

SERIAL 06113 RFP ELECTRONIC HEALTH RECORD SYSTEM, CHS

DATE OF LAST REVISION: July 25, 2007

CONTRACT END DATE: August 31, 2013

CONTRACT PERIOD THROUGH AUGUST 31, 2013

TO: All Departments

FROM: Department of Materials Management

SUBJECT: Contract for **ELECTRONIC HEALTH RECORD SYSTEM, CHS**

Attached to this letter is published an effective purchasing contract for products and/or services to be supplied to Maricopa County activities as awarded by Maricopa County on **July 25, 2007 (Eff. 08/01/07)**.

All purchases of products and/or services listed on the attached pages of this letter are to be obtained from the vendor holding the contract. Individuals are responsible to the vendor for purchases made outside of contracts. The contract period is indicated above.

Wes Baysinger, Director
Materials Management

SD/mm
Attach

Copy to: Clerk of the Board
Lindy Funkhouser, Correctional Health Services
Diane Golat, Employee Health Initiatives
Materials Management



CONTRACT PURSUANT TO RFP

SERIAL 06113-RFP

This Contract is entered into this 25th day of July, 2007 (the “**Effective Date**”) by and between Maricopa County, a political subdivision of the State of Arizona and Business Computer Applications, Inc., a Tennessee corporation (“**Contractor**”) for the acquisition of an electronic health records system and services as described in this Contract as supplemented by the Exhibits referenced below, and in particular to develop and implement a hybrid application service provider system for County as provided in this Contract and said Exhibits (the “**EHR System**”).

1.0 TERM:

- 1.1 This Contract is for a term commencing on the Effective Date and ending on the fifth (5th) anniversary of the date of the EHR System Go-Live Date plus sixty (60) days (the “**Initial Term**”). For purposes of this Contract, “**Go-Live**” or “**Go-Live Date**” or “**First Productive Use**” shall mean the first date when County uses the EHR System in a live production mode as opposed to a test or training mode.
- 1.2 The County may, at its option and with the agreement of the Contractor, extend the period of this Contract for additional terms up to a maximum of five (5) years, (or at the County’s sole discretion, extend the contract on a month to month bases for a maximum of six (6) months after expiration). The County shall notify the Contractor in writing of its intent to extend the Contract period at least thirty (30) calendar days prior to the expiration of the original contract period, or any additional term thereafter. The monthly or annual amounts that will be due should the County elect to extend the period of this Contract as outlined above are shown in Exhibit “A”.

2.0 PAYMENT:

- 2.1 As consideration for performance of the duties described herein, County shall pay Contractor the sum(s) stated in Exhibit “A.”
- 2.2 Payment shall be made upon the County’s receipt of a properly completed invoice as set forth in Section 2.2.7 below. In addition software, implementation services, hardware, operational costs, travel and other costs will be based on the payment schedule detailed below:
- 2.2.1 The Contractor will invoice approximately monthly for fees charged against each identified implementation deliverable as set forth in the Exhibit B-1. Payment for each implementation deliverable will be due and payable within thirty (30) days following delivery of the invoice to County (subject to the provisions in Section 2.2.9 for invoices or parts thereof which are disputed).
- 2.2.2 Notwithstanding Section 2.2.1 above, the implementation deliverables identified in the Exhibits B-1 to this Contract as “Contractor Services” shall be subject to a twenty percent (20%) holdback which shall be identified on each invoice delivered pursuant to Section 2.2.1 above.
- 2.2.3 All monthly operational, maintenance, and other recurring monthly fees whose payment terms are not otherwise identified in this Section 2.0 shall be paid within thirty (30) days after the end of each month, starting thirty (30) days after the Go-Live Date.

- 2.2.4 The license fee for the Initial Term and initial population utilization thresholds of the license for the PEARL™ EMR and practice management software included in the EHR System will be paid as follows, without further holdback:
 - 2.2.4.1 Twenty Five percent (25%) within 30 days of the first to occur of (a) the date of the last party to sign this Contract as shown on the signature block below.
 - 2.2.4.2 Twenty Five percent (25%) within thirty (30) days following the software installation has occurred on the computer servers to be utilized by County for the EHR System.
 - 2.2.4.3 Thirty Percent (30%) within thirty (30) days following the Go-Live Date
 - 2.2.4.4 Ten percent (10%) within thirty (30) days following Go-Live Date plus sixty (60) days Final Acceptance.
 - 2.2.4.5 Ten percent (10%) within thirty (30) days following Final Acceptance plus sixty (60) days.
- 2.2.5 County payments for third party software included in the EHR System will be paid for in full within thirty (30) days following the date that such third party software has been loaded on the computer servers to be utilized by County for the EHR System (date to mutually agreed to).
- 2.2.6 Travel and all non-specified costs (i.e. change orders etc.) will be paid within thirty (30) days after they are invoiced.
- 2.2.7 The Contractor shall submit two (2) legible copies of their detailed invoice before payment(s) can be made. An invoice shall be deemed properly completed for purposes of this Contract if it provides the following information, to the extent relevant to the invoice in question:
 - 2.2.7.1 Company name, address and contact
 - 2.2.7.2 County bill-to name and contact information
 - 2.2.7.3 Contract Serial Number
 - 2.2.7.4 County purchase order number
 - 2.2.7.5 Invoice number and date
 - 2.2.7.6 Payment terms
 - 2.2.7.7 Date of service or delivery
 - 2.2.7.8 Quantity (number of days or weeks)
 - 2.2.7.9 Contract Item number(s)
 - 2.2.7.10 Description of Purchase
 - 2.2.7.11 Pricing per unit of purchase
 - 2.2.7.12 Extended price
 - 2.2.7.13 Total Amount Due
- 2.2.8 As long as the information above is included on invoices, payment may not be delayed by requesting additional information, unless the invoice or selected items on the invoice are disputed for reasons other than a request for additional information.
- 2.2.9 In the event that an entire invoice or any specific item or items on an invoice are disputed, County agrees to resolve the dispute as soon as practical; otherwise the invoice shall be deemed accepted. Any disputed amounts are to be reported to BCA in writing within 15 days of the County receiving the invoice. The initial resolution effort will be by a telephone conversation to see if the matter can be clarified at this step, or if additional information about the invoice clarifies the matter. If it is not possible to resolve the issue in this manner, then the parties agree to binding arbitration as outlined in Section 4.15.
- 2.2.10 In the event invoices remain unpaid beyond one hundred and twenty ninety (120) days, then at Contractor's option, the license pursuant to the BCA Software License Agreement shall be deemed terminated without liability to BCA. The foregoing remedies are in addition to any other remedies which BCA has at law or in equity. In the event that

Contractor employs or retains an attorney-at-law to collect sums owed to Contractor pursuant to this Agreement, County shall also reimburse Contractor for its court costs and attorney fees.

2.2.11 Problems regarding billing or invoicing shall be directed to the using agency as listed on the Purchase Order.

3.0 DUTIES:

- 3.1 Each party shall perform their respective duties and adhere to the provisions applicable to such party as stated in Exhibit B (General Scope of Work), Exhibit B-1 (Statement of Work), Exhibit B-2 (Specific Project Plan), Exhibit B-3 (License Agreement), Exhibit B-4 (Service Level Agreement), Exhibit B-5 (Functionality Matrix), Exhibit B-6 (Maintenance Agreement) and Exhibit B-7 (Third party Software and Service Agreement), Exhibit B-8 Data Center Service Agreement, Exhibit C (Maricopa County Contractor Travel Policy), Exhibit D (Pearl and Associated Product Descriptions), Exhibit D-1 (BCA Disaster Recovery Program), Exhibit D-2 (BCA Business Continuity Program), Exhibit D-3 (BCA Customer Support Policies and Procedures), Exhibit D-4 (BCA Network Security Policy), Exhibit D-5 (BCA Problem Resolution Policy and Procedures) D-6 (Business Associate Agreement).
- 3.2 The Contractor shall perform services at the location(s) and time(s) stated in Exhibit B-1 and B-2 or as otherwise directed in writing.
- 3.3 During the Contract term County shall provide Contractor's personnel with adequate workspace for consultants and such other related facilities as may be required by Contractor to carry out its contractual obligations.

4.0 TERMS & CONDITIONS

4.1 INDEMNIFICATION:

Contractor shall defend, indemnify, and hold harmless County, its agents, representatives, officers, directors, officials, and employees from and against all claims, damages, losses and expenses, including, but not limited to, attorney fees, court costs, expert witness fees, and the cost of appellate proceedings, relating to, arising out of, or alleged to have resulted from the negligent acts, errors, omissions or mistakes relating to the performance of this Contract by Contractor. Contractor's duty to defend, indemnify and hold harmless County, its agents, representatives, officers, directors, officials, and employees shall arise in connection with any claim, damage, loss or expense that is attributable to bodily injury, sickness, disease, death, or injury to, impairment, or destruction of property, including loss of use resulting there from, caused by any negligent acts, errors, omissions or mistakes in the performance of this Contract by Contractor including any person or entity for whose acts, errors, omissions or mistakes Contractor may be legally liable.

The amount and type of insurance coverage requirements set forth herein will in no way be construed as limiting the scope of the indemnity in this paragraph.

The scope of this indemnification does not extend to the sole negligence of County. In addition, if both County and Contractor are found to have been both negligent as to the matter, Contractor's obligations in this paragraph 4.1 shall be reduced by a percentage by which the County was directly or actively negligent.

Nothing in this paragraph 4.1 is intended to act as a waiver of any governmental or sovereign immunity or any third party indemnity or insurance rights enjoyed by County as to any third party. Nor shall anything in this paragraph create in any third party a direct right of action against Contractor. The parties intend that County shall exercise (and Contractor may assert on County's behalf in its defense of County) all of County's rights of governmental and sovereign immunity, as well as third party contractual indemnity for its own behalf and on behalf of Contractor.

4.2 INSURANCE REQUIREMENTS:

Contractor, at Contractor's own expense, shall purchase and maintain the herein stipulated minimum insurance from a company or companies duly licensed by the State of Arizona and possessing a current A.M. Best, Inc. rating of B++6, or its substantial equivalent. In lieu of State of Arizona licensing, the stipulated insurance may be purchased from a company or companies, which are authorized to do business in the State of Arizona, provided that said insurance companies meet the approval of County. The form of any insurance policies and forms must be acceptable to County.

All insurance required herein shall be maintained in full force and effect until all work or service required to be performed under the terms of the Contract is satisfactorily completed and Final Acceptance has occurred. Failure to do so may, at the sole discretion of County, constitute a material breach of this Contract.

Contractor's insurance shall be primary insurance as respects County, and any insurance or self-insurance maintained by County shall not contribute to it.

The insurance policies may provide coverage that contains deductibles or self-insured retentions. Such deductible and/or self-insured retentions shall not be applicable with respect to the coverage provided to County under such policies. Contractor shall be solely responsible for the deductible and/or self-insured retention and County, at its option, may require Contractor to secure payment of such deductibles or self-insured retentions by a surety bond or an irrevocable and unconditional letter of credit.

County reserves the right to request and to receive, within ten (10) working days, certified copies of any or all of the herein required insurance policies and/or endorsements. County shall not be obligated, however, to review such policies and/or endorsements or to advise Contractor of any deficiencies in such policies and endorsements, and such receipt shall not relieve Contractor from, or be deemed a waiver of County's right to insist on strict fulfillment of Contractor's obligations under this Contract.

The insurance policies required by this Contract, except workers' compensation, and errors and omissions, shall name County, its agents, representatives, officers, directors, officials and employees as additional insured's.

The policies required hereunder, except workers' compensation, and errors and omissions, shall contain a waiver of transfer of rights of recovery (subrogation) against County, its agents, representatives, officers, directors, officials and employees for any claims arising out of Contractor's work or service.

- 4.3 Commercial General Liability. Commercial general liability insurance and, upon County's written request, commercial umbrella insurance with a limit of not less than \$1,000,000 for each occurrence, \$2,000,000 products/completed operations aggregate, and \$2,000,000 general aggregate limit. The policy shall include coverage for bodily injury, broad form property damage, personal injury, products and completed operations and blanket contractual coverage. There shall be no endorsement or modification of the commercial general liability insurance limiting the scope of coverage for liability arising from explosion, collapse, or underground property damage.
- 4.4 Automobile Liability. Commercial business automobile liability insurance and, upon County's written request, commercial umbrella insurance with a combined single limit for bodily injury and property damage of not less than \$1,000,000 each occurrence with respect to any of Contractor's owned, hired, and non-owned vehicles assigned to or used in performance of Contractor's work or services under this Contract.
- 4.5 Workers' Compensation. Workers' compensation insurance to cover obligations imposed by federal and state statutes having jurisdiction of Contractor's employees engaged in the performance of the work or services under this Contract; and employer's liability insurance of not

less than \$500,000 for each accident, \$500,000 disease for each employee, and \$1,000,000 disease policy limit.

Contractor waives all rights against County and its agents, officers, directors and employees for recovery of damages to the extent these damages are covered by the workers' compensation and employer's liability or commercial umbrella liability insurance obtained by Contractor pursuant to this Contract.

4.6 -Certificates of Insurance.

Prior to commencing work or services under this Contract, Contractor shall furnish County with certificates of insurance, or formal endorsements as required by the Contract in the form provided by County, issued by Contractor's insurer(s), as evidence that policies providing the required coverage, conditions and limits required by this Contract are in full force and effect. Such certificates shall identify this contract number and title.

In the event any insurance policy (ies) required by this Contract is (are) written on a "claims made" basis, coverage shall extend for two (2) years past Final Acceptance as evidenced by annual Certificates of Insurance.

If a policy does expire during the Term or any Extended Term of this Contract, a renewal certificate must be sent to County fifteen (15) days prior to the expiration date.

4.6.1 Cancellation and Expiration Notice.

Insurance required herein shall not be permitted to expire, be canceled, or materially changed without thirty (30) days prior written notice to the County.

4.7 SOURCE CODE:

Within ninety (90) Days of the Effective Date, Contractor will deposit with a third party escrow agent, the current source code for the software which is owned by Contractor and included in the EHR System (meaning, for purposes of clarification, that third party software is not included in this provision). Contractor shall maintain at its sole expense this escrow (and also deposit the source code for any subsequent enhancements to the EHR System once every six (6) months) during the duration of the Contract so long as County pays the annual maintenance fees to Contractor for ongoing maintenance of the EHR System. County may have access to the escrowed source code in the event that a petition in bankruptcy under Chapter 7 of the United States Bankruptcy Code is filed by or against Contractor (and if filed against Contractor, is not dismissed within 60 days), or ceases business operation other than through acquisition or merger, or the successor owner of the EHR System fails or refuses to honor Contractor's obligations to maintain the EHR System pursuant to the Contract. In the event County receives such access to the source code, County will have a non-exclusive, personal, and non-transferable license to use the source code for its internal purposes during the remainder of the term of the Contract. At the expiration or termination of the Contract, County will return all copies of the source code to Contractor.

4.7.1 NONDISTURBANCE AND ATTORNMENT AGREEMENT:

Business Computer Applications, Inc. will obtain a nondisturbance and attornment agreement ("NDA"), in a form acceptable to the County, in favor of the County from any and all existing or future lenders ("Lender") who have, may have, claim or may claim, a security interest in or to the Software that is the subject of this Contract, the source code relating to such Software, and/or any intellectual property relating in any way to the Software (collectively, the "Intellectual Property"). Generally, the NDA will provide that: (A) so long as the County pays all amounts as specified in this Contract and is not otherwise in default (beyond applicable notice and cure periods) of any of its obligations and covenants pursuant to this Contract, Lender will agree for itself and its successors in interest and for any other person acquiring the Intellectual Property through a foreclosure,

execution or forced sale (an “Acquiring Party”), that the County's rights and interests in and to the Intellectual Property as described and set forth in this Contract will not be disturbed during the term of this Contract (as said term may be extended pursuant to the terms of this Contract or as said rights and interests may be expanded as specified in this Contract) by reason of such a foreclosure, execution or forced sale. For purposes of the NDA, a “foreclosure” shall include (but not be limited to) Lender's exercise of its rights under its loan agreement, the Uniform Commercial Code or any other applicable statute with respect to its lien or security interest in the Intellectual Property, a sheriff's sale or execution of the Intellectual Property pursuant to applicable law, and any other transfer of BCA's interest in the Intellectual Property under peril of foreclosure, execution or forced sale, including, without limitation to the generality of the foregoing, an assignment or sale in lieu of foreclosure; and (B) the County will agree to attorn to, accept and recognize any Acquiring Party as the owner of the Intellectual Property under this Contract pursuant to the provisions expressly set forth herein for the then remaining balance of the term of this Contract, and any extensions thereof as made pursuant to this Contract.

4.8 NOTICES:

All notices given pursuant to the terms of this Contract shall be addressed to:

For County:

Maricopa County
Department of Materials Management
Attn: Director of Purchasing
320 West Lincoln Street
Phoenix, Arizona

For Contractor:

Business Computer Applications, Inc.
Attn: Albert P. Woodard, Chief Executive Officer
2002 Summit Boulevard, Suite 880
Atlanta, Georgia 30319

Business Computer Applications, Inc.
Attn: June Nuckolls, Chief Operating Officer
1008 Professional Blvd, Suite 3
Dalton, GA 30720

Smith, Gambrell & Russell, LLP
Attn: Jonathan Minnen, Attorney-at-Law
Promenade II, Suite 3100
1230 Peachtree St. N.E.
Atlanta, GA 30309

4.9 PRICE ADJUSTMENTS:

Any requests for reasonable price adjustments must be submitted sixty (60) days prior to the annual Contract date. This is the adjustment that would be due to any annual increase in average daily population counts computed over the last 12 months. Requests for adjustment in cost of labor and/or materials must be supported by appropriate documentation. If County agrees to the adjusted price terms, County shall issue written approval of the change. The reasonableness of the request will be determined by comparing the request with the (Consumer Price Index) or by performing a market survey.

4.9.1 The County agrees that the software license fee computed for the EHR System is based on an average monthly population count not exceeding 9,900 (the “**Base Population**”

Count”). On an annual basis, commencing on or after the first anniversary of the Go-Live Date, an average monthly population count for the prior twelve (12) complete calendar months shall be made by Contractor (and County agrees to permit Contractor access to the EHR System for that purpose). In the event that the average monthly population count exceeds the Base Population Count, then County shall pay to Contractor an increased license fee of .045 per inmate for the next twelve (12) months as set forth in Exhibit A.

4.10 TERMINATION FOR CONVENIENCE:

The County reserves the right to terminate the Contract, in whole or in part at any time, when in the best interests of the County without penalty or recourse. Upon receipt of the written notice, the Contractor shall immediately stop all work, as directed in the notice, notify all subcontractors of the effective date of the termination and minimize all further costs to the County. In the event of termination under this paragraph, all documents, data and reports prepared by the Contractor under the Contract shall become the property of and be delivered to the County upon demand. The Contractor shall be entitled to receive just and equitable compensation for work in progress, work completed and materials accepted before the effective date of the termination, including but not limited to payment of all amounts previously held back pursuant to Section 2.0 above.

4.11 TERMINATION FOR DEFAULT:

4.11.1 In addition to the rights reserved in the Contract, the County may terminate the Contract in whole or in part due to the failure of the Contractor to comply with any term or condition of the Contract, to acquire and maintain all required insurance policies, bonds, licenses and permits, or to make satisfactory progress in performing the Contract, provided that Contractor is provided written notice detailing the failure and a thirty (30) day opportunity to cure, and Contractor has not cured within such thirty (30) day period. The County’s procurement officer shall provide written notice of the failure (and thereafter, termination, if cure was not effected) and the reasons for it to the Contractor.

4.11.2 Upon termination under this Section 4.7, all; County data and reports and other output generated by the EHR System shall become the property of and be delivered to the County on demand.

4.11.3 The County may, upon termination of this Contract, procure, on terms and in the manner that it deems appropriate, materials or services to replace those under this Contract. The Contractor agrees to assist the County in a smooth transition to the replacement services selected by the County in procuring materials or services in substitution for those due from the Contractor.

4.11.4 The Contractor shall continue to perform, in accordance with the requirements of the Contract, up to the date of termination, as directed in the termination notice.

4.11.5 Contractor shall be entitled to receive just and equitable compensation for work in progress (not disputed by the County), work completed and materials accepted before the effective date of the termination, including but not limited to payment of all amounts previously held back pursuant to Section 2.0 above.

4.12 STATUTORY RIGHT OF CANCELLATION FOR CONFLICT OF INTEREST:

Notice is given that pursuant to A.R.S. §38-511 the County may cancel this Contract without penalty or further obligation within three years after execution of the contract, if any person significantly involved in initiating, negotiating, securing, drafting or creating the contract on behalf of the County is at any time while the Contract or any extension of the Contract is in effect, an employee or agent of any other party to the Contract in any capacity or consultant to any other

party of the Contract with respect to the subject matter of the Contract. Additionally, pursuant to A.R.S §38-511 the County may recoup any fee or commission paid or due to any person significantly involved in initiating, negotiating, securing, drafting or creating the contract on behalf of the County from any other party to the contract arising as the result of the Contract.

4.13 OFFSET FOR DAMAGES;

In addition to all other remedies at law or equity, the County may offset from any money due to the Contractor any amounts Contractor owes to the County for damages resulting from breach or deficiencies in performance under this contract.

4.14 ADDITIONS/DELETIONS OF SERVICE:

The County reserves the right to add and/or delete products and/or services provided under this Contract. If a requirement is deleted, payment to the Contractor will be reduced proportionately to the amount of service reduced in accordance with the proposal price. If additional services and/or products are required from this Contract, prices for such additions will be negotiated between the Contractor and the County and agreed to by the parties prior to Contractor being obligated to render such additional services and/or products.

4.15 SUBCONTRACTING:

The Contractor may not assign this Contract or subcontract to another party for performance of the terms and conditions hereof without the written consent of the County, which shall not be unreasonably withheld. All correspondence authorizing subcontracting must reference the Contract Serial Number.

4.16 AMENDMENTS:

All amendments to this Contract must be in writing and signed by both parties. The course of conduct or course of dealing of the parties shall not act to amend, modify, terminate or waive the provisions of the preceding sentence.

4.17 RETENTION OF RECORDS:

The Contractor agrees to retain all financial books, records, and other documents relevant to this Contract for five (5) years after final payment or until after the resolution of any audit questions which could be more than five (5) years, whichever is longer. The County, Federal or State auditors and any other persons duly authorized by the Department shall have full access to, and the right to examine, copy and make use of, any and all said materials.

If the Contractor's books, records and other documents relevant to this Contract are not sufficient to support and document that requested services were provided, the Contractor shall reimburse Maricopa County for the services not so adequately supported and documented.

4.18 AUDIT DISALLOWANCES:

If at any time, County determines that a cost for which payment has been made is a disallowed cost, meaning a cost not contemplated by this Agreement, such as overpayment, County shall notify the Contractor in writing of the disallowance. County shall also state the means of correction, which may be but shall not be limited to adjustment of any future claim submitted by the Contractor by the amount of the disallowance, or to require repayment of the disallowed amount by the Contractor.

4.19 ALTERNATIVE DISPUTE RESOLUTION:

4.19.1 After the exhaustion of the administrative remedies provided in the Maricopa County Procurement Code, any contract dispute in this matter is subject to compulsory arbitration. Provided the parties participate in the arbitration in good faith, such arbitration is not binding and the parties are entitled to pursue the matter in state or

federal court sitting in Maricopa County for a de novo determination on the law and facts. If the parties cannot agree on an arbitrator, each party will designate an arbitrator and those two arbitrators will agree on a third arbitrator. The three arbitrators will then serve as a panel to consider the arbitration. The parties will be equally responsible for the compensation for the arbitrator(s). The hearing, evidence, and procedure will be in accordance with Rule 74 of the Arizona Rules of Civil Procedure. Within ten (10) days of the completion of the hearing the arbitrator(s) shall:

4.19.1.1 Render a decision;

4.19.1.2 Notify the parties that the exhibits are available for retrieval; and

4.19.1.3 Notify the parties of the decision in writing (a letter to the parties or their counsel shall suffice).

4.19.2 Within ten (10) days of the notice of decision, either party may submit to the arbitrator(s) a proposed form of award or other final disposition, including any form of award for attorneys' fees and costs. Within five (5) days of receipt of the foregoing, the opposing party may file objections. Within ten (10) days of receipt of any objections, the arbitrator(s) shall pass upon the objections and prepare a signed award or other final disposition and mail copies to all parties or their counsel.

4.19.3 Any party which has appeared and participated in good faith in the arbitration proceedings may appeal from the award or other final disposition by filing an action in the state or federal court sitting in Maricopa County within twenty (20) days after date of the award or other final disposition. Unless such action is dismissed for failure to prosecute, such action will make the award or other final disposition of the arbitrator(s) a nullity.

4.20 SEVERABILITY:

The invalidity, illegality or unenforceability, in whole or in part, of any provision of this Contract shall not void or affect the validity of any other provision of this Contract. The offending provision shall be modified (by mutual agreement) to the minimum extent necessary to make it valid, legal and enforceable, and as such shall be incorporated into this Contract.

4.21 RIGHTS IN DATA:

The County shall own have the use of all data and reports resulting from this Contract without additional cost or other restriction except as provided by law. Each party shall supply to the other party, upon request, any available information that is relevant to this Contract and to the performance hereunder.

4.22 INTEGRATION:

This Contract represents the entire and integrated agreement between the parties and supersedes all prior negotiations, proposals, communications, understandings, representations, or agreements, whether oral or written, express or implied. All Exhibits listed in this Contract are incorporated into this Contract. In the event of any express conflict between the provisions of such Exhibits and the provisions of this Contract, except with respect to specific indemnification providing for indemnification of the County in any of the attached, incorporated exhibits, the provisions of this Contract shall control. In the event of any express conflict between or among the Exhibits, then they shall be reconciled based on the following order of priority.

- Exhibit A (Pricing)
- Exhibit B-5 (Functionality Matrix)
- Exhibit B-4 (Service Level Agreement)
- Exhibit B-1 (Statement of Work)
- Exhibit B (General Scope of Work)
- Exhibit B-2 (Specific Project Plan)

Exhibit B-3 (License Agreement)
Exhibit B-6 (Maintenance Agreement)
Exhibit B-7 (Third Party Software and Service Agreement)
Exhibit B-8 (Data Center Support)
Exhibit D-3 (BCA Customer Support Policies and Procedures)
Exhibit D-5 (BCA Problem Resolution Policy and Procedures)
Exhibit D-2 (BCA Business Continuity Program)
Exhibit D-4 (BCA Network Security Policy)
Exhibit D-1 (BCA Disaster Recovery Program)
Exhibit D (PEARL™ and Associated Product Descriptions)
Exhibit D-6 (Business Associate Agreement)
Exhibit C (Maricopa County Contractor Travel Policy)

4.23 GOVERNING LAW:

This Contract shall be governed by the laws of the state of Arizona. Venue for any actions or lawsuits involving this Contract will be in Maricopa County Superior Court or in the United States District Court for the District of Arizona, sitting in Phoenix, Arizona

4.24 INTERPRETATION:

The headings used in this Contract are provided for convenience of reference only and will not affect the construction or interpretation of this Contract. County and Contractor acknowledge that both parties have participated in the preparation of this Contract, and therefore no rule of construction disfavoring the drafter shall apply to either party.

4.25 COUNTERPARTS; FACSIMILE COPIES:

This Contract may be executed in one or more counterparts, each of which shall be deemed an original, and all of which, when taken together, shall be deemed to constitute one and the same Contract. The parties intend that a signed copy of this Contract that has been transmitted by facsimile (or scanned and transmitted by electronic mail) shall be equal in force to an original manually-signed copy for all purposes.

IN WITNESS WHEREOF, this Contract is executed on the date set forth above.

CONTRACTOR

AUTHORIZED SIGNATURE

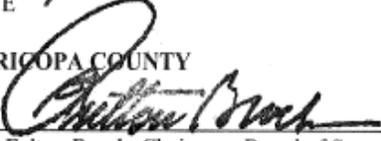


Albert Woodard, CEO Business Computer Applications, Inc.

2002 Summit Blvd, Suite 880, Atlanta, GA 30319

7/27/07
DATE

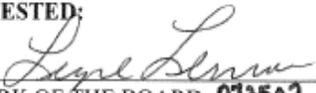
MARICOPA COUNTY

BY: 
Fulton Brock, Chairman, Board of Supervisors

JUL 27 2007
DATE

ATTESTED:

ASSISTANT DEPUTY


CLERK OF THE BOARD 012507

7/27/07
DATE

APPROVED AS TO FORM:


DEPUTY MARICOPA COUNTY ATTORNEY

7/27/7
DATE

EXHIBIT A - PRICING

General Pricing Information

RFP Identifiers

SERIAL: 06113-RFP
 PRICING SHEET: C703513 NIGP 92007

1.0 Please Complete the Following as Appropriate

1.0 BIDDER NAME: BUSINESS COMPUTER APPLICATIONS, INC.
 2.0 F.I.D./VENDOR #: 62-1008545
 3.0 BIDDER ADDRESS: 2002 SUMMIT BOULEVARD, SUITE 880 ATLANTA, GA 30319
 4.0 P.O. ADDRESS: _____
 5.0 BIDDER PHONE #: 678-221-9001
 6.0 BIDDER FAX #: 770-931-4191
 7.0 COMPANY WEB SITE: www.bca.us
 8.0 COMPANY CONTACT (REP): MILTON H. PATTON, JR.
 9.0 E-MAIL ADDRESS (REP): mpatton@bca.us

10.0 WILLING TO ACCEPT FUTURE SOLICITATIONS VIA EMAIL

Yes	No
X	

11.0 OTHER GOV'T. AGENCIES MAY USE THIS CONTRACT:

X	
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12.0 PAYMENT TERMS:
 NET 30

X

EXHIBIT A - PRICING

Pricing Summary and Recommended Staffing Recommendations

2.0 PRICING and RECOMMENDED STAFFING RECOMMENDATIONS

RFP Identifiers

SERIAL:	06113-RFP
PRICING SHEET:	C703513 NIGP 92007
BIDDER NAME:	BUSINESS COMPUTER APPLICATIONS, INC.
COMPANY CONTACT (REP):	MILTON H. PATTON, JR.

Over view of Section 2.0

This section of Attachment A is used to summarize the detail information contained in Sections 3, 4, 5 and 6 of this attachment. It is Mandatory that the amounts listed below are reconciled to each of the aforementioned sections. It is up to the Respondent to explain how each of the amounts below tie to the subsequent sections. Respondents may add comments and footnotes at their discretion however excessive responses may be disregarded. It is recommended that the comments be included at the end of this section and the Respondent should avoid using the comment function of Excel.

In addition, the Contractor will assume that the amounts below are additive in nature unless an all inclusive monthly cost is specifically identified.

2.1 IMPLEMENTATION COST (one time Costs)

Implementation Costs

Initial Complete System Solution Implementation Cost

To include all applicable Software, Database Administrator and Database Programming for Hybrid implementation model, Labor, Training, Travel Costs, and 1st Year Support and Maintenance. Enter the cost only to the extent not included in the monthly cost below.

Year 1	Year 2	Year 3	Year 4	Year 5
\$3,066,112	\$ -	\$ -	\$ -	\$ -

The BCA Initial Complete System Solution Implementation Cost is \$2,976,088 and includes: All costs as outlined in 5.0 Software_Costs and 6.0 Training _Costs. It does not include any costs outlined in 3.0 ASP_Costs (including any Maintenance Fees). All Maintenance Fees including the first years maintenance fees are included in the Monthly Costs outlined in Section 2.2 below.

Dictaphone Implementation Cost is \$90,024. (Project Management, Training, other Implementation Services)

4.0 Hardware Cost - Decision for Hardware has not been determined. Cost is not included in this pricing - Maricopa County and BCA at later date may have hardware purchased by BCA and that cost will be added to the implementation price.

5.0 Software_Cost is \$2,753,988 and includes: The Pearl EMR and PMS Software, Implementation Services (not including training), All Third Party Software, the development of all interfaces and customizations and travel and miscellaneous expenses.

6.0 Training_Cost is \$222,100 and includes: All training in the first 18 months.

2.2 MONTHLY COST - FIRST (60) Sixty Months (1) (2)

	Yes	No	
Is the Respondent Proposing an All Inclusive Cost Per Month (A no response will result in the Contractor assuming that all costs identified in this section are additive in nature)		X	

System Solution Monthly Cost Including Unlimited Medical Records, ASP Services, Applicable Support and Maintenance, etc. **30,266** /MONTH

(1) If the Contractor is proposing an all inclusive cost per month which includes the amortization of one time expenses such as implementation training and additional costs, please explain your amortization assumptions in detail including a reconciliation to Sections 3, 4, 5 and 6 of this attachment.

(2) Please be specific in what is included in the monthly cost. The Respondent may add additional lines to identify detailed costs.

The BCA Monthly Cost is \$30,266 and includes: BCA Pearl Software Maintenance, Third Party Software Maintenance, Interface Software Maintenance and Data Center Support Services, as outlined in 3.0 ASP_Costs, and includes 3.5% annual increases after the first year. BCA's Total Monthly Cost for sixty (60) months is \$1,815,960, payment for the monthly cost starts upon System Go-Live.

Maintenance and Data Center Support Services, payment for the Monthly Cost starts at Go-Live.

Dictaphone Equipment, Software, and Equipment Maintenance Cost - \$1,296.00 per month

Dictaphone ichart Voice Text and Speech Recognition System Cost \$.0292 per line (Estimate 500k line per month) = \$14,600 per month **15,896** /MONTH

2.3 MONTHLY COST - Optional Years

Year 6 -	<u>3.50%</u>	Capped Percentage Increase
Year 7-	<u>3.50%</u>	Capped Percentage Increase
Year 8 -	<u>3.50%</u>	Capped Percentage Increase
Year 9 -	<u>3.50%</u>	Capped Percentage Increase
Year 10 -	<u>3.50%</u>	Capped Percentage Increase

If the Respondent is proposing an all inclusive monthly cost please explain how the amortization of the initial one time costs will impact the price increases in the monthly cost associated with the optional years 6 through 10?

Response:

BCA is not proposing an all inclusive monthly cost. By doing this, the one time costs for implementation are not amortized into the optional year costs, avoiding unnecessary costs to Maricopa County.

2.4 ADDITIONAL COSTS

Please provide any other **ADDITIONAL COSTS** that are applicable to Project Scope
Additional Storage Costs, Optional Modules, Etc. (format as applicable but assure that all data reconciles to detail pricing sheets)

Description (add as necessary)	Year 1	Year 2	Year 3	Year 4	Year 5
Item 1- Customizations from Attachement E of RFP- See attached Exhibit A (Customization Details)	\$ 383,000				
Item 2 - Develop and Design - Intake Process and Program	\$ 140,000				
Item 3 - Develop and Design - MAR and Meds Tracking	\$ 140,000				
Total	\$ 663,000	\$ -	\$ -	\$ -	\$ -

2.5 PLEASE PROVIDE SPECIFIC ONGOING STAFFING REQUIREMENTS/RECOMMENDATIONS NEEDED TO MAINTAIN THE PROPOSED SYSTEM.

Base FTE calculations on 2088 hours per year

Please provide specific skill sets required for staff.

Please be specific as to functions to be performed by level

These estimates should be based on the Respondent's prior experience and will be discussed in detail with references provided

Resource	Job Description / Functions	FTEs
Resource Level 1 - System Administrator	Manages Facilities Specific Pearl Functions and Tables and shall be the liason to BCA for Software issues	0.5
Resource Level 2 - Network Adminstrator	Manages Network connectivity and devices and telecommunications connectivity to BCA	0.5
Resource Level 3 - Training Coordinator	Developes and Manages Training plans and schedules and coordinates all training activities	1
Resource Level 3 - User Support Coordinator	Manages the Help Desk, User Support and Problem resolution policies and procedures	1

2.6 COMMENTS RELATED TO THE RECONCILIATION OF DETAIL SECTIONS 3,4,5 AND 6 OF THIS ATTACHMENT TO SECTIONS 2.1 THROUGH 2.4 ABOVE

Our initial cost for system implementation, training and Dictaphone implementation services, as outlined in section 2.1 above is \$3,066,112.

Our monthly cost for ASP services, as outlined in section 2.2 above and tab 3.0 ASP_Costs is \$30,266 per month for a total of \$1,815,960 for sixty months. The

sixty month period begins at productive use (Go-Live)

Dictaphone estimated Cost is \$15,896 per month for a total of \$953,760 for sixty months

Our total cost to Maricopa County for the first seventy-two month period is \$5,835,832

BCA's monthly cost will not increase more than 3.5% per annum in optional years.

2.7 TRAVEL.

NOT TO EXCEED CAP ON TRAVEL, FOOD AND LODGING EXPENSES (SEE SECTION 2.30)

BCA Travel is included in the total pricing shown for the 5 year agreement.

FOR LIFE OF CONTRACT AND CANNOT EXCEED _____% OF MONTHLY BILLINGS.

EXHIBIT A - PRICING

3.0 ASP Costs

RFP Identifiers

SERIAL: 06113-RFP
PRICING SHEET: C703513 NIGP 92007
BIDDER NAME: BUSINESS COMPUTER APPLICATIONS, INC.
COMPANY CONTACT (REP): MILTON H. PATTON, JR.

Application Service Provider Costs	One Time Cost (1)			Monthly Cost			Annual Maintenance Fees
	Cost Each	Quantity (Count)	Extended Cost	Cost Each	Quantity (Count)	Extended Costs	
Components:							
Software Maintenance							
BCA Pearl EMR & Practice Management SW			\$ -	\$14,533	1	\$14,533	\$174,396
			\$ -			\$ -	\$ -
Third Party Software			\$ -	\$1,730	1	\$1,730	\$20,760
Oracle Database Management System			\$ -				
First Data Bank - Database							
Kofax Adrenaline Imaging Software			\$ -			\$ -	\$ -
Right Fax Solution			\$ -			\$ -	\$ -
Crystal Report Writer			\$ -			\$ -	\$ -
Zebra bar coding system			\$ -			\$ -	\$ -
			\$ -			\$ -	\$ -

Interface Software			\$ -	\$4,379	1	\$4,379	\$52,548
ICJIS Interface			\$ -			\$ -	\$ -
Iris Scan I(Identex Interface							
SonoraQuest Lab Interface			\$ -			\$ -	\$ -
Diamond Pharmacy System Interface			\$ -			\$ -	\$ -
Arizona State Immunization IS Interface			\$ -			\$ -	\$ -
Dictaphone System Interface			\$ -			\$ -	\$ -
GE Centricity Digital X-ray System Interface			\$ -			\$ -	\$ -
			\$ -			\$ -	\$ -
			\$ -			\$ -	\$ -
Data Center Services			\$ -			\$ -	\$ -
ASP-Hybrid Support Services-			\$ -	\$9,624	\$ 1	\$9,624	\$115,488
			\$ -		\$ 1	\$ -	\$ -
			\$ -		\$ 1	\$ -	\$ -
			\$ -			\$ -	\$ -
			\$ -			\$ -	\$ -
			\$ -			\$ -	\$ -
Total						\$30,266	\$363,192

Respondent Notes

- 1
- 2
- 3
- 4

Footnotes

1 Please comment on the timing of one time expenses, when they will be incurred and payable, etc.

EXHIBIT A - PRICING

4.0 Hardware Costs

RFP Identifiers

SERIAL:	06113-RFP
PRICING SHEET:	C703513 NIGP 92007
BIDDER NAME:	BUSINESS COMPUTER APPLICATIONS, INC.
COMPANY CONTACT (REP):	MILTON H. PATTON, JR.

Provide estimated unit price and quantity for the proposed servers/hosts, even if you do not resell hardware. Note at the bottom of the worksheet if the hardware may be purchased through the Respondent. Please provide an estimated price for only one (1)

System Hardware	Cost Each	Quantity (Count)	Total Purchase Price	Installation Fees	Annual Maintenance Fees
Servers/hosts PCs proposed, including CPU, disk, memory, operating system, etc.			\$ -		
Pearl Image Server	\$10,000.00	0	\$ -		
Fujitsu 5220C Scanners	\$1,722.00	0	\$ -		
		0			
Database Server,Storage Units,Tape Lib, Backup Unit	\$371,372.00	0	\$ -		
			\$ -		
			\$ -		
TOTAL			\$ -	\$ -	\$ -

Respondent Notes

(See Server, Storage, Tape Library, and Backup Unit detail configuration)

EXHIBIT A - PRICING

5.0 Software Costs

RFP Identifiers

SERIAL: 06113-RFP
PRICING SHEET: C703513 NIGP 92007
BIDDER NAME: BUSINESS COMPUTER APPLICATIONS, INC.
COMPANY CONTACT (REP): MILTON H. PATTON, JR.

Please specify the detailed pricing (as indicated in the worksheet) for the solution. Examples are listed however, the Respondent may adapt as necessary

Selected Software Applications	License Fee	Implementation Fees	Annual License/Support Renewal Fees
Clinical:			
BCA PEARL EMR & Practice Management Systems	\$871,977		
BCA PEARL EMR Implementation tasks			
Project Management		\$260,000	
Infrastructure Development		\$36,000	
Build Support Tables		\$18,000	
Database Administrator and Database Programmer		\$115,488	
Interface Development (See Interfaces below)		\$ -	
Onsite Support Services		\$196,000	
Additional Development Services (Intake and MAR)		\$280,000	

Training (See training sheet - 6.0)			
Revenue Cycle:			
Other Modules:			
Database Management Systems (list):			
Oracle	\$64,000		
First Data Bank	\$33,154		
Operating Systems (list):			
Windows 2003	Not included		
AIX	Not included		
Other Recommended System Software (list):			
Kofax	\$5,592		
Right Fax	\$8,947		
Crystal Report Writer	\$3,500		
Zebra bar coding system	\$2,330		

Interfaces (name specific interfaces bid):			
ICJIS Interface		\$45,000	
Iris Scan (Identex) Interface		\$45,000	
SonoraQuest Lab Interface		\$45,000	
Diamond Pharmancy System Interface		\$45,000	
Dictaphone System Interface		\$45,000	
GE Centricity Digital X-ray System Interface		\$20,000	
Report Writer(s) Included			
Enhancements/Customizations (specific name and cross reference customization responses from Attachment E)			
Customizations		\$383,000	
TOTAL	\$989,500	\$1,533,488	\$ -
Other costs not detailed above:			
Travel and Miscellaneous Expenses	\$231,000		
TOTAL	\$231,000	\$ -	\$ -
GRAND TOTAL	\$1,220,500	\$1,533,488	\$ -

Respondent Notes

EXHIBIT A - PRICING

6.0 Training Costs Tables A and B

RFP Identifiers

SERIAL:	06113-RFP
PRICING SHEET:	C703513 NIGP 92007
BIDDER NAME:	BUSINESS COMPUTER APPLICATIONS, INC.
COMPANY CONTACT (REP):	MILTON H. PATTON, JR.

Table A: Training costs to be incurred during implementation, testing, and go live to fully implement the system

	Yes	No
Is the Respondent Proposing a "Train the Trainer" Approach?		X

Initial Training Costs			
Training Description	Cost Per Hour	Hours (Count)	Extended Cost
Initial Training			
System Administration (Applications, Database)	\$175	80	\$14,000
Nurses (CHT, HUC, LPN, RN)	\$175	312	\$54,600
Providers	\$375	40	\$15,000
Clinical Support Staff	\$175	300	\$52,500
I/T Support (Network Administrator and PC Tecks	\$175	40	\$7,000
Help Desk Staff	\$175	40	\$7,000
			\$ -
			\$ -
			\$ -

Table B: List of hourly rates for training resources by level

RFP Identifiers

SERIAL: 06113-RFP
PRICING SHEET: C703513 NIGP 92007
BIDDER NAME: BUSINESS COMPUTER APPLICATIONS, INC.
COMPANY CONTACT (REP): MILTON H. PATTON, JR.

Level of Resource	Rate Per Hour (1)
Physician Trainers	\$ 375
User Trainers	\$ 175

Footnotes

(1) Note that these rates are to be used for services provided for the duration of the contract. Increases will be made only when mutually agreed upon in writing.

Respondent Notes

- 1
- 2
- 3
- 4

Exhibit A - Detailed Customizations List

Line #		Estimated Hours	Rate	Total
48	Provide online tickler file for automatic clerical follow-up with specific clients and/or services (i.e. if patient address changes, message "check guarantor address".)	60	\$125	\$7,500
109	Scoring capabilities to build T-scores, percentiles, and other mathematical algorithms against the responses.	96	\$125	\$12,000
110	Customizable online help to guide the client in filling out the assessment/survey.	40	\$125	\$5,000
115	Provide the ability to build self-scoring specific Assessment templates for example: speech and language; self care; cognitive functioning; abnormal involuntary movements; nursing; educational functioning; psychological; neurological; general physical hea	120	\$125	\$15,000
330	Improper order in scheduling sequential interventions.	120	\$125	\$15,000
376	Provide option of visual or auditory alarm which requires a response on receipt of STAT, ASAP, timed orders, or special instructions	80	\$125	\$10,000
399	Allow scheduling of a test (procedure) when ordering. Notify provider (where test is scheduled) so time and date may be verified. Provide automatic feedback of verification to ordering area.	80	\$125	\$10,000
434	Ability to Lock Out Ordering (e.g. ARNP not able to order medications for himself).	120	\$125	\$15,000
581	Incorporate Risk assessments (e.g. clinical calculators).	144	\$125	\$18,000
682	Support purging (i.e. archiving) of system data, as defined by department	240	\$125	\$30,000
718	Color indicators are provided on patient list screens as defined above, which indicate new, abnormal, or critical data and the data is easily accessible	80	\$125	\$10,000
720	Provide online access both locally and remotely via the Internet to one or more databases (e.g., Medline) of bibliographic information.	48	\$125	\$6,000
767	Use Logical Observation Identifier Names and Codes (LOINC).	96	\$125	\$12,000
770	Use National Council for Processing Prescription Drug Programs (NCPDP).	96	\$125	\$12,000

SERIAL 06113-RFP

774	Use another recognized vocabulary source.	96	\$125	\$12,000
776	Relationships between Code Sets clearly defined.	96	\$125	\$12,000
779	Supports static/dynamic data element relationships	96	\$125	\$12,000
780	Accommodate new, unforeseen codes, data elements	96	\$125	\$12,000
781	Ability to Recognize Semantic Differences (e.g. Heart and Cardiac).	96	\$125	\$12,000
791	Offer medical & mental health diagnosis decision matrix that addresses continuity of interventions in treatment planning.	144	\$125	\$18,000
807	Ability to Conference (i.e., chat) on-line.	200	\$125	\$25,000
841	Designated users can not be signed on to more than one PCI (device) at a time	80	\$125	\$10,000
848	Ability to process files from Human Resources system for terminated employees, and automatically turns off access.	240	\$125	\$30,000
859	Alert simultaneous users of each other's presence on the same record.	80	\$125	\$10,000
872	User is able to identify where the current display is in the whole record (e.g. site map).	80	\$125	\$10,000
905	Critical fields have on-line Help (data dictionary name and codes) for easy reference and look-up	120	\$125	\$15,000
921	Ability to link notes with problems by patient.	180	\$125	\$22,500
965	Ability to generate report of all lab tests by laboratory technician	40	\$125	\$5,000

TOTAL HOURS

3064

\$383,000

Customizations of 3,064 hours at \$125.00 per hour = \$383,000
 Cost included in pricing shown on, Section 5.0
 These are estimated hours, actual hours may vary once specifications are available.

06113 EXHIBIT B

Statement of Work

1.0 Intent

2.0 Statement of Work..... 8

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2.2 BCA Responsibilities 13

Task List - System Implementation Services..... 13

Task 19 – System Acceptance 36

Task 20 – BCA PEARL Warranty and On-Going Maintenance Support 13

Task 21 - BCA Pearl Hybrid ASP Service

2.3 MC-CHS Personnel Roles & Responsibilities- 14

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Appendix B. – Project Change Control Procedure..... 16

Appendix C – BCA PEARL Applications..... 17

Appendix D – BCA PEARL Application Software Modules 17

Appendix E – BCA PEARL Application Software Product Descriptions..... 18

Appendix F – BCA PEARL Applications Software Capabilities (per the RFP responses) 18

Appendix G – Hardware Equipment Configuration and Operating System Software 18

Appendix H – Third Party Software List..... 20

Appendix I – BCA Specific Project Plan..... 20

Appendix J – Customization Services for Task 7 (optional) 21

Appendix K – Interface Development List 23

Appendix L – MC-CHS Licensed Use 23

Appendix M – MC-CHS Personnel Roles and Responsibilities 23

Appendix N – BCA Project Personnel Roles and Responsibilities 31

Appendix O – Warranty and Maintenance Support Services and Hours 35

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Appendix Q – BCA Escalation Process 31

1.0 Intent

This contract is for the purchase/use of Hybrid Application Service Provider (ASP) Electronic Health Record System (EHR or the System) (Pearl EMR software). Contractor shall provide these services including implementation of a fully integrated system solution throughout the Maricopa County Department of Correctional Health Services (CHS or the Department's) six (6) clinic locations.

1.1 **Hybrid Application Service Provider (ASP) Model**

The County's intent is that the system solution shall be housed on County premises on contractors owned servers which shall be accessed via the County's VPN (Virtual Private Network) via the Internet. Contractor shall be responsible for supporting all system functions and features, maintenance, updates, fixes, database and system administration, etc., required to keep the system functional at all times. The County will be responsible for operating the system, supplying the equipment and network necessary for it to function, providing first line of help desk support and reporting problems to BCA and providing supporting documentation.

1.2 **MANDATORY SERVICE REQUIREMENTS OF PROPOSED SYSTEM**

The following represents the mandatory system capabilities.

Table 1: Mandatory System Capabilities

Patient (Inmate) Management:
• Co-pay Management
• Referrals
• Appointment Scheduling
• Registration of DNR Orders
• Registration of Living Will
• Release of Information
• Report Capability
• Intake Interface
• Admission, Discharge, Transfer
• Merge/unmerge Record
• Alias Management
• Patient Tracking (interface)
• Patient Transport Management
• Special Accommodations
• Census Reporting

Clinical Operations by Provider:
• Problem List (complaints/diagnosis)
• Encounters
• Treatment Planning
• Clinical Guidelines/Pathways and Notes
• Orders & Results Reporting

• Consents
• Clinician Access View
• Clinical Decision Support
• Controlled Medical Vocabulary
• Charge Capture
• Patient Education
• Intake, Transfer, Release
• Admission Discharge, Transfer
• Referrals
• Flow Sheets
• Population Based Clinical Areas

Clinical Specialties:
• Pharmacy:
Order/Results Interface
Medication Administration
Drug-Drug/Allergy Interactions
Drug Look-up
Formulary Management
• Laboratory (in house and reference)
• Obstetrics
• Communicable Diseases (including tuberculosis and STDs)
• Family Planning
• Infirmery
• Psychiatrics
Testing Support
Mental Health Evaluation
Mental Health Screening
• Dental Care:
Appointment Scheduling
Screening
Charting
• Emergency Care Management

1.3 ASP Related System Requirements

The following outlines the interconnectivity requirements.

1.3.1 SYSTEM ACCESS VIA COUNTY VPN (Virtual Private Network)

1.3.1.1 All sites participating in this program are connected to the Maricopa County Wide Area Network (WAN). The larger Jail facilities are connected via gigabit backbone or fractional OC3 Asynchronous Transfer Mode (ATM). Smaller Sheriff locations

supporting Telemedicine equipment are connected via a point to point T1 circuit.

- 1.3.1.2 If Contractor wishes to perform maintenance and/or support from remote locations on equipment in the County WAN, must connect via the County's VPN through the Internet. VPN access requires a token card that is issued to an individual. These Token Cards are not to be shared among employees; the cards will be issued only to personnel that require access.

The cost of the token card is \$50.00 each. Monthly usage fee of \$8.00 per month, per card, will be assessed to the successful Respondent.

VPN access requires that a VPN client be installed on the remote PC. It will be the Contractors responsibility to install the VPN client software and keep it upgraded as needed. Client installation instructions will be provided at the time of issuance of the token card. All persons requiring remote access must complete a "Respondent Remote Access Registration Form" and a "Respondent Remote Access Acceptable Use Form".

1.4 IMPLEMENTATION (MANDATORY)

- 1.4.1 The Contractor shall develop and maintain (Exhibit B-3), a Project Work Plan for implementing the system solution.
- 1.4.2 Document all requirements and specifications for integration and implementation.
- 1.4.3 Identify equipment, software, logistical support and personnel available to CHS during and after implementation.
- 1.4.4 Identify process for training of CHS personnel. This should include a detailed workplan which includes specific identification of training approach, number of sessions necessary to assure CHS personnel are trained adequately, the level of resources provided by the Contractor to lead and conduct training, etc

It is the intent of CHS to implement the proposed solution as a "This point forward" application. Integration of existing medical records will not be required.

1.5 EHR SYSTEM SOLUTION IMPLEMENTATION

1.5.1 Overview of Requirements

A "successful implementation" is one where the Contractor's system was implemented: (1) in production on schedule, (2) within the contracted budget, (3) supports the client's day-to-day business functions and (4) an appropriate knowledge transfer to appropriately trained personnel.

1.5.2 Maricopa County Organization and Staffing

The County shall establish a Core Team consisting of members from each CHS and the County to participate in the implementation of the system.

Assignment of applicable and adequate personnel will be designated by the County.

Project Director - The Project Director will direct and manage the project on a day-to-day basis and who have overall responsibility for the project. All Contractors lead consultants and managers as well as the County's project staff will report to the Project Director.

Project Team Staffing - Maricopa County will form a project team for CHS, led by a functional business area member(s), and organized around each of the major system modules/business functions.

Project Team Training - All project team staff – both functional and technical – will receive adequate and appropriate training to support this project as provided by the Contractor. The Contractor is expected to mentor the County's staff throughout the duration of this project. The Contractor is expected to review with the County's Project Director (see 1 above) the proposed training schedule developed during the pre-implementation phase.

1.5.3 EHR System Solution (Contractors) Staffing Requirements

The Contractor shall provide key implementation staff with the following qualifications:

- Has a strong local/county government and healthcare knowledge base and can bring valuable, practical experience (both functional as well as technical) to the implementation effort.
- Clearly understands the unique characteristics of CHS in general, and the specific needs of the County.
- Appreciates the County's need to exercise strict budgetary controls on this project, with specific emphasis on controlling project scope and implementation timeline.
- Brings leadership, enthusiasm, and optimism to the implementation.
- Can provide innovative solutions in applying the functional capabilities of the EHR application.
- Is highly qualified and experienced in the technologies and tools underlying this solution.
- Has substantial knowledge and expertise in the technical architecture and design of the system solution.
- Will provide continuity of project management and consultants throughout the duration of the project.
- Will provide a comprehensive transfer of their knowledge of the proposed system solution to the County.
- Is able to present 'best practices' solutions based on a thorough knowledge of how the system solution can be used in the unique CHS environment

- Can provide comprehensive and complete technical and functional/business training programs, with special emphasis on end-user training and documentation.
- Has in-house experience working through Change Management and Business

During the course of the contract, the County reserves the right to require the Contractor to reassign or otherwise remove from the project, without cause or further explanation, any employees found unacceptable by the County. The County reserves the right to accept or reject any proposed or assigned consultant, without cause, at any time during the duration of the project.

Prior to their assignment to the project, the Respondent must provide the County the resume of each individual including his/her certifications and experience.

1.5.4 Background Investigation

The BCA Team agrees that it will allow Customer, at Customer's sole expense to perform a background check as described herein on any and all employees and/or agents and subcontractors prior to them being assigned to perform under this SOW. This background check will at a minimum include an investigation for, and review of, any (i) state and federal felony convictions; (ii) misdemeanor convictions that would present an unreasonable risk to Customer property or personnel; and (iii) any pending deferred adjunction's with respect (i) or (ii). The background checks will take place in Maricopa County. Customer understands that the BCA Team will notify the subject employees of such background check and request the employee sign a release that includes a list of the background components listed above. The employee is free, without repercussion, to not consent to such a background check. In that event, such employee will not be assigned to perform under this SOW. Customer acknowledges that the results of the background shall be considered Confidential Information under this SOW.

1.6 CONTRACTOR'S PROJECT MANAGER

The Contractor shall provide a full-time, on-site Project Manager for all Contractor's staff/personnel for the duration of the project. The Contractor's Project Manager will report to the Project Director.

The Project Manager will be responsible for acquiring, scheduling, and managing all Contractor resources assigned to this project. The Project Manager will consult with and advise the Project Director on project planning, implementation methodology, scope definition, functionality, best practices, training and on all other Contractor matters needed to ensure that the implementation is successfully completed. Additionally, the Project Manager shall immediately alert the Project Director to any observed threats to the successful, on-schedule, within budget completion of the project and present strategies and plans for correction.

The Project Manager must work at the direction of the Project Director. The County "owns the project" and the Project Director will direct all project activities on behalf of the County.

As project management continuity is important, the Contractor shall agree that, unless directed by the County, the Project Manager will remain with the County project for the duration of the project.

The Project Manager must have substantial experience in managing projects of comparable size and complexity to that being proposed. The Project Manager must be expert in the implementation of the proposed systems in medium to large governmental organizations.

1.7 PROJECT PLANNING AND ORGANIZATION

The Contractor is responsible for providing management of their own resources in order to meet the project goals and time schedule. The County at its discretion shall be responsible for providing management of its resources and will ensure the availability of sufficient CHS/ staff and resources to meet the goals and time schedule agreed to after award of the contract.

The Contractor will work closely with the Project Director to jointly develop and maintain a detailed overall project plan and timeline.

In consultation with the Contractor, the Project Director will establish the order and calendar for implementing the EHR system solution in CHS. The Contractor will be responsible for implementing the application using a phased approach in the order and time schedule agreed upon by the Project Director.

2.0 Statement of Work

This Statement of Work defines the scope of work to be accomplished by BCA under the terms and conditions of contract 06113-RFP *between MC-CHS and BCA (contract)*. The tasks to be performed by BCA are defined and an estimated schedule is provided. In addition, the responsibilities of MC-CHS are listed.

Changes to this Statement of Work will be processed in accordance with the procedure described in Appendix B, "Project Change Control Procedure." The investigation and the implementation of changes may result in modifications to the Estimated Schedule, Charges, or other terms of this Statement of Work.

The following appendices are incorporated in and made part of this Statement of Work:

- Appendix A, "Deliverable Guidelines"
- Appendix B, "Project Change Control Procedure"
- Appendix C, "BCA PEARL Applications"
- Appendix D, "BCA PEARL Software Modules"
- Appendix E, "BCA PEARL Software Modules' Product Description"

- Appendix F, “BCA PEARL Software Modules’ Responses to MC-CHS RFP
- Appendix G, “Recommend Hardware Equipment Configuration and Operating System Software”
- Appendix H, “Third Party Software List”
- Appendix I, “BCA Work Plan”
- Appendix J, “Customization Services for Task 7”
- Appendix K, “Interface Development”
- Appendix L, “MC-CHS Licensed Sites”
- Appendix M, “MC-CHS Personnel Roles and Responsibilities”
- Appendix N, “BCA Project Personnel Roles and Responsibilities”
- Appendix O, “Warranty Support Services and Hours”
- Appendix P, “PEARL Standard HL7 Transactions”

2.1 Key Assumptions

This Statement of Work is based on the following key assumptions. Deviations that arise during the proposed project will be managed through the procedure described in Appendix B, "Project Change Control Procedure."

BCA Assumptions

1. Maricopa will provide the data center in Phoenix to house the database servers using a Hybrid Application Service Provider (ASP) model. The hardware will be located on Maricopa premises and will be operated and maintained by Maricopa County personnel. BCA will provide all systems and database administration remotely by BCA personnel. BCA will provide all BCA systems and database administrative personnel necessary for operations and maintenance of operating system and Oracle database, including DBA services, via remote connectivity to BCA’s Dalton Data Center.
2. The MC-CHS network system environment will have the connectivity needed for BCA to access all licensed sites from outside the MC-CHS network.
3. The pricing for this project is based on number of inmates/average daily population of 9,900. This number will be reviewed annually and may be adjusted if there is an increase in the average daily population for the previous year.

4. The MC-CHS network Maricopa system environment will have the communications capacity needed for the BCA PEARL System to operate at MC-CHS acceptable speeds.
5. MC-CHS, with the support of BCA consultation, will be responsible for providing and supporting the network and communication environments needed to support the implementation, deployment and support of the BCA solution.
6. MC-CHS will provide security clearance access to BCA and other third party suppliers needed to provide the support to MC-CHS and required by this agreement to meet specified performance metrics.
7. The Wide Area Network (WAN) will be fully implemented at all sites prior to the implementation of PEARL at those sites.
8. Site preparation from the standpoint of electrical, WAN and physical connectivity will be provided by MC-CHS, with the exception of Cisco Routers & data circuits connecting the MC-CHS WAN to the Dalton Data Center, or other BCA locations as needed.
9. MC-CHS will be responsible for the site preparation needed to bring all sites online.
10. BCA will execute all 3rd Party Agreements and pass through to MC-CHS.
11. MC-CHS will acquire the equipment, including servers and dictation devices, and transcription per line charge, necessary to implement and operate the Dictaphone solution, from BCA under a separate order.
12. BCA will not be responsible for delays in the completion of the project beyond BCA's control, including those caused by MC-CHS. This will be handled as part of the contract boilerplates.
13. Work related travel will be suspended on or about the 15th of December and will commence the 1st week of January 2008, in recognition of the holidays.
14. The project scope will only include the implementation of the BCA PEARL EMR modules outlined in the Product Description section of BCA's response.
15. MC-CHS will appoint a Project Director who will coordinate activities with the BCA Project Manager. The MC-CHS Project Director will be the primary point-of-contact for the BCA Project Manager, or his, or her, associates.
16. The training plan includes End User and System Administrator training.

17. The County shall have the option to obtain or lease equipment through its existing vendor contracts, or may choose to obtain or lease equipment through BCA.
18. Project milestones are included in Exhibit B-3.
19. All interface programs will be direct or through an interface engine. The standard format will be HL7, unless noted in the design document.
20. Interfaces will be real time except as may be specified in individual design documents. 3rd Party Vendors must support Real-Time transactions and pass messages through the interface engine.
21. The main server will be located in the Maricopa County Data Center using a Hybrid ASP model.
22. Training and Testing will take place in Phoenix in a facility provided by MC-CHS, and at BCA Data Center facilities.
23. BCA will provide an agreed to number of Training hours see Exhibit A. Additional hours are not covered under the Scope of the Project and will be handled as a Project Change if needed.
24. Travel and lodging expenses shall not exceed \$231,000. BCA will follow the Maricopa County Contractor Travel Policy Exhibit C. If contractor is unable to find lodging within the policy guidelines, they shall work with Maricopa County to find suitable lodging.
25. BCA will assist in the verification, support, and validation of the “To Be” processes from the Weekly Workshops.

MC-CHS Assumptions

26. MC-CHS personnel who will be assigned to this project will have the technical and business operations skills necessary to participate in the BCA PEARL project.
27. MC-CHS will designate and authorize one or more persons who work at or support the various sites to function as site coordinators responsible for supporting the survey and installation activities. These individuals will be qualified to perform these tasks and be available to the BCA project team as needed.
28. MC-CHS will provide the BCA project team with security badges and other IDs to allow as much freedom of movement within facilities as possible.
29. MC-CHS will schedule, manage, and lead meetings and workshops from time to time as necessary. MC-CHS will provide BCA with notes and documentation from each session.

30. MC-CHS will be responsible for entering and maintaining the tables that support the PEARL EHR.
31. MC-CHS will order, receive, assemble, and test the hardware devices used in conjunction with this Project.
32. MC-CHS will make available all personnel and other resources, including 3rd party hardware, software and support services needed for BCA to develop the interfaces.

BCA and Subcontractor Personnel

33. Products and services provided under this Statement of Work will be performed at MC-CHS's facilities in Maricopa County".
34. Some BCA contract-related activities on this project may be performed on BCA premises. The time spent on these contract-related activities will be considered part of this project and will be billed to this project. BCA will provide in writing to MC-CHS a detailed description of all contract related work completed and considered part of this project
35. Part of the products and services will be performed or provided by BCA approved Third Parties. BCA will provide in writing to MC-CHS a detailed description of all Third Party related work completed and considered part of this project.
36. BCA will provide services under this Statement of Work during normal business hours, Monday through Friday, except BCA holidays and as specified in Section 2.0 of this SOW.

Exclusions from this Statement of Work

37. Management of any network services, other than connectivity to the BCA Data Centers, is not included in this Statement of Work. BCA will be responsible for response times associated with BCA's responsibilities included in the contract (exhibit B-4) and will not be responsible for response time attributed to the MC-CHS Network.
38. LAN (Local Area Network) administrative tasks associated with the creation and maintenance of user accounts and passwords are not included in this Statement of Work.
39. Installation and testing of LAN (Local Area Network) cabling at the central sites and at the remote sites are not included in this Statement of Work.
40. Formal training in supporting technology (such as Microsoft 2003 Server, or Microsoft XP Workstation, Oracle, Crystal Reports, etc) is not included in this Statement of Work.
41. Installation of the network's connectivity and other equipment to remote sites is not included in this Statement of Work. The network connectivity

and other equipment will be installed and operational at each remote site prior to the installation and deployment of PEARL.

42. Conversion of existing MC-CHS data is not included in Appendix I, “BCA Work Plan”, and is not included in this Statement of Work.

2.2 BCA Responsibilities

Task List - System Implementation Services

Description: The objective of this Project is to provide implementation services needed to manage, design, develop, train, test, document and deploy the new MC-CHS EHR, as described in Appendix I “BCA Work Plan”. The system will be deployed at all MC-CHS licensed sites as specified in Appendix L “MC-CHS Licensed Sites”. The approach will be to transfer knowledge to the appropriate group of MC-CHS staff who will be identified during the planning phase, and provide maintenance and BCA Pearl Hybrid ASP Services thereafter. BCA trainers will conduct initial end user training.

The following categories of the BCA Work Plan will be performed:

Please see Exhibit B-1 for a detailed listing of the Statement of Work and Related Deliverables related to tasks 1 through 18.

Task 19 – BCA PEARL Warranty and On-Going Maintenance Support

Description: The objective of this task is to provide MC-CHS with Warranty and PEARL Software License, Maintenance and Support Services as defined in the Software Maintenance and Support Agreement. The PEARL Warranty period will begin upon the execution of the Contracts, by both parties, and shall end 90 days after first productive use, and assumes that the BCA Maintenance Agreement is in effect prior to the start of this task. After the 90 day warranty period expires, the standard BCA Maintenance Agreement will provide system support.

The BCA PEARL Warranty and Software Maintenance and Support Services will cover all original PEARL Software Modules, Programs and Functionality licensed and provided to MC-CHS by BCA as part of this contract. Coverage shall be provided 24 hours per day 365 days per year. Monday thru Friday, from 8:30 a.m. to 5:30 p.m. Arizona Time coverage will be provided by a staffed help desk. Other hours during the day or night, weekends and holidays are covered under this contract as on-call hours, where the Help Desk will automatically forward to on-call personnel using pager, phone, or e-mail during those hours. This task **does not** cover support of any equipment, third party software or other BCA software products not licensed under this contract. The sub-tasks are:

- Repair all PEARL Software programming errors
- Provide Help Desk Support
- Provide new release updates and enhancements to the licensed programs

Completion: This task will be complete upon the end of the term of this contract.

Deliverables: The BCA PEARL Monthly Maintenance Status Reports.

Task 20 – Ongoing Hybrid ASP Services

Description: The objective of this task is to provide MC-CHS with Hybrid Application Support Provider (ASP) Support Services as defined in the BCA Application Support Services Provider Agreement. The Hybrid ASP Service will be immediately upon the execution of the Agreement between two parties. The agreement will remain in effect for the duration of the Agreement, consistent with the terms and conditions of this agreement.

The Hybrid ASP Support Services will cover all original PEARL Software Modules, Programs, and Functionality licensed and provided to MC-CHS by BCA as part of this contract. It will also cover all PEARL EHR features and functions developed and/or customized as part of this agreement. **Coverage shall be provided 24 hours per day 365 days per year. Monday thru Friday, from 8:30 a.m. to 5:30 p.m. Arizona Time coverage will be provided by a staffed help desk. Other hours during the day or night, weekends and holidays are covered under this contract as on-call hours, where the Help Desk will automatically forward to on-call personnel using pager, phone, or e-mail during those hours.** This task does not cover support of any equipment, third party software, or other BCA products not sold or licensed under this contract. Hosting of the system, IT network or telecommunication support is not covered under this contract, except as described here in.

Subtasks are:

- Provide Database Administrative Services
- Provide System Administrative Services
- Provide Help Desk Support Services

Completion: The task will be complete upon the end of the terms of this agreement.

Deliverables: The BCA PEARL Monthly Status Report

2.3 MC-CHS Personnel Roles & Responsibilities-

The responsibilities listed in Appendix M are in addition to those responsibilities specified in section 2.3 and are to be provided at no charge to BCA. BCA's performance is predicated upon the following responsibilities being fulfilled by MC-CHS.

2.3.1 Office Space and Other Facilities

1. MC-CHS will provide suitable office space, office supplies, furniture, telephone and other facilities equivalent to those provided

to MC-CHS employees for the BCA project team while working Maricopa on MC-CHS premises at no charge to BCA.

2.3.2 Security and Laws

MC-CHS is responsible for the actual content of any data file, selection and implementation of controls on its access and use, and security of any relevant stored data.

MC-CHS will identify and make the interpretation of any applicable federal, state and local laws, regulations and statutes and insure that products of the system meet those requirements.

2.3.3 Required Consents

MC-CHS shall be responsible for promptly obtaining and providing to BCA all "Required Consents" necessary to BCA to access, use and/or modify software, hardware, firmware and other products used by customer for which BCA shall provide services described herein. A Required Consent means any consents or approvals required to give BCA and its subcontractors the right or license to access, use and/or modify (including creating derivative works) MC-CHS's or a third party's software, hardware, firmware and other products used by the customer without infringing the ownership or license rights (including patent and copyright of the providers or owners of such products).

MC-CHS agrees to indemnify, defend and hold BCA and its affiliates harmless from and against any and all claims, losses, liabilities and damages (including reasonable attorneys' fees and costs) arising from or in connection with any claim (including patent and copyright infringement) made against BCA alleged to have occurred as a result of the customer's failure "BCA shall be relieved of the performance of any obligations that may be affected by the customer's failure to promptly provide any Required Consents to BCA.

2.4 Estimated Schedule

These services are estimated to require approximately twelve (12) months for completion, not included maintenance support after the system has been put into productive use. The estimated Start Date is August 1, 2007, and the estimated GO Live date is July 31, 2008.

2.5 Completion Criteria

System Implementation: BCA shall have fulfilled its Systems Implementation obligations under this Statement of Work when any one of the following occurs:

- BCA accomplishes and MC-CHS has accepted the BCA System Implementation tasks described in 2.2, "BCA Responsibilities, Implementation Services"

- 60 days after first productive use
- MC-CHS or BCA terminates the Project in accordance with the provisions of the *contract* 4.6 and 4.7.

2.6 Cost Proposal

Charges: The pricing for the products and services represent the total funding requirement for BCA Product and Services as described in this Statement of Work (SOW) as outlined in Exhibit A.

The pricing structure has been developed, with certain minimum and maximum quantities of hardware, software and services, as outlined in Exhibit A, to be purchased by MC-CHS. Deviation from the Statement of Work will result in changes to the pricing structure and charges, and will be managed through the Project Change Control Procedures described in Appendix B.

BCA will submit an invoice monthly for products and services provided during the previous month. Terms of payment for the monthly invoices are net 30 days.

Appendix A – Deliverables Guide Line

Refer to Exhibit B-1 for a detailed list of deliverables associated with Tasks 1 through 18 and Exhibit B for deliverables associated with all other tasks.

Appendix B. – Project Change Control Procedure

- A Project Change Request (PCR) will be the vehicle for communicating change. The PCR must describe the change; the rationale for the change and the effect the change will have on the project.
- The designated Project Director/Manager of the requesting party will review the proposed change and determine whether to submit the request to the other party.
 - Both Project Managers will review the proposed change and evaluate it as follows:
 - ▲ Assess the benefits of proposed change
 - ▲ Assess the relationship of proposed change with the statement of work
 - ▲ Assess the pricing associated with the proposed change
 - ▲ Assess the impact to overall project schedule
 - ▲ Recommend or reject the incorporation of change into the Statement of Work

- A written Project Change Authorization must be approved and signed by both parties to authorize implementation of the proposed changes.
- The BCA Project Manager will maintain a log of all changes proposed by BCA and all change requests received from MC-CHS. This log will catalog the dates and activities associated with the review and outcome of each proposed change.

Appendix C – BCA PEARL Applications

The following is a list of BCA PEARL software modules that are licensed to MC-CHS under this Statement of Work and the related agreements:

Licensed Programs:

PEARL EMR

Appendix D – BCA PEARL Application Software Modules

The following are function lists of the BCA PEARL software modules licensed to MC-CHS under this Statement of Work and the related agreements:

- **Appointment Scheduling**
- **Registration**
- **Medications**
- **Orders**
- **Lab Results (must be interfaced)**
- **Vitals**
- **Reminders**
- **Document System (E-mail, NoteBuilder, Scanning, Transcription, Chart)**
- **Result Entry**
- **Physician Daily Orders**
- **Administrative Function Menu**
- **Charge Master**
- **Pharmacy**
- **Modifications and Customizations as Outlined in this SOW**

Appendix E – BCA PEARL Application Software Product Descriptions

The following are product descriptions of the BCA PEARL software modules licensed to MC-CHS under this Statement of Work and the related Agreements (See Exhibit D).

Appendix F – BCA PEARL Applications Software Capabilities

(See Exhibits B-5 and D-1)

Appendix G – Hardware Equipment Configuration and Operating System Software

The following is the recommended configuration of the Image Server Hardware Configuration, Software Operating System and Support Components provided by BCA to MC-CHS under this Statement of Work and related Agreements: (THIS LIST WILL CHANGE AS BCA ANALYSES THE COUNTY OPERATIONS).

Pearl Image Server

HP ProLiant DL360 Servers running Windows 2003

Each DL360 server includes:

2-Intel Xeon 3.0 GHZ, 2MB Cache Processors

*Upgradeable to 2-3.6 GHZ processors

-2 GB REG PC-2 memory

*Upgradeable to 12GB memory

1-Standard windows keyboard

1-Logitech PS/2 mouse

1-17” Rack mount monitor

2-73GB 15K RPM Ultra 320 SCSI HDD

*Upgradeable to 2-300GB (max) HDD's

1-Integrated Array Controller in a RAID 1 drive set

1-Dual Onboard NIC

1-24X IDE CD ROM

1-Redundant Power Supply

1-HP UPS R1500

1-HP 5642 Rack Cabinet Assembly

6 years H/W support

Application/Data Base Support Service

Pearl Migration Server

1- HP ProLiant DL360 Server running Windows 2003

This PowerEdge server includes:

-Intel Xeon 3.0 GHZ, 2MB Cache

*Upgradeable to 2-3.6 GHZ processors

-2 GB REG PC-2 memory

*Upgradeable to 12GB memory

1-Standard windows keyboard

1-Logitech PS/2 mouse

1-17" Rack mount monitor

1-73GB 15K RPM Ultra 320 SCSI HDD

*Upgradeable to 2-300GB (max) HDD's

1-Integrated Array Controller

1-Fiber Channel Adapter

1-Onboard NIC

1-24X IDE CD ROM

1-Redundant Power Supply

6 years H/W support

Pearl Workstations

Desktops running Windows XP Professional SP2

Microsoft Office 2003 Basic

Microsoft Software Assurance

Intel Pentium4 2.80 GHZ processor—533 MHZ front side bus

1 GB DDR SDRAM

1-40 GB PATA 7200 RPM HDD

1-48X CD-ROM

1-17" HP v7650 Flat-face monitor

1-Standard windows keyboard

1-PS/2 mouse

1-Belkin Surge Protector

6 years H/W support

HP LaserJet Printers

HP LaserJet 5100 Series Printer

Fujitsu Scanners

Fujitsu Scan Partner 620C

Kofax Adrenaline Imaging Cards

Zebra Bar Code Printers

RightFax Solution

WAN/LAN Solution

Appendix H – Third Party Software List

The following is a list of Third Party Software Products provided by BCA to MC-CHS under this Statement of Work and related Agreements:

No agreements are required for use of these 3rd party systems.

- First Data Bank
- Oracle Database Management Software – A Run Time Version
- Kofax Adrenaline Imaging Software
- RightFax Solution Software
- Crystal Reporting Software
- Zebra Bar Coding Scanning Software

Appendix I – BCA Specific Project Plan

(See Exhibit B-2)

The following is a list of implementation services BCA will provide in support of this project and under this Statement of Work and other related agreements:

Implementation Services:

- Implementation Services

- Project Management
- Develop Infrastructure
- Build Support Tables
- Interface Development
- Training
- On-Site Support
- Developmental Services

Hardware and 3rd Party Software Installation

Assist in installation and configuration of data base server
 Assist in installation and configuration of image servers
 Assist in installation and configuration of scanners
 Install Crystal Reporting Software
 Assist in installation of Zebra bar code scanning system
 Install 3rd party software listed above in Appendix “H”

Appendix J – Customization Services for Task 7 (optional)

Please see the attached page marked Appendix “J” below for the detailed list of proposed customization services and the estimates to produce

Appendix J - Detailed Customizations List

Line #		Estimated Hours
48	Provide online tickler file for automatic clerical follow-up with specific clients and/or services (i.e. if patient address changes, message “check guarantor address”.)	60
109	Scoring capabilities to build T-scores, percentiles, and other mathematical algorithms against the responses.	96
110	Customizable online help to guide the client in filling out the assessment/survey.	40
115	Provide the ability to build self-scoring specific Assessment templates for example: speech and language; self care; cognitive functioning; abnormal involuntary movements; nursing; educational functioning; psychological; neurological; general physical hea	120
330	Improper order in scheduling sequential interventions.	120
376	Provide option of visual or auditory alarm which requires a response on receipt of STAT, ASAP, timed orders, or special instructions	80
399	Allow scheduling of a test (procedure) when ordering. Notify provider (where test is scheduled) so time and date may be verified. Provide automatic feedback of verification to ordering area.	80

434	Ability to Lock Out Ordering (e.g. ARNP not able to order medications for himself).	120
581	Incorporate Risk assessments (e.g. clinical calculators).	144
682	Support purging (i.e. archiving) of system data, as defined by department	240
718	Color indicators are provided on patient list screens as defined above, which indicate new, abnormal, or critical data and the data is easily accessible	80
720	Provide online access both locally and remotely via the Internet to one or more databases (e.g., Medline) of bibliographic information.	48
767	Use Logical Observation Identifier Names and Codes (LOINC).	96
770	Use National Council for Processing Prescription Drug Programs (NCPDP).	96
774	Use another recognized vocabulary source.	96
776	Relationships between Code Sets clearly defined.	96
779	Supports static/dynamic data element relationships	96
780	Accommodate new, unforeseen codes, data elements	96
781	Ability to Recognize Semantic Differences (e.g. Heart and Cardiac).	96
791	Offer medical & mental health diagnosis decision matrix that addresses continuity of interventions in treatment planning.	144
807	Ability to Conference (i.e., chat) on-line.	200
841	Designated users can not be signed on to more than one PCI (device) at a time	80
848	Ability to process files from Human Resources system for terminated employees, and automatically turns off access.	240
859	Alert simultaneous users of each other's presence on the same record.	80
872	User is able to identify where the current display is in the whole record (e.g. site map).	80
905	Critical fields have on-line Help (data dictionary name and codes) for easy reference and look-up	120
921	Ability to link notes with problems by patient.	180

965	Ability to generate report of all lab tests by laboratory technician	40
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TOTAL

3064

HOURS

Customizations of 3,064 hours at \$125.00 per hour = \$383,000
 Cost included in pricing shown on, Section 5.0
 These are estimated hours, actual hours may vary once specifications are available. The total number of customization hours will not exceed cost estimates provided in Exhibit A, regardless of the tasks completed.

Appendix K – Interface Development List

The following is a list of interfaces BCA will develop in support of this project and under this Statement of Work and other related agreements:

Interfaces Descriptions:

- Jail Management System Interface
- Diamond Pharmacy two way med orders and results interface
- SonoraQuest Lab Two way laboratory orders and results interface
- IRIS Scan (Identex) Interface
- Dictaphone Transcription Interface
- Digital X-Ray System Image interface

Appendix L – MC-CHS Licensed Use

BCA PEARL Software under this Statement of Work is based on the number of inmates and may be used at any MCSO jail facility

Appendix M – MC-CHS Personnel Roles and Responsibilities

The following describes the roles and responsibilities of the MC-CHS project personnel needed to support of this project, Statement of Work and other related agreements:

Maricopa County Project Personnel, Roles and Responsibilities

1. Project Director: The MC-CHS Project Director is responsible for directing the BCA Project Manager and who has the authority to act for MC-CHS in all aspects of the contract. Together the MC-CHS Project Director and the BCA Project Manager are responsible for the overall success of the project. The MC-CHS Project Director responsibilities include:

- Directing the BCA Project Manager.

- Communicating with BCA daily, or as needed, to review progress, answer questions, help resolve problems, and communicate MC-CHS decisions to BCA.
 - Leading weekly project status reviews and providing direction to BCA during the project.
 - Reviewing monthly project status reports, coordinating and leading monthly project status meeting and providing direction to BCA as needed.
 - Communicating project status to MC-CHS upper management and providing BCA feedback as needed.
 - Coordinating the MC-CHS resources as needed to support the timely implementation and delivery of the project tasks.
 - Accepting the delivery of BCA project tasks and approving the continuation of the project after reaching major milestones.
 - Initiating and elevating problems, concerns or unresolved issues to BCA upper management as needed.
 - Serve as the interface between the BCA project team and all MC-CHS departments participating in this project.
 - Select the staff for the MC-CHS implementation team.
 - Assign duties and responsibilities for each MC-CHS team member.
 - Assist in developing the implementation schedule.
 - Assist in developing a schedule for data entry.
 - Identify staff to be trained for each location and coordinate site implementation schedule.
 - With the BCA Project Manager, administer Project Change Control.
 - Attend project status meetings.
 - Obtain and provide information, data, decisions and approvals, within three (3) working Maricopa days of BCA's request unless MC-CHS and BCA agree to an extended response time. All extensions will be documented in writing and signed by both MC-CHS and BCA.
 - Help resolve project issues and escalates issues within the MC-CHS organization, as necessary.
 - Facilitate and manage the Weekly Workshops and provide regular reports.
2. Site Coordinators: are responsible for facilitating security clearance and escorting BCA project personnel within the JHS sites identified in Appendix L.
3. Interface Lead: The MC-CHS Interface Lead shall be responsible for insuring that all MC-CHS interfaces are designed, programmed, tested, and properly functioning in a timely manner to support the timely delivery of the tasks outlined in the final project plan, and revisions. The MC-CHS Interface Lead shall support the MC-CHS Project Director.
4. Operations Manager: The MC-CHS Operations Manager is responsible for providing an understanding of MC-CHS's healthcare delivery system,

including the current organization structure, policies, procedures, physical facilities, and workflow, understanding BCA recommendations and advising the Project Director to the most suitable overall policies and procedures for MC-CHS going forward. The MC-CHS Operations Manager shall support the MC-CHS Project Director and shall be responsible for:

- Providing documentation and communicating MC-CHS's overall operations policies and procedures concerning the delivery of healthcare to its Patients.
- Reviewing BCA proposed policies, procedures and workflow recommendations with the implementation of the new system.
- Providing direction to BCA concerning the optimum workflow to support MC-CHS once the new system is installed.

5. Appointment Scheduling Lead(s): The MC-CHS Appointment Scheduling Lead shall be responsible for providing an understanding of MC-CHS's current appointment scheduling policies and procedures, understanding BCA recommendations and advising the Project Director of the most suitable set of appointment scheduling policies and procedures for MC-CHS going forward. The MC-CHS Appointment Scheduling Lead(s) shall also be responsible for:

- Coordinating the availability of appointment scheduling personnel to be trained.
- Being trained to use the BCA appointment scheduling system.
- Assisting with training appointment scheduling personnel.
- Leading the testing of the BCA appointment scheduling system.
- Supporting the conversion tasks for converting to the BCA appointment scheduling system.

6. Inmate Intake and Registration Lead(s): The MC-CHS Patient Intake and Registration Lead shall be responsible for providing BCA with an understanding of MC-CHS's current patient intake and registration policies and procedures, understanding BCA recommendations and advising the Project Director of the most suitable set of policies and procedures for MC-CHS going forward after the new system is installed. The MC-CHS Patient Intake and Registration Lead(s) shall also be responsible for:

- Coordinating the availability of patient intake and registration personnel to be trained.
- Being trained to use the BCA patient intake and registration system.
- Assisting with training patient intake and registration personnel.
- Leading the testing of the BCA patient intake and registration system.
- Supporting the transition tasks of converting to the BCA patient intake and registration system.

7. Case Management Lead(s): The MC-CHS Case Management Lead shall be responsible for providing an understanding of MC-CHS's current case management policies and procedures, understanding BCA's recommendations and advising the Project Director of the most suitable set of case management policies and procedures for MC-CHS going

forward after the new system is installed. The MC-CHS Case Management Lead(s) shall also be responsible for:

- Coordinating the availability of case management personnel to be trained.
- Being trained to use the BCA EHR system.
- Assisting with training case management personnel.
- Leading the testing of the BCA EHR system.
- Supporting the conversion tasks of converting to the BCA case management system.

8. Clinical Personnel Coordinator (s): The MC-CHS Clinical Personnel Coordinator shall be the primary liaison between the HER and clinical personnel. The MC-CHS Clinical Personnel Coordinator shall be responsible for:

- Coordinating communications with the providers and clinical staff.
- Coordinating training and providing system overviews for the providers and clinical personnel.
- Gathering important clinical information to establish rules and data base support files and tables, needed to build and maintain the HER.
- Coordinating the development of provider/department forms.
- Coordinating and establishing provider schedules, absent periods, workload standards, and other similar provider information needed.

9. Clinic Services Lead (s): The MC-CHS Clinic Services Lead (s) shall be responsible for providing an understanding of MC-CHS's current clinic services policies and procedures, understanding BCA's recommendations and advising the Project Director of the most suitable set of clinic services policies and procedures for MC-CHS going forward after the new system is installed. The MC-CHS Clinic Services Lead (s) shall be responsible for:

- Coordinating the availability of clinic services personnel to be trained.
- Being trained to use the BCA clinic services system.
- Assisting with training clinic services personnel.
- Leading the testing of the BCA clinic services system
- Supporting the transition tasks of converting to the BCA clinic services system

10. Triage and Treatment Services Lead (s): The MC-CHS Triage and Treatment Services Lead (s) shall be responsible for providing an understanding of MC-CHS's current triage and treatment services policies and procedures, understanding BCA's recommendations and advising the Project Director of the most suitable set of triage and treatment services policies and procedures for MC-CHS going forward after the new system is installed. The MC-CHS Triage and Treatment Services Lead (s) shall be responsible for:

- Coordinating the availability of Triage and Treatment services personnel to be trained.

- Being trained to use the BCA Triage and Treatment services system.
 - Assisting with training Triage and Treatment services personnel.
 - Leading the testing of the BCA Triage and Treatment services system
 - Supporting the transition tasks of converting to the BCA Triage and Treatment services system
11. Infirmery and Intense Medical Management Lead (s): The MC-CHS Infirmery and Intense Medical Management Lead (s) shall be responsible for providing an understanding of MC-CHS's current Infirmery and Intense Medical Management services policies and procedures, understanding BCA's recommendations and advising the Project Director of the most suitable set of Infirmery and Intense Medical Management services policies and procedures for MC-CHS going forward after the new system is installed. The MC-CHS Infirmery and Intense Medical Management Lead (s) shall be responsible for:
- Coordinating the availability of Infirmery and Intense Medical Management services personnel to be trained.
 - Being trained to use the BCA Infirmery and Intense Medical Management services system.
 - Assisting with training Infirmery and Intense Medical Management services personnel.
 - Leading the testing of the BCA Infirmery and Intense Medical Management services system
 - Supporting the transition tasks of converting to the BCA Infirmery and Intense Medical Management services system
12. Pharmacy and Medication Admin Services Lead (s): The MC-CHS Pharmacy and Medication Admin Services Lead (s) shall be responsible for providing an understanding of MC-CHS's current Pharmacy and Medication Admin Services policies and procedures, understanding BCA's recommendations and advising the Project Director of the most suitable set of Pharmacy and Medication Admin Services policies and procedures for MC-CHS going forward after the new system is installed. The MC-CHS Pharmacy and Medication Admin Services Lead (s) shall be responsible for:
- Coordinating the availability of Pharmacy and Medication Admin Services personnel to be trained.
 - Being trained to use the BCA Pharmacy and Medication Admin Services system.
 - Assisting with training Pharmacy and Medication Admin Services personnel.
 - Leading the testing of the BCA Pharmacy and Medication Admin Services system
 - Supporting the transition tasks of converting to the BCA Pharmacy and Medication Admin Services system
13. Health Information Management Lead (s): The MC-CHS Health Information Management Lead (s) shall be responsible for providing an

understanding of MC-CHS's current Health Information Management policies and procedures, understanding BCA's recommendations and advising the Project Director of the most suitable set of Health Information Management Services policies and procedures for MC-CHS going forward after the new system is installed. The MC-CHS Pharmacy and Health Information Management Lead (s) shall be responsible for:

- Coordinating the availability of Health Information personnel to be trained.
- Being trained to use the BCA Health Information Management system.
- Assisting with training Health Information personnel.
- Leading the testing of the BCA Health Information Management system
- Supporting the transition tasks of converting to the BCA Health Information Management system

14. System Administrator(s) and PEARL Security Officer: The MC-CHS System Administrator and PEARL Security Officer are responsible for general Table Load Maintenance and supporting the PEARL system's application level security, including chart and screen level security. These duties include:

- Establishing and maintaining the MC-CHS production, testing and training environments,
- PEARL User creation and maintenance.
- Entering and maintaining data base table content (Table Loads)
- Primary contact for managing and coordinating End User Training
- Document system workflow
- Manage 1st Level Support and act as primary contact for BCA Help Desk
- Managing the reporting environment,
- Establishing and maintaining the user environment, password security, user and workstation identification, etc.

15. Training Coordinator: The MC-CHS Training Coordinator trains the users how to use BCA software products, modifications and enhancements. The Training Coordinator are responsible for working with BCA to develop MC-CHS specific training material and handouts, helping to establish and equip training facilities, planning and scheduling training courses and train the users how to use the software systems that they acquire from BCA and implement in their Practices. In addition, BCA Trainers are responsible for understanding Customer system requirements, operational policies and procedures and user expectations of the knowledge to be gained from BCA training programs. The BCA Trainers are responsible for leading BCA testing efforts, developing customer specific user manuals and providing onsite support immediately before, during and after the BCA product is put into production. The BCA Trainers responsibilities include:

- Reviewing Customer internal policies and procedures,

- Understanding user requirements,
- Developing training materials,
- Developing training curriculums,
- Assisting in establishing training facilities,
- Determining training equipment needs and monitoring the delivery and installation of training equipments,
- Developing and publishing detail training plans and schedules,
- Training,
- Leading and supporting testing efforts,
- Participating in the conversion task,
- Providing onsite support, and
- Providing Customer support after implementation and Customer acceptance.

Testing and QA Lead

MC-CHS is responsible for providing test data, in the appropriate format, to BCA **so that testing for the interface validation programming can be performed.**

2.7 Network Lead

- MC-CHS systems or communications environment
- MC-CHS LAN and WAN
- MC-CHS naming conventions and network standards
- MC-CHS network addresses, machines names, and machine personality information for each server and PC to be deployed
- MC-CHS is responsible for the completion of the installation of LAN (Local Area Network) and WAN (Wide Area Network) services to connect all remote sites to the Nashville Data Center.
- MC-CHS is responsible for providing BCA a specification concerning its Server Naming Schema.
- MC-CHS is responsible for providing BCA a set of specifications concerning its Network Management System.
- MC-CHS is responsible for providing a TCP/IP Addressing Schema. This includes furnishing specific addresses for the network devices requiring addresses for each remote site according to the project schedule. This includes furnishing remote sites subnet numbers, subnet masks; default gateway addresses, and Wins, DHCP, and DNS services information.
- MC-CHS is responsible for the management system for tracking Maricopa and maintaining the assignment of TCP/IP network addresses.

- MC-CHS is responsible for providing any tools or test equipment deemed essential for troubleshooting or for performing diagnostics on the network Maricopa systems deployed in this project.
- Ordering, receiving, testing and installing equipment, hardware, software and communication resources as needed and consistent with the project plan.
- Advising the MC-CHS Project Director and the BCA Project Manager of the best technology solutions available to support the system infrastructure in the MC-CHS environment.
- Coordinating disaster recovery services as needed.

2.8 Desktop Lead

- MC-CHS existing applications
- MC-CHS will provide the workstations and printers at the remote sites and at the central site, which are required to operate PEARL. MC-CHS will allow the loading of the client software on the workstations that are required to operate the PEARL application.
- Ordering, receiving, testing and installing equipment, hardware, software and communication resources as needed and consistent with the project plan.
- Advising the MC-CHS Project Director and the BCA Project Manager of the best technology solutions available to support the system infrastructure in the MC-CHS environment.

2.9 Other MC-CHS Personnel

MC-CHS is responsible for Maricopa to make available appropriate personnel to provide assistance to the BCA project team, should requirements or questions arise. MC-CHS personnel will be provided on a timely basis so as not to cause project delays.

2.10 Additional Responsibilities

1. MC-CHS is responsible for providing the necessary space and environment for BCA PEARL user training.
2. MC-CHS is responsible for providing the image server hardware and software, printers, scanners, network interface equipment and the connectivity necessary to support their site requirements, should they elect not to purchase hardware from BCA.
3. MC-CHS is responsible for providing a central and adequate facility to receive setup, configure and test the equipment and system.

4. MC-CHS is responsible for the arrangements and payments for shipping of hardware (PC Workstations, Servers and Peripherals) from the central facility to the remote sites within the framework of the project plan.
5. MC-CHS is responsible for the coordination of availability of staff, including necessary travel, to access the proposed training within the framework of the project plan.

Appendix N – BCA Project Personnel Roles and Responsibilities

The following describes the roles and responsibilities of the BCA project personnel that will support this project, Statement of Work and other related agreements:

BCA Project Personnel, Roles and Responsibilities

1. **Project Manager:** The BCA Project Manager is responsible for delivering our Customers Management Information System known as the PEARL EHR projects on time and within budget, and with a high level of quality, which meets or exceeds our Customers' expectations. The BCA Project Manager is BCA's primary representative and point of contact for our Customers, throughout the duration of the project. The BCA Project Manager has dual responsibilities and normally reports directly to the Customer's Project Director and a BCA Executive Level Manager. Together the BCA Project Manager and the Customer's Project Director are responsible for the overall success of the project. The BCA Project Manager is also responsible for:
 - Developing the project plan,
 - Managing all BCA project personnel and other resources,
 - Managing the cost of the project,
 - Managing timelines to insure that all project milestones are met,
 - Managing the process of change orders,
 - Resolving all project issues, problems and concerns that may arise, from time to time, during the course of the project.

The BCA Project Manager responsibilities also include:

- Communicating with the Customer's Project Director and other Customer personnel daily, or as needed, to review progress, answer questions, make recommendations, help resolve problems, and communicate the Customer's direction during the course of the project.
- Planning and scheduling and helping lead weekly project status reviews and providing direction to BCA as needed.
- Preparing monthly project status reports, planning and scheduling and participating in monthly project status meeting and implementing Customer directions.
- Communicating project status to BCA upper management and providing Customer feedback as needed.
- Directing BCA personnel resource availability as needed to support the timely implementation and delivering project tasks.

- Gaining Customer acceptance at major milestones and insuring ongoing continuity of the project to its planned conclusion.
 - Elevating problems, concerns or unresolved issues to BCA upper management as needed.
 - Providing Customer support after implementation and Customer acceptance.
2. Senior Systems Analyst: The BCA Senior Systems Analyst leads the development of BCA software products, modifications and enhancements. The Senior Systems Analyst is responsible for providing high-level technical support and consultation to BCA Project and Executive Level Managers. The BCA Senior Systems Analyst also communicates directly with Customer personnel to understand system requirements, information technology standards, operational policies and procedures and user expectations to be incorporated into BCA products, services and Customer projects. The BCA Systems Analyst is also responsible for leading BCA data conversion, system interfaces, system integration, customizations and other application software development efforts. The Senior Systems Analyst is responsible for supervising the efforts of other Programmers and Systems Analysts. The BCA Senior Systems Analyst responsibilities include:
- Reviewing Customer internal policies and procedures,
 - Understanding user requirements,
 - Developing and presenting system requirement documents,
 - Developing system designs,
 - Leading programming efforts,
 - Leading testing efforts,
 - Leading documentation efforts,
 - Developing security policies and procedures, and
 - Supporting training efforts,
 - Providing Customer support after implementation and Customer acceptance.
3. Systems Analyst/Programmer: The BCA Systems Analyst/Programmer develops BCA software products, modifications and enhancements. The Systems Analyst/Programmer is responsible for providing technical support and consultation to BCA Senior Systems Analyst and Project Managers. The BCA Systems Analyst/Programmer also communicates directly with Customer personnel, under the direction of the BCA Senior Systems Analyst or Project Manager, to understand system requirements, information technology standards, operational policies and procedures and user expectations to be incorporated into BCA products, services and Customer projects. The BCA Systems Analyst/Programmer is responsible for developing data conversions, system interfaces, system integration programs, customizations and other application software development efforts. The BCA Systems Analyst /Programmer responsibilities include:
- Reviewing Customer internal policies and procedures,
 - Understanding user requirements,

- Developing and presenting system requirement documents,
 - Developing system designs,
 - Programming efforts,
 - Testing efforts,
 - Developing documentation,
 - Understanding and implementing security policies and procedures, Supporting training efforts, and
 - Providing Customer support after implementation and Customer acceptance.
4. Trainers: The BCA Trainers train BCA Customers how to use BCA software products, modifications and enhancements. The Trainers are responsible for developing BCA standard training programs and customizing these programs to Customer specific requirements, as directed by the BCA Project Managers. The BCA Trainers are responsible for developing BCA training material and handouts, helping to establish and equip training facilities, planning and scheduling training courses and train the users how to use the software systems that they acquire from BCA and implement in their Practices. In addition, BCA Trainers are responsible for understanding Customer system requirements, operational policies and procedures and user expectations of the knowledge to be gained from BCA training programs. The BCA Trainers are responsible for leading BCA testing efforts, developing customer specific user manuals and providing onsite support immediately before, during and after the BCA product is put into production. The BCA Trainers responsibilities include:
- Reviewing Customer internal policies and procedures,
 - Understanding user requirements,
 - Developing training materials,
 - Developing training curriculums,
 - Assisting in establishing training facilities,
 - Determining training equipment needs and monitoring the delivery and installation of training equipments,
 - Developing and publishing detail training plans and schedules,
 - Training,
 - Leading and supporting testing efforts,
 - Participating in the conversion task,
 - Providing onsite support, and
 - Providing Customer support after implementation and Customer acceptance.
5. Network Engineer/Administrator: The BCA Network Engineer/Administrator designs, builds and supports data center and network infrastructure needed to support the operation of BCA systems. The Network Engineer/Administrator is responsible for providing technical support and consultation to BCA Senior Systems Analyst and Project Managers. The BCA Network Engineer/Administrator also communicates directly with Customer personnel, under the direction of the

BCA Senior Systems Analyst or Project Manager, to understand system requirements, information technology standards, operational policies and procedures and user expectations to be incorporated into BCA products, services and Customer projects. The BCA Network Engineer/Administrator is responsible for designing and developing data center facilities, wide area and local area networks and all user connectivity and peripheral equipment to network servers that support BCA systems. The BCA Network Engineer/Administrator responsibilities include:

- Reviewing Customer internal policies and procedures,
- Understanding user requirements,
- Developing and presenting network systems requirement documents,
- Developing network designs,
- Developing equipment lists,
- Managing the acquisition, delivery, installation, testing, deployment and support of network equipment,
- Testing,
- Developing network documentation,
- Understanding and implementing security policies and procedures,
- Supporting training efforts.
- Providing onsite support when needed, and
- Providing Customer support after implementation and Customer acceptance.
- Performing backup, and recovery, of data contained in the EHR.
- Maintaining and executing disaster recovery services as needed.
- Serves as BCA Security Officer.

6. Data Base Administrator(s): The BCA Data Base Administrator is responsible establishing, and maintaining, the database support files and tables, and insuring a high level of quality data is maintained, and providing database security at all times. The Data Base Administrator shall be responsible for:

- Entering and maintaining data base table content and structure.
- Providing data security as needed to protect the integrity of the data.
- Producing listing, report and audits as needed to control the data.
- Interface development and maintenance.
- Monitors database performance and activities.
- Performs data loads and conversions for customers.

7. Technical Writer:

Technical Writer: The BCA Technical Writer develops technical, user, and other documentation. Technical writers are responsible for developing technical and user manuals and other related materials. Technical writers are responsible for understanding BCA documentation standards, developing, editing, and publishing final documentation that is reflective of those standards as well as customer specific and project requirements. The BCA Technical Writer responsibilities include:

- Reviewing System Requirements

- Developing Requirements Documentation
- Developing Design Documents
- Developing Testing Materials
- Developing Training Materials
- Developing Deployment Planning Documentation
- Developing User Manuals

8. Application Specialists

Application Specialist: The BCA Application Specialist has in depth understanding of the features and functions of the PEARL EHR Application software system. Application Specialist are responsible for assisting customer setup the BCA PEARL EHR, testing, training, production environments, and provides support about how to develop PEARL parameters to customize PEARL to customer specific requirements and unique environment.

The BCA Application Specialist responsibilities include:

- Understanding customer requirements
- Assisting customer to establish Training, Testing, and Production Environment
- Setting up support tables and files
- Setting up security parameters
- Setting up user parameters

Appendix O – Warranty and Maintenance Support Services and Hours

The following describes the Warranty and Maintenance Support Services and the time these services will be provided to MC-CHS:

Warranty and Maintenance Support Services

Help Desk Support: As part of the Warranty and Maintenance Support Services BCA will provide help desk support to MC-CHS. Coverage shall be provided 24 hours per day 365 days per year. Monday thru Friday, from 8:30 a.m. to 5:30 p.m. Arizona Time coverage will be provided by a staffed help desk. Other hours during the day or night, weekends and holidays are covered under this contract as on-call hours, where the Help Desk will automatically forward to on-call personnel using pager, phone, or e-mail during those hours.

Software Repairs: BCA will provide software repairs to any of the programs and functionality licensed to MC-CHS under this statement of work and associated agreements. Software Repair services does not include hardware, network, communications or any third party software products. Third parties that are associated with this statement of work warranties and maintenance support is available to MC-CHS, and BCA will provide the second level of support, or will allow MC-CHS to work directly with the third party.

New Releases and Updates: New releases or updates to the BCA Software Product licensed to MC-CHS as part of this contract will be provided to MC-CHS at no additional charge as long as the Warranty period or the Maintenance support agreements remain in effect and undisputed balances owed to BCA by MC-CHS remain current.

Appendix “P” – System Acceptance and Testing

The objective of this appendix is to set forth the process by which the BCA PEARL System is to be formally accepted by MC-CHS and is working accurately as designed, and all issues have been resolved according to the Go-Live Escalation Process defined in Appendix Q.

TESTING AND IMPLEMENTATION

The Contractor shall provide the following:

Guidance and assistance in developing test cases that will assure that all requirements stated in the final contract are met and fully operational at go-live.

Guidance and assistance in developing test strategies, plans, and test cases to ensure that each module is ready for production and full operational at go-live.

Recommendations and assistance in establishing testing criteria and metrics so that the customer can measure and validate compliance of the product to the requirements in the final contract.

Recommendations and assistance in developing production application implementation standards.

Review and advise on all established user acceptance criteria for the production environments.

ACCEPTANCE

The following process will be used regardless of the system(s)

SYSTEM SOLUTION ACCEPTANCE

Project/System Completion Criteria/Deliverables

The criteria for the implementation of the Contractor’s software will be as follows:

Functional, integration, and stress acceptance testing at the unit, system, and enterprise level will be satisfactorily completed for each module/component, including employee self-service and electronic workflow.

Documentation of software features and functions and completion of the training plan for the end users and technical staff.

System interfaces are to be designed, developed, tested and implemented (internal as well as external), except for those that are not the responsibility of the Contractor.

Documentation will be provided on the system roll-out/initial go-live plan.

System initial go-live will be achieved on time and within the budget. The final go-live and acceptance will occur 60 days after the initial go-live. This 60 day period starting after initial go-live will be designated as the “break-in” period.

For Customer's Initial purchase or for the acquisition of the BCA PEARL System software product by MC-CHS .

1. Contractor shall provide for an initial acceptance test and validation period (the "test period") that commences after System Installation, Configuration, and Setup.
2. Installation shall be defined as:
 - a. the application software and database are installed on the related server(s) and/or personal computer(s); and
 - b. Pre-implementation Customer or technical training, if any, is completed.
3. Configuration and Setup shall be defined as
 - a. building all the System parameters for operating, for communicating, for access, for actions, etc.
 - b. building the Master, Look-up, and Rules tables that will form the foundation for the actual client medical records transactions to be processed against, and
 - c. providing and putting in the mapping and transformation criteria for data sharing between EHR and each individual connected external system interfaced.
4. During the Test Period, the parties shall determine whether the Software meets the published electronic documented requirements, for the business and technical listed features, functions, data, and integration ("Specifications"). A Requirements Traceability process will be established by the Contractor to allow the County to verify and validate that each requirement has been included and tested (meeting the operational levels defined), to create test cases for all requirements, and to use for final acceptance certification.
5. The Test Period shall be planned and scheduled to validate and certify that all specified RFP requirements have been satisfied. Once the Test Period is concluded and the Initial Acceptance is given, the solution will be given a status of Initial Go-Live
6. The Break-In Test Period will commence from Initial Go-Live and last 60 days. This 60 period will have the Contractor's system in a live operational production state where the County (MC-CHS) can use the system in their natural business processes and surroundings, and determine if there are any left-over anomalies.
7. The County is required to provide a formal written response to the Contractor for any discovered issues with the solution found during either the Initial Test Period or the Final 60 day Break-In Period. If the County fails to give the Contractor a

written deficiency statement within 30 days after the commencement of the Final 60-Day Test Period specifying how the software fails to meet the Specification (“Deficiency Statement”) the Software shall be deemed accepted upon the Final Go-Live Date.

8. If the County provides a Deficiency Statement within the time period stated immediately above, the Contractor shall have 60 days to correct the deficiency, and the County shall have an additional 60 days from the delivery and installation of the fix to evaluate the software.
9. If the Software does not meet the Specifications at the end of the second 60 day test period, the County may terminate this Agreement. Upon any such termination, the County shall return all software to the Contractor. The County will have no obligation to pay the Contractor for any services not performed by the Contractor or the final software payment which shall be equal to 20% of the license fee owed the Contractor. Neither party shall then have any further liability to the other for the products that were the subject of the Acceptance Test.

ACCEPTANCE CRITERIA - In order to insure that contractual requirements are met, an acceptance criterion as required.. The acceptance criteria located in the Acceptance Criteria Summary Table represent the major categories of criteria that will be developed by the County to measure the viability, reliability, and capability of the selected technology solution. Some properties will have 2 levels in their acceptance criteria, “precision requirements” or a “regular requirements”. The applicable acceptance criteria must be met in all material respects before any Acceptance Signoff and Final Payment are made.

TESTING. It is the responsibility of the Contractor and the County to identify each requirement as stated in the Final Contract, the Contractor and the County will create test cases and conduct through actual usage the proof of the Contractor solution satisfying those listed requirements. The application and technology environment will be inspected and tested by the County with the assistance of the Contractor. Recommendations of acceptance or rejection of the product will be based on these tests and furnished test reports. Failure of the County to notify the Contractor of an acceptance or a rejection within 60 calendar days after test conclusion shall be deemed as final acceptance by the County. Tests may be performed by the County without limitation either on test cases or data developed by the County or from tests performed and reported by the Contractor pursuant to the provisions of this contract. All testing and measurements are to be made against the Mandatory or Primary RFP requirements first, with Optional or Non-Mandatory requirements being second. **Note:** Some tests may need to be run more than once, either sequentially or in parallel. Sufficient testing will be accomplished to insure all products or modules are working individually and together before Final Acceptance will occur. For the testing, acceptance and implementation phases, the Contractor will provide

1. Guidance and assistance in developing test cases that will assure that all requirements stated in the RFP are met and fully operational at initial and Final Go-Live
2. Guidance and assistance in developing test strategies, plans and test cases to ensure that each module is ready for production and fully operational at initial and Final Go-Live
3. Recommendations and assistance in establishing testing criteria and metrics so that the customer can measure and validate compliance of the product to the requirements in the Final Contract.
4. Recommendations and assistance in developing production application implementation and operational standards.
5. Review and advise on all established user acceptance criteria for the production environments.

REJECTION. The Contractor will be notified in writing of any determination of the County contracting officer that the County has rejected some non-conforming products. The decision of the contracting officer shall be final and conclusive unless within 60 days from the date of receipt of said decision, the Contractor mails or otherwise furnishes to the contracting officer a written request for retesting of the allegedly deficient item(s). Such request must include specific rationale for the dispute along with supporting documentation such as the manufacturer's test data for each item in question. In the event of such request, the County Project Director and staff will perform a new retest. At the option of the County, the new test will be made on the representative unmet requirements by the appropriate test cases and data or through resubmission of retest and results by the Contractor/manufacturer.

- 1 If a requested retest confirms the original test results for the item rejected, the parties will use the results to determine if they wish to continue with the project, cancel the project, or seek damages from the other party according to contract terms.
- 2 If a requested retest does confirm the satisfaction of the requirement and related acceptance criteria, the project will continue as planned.

REMOVAL OF DEFICIENT ITEMS - If it is determined that the project is to be cancelled, due to mutual consent the Contractor will remove any and all technology from the County within 60 calendar days after receipt of notice of rejection and cancellation. The Contractor and County will return all data and documentation to the other party within the same time period. All County data in the possession of the Contractor must be completely disposed of according to County public record retention and Standards. Should the Contractor fail to furnish disposition instructions to the County within the 60 calendar day period specified above, the County shall charge the Contractor's account for storage and handling charges at the rate set forth by the County.

REPLACEMENT OF REJECTED ITEMS - Rejected items should be handled and replaced with working products within a reasonable period of time.

LATENT DEFECTS - Latent defects are defects discovered after acceptance. Any defect discovered after Initial GO-LIVE and before Final Go-Live (60 day period) will be formally communicated to the Contractor and corrected by the Contractor before Final Acceptance can occur and before Final Payment will happen. Any defect discovered after Final Go-Live and Final Payment, will be formally communicated to the Contractor and the Contractor (depending on the severity of the defect and its impact on the business operation) will correct the defect per the defect correction fix schedule set in the contract. Unsatisfactory performance are causes for rejection penalty or contract cancellation.

Completion: MC-CHS Project Manager will deliver a letter of acceptance.

Appendix Q – Customer Problem Reporting, Escalation and Resolution

Reporting:

Customers are responsible for reporting all incidences involving disputes between themselves and BCA as soon as possible after they are identified. Every attempt should be made by the Customer's staff and BCA's staff to resolve such disputes at the level at which they occur utilizing negotiation, compromise and corporation. BCA staff at the worker and intermediate management levels are trained and empowered to work with customers to resolve disputes quickly and fairly. BCA's historic experience reflects that a vast majority of disputes can be resolved at the level of their identification through the establishment of a well defined partnership between it and its customers.

Escalation:

Should a dispute not be resolvable at its level of first identification, it will be elevated to the BCA Vice President of Customer Relations for further consideration. The Vice President of Customer Relations has the authority, in concert with the Vice President of Technical Services to address and negotiate resolution of all disputes involving BCA's provision of Support and Technical Services to its customers.

If the dispute is not resolved at the Vice President Level, or the plan of resolution is unacceptable to the Customer's Executive Staff, then the dispute is elevated to the Senior Executive level of BCA where the Company's President and Chief Executive Officer become personally involved in negotiating an acceptable resolution.

BCA Dispute Resolution Policy

The parties would agree to a dispute resolution process which includes timelines and identifies an escalation process for dispute resolution between the representatives of both parties based on the Maricopa County Procurement Code Section MC1-906.

**CONFIDENTIAL DRAFT: FOR DISCUSSION PURPOSES ONLY.
06113 EXHIBIT B-1**

B-1 Task Number	Sub Task	B-1 Task Description	Deliverables to the County (New Field to be included B-1 by BCA)	B-2 BCA Workplan Ref No	B-2 Workplan Description	Time Frame (week # from start)	BCA Resource Type Assigned	BCA Hrs Committed	MC Resource Type Assumed by BCA	MC Hours Assumed by BCA	Comments/Notes
1		Project Management The objective of this task is to provide technical direction and control of BCA project personnel and to provide a framework for project communications, reporting, and procedural and contractual activity. BCA will appoint a qualified Project Manager to manage the BCA project resources who will interface directly with the MC-CHS Project Director. The key steps in this process are: - Developed High-level Project Plan - Developed detailed project plan and staffing - Setup methods of managing, supporting and communicating progress of this plan	Final project close-out status report, post go-live Other deliverables should include: - Detailed Project Plan with Work Breakdown Structure and Critical Path GANTT Chart - Risk Management Plan - Detailed document reflecting "Lessons Learned" - A set of indexed project records (all documentation created and distributed by the BCA PM) for archiving purposes - Final Application Specifications reflecting all customizations and modifications made for the MC/CHS implementation	01	Project Management	1- 50	Project Manager	1486	Project Director	3000	
1	1	Maintain project communications on a timely basis with the MC-CHS Project Director	Provide Bi-weekly status reports to PMO			1- 50	Project Manager		Project Director		
1	2	Establish documentation and procedural standards for the deployment of the project.	Written (hardcopy and electronic) documentation and procedural standards for the deployment of the project and gain appropriate sign-off by MC Project Director/PMO			30-38	Project Manager		Project Director		
1	3	Establish documentation and procedural standards for post-implementation support	Written (hardcopy and electronic) documentation and procedural standards for post-implementation support of the application and gain appropriate sign-off by MC Project Director/PMO			30-38	Project Manager		Project Director		
1	4	Prepare a detailed BCA project plan for performance of this Statement of Work, which defines the detailed task and schedule responsibilities.	Provide hardcopy and electronic version of formal resource loaded and critical path workplans in Microsoft Project. This document to be integrated with MC workplans and include MC Resources required. This includes the bi-weekly update of the project workplan in coordination with MC Project Director and the PMO.			1- 4	Project Manager		Project Director		
1	5	Track and report on BCA hours expended by task against the best estimate on a monthly basis.	Provide bi-weekly time reports to MC Project Director and PMO			1- 50	Project Manager		Project Director		
1	6	Coordinate in the development and regularly scheduled monitoring of the full project tasks, for both BCA and MC-CHS project teams.	Attend and deliver project status reports to PMO on a bi-weekly basis			1- 50	Project Manager		Project Director		
1	7	Develop detailed time estimates of all activities and tasks including dependencies and milestones. Conduct regularly scheduled project status meetings.	BCA to provide detailed work plan for acceptance by MC Project Director and PMO. The plan should include estimated dates and durations of status meetings			1- 6 50 1-	Project Manager		Project Director		

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B-1 Task Number	Sub Task	B-1 Task Description	Deliverables to the County (New Field to be included B-1 by BCA)	B-2 BCA Workplan Ref No	B-2 Workplan Description	Time Frame (week # from start)	BCA Resource Type Assigned	BCA Hrs Committed	MC Resource Type Assumed by BCA	MC Hours Assumed by BCA	Comments/Notes
1	8	BCA Project Manager, MC Project Director and their designees, will conduct at a minimum bi-weekly scheduled project status meetings.	The PMO will provide a formal meeting schedule			1- 50	Project Manager		Project Director		
1	9	Prepare and submit Monthly Status Reports on BCA's project team work to the MC-CHS Project Director.	Deliver Bi-weekly Status Reports and Risk Management Plan Updates			1- 50	Project Manager		Project Director		
1	10	Review and administer the Project Change Management Procedure with the MC-CHS Project Director.	BCA and County to follow formal change order process to be defined by the PMO/MC OET's office.				Project Manager		Project Director		
1	11	Help resolve project issues and escalate issues to BCA and MC-CHS management when necessary following the Escalation Procedure.	BCA to actively maintain either their own formal issues tracking tools and reports or other tool at the discretion of the PMO. BCA Manager and MC Project Director will create bi-weekly communications regarding outstanding and resolved issues to the PMO.				Project Manager		Project Director		
1	12	Coordinate and manage the activities of BCA project personnel.					Project Manager		Project Director		
1	13	Oversee the development of database systems and processes supporting the project.					Project Manager		Project Director		
1	14	Develop a detailed system implementation phasing plan	BCA to provide detailed plan for acceptance by MC Project Director, the Director of CHS and the PMO Steering Committee.				Project Manager		Project Director		
1	15	Perform other tasks as outlined in Appendix I, "BCA Work Plan".					Project Manager		Project Director		
1	a - zz	BCA to include in the body of B-1 and this matrix all work steps outlined in Appendix I. This should include detailed listing of deliverables and required resources.	BCA to provide initial deliverables in this matrix format. The project plan shall be at a level that identifies deliverables based on the 8/80 rule related to WBS				Project Manager		Project Director		

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B-1 Task Number	Sub Task	B-1 Task Description	Deliverables to the County (New Field to be included B-1 by BCA)	B-2 BCA Workplan Ref No	B-2 Workplan Description	Time Frame (week # from start)	BCA Resource Type Assigned	BCA Hrs Committed	MC Resource Type Assumed by BCA	MC Hours Assumed by BCA	Comments/Notes
2		Hardware, Software, and Infrastructure Set up The objective of this task is for BCA to assist MC-CHS network personnel to determine and establish the MC-CHS LAN and WAN network communication infrastructure needed to support the operations of the BCA Pearl EHR and connectivity between BCA Support Personnel and the MC-CHS Data Center for the installation and operation of the BCA PEARL EHR. This will include reviewing the current MC-CHS network diagrams and documentation, confirming the on-site survey of the locations listed in Appendix L, "MC-CHS Licensed Sites", confirming the high level BCA PEARL Network Design Summary, and determining the equipment required to meet the needs of the PEARL system installation.	BCA PEARL Software and Third Party Software Installation, configuration and operational tests. A Software Summary report to be provided following the installation, configuration and validation software is functioning as designed	02	HW, SW Infrastructure	1-12	VP. Technical Operations - Network Engineer - Network Analyst- Application Specialist	205	Data Center Manager - Network Engineer - Network Analyst	480	
2	1	BCA to define communication and network Infrastructure environment requirements definitions	Provide written documentation of PEARL's required network and communication infrastructure requirements and obtain acceptance by OET/PMO				Network Engineer		Network Engineer - CIO		
2	2	Verify the Installed Hardware	BCA will verify the installation of the printers, scanners and image servers as it relates to the PEARL software. This will include BCA performing system and network diagnostics and verify installation of hardware once installed by MCSO IT personnel. BCA will furnish to the MC Project Manager and PMO written acceptance of hardware as installed.				Network Engineer - Network Analyst		Network Engineer - Network Analyst - Data Center Manager - Security		
2	3	Install the PEARL software	Installing the BCA PEARL Client software on MCSO hardware, includes verifying and demonstrating the availability of PEARL Client software main menu and sub-menus are operational according to software design, troubleshooting and resolve any software issues. BCA will furnish to the MC Project Director and PMO written acceptance of software as installed.				Applications Specialist		Project Director - Data Center Manager		

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B-1 Task Number	Sub Task	B-1 Task Description	Deliverables to the County (New Field to be included B-1 by BCA)	B-2 BCA Workplan Ref No	B-2 Workplan Description	Time Frame (week # from start)	BCA Resource Type Assigned	BCA Hrs Committed	MC Resource Type Assumed by BCA	MC Hours Assumed by BCA	Comments/Notes
2	4	Install the Third Party software	<p>Installation of the Third Party Software including</p> <ul style="list-style-type: none"> - First Data Bank - Coax Adrenaline Imaging Software - RightFax Solution Software - Crystal Reporting Software - Dictaphone Software - Zebra Bar Coding Scanning Software <p>Provide formal documentation to OET and the PMO including the formal sign-off by the MC Project Director that the software has been loaded and the demonstration that the third party software is available.</p>				Applications Specialist		Project Director - Data Center Manager		
3		<p>Process and Workflow Analysis and Design</p> <p>Assist MC-CHS with review of processes in relation to the EHR. Help analyze the processes for potential areas of improvement. Instruct the MCSO-CHS EHR project team on how to map these processes into BCA PEARL functions. Assist with processes reengineering and/or workarounds to make best use of electronic medical records. This task requires close working between BCA and the MC-CHS EHR project team and will involve a number of on-site working sessions.</p>	Process Analysis Summary	03	Process and Workflow Analysis and Design	7 - 13	Senior System Analyst - Application Specialist - Project Manager	280	Project Director - Operations - Nursing - Clinical Leads	560	
3	1	Assist with identification of all relevant processes and categorize them					Senior System Analyst		Project Director - Operations - Nursing Clinical Leads		
3	2	Assist with coverage and gap analysis	Consensus signoff by BCA Project Manager and MC Project Director on gap analysis report				Senior System Analyst		Project Director - Operations - Nursing Clinical Leads		
3	3	Map and document processes to Pearl functions	Consensus signoff by BCA Project Manager and MC Project Director on the mapping of processes to enable PEARL. This includes the identification and resolution of all gaps identified as part of Task 3 subtask 2.				Senior System Analyst - Application Specialist				

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B-1 Task Number	Sub Task	B-1 Task Description	Deliverables to the County (New Field to be included B-1 by BCA)	B-2 BCA Workplan Ref No	B-2 Workplan Description	Time Frame (week # from start)	BCA Resource Type Assigned	BCA Hrs Committed	MC Resource Type Assumed by BCA	MC Hours Assumed by BCA	Comments/Notes
4		Build Database and Support Table Loads The objective of this task is to assist MC-CHS with creating tables needed by the BCA PEARL Software according to the decisions of the EHR Project Design Teams. As part of this task BCA will provide MC-CHS with user instructions, content examples, training, and testing assistance, as needed to create the tables. These tables define the content and parameters needed to tailor and operate PEARL in the MC-CHS environment. The sub-tasks are:	Table Load Content Development Summary	04	Build Database and Support Table Loads	14 - 23	Applications Specialist Project Manager	102	Project Director - Operations - Nursing- Clinical Leads	160	
4	1	Solution design	Formal acceptance by both the MC Project Director and the BCA Project Manager of the design. The document format and content to be determined in consensus with the MC Project Director and BCA Project Manager.				Application Specialist - Project Manager		Project Director - Operations - Nursing- Clinical Leads		
4	2	Build and check out	Formal acceptance by both the MC Project Director and the BCA Project Manager.				Application Specialist - Project Manager		Project Director - Operations - Nursing- Clinical Leads		
5		Develop Electronic Intake Process Module The objective of this task is to develop an Electronic Intake Process Module to the BCA PEARL EHR as defined during the conceptual and detailed design phase of implementation. This will essentially result in a new PEARL module, and will be driven by facility type. BCA Project Manager will serve on the Intake Process Development Projects Team to understand the requirements as defined by the team.	Functioning and tested Intake Process Module Development Task Summary Report	05	Develop Electronic Intake Process Module	9 - 33	Senior System Analyst - Project Manager	800	Project Director - Operations - Nursing- Clinical Leads	2000	
5	1	Requirements Definition	Formal documentation to be accepted by MC Project Director and BCA Project Manager				Senior System Analyst - Project Manager		Project Director - Operations - Nursing- Clinical Leads		
5	2	Solution Design	Formal documentation to be accepted by MC Project Director and BCA Project Manager				Senior System Analyst - Project Manager		Project Director - Operations - Nursing - Clinical Leads		

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B-1 Task Number	Sub Task	B-1 Task Description	Deliverables to the County (New Field to be included B-1 by BCA)	B-2 BCA Workplan Ref No	B-2 Workplan Description	Time Frame (week # from start)	BCA Resource Type Assigned	BCA Hrs Committed	MC Resource Type Assumed by BCA	MC Hours Assumed by BCA	Comments/Notes
6	6 1 c 1	Develop formal testing plan	Formal testing plan to be accepted by MC Project Director and BCA Project Manager				Project Manager Senior Programmer Analyst		Project Director		
6	6 1 c 2	Create testing scenarios	Formal test scenarios provided to and accepted by MC Project Director and BCA Project Managers				Senior Programmer Analyst - Application Specialist		Project Director Nursing Leads Clinical Leads Operation Leads		
6	6 1 c 3	Testing of the change	Formal acceptance of test results by the MC Project Director and BCA Project Manager				Applications Specialist		Project Director Nursing Leads Clinical Leads Operation Leads		
6	6 1 d	Create documentation and help text	Formal documentation included in the user manual and online display of help functions. Acceptance of the MC Project Director and BCA Project Managers and presentation to the PMO.				Technical Writer - Application Specialist		Project Director Nursing Leads Clinical Leads Operation Leads		
6	6 1 e	Integrate and install	Formal acceptance by MC Project Director and BCA Project Manager				Database Administrator		Project Director Nursing Leads Clinical Leads Operation Leads		
6	2	Portable handheld solution using a store-and-forward model							Project Director Nursing Leads Clinical Leads Operation Leads		
6	6 2 a	Requirements Definition	Formal documentation to be accepted by both MC Project Director and BCA Project Manager				Senior Systems Analyst		Project Director Nursing Leads Clinical Leads Operation Leads		

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7		<p>Develop MC-CHS Customizations and Modifications to Pearl</p> <p>In the RFP, MC-CHS requested cost estimates for those functions codified as "C" (for custom programming). The amount of hours to produce each of these items has been quantified and is shown below. The objective of this task is to customize and modify the Pearl System capabilities. This task will allow MC-CHS to incorporate required customizations and modifications to the Pearl System. The BCA Project Manager will serve on the Customization and Modifications Projects Team to understand and collect the Requirements as defined by the Process Design Teams</p>			07 Customizations/Modifications to PEARL (see last page)	9 - 40	Senior Systems Analyst - Project Manager - Application Specialist	2840	2840 Project Director Nursing Clinical Operations Leads	2840	
7	1	Develop Requirements	Formal acceptance by MC Project Director and BCA Project Manager of the requirements definition								
7	2	Design Customized Functionality					Senior Systems Analyst		Project Director Nursing Clinical Operation Leads		
7	a	Review customizations included in the list below to determine necessity	Acceptance by MC Project Director and BCA Project Manager on agreed upon customizations				Senior Systems Analyst		Project Director Nursing Clinical Operation Leads		
7	b	Design customization	Formal acceptance by MC Project Director and BCA Project Manager on the design of the customization				Senior Systems Analyst		Project Director Nursing Clinical Operation Leads		
7	c	Update pricing as necessary	Formal acceptance of the update price by MC-CHS Project Director in accordance with MC policies and procedures				Project Manager		Security Officer		
7	3	Develop Customized Functionality	Formal documentation to be accepted by MC Project Director and BCA Project Manager				Programmer Analyst				
7	4	Test Customized Functionality					Applications Specialist		Operation Nursing Clinical Leads		

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7	a	Develop formal testing plan	Formal testing plan to be accepted by MC Project Director and BCA Project Manager				Programmer Analyst		Operation Nursing Clinical Leads		
7	b	Create testing scenarios	Formal test scenarios provided to and accepted by MC Project Director and BCA Project Manager				Programmer Analyst		Operation Nursing Clinical Leads		
7	c	Testing of the change	Formal acceptance of test results by the MC Project Director and BCA Project Manager				Applications Specialist		Operation Nursing Clinical Leads		
7	5	Develop Customized Documentation	Formal documentation included in the user manual and online display of help functions. Acceptance of the MC Project Director and BCA Project Manager and presentation to the PMO.				Technical Writer				
7	Cust 1	Provide online tickler file for automatic clerical follow-up with specific clients and/or services (i.e. if patient address changes, message "check guarantor address".)	See Above Deliverables				See above Customizations Resource Types		Operation Nursing Clinical Leads		
7	Cust 2	Scoring capabilities to build T-scores, percentiles, and other mathematical algorithms against the responses.	See Above Deliverables				See above Customizations Resource Types		Operation Nursing Clinical Leads		
7	Cust 3	Customizable online help to guide the client in filling out the assessment/survey.	See Above Deliverables				See above Customizations Resource Types		Operation Nursing Clinical Leads		
7	Cust 4	Provide the ability to build self-scoring specific Assessment templates for example: speech and language; self care; cognitive functioning; abnormal involuntary movements; nursing; educational functioning; psychological; neurological; general physical health	See Above Deliverables				See above Customizations Resource Types		Operation Nursing Clinical Leads		
7	Cust 5	Improper order in scheduling sequential interventions.	See Above Deliverables				See above Customizations Resource Types		Operation Nursing Clinical Leads		
7	Cust 6	Provide option of visual or auditory alarm which requires a response on receipt of STAT, ASAP, timed orders, or special instructions	See Above Deliverables				See above Customizations Resource Types		Operation Nursing Clinical Leads		
7	Cust 7	Allow scheduling of a test (procedure) when ordering. Notify provider (where test is scheduled) so time and date may be verified. Provide automatic feedback of verification to ordering area.	See Above Deliverables				See above Customizations Resource Types		Operation Nursing Clinical Leads		

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7	Cust 8	Ability to Lock Out Ordering (e.g. ARNP not able to order medications for himself).	See Above Deliverables				See above Customizations Resource Types		Operation Nursing Clinical Leads		
7	Cust 9	Incorporate Risk assessments (e.g. clinical calculators).	See Above Deliverables				See above Customizations Resource Types		Operation Nursing Clinical Leads		
7	Cust 10	Support purging (i.e. archiving) of system data, as defined by department	See Above Deliverables				See above Customizations Resource Types		Operation Nursing Clinical Leads		
7	Cust 11	Color indicators are provided on patient list screens as defined above, which indicate new, abnormal, or critical data and the data is easily accessible	See Above Deliverables				See above Customizations Resource Types		Operation Nursing Clinical Leads		
7	Cust 12	Provide online access both locally and remotely via the Internet to one or more databases (e.g., Medline) of bibliographic information.	See Above Deliverables				See above Customizations Resource Types		Operation Nursing Clinical Leads		
7	Cust 13	Use Logical Observation Identifier Names and Codes (LOINC).	See Above Deliverables				See above Customizations Resource Types		Operation Nursing Clinical Leads		
7	Cust 14	Use National Council for Processing Prescription Drug Programs (NCPDP).	See Above Deliverables				See above Customizations Resource Types		Operation Nursing Clinical Leads		
7	Cust 15	Use another recognized vocabulary source.	See Above Deliverables				See above Customizations Resource Types		Operation Nursing Clinical Leads		
7	Cust 16	Relationships between Code Sets clearly defined.	See Above Deliverables				See above Customizations Resource Types		Operation Nursing Clinical Leads		
7	Cust 17	Supports static/dynamic data element relationships	See Above Deliverables				See above Customizations Resource Types		Operation Nursing Clinical Leads		
7	Cust 18	Accommodate new, unforeseen codes, data elements	See Above Deliverables				See above Customizations Resource Types		Operation Nursing Clinical Leads		
7	Cust 19	Ability to Recognize Semantic Differences (e.g. Heart and Cardiac).	See Above Deliverables				See above Customizations Resource Types		Operation Nursing Clinical Leads		
7	Cust 20	Offer medical & mental health diagnosis decision matrix that addresses continuity of interventions in treatment planning.	See Above Deliverables				See above Customizations Resource Types		Operation Nursing Clinical Leads		

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7	Cust 21	Ability to Conference (i.e., chat) on-line.	See Above Deliverables				See above Customizations Resource Types		Operation Nursing Clinical Leads		
7	Cust 22	Designated users can not be signed on to more than one PCI (device) at a time	See Above Deliverables				See above Customizations Resource Types		Operation Nursing Clinical Leads		
7	Cust 23	Ability to process files from Human Resources system for terminated employees, and automatically turns off access.	See Above Deliverables				See above Customizations Resource Types		Operation Nursing Clinical Leads		
7	Cust 24	Alert simultaneous users of each other's presence on the same record.	See Above Deliverables				See above Customizations Resource Types		Operation Nursing Clinical Leads		
7	Cust 25	User is able to identify where the current display is in the whole record (e.g. site map).	See Above Deliverables				See above Customizations Resource Types		Operation Nursing Clinical Leads		
7	Cust 26	Critical fields have on-line Help (data dictionary name and codes) for easy reference and look-up	See Above Deliverables				See above Customizations Resource Types		Operation Nursing Clinical Leads		
7	Cust 27	Ability to link notes with problems by patient.	See Above Deliverables				See above Customizations Resource Types		Operation Nursing Clinical Leads		
7	Cust 28	Ability to generate report of all lab tests by laboratory technician	See Above Deliverables				See above Customizations Resource Types		Operation Nursing Clinical Leads		
8		Develop ICJIS Interface The objective of this task is to use standard HL7 programming to create a two way interface from ICJIS to BCA PEARL EHR and from BCA PEARL to ICJIS as defined during the conceptual and detailed design phase of implementation (Task number 3 above). . The BCA Project Manager will serve on the Interface Projects Team to understand the Requirements as defined by the Process Design Teams.	Functioning and tested Interface and Interface Development Task Summary Report		08 Develop ICJIS Interface	9 - 14	Senior Systems Analyst - Program Analysis	257	Project Director Data Center Manager Operation Lead	514	
8	1	Design Interface Requirements and Functionality	Formal documentation to be accepted by MC Project Director and BCA Project Manager				Senior Systems Analyst		Project Director Data Center Manager Operation Lead		

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8	2	Build and Test Interface Functionality							Project Director Data Center Manager Nursing Operation Lead Clinical Lead		
8	8 2 a	Develop formal testing plan	Formal testing plan to be accepted by MC Project Director and BCA Project Manager				Programmer Analyst		Operation Lead Nursing Clinical Leads		
8	8 2 b	Create testing scenarios	Formal test scenarios provided to and accepted by MC Project Director and BCA Project Manager				Programmer Analyst		Operation Lead Nursing Clinical Leads		
8	8 2 c	Testing of the interface	Formal acceptance of test results by the MC Project Director and BCA Project Manager				Programmer Analyst		Operation Lead Nursing Clinical Leads		
8	3	Integrate and Install interface	Formal acceptance by MC Project Director and BCA Project Manager				Programmer Analyst		Operation Lead Nursing Clinical Leads		
8	4	Create documentation	Formal documentation included in the user manual. Acceptance of the MC Project Director and BCA Project Manager and presentation to the PMO.				Technical Writer				
9		Develop IRIS Scan (Identex) Interface The objective of this task is to interface the Iris Scan function with existing PEARL demographics to allow biometric identification of patients. The iris scan will be married to the PEARL Master Patient Index to achieve this functionality. The BCA Project Manager will serve on the Interface Projects Team to understand the Requirements as defined by the Process Design Teams	Functioning and tested Interface and Interface Development Task Summary Report	09	Develop Iris Scan (Identex) Interface	13 - 17	System Analyst	257	Project Director Data Center Manager Operation Lead	514	
9	1	Design Interface Requirements and Functionality	Formal documentation to be accepted by MC Project Director and BCA Project Manager				System Analyst		Project Director Data Center Manager Operation Lead		

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9	2	Build and Test Interface Functionality							Project Director Data Center Manager Operation Lead		
9	9 2 a	Develop formal testing plan	Formal testing plan to be accepted by MC Project Director and BCA Project Manager				Programmer Analyst		Operations Lead		
9	9 2 b	Create testing scenarios	Formal test scenarios provided to and accepted by MC Project Director and BCA Project Manager				Programmer Analyst		Operations Lead		
9	9 2 c	Testing of the interface	Formal acceptance of test results by the MC Project Director and BCA Project Manager				Programmer Analyst		Operations Lead		
9	3	Integrate and Install interface	Formal acceptance by MC Project Director and BCA Project Manager				Database Administrator		Operations Lead		
9	4	Create documentation	Formal documentation included in the user manual. Acceptance of the MC Project Director and BCA Project Manager and presentation to the PMO.				Technical Writer				
10		Develop SonoraQuest Lab Interface The objective of this task will involve developing a two-way interface between the BCA Pearl EHR and the External Lab System, which will allow MC-CHS to order, and view lab results automatically in the BCA EHR. The BCA Project Manager will serve on the Interface Projects Team to understand the Requirements as defined by the Process Design Teams	Functioning and tested Interface and Interface Development Task Summary Report		10 Develop SonoraQuest Lab Interface	16 - 20		257	Project Director Data Center Manager - Operations Lead	514	
10	1	Design Interface Requirements and Functionality	Formal documentation to be accepted by MC Project Director and BCA Project Manager				System Analyst		Project Director Data Center Manager - Operations Lead		
10	2	Build and Test Interface Functionality									
10	10 2 a	Develop formal testing plan	Formal testing plan to be accepted by MC Project Director and BCA Project Manager				Programmer Analyst		Operations Lead		
10	10 2 b	Create testing scenarios	Formal test scenarios provided to and accepted by MC Project Director and BCA Project Manager				Programmer Analyst		Operations Lead		
10	10 2 c	Testing of the interface	Formal acceptance of test results by the MC Project Director and BCA Project Manager				Programmer Analyst		Operations Lead		

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10	3	Integrate and Install interface	Formal acceptance by MC Project Director and BCA Project Manager				Database Administrator		Operations Lead		
10	4	Create documentation	Formal documentation included in the user manual. Acceptance of the MC Project Director and BCA Project Manager and presentation to the PMO.				Technical Writer		Project Director		
11		Develop Diamond Pharmacy System Interface The objective of this task is to customize and develop the Diamond Pharmacy System Interface capabilities. This task will involve developing a two-way interface between the BCA Pearl EHR and the Diamond System, which will allow MC-CHS to order and view medication orders automatically in the BCA EHR. The BCA Project Manager will serve on the Interface Projects Team to understand the Requirements as defined by the Process Design Teams.	Functioning and tested Interface and Interface Development Task Summary Report	11	Develop Diamond Pharmacy System Interface	19 - 24	Systems Analyst Programmer Analyst Database Administrator Technical Writer	257	Project Director, Operations, Nursing, Clinical Leads	514	
11	1	Design Interface Requirements and Functionality	Formal documentation to be accepted by MC Project Director and BCA Project Manager				Systems Analyst		Project Director, Operations, Nursing, Clinical Leads		
11	2	Build and Test Interface Functionality							Operations , Nursing, Clinical Leads		
11	11 2 a	Develop formal testing plan	Formal testing plan to be accepted by MC Project Director and BCA Project Manager				Programmer Analyst		Operations , Nursing, Clinical Leads		
11	11 2 b	Create testing scenarios	Formal test scenarios provided to and accepted by MC Project Director and BCA Project Managers				Programmer Analyst		Operations , Nursing, Clinical Leads		
11	11 2 c	Testing of the interface	Formal acceptance of test results by the MC Project Director and BCA Project Manager				Programmer Analyst		Operations , Nursing, Clinical Leads		
11	3	Integrate and Install interface	Formal acceptance by MC Project Director and BCA Project Manager				Database Administrator		Operations , Nursing, Clinical Leads		

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11	4	Create documentation	Formal documentation included in the user manual. Acceptance of the MC Project Director and BCA Project Manager and presentation to the PMO.				Technical Writer		Operations , Nursing, Clinical Leads		
12		Develop Digital X-Ray System Interface The objective of this task is to customize and develop the Digital X-Ray System Interface capabilities. This task will allow MC-CHS to use the Digital X-Ray System to store digital x-ray into the PEARL EHR. The BCA Project Manager will serve on the Interface Projects Team to understand the Requirements as defined by the Process Design Teams	Functioning and tested Interface and Interface Development Task Summary Report		12 Develop GE Centricity Digital X-Ray System Interface	13 - 28	System Analyst	114	Project Director Operations, Nursing, Clinical Leads	160	
12	1	Design Interface Requirements and Functionality	Formal documentation to be accepted by MC Project Director and BCA Project Manager				System Analyst Programmer Analyst Database Administrator Technical Writer		Project Director Operations, Nursing, Clinical Leads		
12	2	Build and Test Interface Functionality							Project Director Operations, Nursing, Clinical Leads		
12	12 2 a	Develop formal testing plan	Formal testing plan to be accepted by MC Project Director and BCA Project Manager				Programmer Analyst		Project Director Operations, Nursing, Clinical Leads		
12	12 2 b	Create testing scenarios	Formal test scenarios provided to and accepted by MC Project Director and BCA Project Manager				Programmer Analyst		Project Director Operations, Nursing, Clinical Leads		
12	12 2 c	Testing of the interface	Formal acceptance of test results by both the MC and BCA Project Manager				Programmer Analyst		Project Director Operations, Nursing, Clinical Leads		

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12	3	Integrate and Install interface	Formal acceptance by MC Project Director and BCA Project Manager				Database Administrator		Project Director Operations, Nursing, Clinical Leads		
12	4	Create documentation	Formal documentation included in the user manual. Acceptance of both the MC Project Director and BCA Project Managers and presentation to the PMO.				Technical Writer				
13		Develop Dictaphone System Interface The objective of this task is to develop an interface with the Dictaphone System to enable PEARL to receive information from the Dictaphone system. This information may include both the original WAV file as well as the completed transcribed text of the dictation and a record of the physician signing off on the transcription. The BCA Project Manager will serve on the Interface Projects Team to understand the Requirements as defined by the Process Design Teams	Functioning and tested Interface and Interface Development Task Summary Report	13	Develop Dictaphone System Interface	27 - 31	System Analyst Programmer Analyst Database Administrator Technical Writer	257	Project Director Operations, Nursing, Clinical Leads		
13	1	Design Interface Requirements and Functionality	Formal documentation to be accepted by the MC Project Director and BCA Project Manager				System Analyst		Project Director Operations, Nursing, Clinical Leads		
13	2	Build and Test Interface Functionality									
13	13 2 a	Develop formal testing plan	Formal testing plan to be accepted by MC Project Director and BCA Project Manager				Programmer Analyst		Project Director Operations, Nursing, Clinical Leads		
13	13 2 b	Create testing scenarios	Formal test scenarios provided to and accepted by MC Project Director and BCA Project Manager				Programmer Analyst		Project Director Operations, Nursing, Clinical Leads		
13	13 2 c	Testing of the interface	Formal acceptance of test results by the MC Project Director and BCA Project Manager				Programmer Analyst		Project Director Operations, Nursing, Clinical Leads		
13	3	Integrate and Install interface	Formal acceptance by both MC Project Director and BCA Project Manager				Database Administrator		Project Director Operations, Nursing, Clinical Leads		

**CONFIDENTIAL DRAFT: FOR DISCUSSION PURPOSES ONLY.
06113 EXHIBIT B-1**

B-1 Task Number	Sub Task	B-1 Task Description	Deliverables to the County (New Field to be included B-1 by BCA)	B-2 BCA Workplan Ref No	B-2 Workplan Description	Time Frame (week # from start)	BCA Resource Type Assigned	BCA Hrs Committed	MC Resource Type Assumed by BCA	MC Hours Assumed by BCA	Comments/Notes
13	4	Create documentation	Formal documentation included in the user manual. Acceptance of the MC Project Director and BCA Project Manager and presentation to the PMO.				Technical Writer				
14		Intentionally Left Blank									
15		<p>System Training</p> <p>The objective of this task is to train the necessary MC-CHS staff to use the PEARL System. BCA staff will conduct initial training for Project Support Team Members. MC-CHS staff will be educated during the training process to take over on-going training after go live. BCA will be responsible for training the End-Users. MC-CHS will be responsible for providing the facilities, supplies, communication connectivity and equipment needed to train MC-CHS personnel, and will be responsible for insuring personnel are available to be trained at the scheduled time. Other training needed by MC-CHS will be provided by BCA to MC-CHS in accordance with Appendix B, "Project Change Control Procedure". Refer to Exhibit A for hours to be committed to this task</p>	Training Schedules, Course Curriculums, Training Manuals and the Training Task Summary Report	15	System Training	16 - 17, 26 - 29, 36 - 41	VP Support Services, Training Specialist, Provider	839	Project Director, Data Center & Network Staff, Nursing Staff, Operation Staff, Provider Staff, Security Officers	6000	
15	(CONT'D)	<p>Training will cover the following areas</p> <p>Basic PEARL functionality and all customizations and modifications from Task 7.</p> <p>Classroom instruction for maintaining and administration of support files and tables</p> <p>Basic system commands and control procedures</p> <p>Basic security administration for maintaining password and user identification</p> <p>Standard operating procedures for site evaluations/installations</p> <p>Preventive maintenance</p> <p>Multiple reports administration</p>					Training Specialists		Project Director, Data Center & Network Staff - Nursing Staff - Operation Staff - Provider Staff - Security Officers		

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06113 EXHIBIT B-1**

B-1 Task Number	Sub Task	B-1 Task Description	Deliverables to the County (New Field to be included B-1 by BCA)	B-2 BCA Workplan Ref No	B-2 Workplan Description	Time Frame (week # from start)	BCA Resource Type Assigned	BCA Hrs Committed	MC Resource Type Assumed by BCA	MC Hours Assumed by BCA	Comments/Notes
15	(CONT'D)	Staff to be trained - Training Appointment Scheduling Pers. - Training Front Desk and Patient Registration Pers. - Training Information Reporting Pers. - Training Health Services and Case Management Pers. - Training Medical Records Pers. - Training Clinical Staff - Training Management Staff - Testing of Training received for all Users - Training of MCSO Help Desk & Desktop Support Resources - Training of OET Help Desk & PEARL Technical Support Resources					Training Specialists		Project Director Data Center & Network Staff - Nursing Staff - Operation Staff - Provider Staff - Security Officers		
15	1	Develop training plans and documents	Acceptance of the formal training plans, manuals and testing tools by personnel type/function by the MC Project Director				VP Support Services, Training Specialist		Project Director Data Center & Network Staff - Nursing Staff - Operation Staff - Provider Staff - Security Officers		
15	15 1 a	Train EHR Administrators	Proficiency in system use is defined as passing all tests at the 90% or better at the individual level. Testing results will be provided by individual and reviewed by the MC Project Director Manager, Director of CHS and other Sr Staff as appropriate.				Training Specialist		E.H.R Administrators		
15	15 1 b	Train Clerical Personnel	Proficiency in system use is defined as passing all tests at the 90% or better at the individual level. Testing results will be provided by individual and reviewed by the MC Project Manager, Director of CHS and other Sr Staff as appropriate.				Training Specialist		Clerical Personnel		
15	15 1 c	Train Physicians/Providers	Proficiency in system use is defined as passing all tests at the 90% or better at the individual level. Testing results will be provided by individual and reviewed by the MC Project Director, Director of CHS and other Sr Staff as appropriate.				Provider Training Specialist		Physicians and Providers		

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06113 EXHIBIT B-1**

B-1 Task Number	Sub Task	B-1 Task Description	Deliverables to the County (New Field to be included B-1 by BCA)	B-2 BCA Workplan Ref No	B-2 Workplan Description	Time Frame (week # from start)	BCA Resource Type Assigned	BCA Hrs Committed	MC Resource Type Assumed by BCA	MC Hours Assumed by BCA	Comments/Notes
15	15 1 d	Train Nurses/Tech/Staff	Proficiency in system use is defined as passing all tests at the 90% or better at the individual level. Testing results will be provided by individual and reviewed by the MC Project Director, Director of CHS and other Sr Staff as appropriate.				Training Specialist		Nursing and Technical Staffs		
15	15 1 e	Train Psychiatrists	Proficiency in system use is defined as passing all tests at the 90% or better at the individual level. Testing results will be provided by individual and reviewed by the MC Project Director, Director of CHS and other Sr Staff as appropriate.				Provider Training Specialist		Psychiatrists		
15	15 1 e	Train MCSO Help Desk, MCSO Desktop support, OET Help Desk and OET Pearl Technical Support	Proficiency in system use is defined as passing all tests at the 90% or better at the individual level. Testing results will be provided by individual and reviewed by the MC Project Director Manager, Director of CHS and other Sr Staff as appropriate.				Training Specialist		Help Desk		
16		Jointly Supervise System Testing The objective of this task is to give MC-CHS key personnel the opportunity to test the BCA PEARL System capabilities and functionality prior to putting the system into production. The purpose of testing is to resolve issues, errors and problems found, and document all problems with their corresponding resolution on a Problems/Issues Log. BCA will provide support for unit testing, integration testing, system testing, and model office.	Test Plans, Test Data, Testing Instructions and Testing Task Summary Report; Defect Reporting Instructions, Processes, Tracking, Monitoring Report and Defect Resolution Report	16	Jointly Supervise System Training	20 - 41	Application Specialist Training Specialist	429	600		
16	1	Unit Testing									
16	a	Provide the PEARL Testing Plan and Acceptance Criteria	Formal documentation of test plan, test scenarios, expected results and acceptance criteria				Application Specialist Training Specialist Technical Writer				
16	b	Test System Administration Procedures	Formal documentation of test results in matrix format for review and approval by MC Project Director and BCA Project Manager				Application Specialist Training Specialist Technical Writer		E.H.R Administrator Leads		

**CONFIDENTIAL DRAFT: FOR DISCUSSION PURPOSES ONLY.
06113 EXHIBIT B-1**

B-1 Task Number	Sub Task	B-1 Task Description	Deliverables to the County (New Field to be included B-1 by BCA)	B-2 BCA Workplan Ref No	B-2 Workplan Description	Time Frame (week # from start)	BCA Resource Type Assigned	BCA Hrs Committed	MC Resource Type Assumed by BCA	MC Hours Assumed by BCA	Comments/Notes
16	a	Develop the testing Plan and Acceptance Criteria	Formal documentation of test plan, test scenarios, expected results and acceptance criteria				Application Specialist Training Specialist Technical Writer		Project Director		
16	b	Test PEARL with Interfaces	Formal documentation of test results in matrix format for review and approval by MC Project Director and BCA Project Manager				Application Specialist Training Specialist Technical Writer		Project Director, Data Center, Operating Leads		
16	3	System and Model Office Test (Acceptance Test) System Acceptance The objective of this task is for the BCA PEARL System to be formally accepted by MC-CHS and is working accurately as designed, and all issues have been resolved according to the Go-Live Escalation Process Appendix Q. Please refer to Appendix P for a detailed listing of the tasks and deliverables associated with Acceptance Testing prior to go-live					Application Specialist Training Specialist		Project Director, Data Center, Operating Leads		
16	a	Test PEARL with Interfaces using a mock-clinic setting	See Tasks 16.3 B- ZY. 16 3.a should be replaced with the following 16 3.b - ZY				Application Specialist Training Specialist		Project Director, Data Center, Operating Leads		
16	b - zy	The contractor needs to perform this testing in detail and with great attention to outcomes because it is critical to a successful implementation. This task prevents the attitude of "fixing on the fly". BCA to provide all possible detail around proposed steps and deliverables. Detailed scenarios are required which represent all possible events occurring from all perspectives. This should also test the total environment as opposed to "a mock clinic".	BCA to provide detailed deliverables and gain consensus on go/no-go decision at the PMO level				Project Manager		Project Director		

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06113 EXHIBIT B-1**

B-1 Task Number	Sub Task	B-1 Task Description	Deliverables to the County (New Field to be included B-1 by BCA)	B-2 BCA Workplan Ref No	B-2 Workplan Description	Time Frame (week # from start)	BCA Resource Type Assigned	BCA Hrs Committed	MC Resource Type Assumed by BCA	MC Hours Assumed by BCA	Comments/Notes
16	zz	Verify Cut-Over and Go Live Dates	<p>Formal documentation of all testing results and acceptance by the MC Project Director and presentation to the PMO with final acceptance from the PMO Steering Committee and others as deemed necessary by the PMO Steering Committee.</p> <p>BCA to conduct "Knowledge Transfer" sessions with OET Resources. Overview of segregation of duties, application sensitivities; application error messages; BCA support procedures</p>				V.P. Technical Services, Senior Applications Specialist, Training Specialist		Project Director		
17		<p>Go-Live Operations First Site plus sixty (60) day break-in Period</p> <p>The objective of this task is to move PEARL into productive use. The approach is to implement PEARL modules into productive use according to the implementation schedule. Documentation must be available at all sites. Trained MC-CHS coordinators must be available at all sites to provide support. BCA project personnel must be available onsite to assist in providing technical support, verify the quality of the system, help answer questions and solve problems as they occur.</p>	BCA PEARL, accompanying documentation and BCA PEARL Live Operations Task Summary Report.	17	Go-live Operations	42	All Required Support Staff		All Required Staff		
17	a	Develop detailed go-live plans and timelines. These to include specific detailed resource requirements by location detailing all of the pre-go live activities by hour and if necessary minute and by shift.	Formal documentation of the total detailed plan and acceptance by the MC Project Director and presentation to the PMO with final acceptance from the PMO Steering Committee and others as deemed necessary by the PMO Steering Committee.				Project Manager, VP Support Services, Senior Applications Specialist		Project Director - CIO		
18		<p>Provide Post Go-Live Onsite Support (until all sites are live and accepted)</p> <p>The objective of this task is to provide MC-CHS with additional onsite support by BCA project personnel, immediately after the system has been moved into productive use, to insure the successful implementation of the PEARL Implementation Project. MC-CHS and BCA project personnel should be available to all users and licensed sites to provide user support, answer questions, correct errors resolve problems and identify changes that maybe required.</p>		18	Provide Post Go-live Onsite Support	43 - 50	Project Manager, VP Support Services, Senior Applications Specialist	1120	All Support Personnel	40 hours per week all personnel	

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06113 EXHIBIT B-1**

B-1 Task Number	Sub Task	B-1 Task Description	Deliverables to the County (New Field to be included B-1 by BCA)	B-2 BCA Workplan Ref No	B-2 Workplan Description	Time Frame (week # from start)	BCA Resource Type Assigned	BCA Hrs Committed	MC Resource Type Assumed by BCA	MC Hours Assumed by BCA	Comments/Notes
18	a	Develop a detailed schedule of BCA and MC resources required to provide post go live support by facility, shift and individual. This should be in line with Task 1 decisions regarding implementation phasing.	Formal plan and assigned BCA resources accepted by MC Project Director and BCA Project Manager				Project Manager, VP Support Services		Project Director Operation Leads		

06113 EXHIBIT B-2

Maricopa County - CHS EMR

07 - Customizations/Modifications to PEARL (see last page)

- Requirements Definition
- Solution Design
- Build and Unit Test
- Documentation and Help Text
- Integrate and Install
- Deliverable: Task Summary Report
- Task Acceptance

08 - Develop ICJIS Interface

- Requirements and Design
- Build and Test
- Integrate/Install
- Documentation
- Deliverable: Task Summary Report
- Task Acceptance

09 - Develop Iris Scan (Identex) Interface

- Requirements and Design
- Build and Test
- Integrate/Install
- Documentation
- Deliverable: Task Summary Report
- Task Acceptance

10 - Develop SonoraQuest Lab Interface

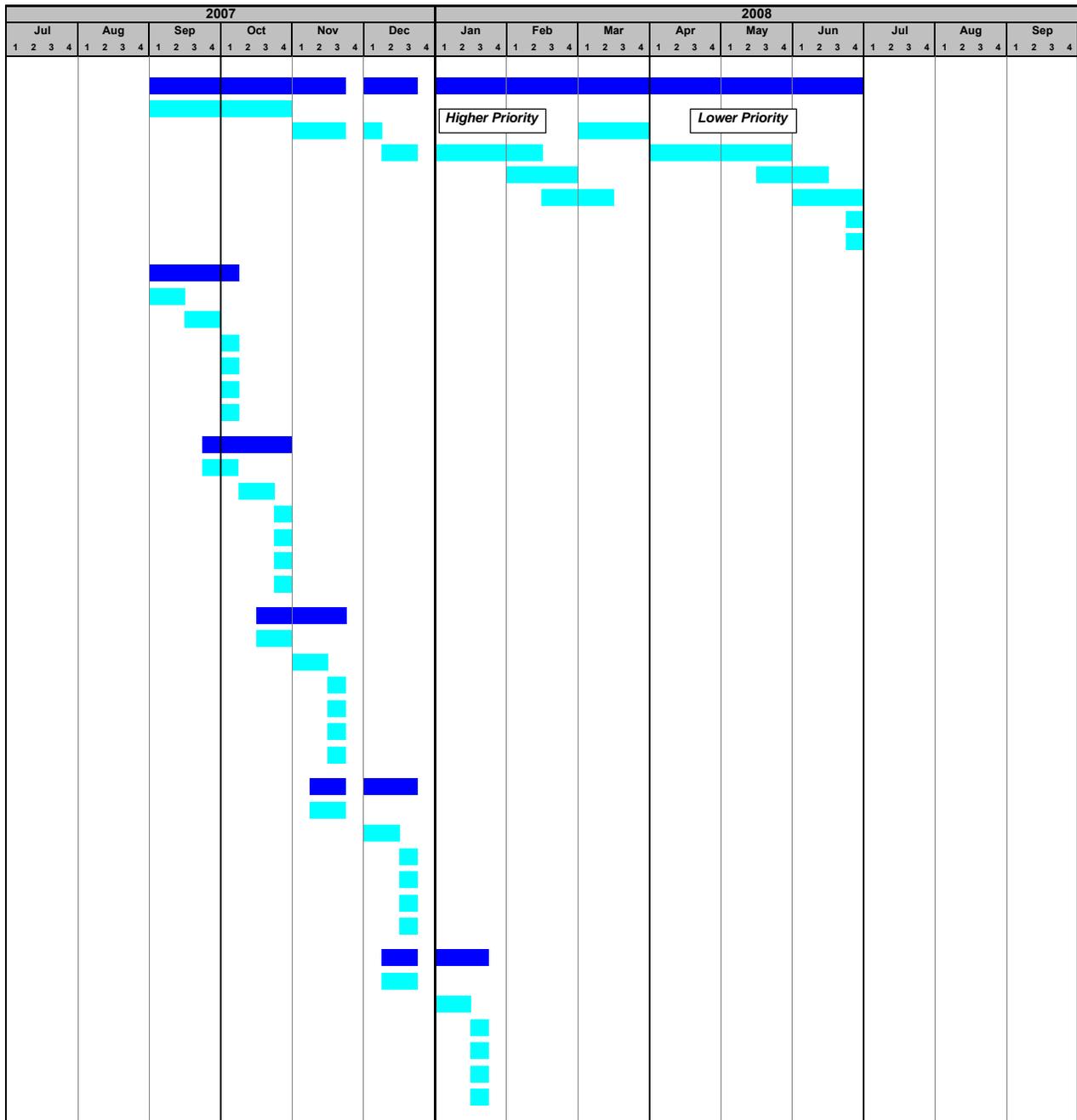
- Requirements and Design
- Build and Test
- Integrate/Install
- Documentation
- Deliverable: Task Summary Report
- Task Acceptance

11 - Develop Diamond Pharmacy System Interface

- Requirements and Design
- Build and Test
- Integrate/Install
- Documentation
- Deliverable: Task Summary Report
- Task Acceptance

12 - Develop GE Centricity Digital X-Ray System Interface

- Requirements and Design
- Build and Test
- Integrate/Install
- Documentation
- Deliverable: Task Summary Report
- Task Acceptance



06113 EXHIBIT B-2

Maricopa County - CHS EMR

13 - Develop Dictaphone System Interface

- Requirements and Design
- Build and Test
- Integrate/Install/Train
- Documentation
- Deliverable: Task Summary Report
- Task Acceptance

14 - Arizona State Immunization Interface

- Requirements and Design
- Build and Test
- Integrate/Install/Train
- Documentation
- Deliverable: Task Summary Report
- Task Acceptance

15 - System Training

- Plans/Documents
- EHR Administrator
- Clerical
- Physicians/Providers
- Nurses/Techs/Staff
- Psychiatric
- Deliverable: Task Summary Report
- Task Acceptance

16 - Jointly Supervise System Testing

- Deliverable: Task Summary Report
- Task Acceptance

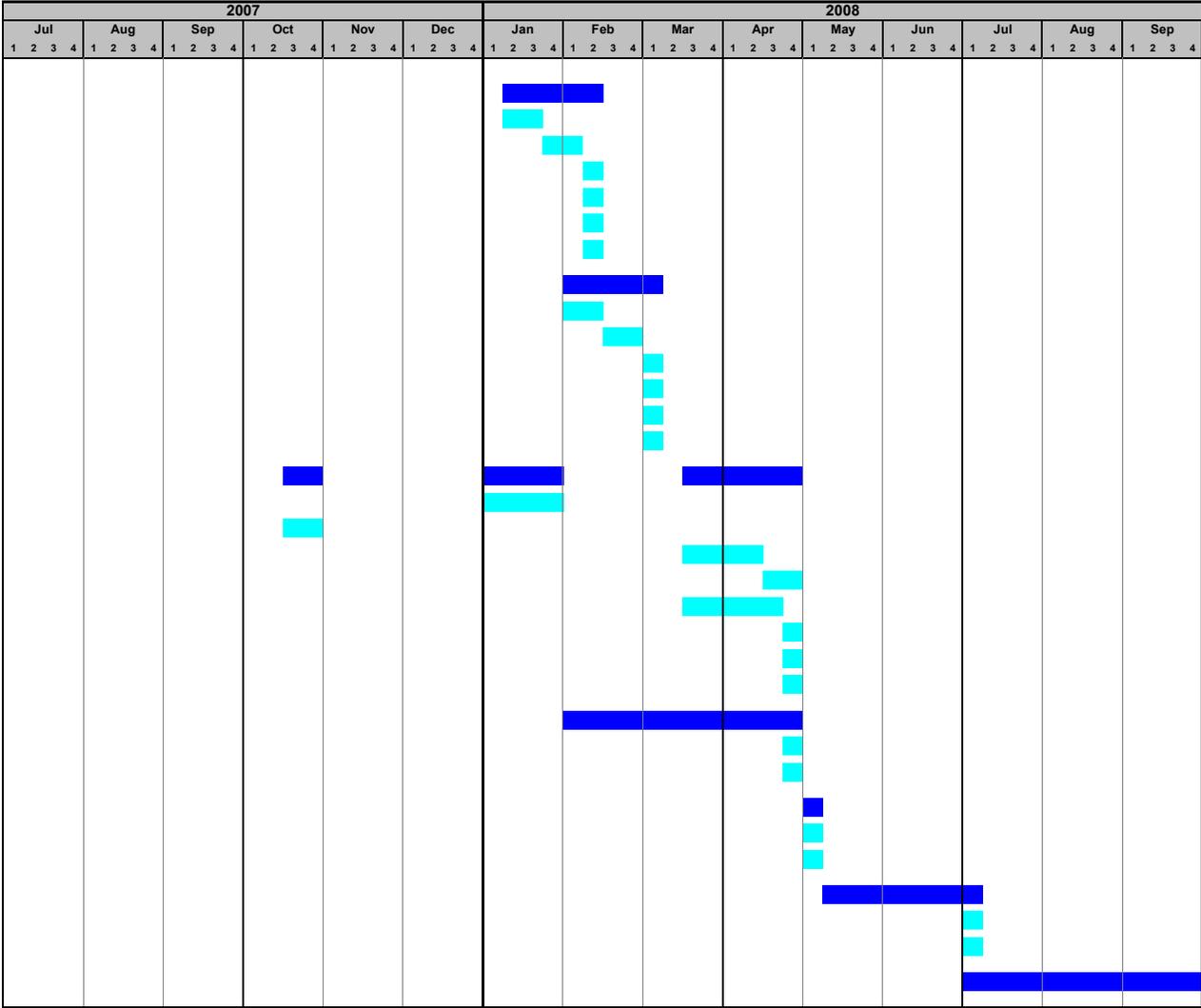
17 - Go-Live Operations

- Deliverable: Task Summary Report
- Task Acceptance

18 - Provide Post Go-Live Onsite Support

- Deliverable: Task Summary Report
- Task Acceptance

20 - BCA PEARL Warranty Period



06113 EXHIBIT B-2

Task 7 -- Optional Customizations/Modifications to PEARL (Items marked #3 from RFP Attachment E)

- 48 Provide online tickler file for automatic clerical follow-up with specific clients and/or services (i.e. if patient address changes, message "check guarantor address".)
- 109 Scoring capabilities to build T-scores, percentiles, and other mathematical algorithms against the responses.
- 110 Customizable online help to guide the client in filling out the assessment/survey.
- 115 Provide ability to build self-scoring specific Assessment templates for example: speech, language; self care; cognitive functioning; abnormal involuntary movements; nursing; educational functioning; psychological; neurological; general physical health.
- 330 Improper order in scheduling sequential interventions.
- 376 Provide option of visual or auditory alarm which requires a response on receipt of STAT, ASAP, timed orders, or special instructions
- 399 Allow scheduling of a test (procedure) when ordering. Notify provider (where test is scheduled) so time and date may be verified. Provide automatic feedback of verification to ordering area.
- 434 Ability to Lock Out Ordering (e.g. ARNP not able to order medications for himself).
- 581 Incorporate Risk assessments (e.g. clinical calculators).
- 682 Support purging (i.e. archiving) of system data, as defined by department
- 718 Color indicators are provided on patient list screens as defined above, which indicate new, abnormal, or critical data and the data is easily accessible
- 720 Provide online access both locally and remotely via the Internet to one or more databases (e.g., Medline) of bibliographic information.
- 767 Use Logical Observation Identifier Names and Codes (LOINC).
- 770 Use National Council for Processing Prescription Drug Programs (NCPDP).
- 774 Use another recognized vocabulary source.
- 776 Relationships between Code Sets clearly defined.
- 779 Supports static/dynamic data element relationships
- 780 Accommodate new, unforeseen codes, data elements
- 781 Ability to Recognize Semantic Differences (e.g. Heart and Cardiac).
- 791 Offer medical & mental health diagnosis decision matrix that addresses continuity of interventions in treatment planning.
- 807 Ability to Conference (i.e., chat) on-line.
- 841 Designated users can not be signed on to more than one PCI (device) at a time
- 848 Ability to process files from Human Resources system for terminated employees, and automatically turns off access.
- 859 Alert simultaneous users of each other's presence on the same record.
- 872 User is able to identify where the current display is in the whole record (e.g. site map).
- 905 Critical fields have on-line Help (data dictionary name and codes) for easy reference and look-up
- 921 Ability to link notes with problems by patient.
- 965 Ability to generate report of all lab tests by laboratory technician
- 1022 Ability to interface (bi-directional) to the Arizona State Immunization Information System
- 1023 Ability to interface to GE Centricity RA600 Digital X-Ray System

06113 EXHIBIT B-3
BCA®
LICENSE AGREEMENT

Between Business Computer Applications, Inc., a corporation organized and existing under the laws of the State of Tennessee, and having its principal office at 2002 Perimeter Summit Blvd, Suite 880, Atlanta Georgia 30319 (hereinafter "BCA") and the Customer identified below (hereinafter "Customer").

Customer: Maricopa County

Customer's Address: Materials Management Department
320 Lincoln Street
Phoenix, AZ 85003-2494

Contact Person: Steve Dahle, Procurement Officer

Phone: 602-506-3540

Designated Clinic\Facility: All Maricopa County Jail Facilities

WITNESSETH

WHEREAS, BCA has developed certain computer software applications and related documentation which Customer wishes to utilize in connection with its business operations; and

WHEREAS, BCA is willing to grant Customer a personal, non-transferable, non-exclusive, terminable license for the use of the Licensed Programs in connection with Customer's business, upon the terms and conditions hereinafter provided;

NOW, THEREFORE, in consideration of the premises and in further consideration of the terms and conditions hereinafter set forth, the parties hereto, intending to be legally bound, agree as follows:

ARTICLE I

DEFINITIONS

Unless otherwise defined in this Agreement the following definitions will control in the interpretation of this Agreement:

- 1.1** "Agreement" means this BCA License Agreement.
- 1.2** "Contract" means the Contract Pursuant to RFP, Serial number 06113-RFP between Customer and BCA.
- 1.3** "Licensed Program" or "Licensed Programs" means, depending on the context, either a computer program or the computer programs, and the related documentation to be provided to Customer pursuant to the terms of this Agreement. A list of the Licensed Programs is set forth in Schedule 1.2 hereof and is expressly incorporated herein.

1.4 “Function List” means a list of the necessary functions desired to be achieved via the operation of the Licensed Programs. The Function List is set forth Exhibit B-1 “Statement of Work” and expressly incorporated herein.

1.5 “Update” means any general version or release of a Licensed Program that BCA may develop from time-to-time that contains an addition, improvement, enhancement or other change to such Licensed Program which is not separately identified and priced by BCA in its price schedule and which is marketed by BCA under the same name as that of the Licensed Program in question; but will not include any modification provided to subsequent customers as a result of requested and/or contracted design or program changes or alterations.

ARTICLE II

GRANT OF LICENSE

2.1 Scope of License BCA hereby grants Customer and Customer hereby accepts, upon the terms and conditions hereinafter set forth, a personal, non-transferable, non-exclusive and terminable license to use the Licensed Programs for the sole purpose of discharging the items set forth on the Function List.

2.2 Limitations on Use This license extends for use of the Licensed Programs at the Designated Clinic\Facility and on the Designated CPU of Customer, or at such other locations as may be specifically authorized in writing by BCA.

2.3 Updates For a period of ninety (90) days from the date of delivery to Customer of the Licensed Programs, BCA will furnish Customer, at no extra charge, a copy of any Updates of a License Program which BCA may release during said period, provided that Customer delivers to BCA all copies of the Licensed Program and supporting documentation being Updated which have been delivered to Customer. The terms and conditions of this Agreement will fully apply to any and all such Updates. BCA will have no obligation under the terms of this Agreement to provide Customer with Updates after the first ninety (90) days. However, if Customer and BCA have entered into the BCA Software Maintenance and Support Agreement, (Exhibit B-6) the Customer will be provided with Updates without the payment of additional license fees.

2.4 Source Code The Source Code will remain BCA’s property and will not be viewed, copied or made privy to any person or entity.

2.5 Confidentiality The license granted Customer hereunder is personal only, and neither the license, the Licensed Programs, technical documentation, operational manuals, this Agreement nor the rights granted hereunder may be resold, assigned, transferred, licensed, sublicensed, copied, hypothecated or otherwise disclosed to any person without the prior written permission of BCA, provided that Customer may disclose such information to its employees, but only as may be necessary for Customer’s utilization of this system and only if such employee will agree to keep any information disclosed confidential as herein provided. Customer further acknowledges that the items being licensed pursuant to the terms of this Agreement are valuable proprietary products of BCA, and that BCA will suffer substantial monetary loss and damage to its business in the event Customer violates the provisions of this Article II.

2.6 Infringement Indemnity

2.6.1 Indemnity By BCA BCA will defend any suit or proceeding brought against Customer to the extent that such suit or proceeding is based on a claim that any Licensed Program, or any part thereof, alone and not in combination with any other products regardless of source, infringes on any patent or copyright of the United States, or misappropriates a trade secret, and BCA will pay all damages and court costs awarded therein against Customer. The foregoing indemnity is subject to BCA being notified within ten (10) days of such claim in writing and given authority, information and assistance for the defense of such claim. Notwithstanding the foregoing, if any such Licensed Program, or any part thereof, is held to constitute an infringement or a misappropriation, and use of the Licensed Program by Customer is enjoined, then BCA will, at its sole option and at its own expense, either: (1) procure for Customer the right to continue using such Licensed Program or modify the same so as to make it non-

infringing, (2) replace such Licensed Program with a non-infringing product, (3) modify the same so as to make it non-infringing, or (4) refund to Customer the applicable amount of the license fee paid for such Licensed Program upon return to BCA of all copies of such Licensed Program in Customer's possession and receipt by BCA from Customer of a signed written certification that Customer has either delivered to BCA or destroyed all copies of such Licensed Programs that were ever in Customer's possession. In no event will BCA's total liability to Customer under or as a result of compliance with this Paragraph exceed the aggregate amount of the applicable license fee paid to BCA by Customer for the allegedly infringing Licensed Program, or part thereof. Customer agrees that the foregoing states the exclusive remedy of Customer with respect to any alleged patent or copyright infringement or trade secret misappropriation. Notwithstanding the foregoing, BCA will be relieved of its responsibilities hereunder in the event that Customer, either intentionally or unintentionally, performs any alteration or modification to the Licensed Programs that have not been expressly authorized in writing by BCA.

2.6.2 Indemnity By Customer If BCA suffers a loss because of a claim that a Licensed Program infringes on any patent or copyright of the United States, or misappropriates a trade secret, and such infringement or misappropriation was caused, directly or indirectly, by Customer's unauthorized modification of a Licensed Program or its source code, then Customer agrees to indemnify and hold BCA harmless for all costs, expenses and losses sustained or incurred as a result thereof.

ARTICLE III

PAYMENT OF FEES

3.1 In addition to the payment terms of the Contract, this license amount is calculated on an average daily inmate population of 9,900 inmates at \$0.045 (four and one-half cents) per inmate per day for 60 months. BCA may revisit the average daily inmate population at the end of each 12 month period. Should the average daily inmate population for the 12 month period just ended exceed 9,900, Customer and BCA will negotiate increases to the License Access Fee and, if agreement is reached, execute an appropriate amendment to this Agreement.

3.3 Multiple License Fee In the event that Customer wishes to use the Licensed Programs at a Clinic\Facility in addition to the Designated Clinic\Facility, then Customer will, prior to using the Licensed Program at such Clinic\Facility, (I.) give BCA prior written notice of such desire and (II.) pay BCA's then prevailing additional Clinic\Facility License Fee.

3.4 Upgrades Should Customer change the model of the designated CPU within twenty-four (24) months of the execution of this Agreement so as to increase the capacity/capabilities of said designated CPU, Customer agrees to pay BCA the difference between the License Fees paid under the terms of this Agreement and the then prevailing License Fees for the Licensed Programs for the model number of the CPU to which the Customer has upgraded.

ARTICLE IV

SHIPMENT AND DELIVERY

4.1 Terms Delivery will be deemed completed upon the physical presentation of the Licensed Programs to the Designated Clinic\Facility during normal business hours. Customer will pay all charges for delivery of the Licensed Programs to Customer's Designated Clinic\Facility. Shipping terms will be FOB Atlanta, Georgia. BCA will not be liable for any delay in delivery or installation due to causes beyond its reasonable control, including but not limited to, acts of God, acts of Customer, acts of civil or military authority, war, terrorism, riots, fires, floods, strikes, natural disasters, blackouts, delays in transportation, and inability to obtain necessary fuel, power, labor, materials, transportation, or manufacturing facilities.

ARTICLE V

INSPECTION

5.1 Duty Upon Receipt Upon delivery of the Licensed Programs, Customer will insert them into a suitable machine for scanning the contents thereof for the purposes of assuring itself that:

- (a) said Licensed Programs contain those capabilities set forth in the Function List; and
- (b) the Licensed Program conforms to Schedule 1.2.

Unless BCA has been notified in detail of any deficiency as to the Licensed Programs within thirty (30) days from their delivery to Customer, the Licensed Programs will be deemed to have been accepted and full payment will be due BCA as described in Article III above.

ARTICLE VI

WARRANTY

6.1 Documentation and Operation Manuals Customer and BCA expressly agree that the technical documentation and operations manuals provided by BCA which accompany the above-described Licensed Programs are submitted on "AS-IS" basis, and may not adequately detail the total capabilities of the system, but that the above-designated technical documentation and operations manuals contain, at a minimum, those capabilities outlined in the Function List.

6.2 Licensed Programs BCA warrants that Licensed Programs as delivered by BCA, if properly installed by Customer, will perform in accordance with the documentation accompanying said Licensed Program and perform those functions set forth in the Function List.

6.3 Remedy BCA's sole obligation and liability for any breach of the warranties provided in this Agreement will be, in BCA's sole option: (1) to replace the copy of such defective Licensed Program; or (2) to repair or correct the copy of such defective Licensed Program so that it will perform in accordance with such specifications set forth in the Function List; or (3) to refund the applicable license fee paid for the defective Licensed Program in question. If BCA elects to exercise this third remedy, the refund will not be paid by BCA until it receives from Customer written certification that all copies of such Licensed Programs, technical documentation and operational manuals ever in Customer's possession have been returned to BCA. BCA will not be liable for any special, indirect, incidental or consequential damages resulting from or arising out of the use or performance of a Licensed Program whether in an action based on contract or tort, including negligence. In no event will BCA's liability to Customer exceed the amount paid by Customer to BCA hereunder.

6.4 Disclaimer of All Other Warranties Except as expressly provided in this Article, BCA MAKES NO OTHER WARRANTY, WHETHER ORAL OR WRITTEN, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

6.5 Actions Which Void Warranty Any warranty made by BCA hereunder will be void in the event that Customer: (1) uses or operates the Licensed Programs on a CPU other than the Designated CPU or at a location other than the Designated Clinic\Facility without the express written permission of the BCA; (2) performs any unauthorized modifications to the Licensed Programs; or (3) is given custody to the Source Code for a Licensed Program by BCA. The voiding of the warranty under this Article will not operate to alter or amend any other provision of this Agreement, or waive or compromise any right of BCA or Customer to fully enforce the other provisions of this Agreement.

ARTICLE VII

MISCELLANEOUS

7.3 **Customer's Obligations on Expiration or Termination** Upon expiration or termination of this Agreement, Customer will immediately deliver to BCA all copies of the Licensed Programs and Updates and will certify in writing to BCA that all such copies ever in Customer's possession have been returned to BCA.

7.9 **Headings** The Article and Paragraph headings contained in this Agreement are for reference purposes only and will not affect in any way the meaning or interpretation of this Agreement.

06113 EXHIBIT B-4
BCA®
OPERATING SERVICE LEVEL AGREEMENT

Between Business Computer Applications, Inc., a corporation organized and existing under the laws of the State of Tennessee, and having its principal office at 2002 Summit Blvd, Suite 880, Atlanta, Georgia 30319 (hereinafter “BCA”) and Maricopa County (hereinafter “Customer”), a political subdivision of the State of Arizona.

Customer: Maricopa County

Customer’s Address: Maricopa County
Department of Materials Management
320 West Lincoln Street
Phoenix, Arizona

Contact Person: Steve Dahle, Procurement Officer

Phone: 602-506-3540

Designated Clinic\Facility: Maricopa County Jail Facilities

WITNESSETH

WHEREAS, BCA and Customer have contemporaneously herewith entered into the BCA License Agreement, the BCA Maintenance Agreement, and the BCA Product and Third Party Software Agreement; and

WHEREAS, in addition to accessing BCA’s standard licensed programs, Customer also desires that BCA customize certain of BCA’s standard licensed programs for access by Customer, and to design, construct and document a system of Work Station Access Nodes, communication links and other infrastructure based on certain specifications hereinafter described and provide Customer’s employees with specified training in the use of said system such that Customer will have the capability to access BCA’s systems and utilize the Licensed Programs; and

WHEREAS, BCA is willing to provide such services pursuant to the terms and conditions of this Agreement;

NOW, THEREFORE, in consideration of the premises and in further consideration of the terms and conditions hereinafter set forth, the parties hereto, intending to be legally bound, agree as follows:

ARTICLE I

DEFINITIONS

- 1.1 **“Agreement”** means this BCA Service Agreement.
- 1.2 **“Effective Date”** means the effective date of this Agreement, which is July 25, 2007.
- 1.3 **“License Agreement”** means the BCA License Agreement.
- 1.4 **“Maintenance Agreement”** means the BCA Maintenance Agreement.
- 1.5 **“Hardware Agreement”** means the BCA Hardware Agreement executed contemporaneously herewith.

- 1.6 **“Software System”** means the computer software system and its associated documentation to be developed by BCA pursuant to the terms of this Agreement.
- 1.7 **Other Definitions** Unless otherwise defined in this Agreement, the definitions set forth in the License Agreement will control the definition of any capitalized term herein.
- 1.8 **SOFTWARE PERFORMANCE DEFINITIONS:**
- (a) **"Actual Uptime"** means, of the Scheduled Uptime, the aggregate number of hours in any calendar month during which the applicable Software or services, or are available for use by End Users.
 - (b) **"Availability"** of particular Software or services are the extent to which such Software and services are actually available for use by End Users during the Scheduled Uptime for such Software, or services. Availability will be expressed as a percentage, by adding Excused Downtime for the calendar month to the Actual Uptime and expressing the result as a percentage of the total Scheduled Uptime (i.e., $\text{Availability \%} = ((\text{Actual Uptime} + \text{Excused Downtime}) / \text{Scheduled Uptime}) \times 100$).
 - (c) **"Available for Use"** means the ability of Software and services, for which Contractor is operationally responsible, to be utilized or accessed by End Users in accordance with normal operations (including, as applicable, Software specifications and Service Levels, and without material degradation of performance.
 - (d) **"Business Day"** means Monday through Sunday 24 hours per day, 365 days per year.
 - (e) **"Business Hour"** means an hour during any Business Day.
 - (f) **"Compliance Date"** for a Service Level shall mean the date designated as such in (Service Level Metrics and Associated Service Levels).
 - (g) **"Credit Formula"** has the meaning given in Subsection 5.6.2 (a).
 - (h) **"Critical Service Level"** has the meaning given in 5.6.2 of the Agreement. As of the Effective Date, the Critical Service Levels are those Service Levels identified as Critical Service Levels in Service Level Metrics and Associated Service Levels to this Schedule B.
 - (i) **"Critical Service Level Failure"** has the meaning given in Section 5.6.2 (a) (Service Level Credits) of the Agreement.
 - (j) **“End User”** refers to the individual utilizing the system at CHS.
 - (k) **"Excused Downtime"** means the aggregate number of hours during a calendar month, based on mutual agreement between the Contractor and the County, that the specified Software or services are not available for use by End Users
 - (l) **"Problem"** means any unscheduled event that adversely affects Software or services, or an End User's use of such Software or services, for which Contractor is responsible as part of the Services.
 - (m) **"Report Delivery Time"** means the time of day at which, or period of time in which, as applicable, a report is delivered by Contractor to the appropriate location and addressed to the appropriate recipient(s), each as reasonably designated from time to time by COUNTY in accordance with the Policy and Procedures Guide.
 - (n) **"Scheduled Outage"** means the aggregate number of hours in any month during which the applicable Software or services are scheduled to be unavailable for use by End Users due to such things as preventive maintenance or upgrades. Scheduled Outages will be mutually agreed upon by COUNTY and Contractor.

- (o) **"Scheduled Uptime"** means, with respect to a Service Level, the time during which the corresponding specified Software or services are to be available for use during a calendar month, excluding any Scheduled Outages.
- (p) **"Service Level"** is defined as the performance standards and measures outlined in Article VI.
- (q) **"Service Level Credit"** has the meaning given in Section 4.6 of the Agreement.
- (r) **"Service Level Metric"** means the metric to be met that is associated with a Service Level category.
- (s) **"Severity Level"** means, with respect to a Problem, the highest-priority level that is applicable based on the following classifications (such classifications are in descending order of priority):

"Severity Level 1 Problem" is the highest level of severity and the most critical of problems. A Severity Level 1 Problem places the County's ability to perform mission-critical business functions in jeopardy or causes such functions to be unavailable, or directly and materially impacts any COUNTY business unit or any COUNTY customers' ability to receive COUNTY services or access to COUNTY systems. Examples of a Severity Level 1 Problem are:

- (A) causes or threatens to cause loss of revenue or expense impact;
- (B) affects or threatens to affect the safety of an COUNTY customer or employee; or
- (C) causes or threatens to cause significant disruption or outage at a major COUNTY location (e.g., call center(s), data center(s)).

"Severity Level 2 Problem" is an urgent level of severity with serious problems and/or degrading conditions without immediate business impact. A Severity Level 2 Problem places a business unit, a department or individual's ability to perform a function in jeopardy or causes such function to be unavailable. For a Severity Level 2 problem a work-around is, or can be, established within a reasonable time. And the problem will not impact COUNTY in manner that would cause such Problem to be classified as a Severity Level 1 Problem. Examples of a Severity Level 2 Problem are:

- (A) affects or threatens to affect multiple COUNTY customers in a non-trivial manner;
- (B) causes a high availability device, designated by COUNTY not to function, for which no work-around has been implemented;
- (C) causes or threatens to cause multiple normal availability devices not to function; or
- (D) prevents one or more End Users from using or receiving output of a critical Application or system, for which no COUNTY-approved work-around has been implemented.

Severity Level 2 Problems shall become Severity Level 1 Problems upon expiration of the Problem Resolution Time for such Severity Level 2 Problem.

"Severity Level 3 Problem" is a medium level of severity with limited business impact. A Severity Level 3 Problem impacts or inconveniences a business unit, COUNTY customer, or a department or individual's ability to perform job functions; but does not prevent business from continuing as normal.

A Severity Level 3 Problem does not impact COUNTY in a manner that would cause such problem to be classified as a Severity Level 1 Problem or Severity Level 2 Problem. Examples of a Severity Level 3 Problem are:

- (A) affects or threatens to affect one or more COUNTY customers in a non-trivial manner;
- (B) causes a high availability device designated by COUNTY not to function, but for which a workaround has been implemented;
- (C) causes or threatens to cause a device other than a high-availability device not to function;
- (D) prevents one or more End Users from using or receiving output of a critical application or system, but for which an COUNTY-approved work-around has been implemented; or
- (E) reduces the functionality of any application or system for an End User, but that does not inhibit such End User's ability to continue performing his or her work.

Severity Level 3 Problems shall become Severity Level 2 Problems upon expiration of the Problem Resolution Time for such Severity Level 3 Problem.

Severity Level 4 Problem" is a low level of severity with very limited business impact. A severity level 4 Problem impacts or inconveniences a business unit, COUNTY customer, or a department or individual's ability to perform job functions; but which does not prevent business from continuing as normal. A Severity Level 4 Problem does not impact COUNTY in a manner that would cause such Problem to be classified as a Severity Level 1, 2, or 3 Problem. Examples of a Severity Level 4 Problem are:

- (A) affects or threatens to affect one or more COUNTY customers in a trivial manner;
- (B) prevents one or more End Users from using or receiving output of a critical application or system, but for which an COUNTY-approved work-around has been implemented; or
- (C) reduces the functionality of any application or system for an End User, but that does not inhibit such End User's ability to continue performing his or her work.

Severity Level 4 Problems shall become Severity Level 3 Problems upon expiration of the Problem Resolution Time for such Severity Level 4 Problem.

ARTICLE II

SERVICES PROVIDED

- 2.1 **Development** BCA will perform, in accordance with the terms of this Agreement, program design, construction, testing and debugging, documentation and user education in order to create the Software System and enable it to be used by Customer's employees to effectuate Customer's data processing needs as specified in [Exhibit A](#). BCA will own all intellectual property rights resulting from the development of the Software System; provided that Customer will have a license to utilize such developments pursuant to the terms of the License Agreement

- 2.2 **Modification of Specifications** No modification of the Software System specifications set forth in Exhibit A will be made except by a written agreement accepted by both BCA and Customer. Such agreement will specify revised performance specifications, revised estimates of the hours needed to effectuate the modifications and any changes in cost resulting from the modifications.
- 2.3 **Training and Testing** As set forth in Exhibit A, BCA shall provide 1132 hours to be allocated to the training of Customer’s personnel and testing of the Software System. Such training will take place at Customer’s Designated Clinic/Facility Location (as hereinbefore defined) at a time mutually convenient for BCA and Customer. It will be Customer’s sole responsibility to coordinate class schedules and class rosters. It is expressly understood that the effectiveness of the training is largely dependent on the individual capabilities of Customer’s employees and therefore BCA cannot guarantee that any or all of Customer’s employees will be able to operate the Software System effectively after the conclusion of the training period.
- 2.4 **Support/Operations** BCA will be responsible for 24/7 support for all development and maintenance support for all applications and the operating system. This includes all tasks related to system software and overall availability of application and system software. **BCA will provide adequate data backup and recovery processes policy and procedure.** BCA will be responsible for all task related to database configuration and database administration,
- 2.5 **Recovery Services** BCA will be responsible for the restoration of all software, databases and operating systems in the event of system failure.

Outage Notification:

The matrix below defines the notification timeframe and method for communication of outages.

Type of Outage	Notification Timeframe	Notification Method	Include in Notification
Planned Outage (scheduled maintenance or scheduled fix)	To be scheduled in accordance with Maricopa County's and BCA's Planned Outage schedule to maintain consistency.	E-Mail Notification	<ul style="list-style-type: none"> • Cause of Notification • Time of scheduled outage – down/up time • Impact to Application
Unplanned Outage (Application is unavailable)	Upon Discovery.	Notify BCA and MCSO I/T support personnel and site administrator(s) / owner(s) via E-Mail and/or text page as appropriate	<ul style="list-style-type: none"> • Cause of Outage • Time of outage – down/up time • Impact to Application • Resolution
Emergency Outage (Application is at risk and may go down or have problems)	One hour before the Emergency Outage (when possible).	Notify BCA and MCSO I/T support personnel and site administrator(s) / owner(s) via E-Mail and/or text page as appropriate.	<ul style="list-style-type: none"> • Cause of Outage • Time of outage – down/up time • Impact to Application • Resolution

BCA Providers:	
BCA – Application	Provides all development and maintenance support for the application. Ensure interface/files shares are available.
BCA – Server Support /Infrastructure	Tasks related to the database operating system, third party software and the application; overall performance and availability of the application and system. Adequate

	backup and recovery processes.
BCA – DBA	Tasks related to database performance and configuration and availability of database and database connectivity adequate data indexing and restore processes.
BCA – Administration and Support	Provides the technical and business support and all administration and management of the solution, including the database operating system , application, and client software.
BCA – Database Security	Provides database security support.

ARTICLE III

DISCLAIMER OF WARRANTY

THE SERVICES RENDERED PURSUANT TO THE TERMS OF THIS AGREEMENT ARE RENDERED ON A BEST EFFORTS BASIS AND BCA DISCLAIMS ALL OTHER WARRANTIES, EXPRESS, IMPLIED, OR STATUTORY, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT WILL BCA BE LIABLE FOR INDIRECT, SPECIAL, OR CONSEQUENTIAL DAMAGES, SUCH AS, BUT NOT LIMITED TO, LOSS OF ANTICIPATED PROFITS OR BENEFITS RESULTING FROM THE USE OF THE SOFTWARE SYSTEM, OR ARISING OUT OF ANY BREACH OF THIS WARRANTY, OR ARISING OUT OF ANY OTHER ACTION, WHETHER BASED ON BREACH OF CONTRACT OR TORT.

ARTICLE IV

SERVICE LEVEL METHODOLOGY

4.1 General.

At a minimum, BCA shall achieve each Service Level Metric identified in Article VI upon the Compliance Date for each Service Level category.

4.2 Measurement and Reporting.

- (a) In accordance with this Agreement and except as otherwise specified in Article VI, commencing as of the Effective Date, BCA shall measure and report on its performance of the Services against the Service Levels on a calendar-quarterly basis. Contractor shall also measure and report, on request (unless otherwise indicated in the Procedures Manual), on its performance against all metrics measured and reported on by COUNTY prior to the Normal Reporting Date.
- (b) As part of the Quarterly Performance Report described here within, BCA shall provide a report on BCA's performance of the Service Levels during the previous quarter. Such report shall include, for any failure to meet a Service Level, a description of the cause(s) of such failure in accordance with BCA's obligations described in **Article VI**; BCA shall provide detailed supporting information for each report as reasonably requested by COUNTY. The raw data and detailed supporting information relating to the determination of whether a Service Level has been met shall be deemed to be COUNTY Data.
- (c) Unless otherwise noted, all references to time of day shall refer to Mountain Standard Time ("MST").

4.3 Measurement Tools.

- (a) Except as may otherwise be specifically provided in the Agreement or as may be mutually agreed upon, BCA shall have operational, administrative, maintenance, and financial responsibility for all tools required to measure BCA's performance of the Service Levels; provided that if COUNTY adds an additional or new Service Level that BCA can reasonably demonstrate cannot be measured with BCA's full-complement of tools available to BCA without BCA having to incur additional material expense for such additional tools, the Parties shall determine if there are alternative means to capture or measure such Service Level; provided further, however, if the Parties are not able to develop such alternative means, the Parties shall mutually agree on the extent of BCA's reimbursement for such expense for the required tools prior to BCA having the responsibility to measure and meet such additional or new Service Level.

4.4 Multiple Service Level Conditions.

Where a Service Level includes multiple conditions or components, satisfaction of each and every condition or component is necessary for the satisfaction of the corresponding Service Level.

4.5 SERVICE LEVEL CREDIT METHODOLOGY

4.5.1 Designation of Critical Service Levels.

- (a) COUNTY and BCA may elect from time to time but no more frequently than once every six (6) months during the Term to change, the designation of any Service Level to another Service Level, upon providing written notice thereof to BCA quarterly prior to the changes going into effect. Contractor (such change to apply for the quarter immediately following such notice so long as the notice was provided by the 10th day of the following quarter, or, if not provided by the 10th day of the following quarter, such change will apply to the following month). For purposes of clarity, if notice is provided on or before February 10th, such change shall apply in March; if notice is provided after February 10th, such change shall apply in April. For any Service Level changed to a Critical Service Level, COUNTY may, in its sole discretion, designate the applicable Critical Service Level Percentage (as defined below).

4.5.2 Service Level Credits.

- (a) Subject to this Agreement, the Service Level Credit applicable of the Agreement for BCA's failure to achieve a Service Level shall be calculated in accordance with this Section 4.5.2 (Service Level Credits).
- (b) Subject to Subsection 4.5.2 (b) and Subsection 4.5.2 (g) (Specific Methodology for Contractor Capability Service Levels), each failure of BCA to meet a Service Level during any calendar quarter shall be deemed a "Service Level Failure." The Service Level Credit for a Service Level Failure shall be computed pursuant to the following formula (the "Credit Formula"):

Service Level Credit = A x B Where:

A = the applicable Service Level Credit Percentage; and

B = the Amount At Risk for such quarter.

- (I) "Service Level Credit Percentage" for a Service Level shall mean the corresponding percentage of the Amount at Risk assigned to such Service Level as specified in this Article VI or as specified in accordance with Subsection 4.5.2(c) below. As of the Effective Date, the Service Level Credit Percentages are those identified as such in Article VI (Service Level Metrics and Associated Service Levels), and may be changed by COUNTY and BCA subject to Subsection 4.5.2

- (c).
 - (ii) "Amount At Risk" shall mean the amount County and BCA agree to in this agreement in Article VI
- (b) If a single triggering event, or causally-related series of triggering events, causes BCA to fail to achieve more than one Service Level (including where subsequent Service Level Failures are caused by an earlier Service Level Failure) in a calendar quarter, then with respect to each set of Service Level Failures caused by such triggering event or causally-related series of triggering events, COUNTY may recover only the greatest individual Service Level Credit associated with such set of Service Level Failures for such calendar quarter. For purposes of clarity, a single triggering event would not include a situation where BCA's correction efforts or corrections in turn triggered additional Service Level Failures.
- (b) Service Level Credit Percentages.
 - (i) Subject to subsection (ii) below, COUNTY with the written approval of BCA , will have the right from time to time to change, in its sole discretion, the Service Level Credit Percentage for any Service Level, no more frequently than once every six (6) months, upon providing written notice to BCA and receiving written confirmation from BCA of the same. Such change to apply for the quarter immediately following such acceptance of the notice.
 - (ii) The sum of all Service Level Credit Percentages at no time shall exceed fifty (50) percentage points
- (c) In accordance with this Agreement, in no event shall any Service Level Credits payable by BCA for any quarter of the Term exceed the Amount at Risk for that quarter.
- (d) As part of the Quarterly Performance Report (or as otherwise mutually agreed upon by the Parties in writing), for each Service Level Failure that occurred during the calendar quarter covered by such report, BCA shall identify and describe as a "Service Level Failure" each such Service Level that it failed to achieve in that quarter and calculate the amount of the Service Level Credit for each such Service Level Failure.
- (e) For each Service Level Credit that COUNTY elects to receive pursuant to Article VI of the Agreement, BCA shall provide such credit to COUNTY on the invoice for the calendar quarter immediately following the calendar quarter during which the Service Level Failure occurred. If there will be no further invoice, BCA will pay the amount of the Service Level Credit to COUNTY within thirty (30) days after the date of the last invoice.
- (f) Earnback
 - (i) General. BCA shall be entitled to earn back the amount of any Service Level Credit it has paid to COUNTY if, with respect to the Critical Service Level that Contractor failed to meet thereby becoming liable for the Service Level Credit, BCA performs the Services at a level that equals or exceeds such Service Level for each of the consecutive twelve (12) months immediately following the month in which the Service Level Failure occurred.
 - (ii) Timing. No earlier than the last day of the twelfth (12th) month of such consecutive twelve (12) month period (with respect to subsection (i) above), or on December 31 of the applicable calendar year (with respect to subsection (ii) above), BCA may, after notifying COUNTY of the earn-back, invoice COUNTY in accordance with Article 14 (Invoicing and Payment) for the amount of the Service Level Credit earned back (which shall be equal to the amount of the applicable Service Level Credit provided to COUNTY), COUNTY shall pay BCA the amount of the Service Level Credit.

4.6 MODIFICATIONS AND IMPROVEMENTS TO SERVICE LEVELS

4.6.1 General.

In response to changes in COUNTY's business needs, or to reflect changes in or evolution of the Services, COUNTY or BCA may upon the agreement of the other party, no more frequently than once every six (6) months, add, delete or change Service Level categories, but not change the associated Service Level Metric for an existing Service Level, during the Term by providing written notice to the other party. Such add, deletion or change to apply for the quarter immediately following such notice.

4.7 Adjustment for Improved Performance.

(a) Periodic Reviews. In conjunction with the review process described in this of the Agreement, commencing on the first anniversary of the Effective Date and annually thereafter, the Parties shall annually assess BCA's actual performance over the preceding twelve (12) months as well as BCA's expected improved performance capabilities resulting from the use of improved technologies and processes to perform the Services, including the determination of improved Service Level Metrics.

(b) Automatic Service Level Adjustment.

To the extent the parties cannot agree on new Service Level Metrics under (a) above, on each anniversary of the Effective Date, each Critical Service Level shall remain the same.

County and BCA agree that there shall be not automatic adjustments for the Service Levels.

4.8 SELF-HELP.

In the event BCA fails to address a problem in accordance with an "acceptable" Level of Service as specified in Article VI, COUNTY may, immediately upon informing BCA, respond to or correct such problem itself. COUNTY may elect to either charge against BCA any Service Level Credits which may arise in connection with any such failure of BCA, if any. In no event shall any adjustment be made to the Problem Response Time Severity Level 1 Steady State Service Level specified in Article VI (Service Level Metrics and Associated Service Levels) without mutual written agreement by the Parties before such adjustment shall apply to this Article 4.8 (Self-Help). County or BCA may enforce this provision by resorting to legal or equitable remedies in Arizona courts.

**ARTICLE V
MISCELLANEOUS**

5.1 Confidentiality of Customer's Information With respect to financial, statistical and personnel data relating to Customer's business which is confidential, which is clearly so designated, and which is submitted to BCA by Customer in order to carry out its work hereunder, BCA will keep such information confidential by using the same care and discretion BCA uses with similar information which BCA has designated confidential.

5.2 Employment of BCA's Personnel Customer agrees that it will not employ any present or former staff member of BCA within a one (1) year period from the time that work is performed pursuant to this contract. Should the Customer fail to comply with this provision, the Customer hereby agrees to pay BCA the staff member(s) salary (ies) for one (1) year, or (\$100,000.00), whichever is the greater, plus any and all expenses and fees incurred by BCA.

5.3 Modification: Waiver The waiver, amendment or modification of any right, power or remedy under this Agreement will not be effective unless agreed to in writing and signed by an authorized representative of the party against whom enforcement of such waiver, amendment or modification

is sought. No waiver of any breach or violation of this Agreement will constitute a waiver of any other breach or violation of this Agreement or of any other provisions hereof.

- 5.4 Parties in Interest** This Agreement will be binding upon and will inure to the benefit of the parties hereto and their respective successors and assigns; provided, however, that neither this Agreement nor any of the rights, interests nor obligations hereunder will be assigned by Customer without the prior written consent of BCA.
- 5.5 Compliance With Applicable Law.** BCA and Customer hereby state their mutual intention to be in compliance with all applicable federal and state laws, rules and regulations with regard to health care activities, including but not limited to the Health Insurance Portability and Accountability Act of 1996. In the event that any future statute or regulation requires an amendment to the non-economic provisions of this Agreement in order to be in compliance with applicable law, rule or regulation, then the parties shall act in good faith and negotiate an appropriate rider to this Agreement.

ARTICLE VI

Applications Operations and Maintenance Performance Metrics

Major Req. Section Number and Name	Related req. section number and name	Performance standard/Measure		Performance adjective	Frequency of measurement	Performance evaluation period	Data Source	Incentive /Disincentive
2.1 Operations	2.1 Operations	2.1.1 Operations System Availability (please review assumptions)	Available 98% of the scheduled time with no more than 2% of unplanned downtime	Acceptable	Quarterly	Quarterly	COUNTY Review of system availability reports provided by contractor	0%
		2.1.2 Operations System Availability (please review assumptions)	Available 99.% or more of the scheduled time with no more than 1% of unplanned downtime	Exceeds Expectations	Quarterly	Quarterly	COUNTY Review of system availability reports provided by contractor	15%
		2.1.3 Operations System Availability (please review assumptions)	Available less than 97% of the scheduled time with no more than 3% of unplanned downtime	Does Not Meet Expectations	Quarterly	Quarterly	COUNTY Review of system availability reports provided by contractor	-15%
	2.1.2 BCA End User Support	2.1.2.1 First-time response for help desk issues	between 2 and 3 minutes (90% of calls)	Acceptable	Per Ticket	Quarterly		0%
		2.1.2.2 First-time response for help desk issues	Between 0 and 2 minutes (90% of calls)	Exceeds Expectations	Per Ticket	Quarterly		5%
		2.1.2.3 First-time response for help desk issues	> 3 minutes(90% of calls)	Does Not Meet Expectations	Per Ticket	Quarterly		-10%

	2.1.3 – Issue	2.1.3.1 Resolution	1 to 4 hours for	Acceptable	Per Ticket	Quarterly	Ticket resolution	0%
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	Resolution Management initiation, (Shall meet 90% of the time measured).	time Priority 1 for issues that prevent users from accessing critical business functions hours from when the issue is logged.	resolution initiation. Some issues such as performing mission critical functions require adherence to COUNTY's emergency procedures where a fix or workaround must be implemented more quickly than 4 hours. (per incident)				reports	
		2.1.3.2 Resolution time Priority 1 for issues that prevent users from accessing critical business functions hours from when the issue is logged.	< 1 hour (per incident)	Exceeds Expectations	Per Ticket	Quarterly	Ticket resolution reports	5%
		2.1.3.3 Resolution time Priority 1 for issues that prevent users from accessing critical business functions hours from when the issue is logged.	> 4 hours (per incident)	Does Not Meet Expectations	Per Ticket	Quarterly	Ticket resolution reports	-5%
		2.1.3.4 Resolution time Priority 2 for issues that prevent users from accessing critical business functions hours from when the issue is logged.	4 to 8 hours for resolution initiation. Some issues such as performing mission critical functions require adherence to County's	Acceptable	Per Ticket	Quarterly	Ticket resolution reports	0%

			emergency procedures where a fix or workaround must be implemented more quickly than 4 hours. (per incident)					
		2.1.3.5 Resolution time Priority 2 for issues that prevent users from accessing critical business functions hours from when the issue is logged.	< 4 hours (per incident)	Exceeds Expectations	Per Ticket	Quarterly	Ticket resolution reports	5%
		2.1.3.6 Resolution time Priority 2 for issues that prevent users from accessing critical business functions hours from when the issue is logged.	> 8 hours (per incident)	Does Not Meet Expectations	Per Ticket	Quarterly	Ticket resolution reports	-5%
		2.1.3.7 Resolution time Priority 3 for issues that prevent users from accessing critical business functions hours from when the issue is logged.	24 to 48 hours for resolution. Some issues such as performing mission critical functions require adherence to County's emergency procedures where a fix or workaround must be implemented more quickly than 4 hours. (per incident)	Acceptable	Per Ticket	Quarterly	Ticket resolution reports	0%

		2.1.3.8 Resolution time Priority 3 for issues that prevent users from accessing critical business functions hours from when the issue is logged.	< 24 hours (per incident)	Exceeds Expectations	Per Ticket	Quarterly	Ticket resolution reports	5%
		2.1.3.9 Resolution time Priority 3 for issues that prevent users from accessing critical business functions hours from when the issue is logged.	> 24 hours (per incident)	Does Not Meet Expectations	Per Ticket	Quarterly	Ticket resolution reports	-5%
		2.1.3.10 Resolution time Priority 4 for issues that prevent users from accessing critical business functions hours from when the issue is logged.	Mutually agreed upon by MC CHS and BCA	Acceptable	Per Ticket	Quarterly	Ticket resolution reports	0%

2.2 Maintenance	2.2.1 Application Maintenance and Enhancement	2.2.1.1 Defect rate resulting from fixes and enhancements in the first 7 calendar days after deployment based on user help desk calls logged.	<3% defect rate	Acceptable	Per Release	Quarterly	Defect rate calculated as number of defects associated with a fix or enhancement request as a percentage or total number of fixes and enhancements deployed in the release	0%
		2.2.1.2. Defect rate resulting from fixes and enhancements	<3%	Exceeds Expectations	Per Release	Quarterly	Defect rate calculated as number of defects	5%

		in the first 7 calendar days after deployment based on user help desk calls logged.					associated with a fix or enhancement request as a percentage or total number of fixes and enhancements deployed in the release	
		2.2.1.3 Defect rate resulting from fixes and enhancements in the first 7 calendar days after deployment based on user help desk calls logged.	>5% or more defect	Does Not Meet Expectations	Per Release	Quarterly	Defect rate calculated as number of defects associated with a fix or enhancement request as a percentage or total number of fixes and enhancements deployed in the release	-5%
	2.2.2 Patch and Upgrade Management	2.2.2.1 Patches and upgrades incorporated in UFMS releases	Security patches to be applied in accordance with OET Patch Policy; all other patches and upgrades to be implemented by next release or agreed upon implementation date.	Acceptable	Quarterly	Quarterly	Report on patches and upgrades	0%

ARTICLE VII
AT RISK AMOUNTS

Contractor agrees to put fifty (50%) percent of their quarterly fees at risk for the performance described above. The + or - will be based on this amount placed at risk.



EXHIBIT B5-1

Business Computer Applications

Mandatory Capabilities

RFP # 06113

Line #			Resp.	Comp	Commen
1	1	PATIENT (INMATE) MANAGEMENT:		<input checked="" type="checkbox"/>	
2		a Co-pay Management	y	<input checked="" type="checkbox"/>	
3		b Referrals	y	<input checked="" type="checkbox"/>	
4		c Appointment Scheduling	y	<input checked="" type="checkbox"/>	
5		d Registration of DNR Orders	y	<input checked="" type="checkbox"/>	
6		e Registration of Living Will	y	<input checked="" type="checkbox"/>	
7		f Release of Information	y	<input checked="" type="checkbox"/>	
8		g Report Capability	y	<input checked="" type="checkbox"/>	
9		h Intake Interface	y	<input checked="" type="checkbox"/>	
10		i Admission, Discharge, Transfer	y	<input checked="" type="checkbox"/>	
11		j Merge/unmerge Record	y	<input checked="" type="checkbox"/>	
12		k Alias Management	y	<input checked="" type="checkbox"/>	

EXHIBIT B5-1

Line #			Resp.	Comp	Commen
13		l Patient Tracking (interface)	y	<input checked="" type="checkbox"/>	
14		m Patient Transport Management	y	<input checked="" type="checkbox"/>	
15		n Special Accommodations	y	<input checked="" type="checkbox"/>	
16		o Census Reporting	y	<input checked="" type="checkbox"/>	
17	2	CLINICAL OPERATIONS BY PROVIDER:		<input checked="" type="checkbox"/>	
18		a Problem List (complaints/diagno sis)	y	<input checked="" type="checkbox"/>	
19		b Encounters	y	<input checked="" type="checkbox"/>	
20		c Treatment Planning	y	<input checked="" type="checkbox"/>	
21		d Clinical Guidelines/Pathwa ys and Notes	y	<input checked="" type="checkbox"/>	
22		e Orders & Results Reporting	y	<input checked="" type="checkbox"/>	
23		f Consents	y	<input checked="" type="checkbox"/>	
24		g Clinician Access View	y	<input checked="" type="checkbox"/>	
25		h Clinical Decision Support	y	<input checked="" type="checkbox"/>	
26		i Controlled Medical Vocabulary	y	<input checked="" type="checkbox"/>	

EXHIBIT B5-1

Line #			Resp.	Comp	Commen
27	j	Charge Capture	y	<input checked="" type="checkbox"/>	
28	k	Patient Education	y	<input checked="" type="checkbox"/>	
29	l	Intake, Transfer, Release	y	<input checked="" type="checkbox"/>	
30	m	Admission Discharge, Transfer	y	<input checked="" type="checkbox"/>	
31	n	Referrals	y	<input checked="" type="checkbox"/>	
32	o	Flow Sheets	y	<input checked="" type="checkbox"/>	
33	p	Population Based Clinical Areas	y	<input checked="" type="checkbox"/>	
34	3	CLINICAL SPECIALTIES:		<input checked="" type="checkbox"/>	
35	a	Pharmacy:		<input checked="" type="checkbox"/>	
36		1 Order/Results Interface	y	<input checked="" type="checkbox"/>	
37		2 Medication Administration	y	<input checked="" type="checkbox"/>	
38		3 Drug-Drug/Allergy Interactions	y	<input checked="" type="checkbox"/>	
39		4 Drug Look-up	y	<input checked="" type="checkbox"/>	
40		5 Formulary Management	y	<input checked="" type="checkbox"/>	

EXHIBIT B5-1

Line #			Resp.	Comp	Commen
41	b	Laboratory (in house and reference)	y	<input checked="" type="checkbox"/>	
42	c	Obstetrics	y	<input checked="" type="checkbox"/>	
43	d	Communicable Diseases (including tuberculosis and STDs)	y	<input checked="" type="checkbox"/>	
44	e	Family Planning	y	<input checked="" type="checkbox"/>	
45	f	Infirmery	y	<input checked="" type="checkbox"/>	
46	g	Psychiatrics:		<input checked="" type="checkbox"/>	
47		1 Testing Support	y	<input checked="" type="checkbox"/>	
48		2 Mental Health Evaluation	y	<input checked="" type="checkbox"/>	
49		3 Mental Health Screening	y	<input checked="" type="checkbox"/>	
50	h	Dental Care:		<input checked="" type="checkbox"/>	
51		1 Appointment Scheduling	y	<input checked="" type="checkbox"/>	
52		2 Screening	y	<input checked="" type="checkbox"/>	
53		3 Charting	y	<input checked="" type="checkbox"/>	
54	i	Emergency Care Management	y	<input checked="" type="checkbox"/>	



Business Computer Applications

EXHIBIT B5-2

Note that lines 4, 8, 48, 109, 110, 115, 167, 170, 171, 179, 180, 187, 188, 189, 283, 284, 285, 286, 287, 288, 289, 290, 295, 296, 316, 330, 376, 399, 434, 581, 599, 630, 632, 682, 718, 720, 765, 767, 770, 774, 776, 779, 780, 781, 791, 807, 841, 848, 859, 873, 905, 919, 921, 965, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 1012, 1022, 1023 will require a pricing estimate in the pricing breakdown.

RFP # 06113

Detailed Requirements

Line #			Resp.	Cap.	Comp	Commen
1	1	ASSIGNMENT OF MEDICAL RECORD NUMBER				<input checked="" type="checkbox"/>
2	a	Assign Medical Record Number for first time offenders/patients.	y	1		<input checked="" type="checkbox"/>
3	1	Minimum 9 character patient Medical Record Number exclusive of check digit.	y	1		<input checked="" type="checkbox"/>
4	2	Ability to import or derive a unique identifier medical record number for each unique iris from iris scan database or data.	y	2		<input checked="" type="checkbox"/> Included in IRIS Scan Interface on Attachment A
5	2	PRE-REGISTRATION/ REGISTRATION/ INTAKE				<input checked="" type="checkbox"/>

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
6	a	Ability to collect, store and search on the following data: booking number, medical record number, patient name, patient alias (also known as) social security number, AHCCCS number, Medicare number, date of birth, address, date of last visit, user defined number (existing medical record number), employer information, insurance information	y	1	<input checked="" type="checkbox"/>	
7	b	Ability to perform a combination search on any of the above fields	y	1	<input checked="" type="checkbox"/>	
8	c	Ability to capture, store, and search on biometric parameters such as iris scan, fingerprint, and facial recognition features.	y	2	<input checked="" type="checkbox"/>	Included in IRIS Scan Interface cost in Attachment A
9	d	System has capability to store and provide name history for up to minimum of 4 names.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
10	e	System has capability to store and provide address history for up to minimum of 4 names.	y	1	<input checked="" type="checkbox"/>	
11	f	Provide quick registration screens, which require data entry of a minimum number of fields: Name, address, DOB, Insurance Information	y	1	<input checked="" type="checkbox"/>	
12	g	Ability to retroactively capture, store, modify and update patient demographic information on selected fields to include all previous visits (e.g. date of birth)	y	1	<input checked="" type="checkbox"/>	
13	h	Additional user defined fields to include as examples but not limited to:	y	1	<input checked="" type="checkbox"/>	
14		1	Need for interpreter / translation services	y	1	<input checked="" type="checkbox"/>
15		2	Language(s) spoken	y	1	<input checked="" type="checkbox"/>
16		3	Dialect of language spoken	y	1	<input checked="" type="checkbox"/>

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
17	4	Percent proficient in English	y	1	<input checked="" type="checkbox"/>	
18	5	Shelter Identification Name or Code	y	1	<input checked="" type="checkbox"/>	
19	6	County Federal Information Processing Standards (FIPS) code for residency county of patient with pre-defined values for counties in Arizona - default is Maricopa County's FIPS code	y	1	<input checked="" type="checkbox"/>	
20	7	Ability to define person's ethnicity (Hispanic, Non Hispanic, refused, unknown, etc.)	y	1	<input checked="" type="checkbox"/>	
21	8	Ability to define a person's ethnicity by up to five race values concurrently (1-5 races): white; black or African- American; Asian; American Indian/Alaskan Native; Native Hawaiian or other Pacific Islander with three additional user- defined values: other race, refused	y	1	<input checked="" type="checkbox"/>	
22	9	Substance abuse history	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #		Resp.	Cap.	Comp	Commen
23	10 Mental health issues	y	1	<input checked="" type="checkbox"/>	
24	11 Veteran	y	1	<input checked="" type="checkbox"/>	
25	12 Indian Services	y	1	<input checked="" type="checkbox"/>	
26	13 Housing status	y	1	<input checked="" type="checkbox"/>	
27	14 Date homeless	y	1	<input checked="" type="checkbox"/>	
28	15 Income level	y	1	<input checked="" type="checkbox"/>	
29	16 Alien ID Number (provided by Immigration and Naturalization Services (INS))	y	1	<input checked="" type="checkbox"/>	
30	17 IV Drug User	y	1	<input checked="" type="checkbox"/>	
31	18 Sites of swab	y	1	<input checked="" type="checkbox"/>	
32	19 Percent condom use	y	1	<input checked="" type="checkbox"/>	
33	20 Date of last sexual encounter	y	1	<input checked="" type="checkbox"/>	
34	21 Number of sex partners last month	y	1	<input checked="" type="checkbox"/>	
35	22 Number of sex partners last year	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
36		23 Arizona Department of Health Services Immunization Registry Number	y	1	<input checked="" type="checkbox"/>	
37		24 Legacy Medical Record Number	y	1	<input checked="" type="checkbox"/>	
38		25 Ability to determine which medical records are in storage and where (box number, etc) are located (vendor and storage location)	y	1	<input checked="" type="checkbox"/>	
39		26 Pre-registration screen pre- populated with all relevant historical information	y	1	<input checked="" type="checkbox"/>	
40		a Account Balance (read only)	y	1	<input checked="" type="checkbox"/>	
41		b Ability to display most recent four "no show" dates	y	1	<input checked="" type="checkbox"/>	
42	i	End-user may cancel client pre- registrations and designate a reason for cancellation.	y	1	<input checked="" type="checkbox"/>	
43	j	System role-based ability to change field from mandatory to optional.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
44	k	Memo field with a minimum of 255 characters	y	1	<input checked="" type="checkbox"/>	
45	l	Online help per registration field - system and user defined.	y	1	<input checked="" type="checkbox"/>	
46	m	Provide the ability during the registration process to write data from first field to a second field, when data is the same (i.e. patient address-guarantor address).	y	1	<input checked="" type="checkbox"/>	
47	n	Ability during the registration process to overwrite data from field previously populated, when data is different (i.e. patient address-guarantor address)	y	1	<input checked="" type="checkbox"/>	
48	o	Provide online tickler file for automatic clerical follow-up with specific clients and/or services (i.e. if patient address changes, message "check guarantor address".)	y	3	<input checked="" type="checkbox"/>	Based off estimated hours, more detailed specifications needed for actual cost. Actual cost could be less.

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
49	p	System automatically populates applicable fields with all demographic and payer information collected at time of registration	y	1	<input checked="" type="checkbox"/>	
50	q	User-defined demographic information captured at pre-registration automatically populates appropriate fields across all modules (i.e. client name, SSN)	y	1	<input checked="" type="checkbox"/>	
51	r	Ability to accept and send demographic and other desired data in HL7 electronic format	y	1	<input checked="" type="checkbox"/>	
52	s	System automatically assigns Medical Record Number for clients who are not in system at registration	y	1	<input checked="" type="checkbox"/>	
53	t	Automatically create a new visit record and update the existing client master record when client is checked in.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
54	u	System prevents users from moving to the next screen if user-defined critical error exists on the current screen including required edits	y	1	<input checked="" type="checkbox"/>	
55	v	System prevents display of subsequent registration screens until all mandatory data has been entered. Users with appropriate security clearance have override capability	y	1	<input checked="" type="checkbox"/>	
56	w	Authorized users may search across all entities for a client or client information via one inquiry.	y	1	<input checked="" type="checkbox"/>	
57	x	Updated demographic information can be shared on a real-time basis.	y	1	<input checked="" type="checkbox"/>	
58	y	Patient demographic data may be retained online for an indefinite period of time.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
59	z	System automatically date and time stamps pre-registration, scheduling, and registration	y	1	<input checked="" type="checkbox"/>	
60	aa	Permit retroactive entry of registration data within a user-defined timeframe, with automatic date and time stamp = Now.	y	1	<input checked="" type="checkbox"/>	
61	ab	Arresting Information.	y	1	<input checked="" type="checkbox"/>	
62	3	APPOINTMENT SCHEDULING			<input checked="" type="checkbox"/>	
63	a	Ability to make multiple appointments, appointments in all clinics (multiple clinics), control appointment intervals (i.e. 10, 15, 20, 30, 45, 60, 90 and 120 minute intervals) and number of providers, cancel or change appointments.	y	1	<input checked="" type="checkbox"/>	
64	b	Appointment system needs to be able to specify program, location, or area and type of appointment	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
65	c	Appointment system must allow capability of blocking appointments for providers when they are scheduled for vacation.	y	1	<input checked="" type="checkbox"/>	
66	d	Appointment system needs to link appointment to provider being seen	y	1	<input checked="" type="checkbox"/>	
67	e	Ability to print out appointments to include Medical Record Number name, date and time of appointment, provider, service and area.	y	1	<input checked="" type="checkbox"/>	
68	f	Ability to check and alert for scheduling conflicts, but allow override of those conflicts when needed	y	1	<input checked="" type="checkbox"/>	
69	g	Ability to reassign (e.g. move) appointments to another provider	y	1	<input checked="" type="checkbox"/>	
70	h	Reschedule no-shows by changing scheduled date without having to re-enter all of patient information	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
71	i	Generate (display or print at user's option) listing of all prescheduled clients, including name, medical record number, care provider name, and care provider locations minimally 72 hour in advance	y	1	<input checked="" type="checkbox"/>	
72	j	Automatically capture end-user who scheduled appointment	y	1	<input checked="" type="checkbox"/>	
73	k	Ability to "check-in" client and generate a unique "encounter number" for that specific visit where the respective clinic and providers will record patient care notes.	y	1	<input checked="" type="checkbox"/>	
74	4	ENCOUNTERS			<input checked="" type="checkbox"/>	
75	a	Ability to create and modify Assessments that contain items, both table driven (where applicable) and text that comply with Medical and Mental Health standards.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #		Resp.	Cap.	Comp	Commen
76	b Allow authorized user to determine which relevant items collected at a prior point, either during referral, admission or a prior episode of care, can be continued over to an Assessment.	y	1	<input checked="" type="checkbox"/>	
77	c Provide means to track medications ordered from physicians outside of system in format that matches internally ordered medications.	y	1	<input checked="" type="checkbox"/>	
78	d Provide the ability to collect comprehensive Clinic Visit (Medical or Dental Diagnostic) information including:	y	1	<input checked="" type="checkbox"/>	
79	1 Provide current ICD-9 and ICD-10 codes, HCPCS Level I and II codes, CPT, J codes and X,Y, Z codes and DSM codes for encounters with the ability to deactivate codes and add facility specific codes	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
80	2	Provide ability to automatically update diagnostic codes (ICD, CPT, HCPCS Level I and II codes, J codes, etc) when new codes are published.	y	1	<input checked="" type="checkbox"/>	
81	3	When old records containing ICD AND CDT diagnoses are viewed or printed, the system must search the ICD-9 version that was in use at the time of diagnosis to retrieve the correct diagnoses.	y	1	<input checked="" type="checkbox"/>	
82	4	When diagnoses are made for client, system must keep track of the version that was in use at the time.	y	1	<input checked="" type="checkbox"/>	
83	5	Provide several methods to code diagnoses for client (e.g. by code, by description, by organ system or specialty).	y	1	<input checked="" type="checkbox"/>	
84	e	Provide the ability to collect comprehensive Mental Health Diagnostic information including:			<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
85	1	Provide DSM diagnostic code table (Tables for Axis I and Axis II diagnoses for each version of the DSM) with ability to de-activate and add facility specific codes.	y	1	<input checked="" type="checkbox"/>	
86	a	An unlimited number of Axis I, II, III, IV, and V diagnoses.	y	1	<input checked="" type="checkbox"/>	
87	b	Effective dates for each Axis especially to delineate Past Year and Past Month diagnostic coding.	y	1	<input checked="" type="checkbox"/>	
88	2	Provide ability to automatically update DSM diagnostic codes when new codes are published.	y	1	<input checked="" type="checkbox"/>	
89	3	When old records containing DSM diagnoses are viewed or printed, the system must search the DSM version that was in use at the time of diagnosis to retrieve the correct diagnoses.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
90		4				
			y	1	<input checked="" type="checkbox"/>	When diagnoses are made for client, system must keep track of the version that was in use at the time.
91		5				
			y	1	<input checked="" type="checkbox"/>	Provide several methods to code DSM diagnoses for client (e.g. by code, by description).
92		6				
			y	1	<input checked="" type="checkbox"/>	System should allow, but not require, entry of ICD codes for Axis III diagnoses, with option for table driven pick list.
93		7				
			y	1	<input checked="" type="checkbox"/>	Axis IV and V should be table driven with optional text for Axis V.
94		8				
			y	1	<input checked="" type="checkbox"/>	System should have "cross-walk" to ICD diagnoses.
95	f					
			y	1	<input checked="" type="checkbox"/>	Client Assessments can explicitly be associated to an episode of care.

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
96	g	Client Assessments can implicitly be associated to an episode of care based on assessment date and episode begin/end dates.	y	1	<input checked="" type="checkbox"/>	
97	h	Assessments are integrated with the Health Treatment Planning and Notes Module	y	1	<input checked="" type="checkbox"/>	
98	i	Provide Assessment graphing tool to measure results over time.	y	1	<input checked="" type="checkbox"/>	Included in Crystal Reporting Graph functions
99	j	Provide means to indicate persons or disciplines responsible for assessment and automatically report notice of required assessment to person or office responsible for assessment.	y	1	<input checked="" type="checkbox"/>	
100	k	Provide ability for Assessments to be automatically and flexibly scheduled, to include:	y	1	<input checked="" type="checkbox"/>	
101		1	Assigned to a responsible party	y	1	<input checked="" type="checkbox"/>

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
102		2	Frequency.	y	1	<input checked="" type="checkbox"/>
103		3	Scheduled Assessment results in notifying the responsible party via e-mail, tickler list, or other means.	y	1	<input checked="" type="checkbox"/>
104	1	Enable the design and implementation of custom Assessment tools as determined by the department. Functionality to include the following:		y	1	<input checked="" type="checkbox"/>
105		1	Upload tool designs from Microsoft Word.	y	1	<input checked="" type="checkbox"/>
106		2	Value pull-down lists, click box, scrolling lists, etc., Radio buttons, yes not check boxes, etc.	y	1	<input checked="" type="checkbox"/>
107		3	Flexible editing logic to verify responses.	y	1	<input checked="" type="checkbox"/>
108		4	Integration to the user customizable data model to capture the responses	y	1	<input checked="" type="checkbox"/>

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
109		5 Scoring capabilities to build T-scores, percentiles, and other mathematical algorithms against the responses.	y	3	<input checked="" type="checkbox"/>	Based on estimated hours, more detail specifications required for actual cost. Actual cost could be less.
110		6 Customizable online help to guide the client in filling out the assessment/survey.	y	3	<input checked="" type="checkbox"/>	Based on estimated hours, more detail specification required for actual cost. Actual cost could be less.
111		7 Logical handling of missing values as specified by the user such as set to zero, treat as null, etc.	y	1	<input checked="" type="checkbox"/>	
112	m	Provide the ability to print patient educational materials associated with the encounter.	y	1	<input checked="" type="checkbox"/>	
113	n	Capability to print patient education materials in multiple languages.	y	1	<input checked="" type="checkbox"/>	
114	o	Provide the ability to display and maintain Medical and Mental Health Assessment information.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
115	p	Provide the ability to build self-scoring specific Assessment templates for example: speech and language; self care; cognitive functioning; abnormal involuntary movements; nursing; educational functioning; psychological; neurological; general physical health	y	3	<input checked="" type="checkbox"/>	Based off estimated hours more detail specification required for actual cost. Actual cost could be less.
116	q	Ability to maintain a list of all providers actively involved in treating the patient.	y	1	<input checked="" type="checkbox"/>	
117	r	Ability to link together with each problem the internal encounters where this problem was addressed, diagnostic tests ordered, external referrals ordered and status of referrals.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
118	s	Ability to provide screening tools and clinical risk assessment calculators that generate a note in the medical record for:	y	1	<input checked="" type="checkbox"/>	
119		1 Cardiac Events.	y	1	<input checked="" type="checkbox"/>	
120		2 Osteoparesis Fractures.	y	1	<input checked="" type="checkbox"/>	
121		3 Substance Abuse.	y	1	<input checked="" type="checkbox"/>	
122		4 Depression.	y	1	<input checked="" type="checkbox"/>	
123		5 Anxiety.	y	1	<input checked="" type="checkbox"/>	
124		6 Geriatric Screening.	y	1	<input checked="" type="checkbox"/>	
125		7 Mini Mental Status.	y	1	<input checked="" type="checkbox"/>	
126		8 Clinical Institute Withdrawal Assessment.	y	1	<input checked="" type="checkbox"/>	
127	5	PROBLEM LIST			<input checked="" type="checkbox"/>	
128	a	Initial medical/intake assessment	y	1	<input checked="" type="checkbox"/>	
129		1 Observations (table driven with ability to select all that apply).	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
130	2	Medical Problems (table driven with ability to select all that apply).	y	1	<input checked="" type="checkbox"/>	
131	3	Mental Health (table driven with ability to select all that apply).	y	1	<input checked="" type="checkbox"/>	
132	4	Substance Abuse/Alcohol (table driven with ability to select all that apply).	y	1	<input checked="" type="checkbox"/>	
133	5	Current Prescription Medications.	y	1	<input checked="" type="checkbox"/>	
134	6	Medication Allergies (table driven with ability to select all that apply).	y	1	<input checked="" type="checkbox"/>	
135	7	Food Allergies (table driven with ability to select all that apply).	y	1	<input checked="" type="checkbox"/>	
136	8	Female data (table driven with ability to select all that apply)	y	1	<input checked="" type="checkbox"/>	
137	9	Disposition (table driven with ability to select only one).	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
138	b	Based on positive Initial receiving/medical assessment responses, application will automatically trigger events.	y	1	<input checked="" type="checkbox"/>	
139	c	Ability to provide or interface with a symptom-based decision support module for medical triage to assist clinical staff with pathways/guidelines for assessing and responding to presenting symptoms.	y	1	<input checked="" type="checkbox"/>	
140	d	Capacity to capture request for well care visits (chronic care, well baby, well adult).	y	1	<input checked="" type="checkbox"/>	
141	e	System maintains a master file of problems including the following information:	y	1	<input checked="" type="checkbox"/>	
142	1	Problem code (Multiple options provided automatically to user).	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
143		2			<input checked="" type="checkbox"/>	
		Problem category (Multiple options provided automatically to user).	y	1		
144		3			<input checked="" type="checkbox"/>	
		Problem description (unlimited free text).	y	1		
145		4			<input checked="" type="checkbox"/>	
		Multiple associated diagnoses.	y	1		
146	f	System maintains, at a minimum, the following problems:	y	1	<input checked="" type="checkbox"/>	
147		1			<input checked="" type="checkbox"/>	
		Psychiatric Problems.	y	1		
148		2			<input checked="" type="checkbox"/>	
		Medical problems.	y	1		
149		3			<input checked="" type="checkbox"/>	
		Substance Abuse Problems.	y	1		
150		4			<input checked="" type="checkbox"/>	
		Housing Problems.	y	1		
151		5			<input checked="" type="checkbox"/>	
		Dental Problems.	y	1		
152	g	Ability to build a Problem List during intake and during stay of offenders including the following:	y	1	<input checked="" type="checkbox"/>	
153		1			<input checked="" type="checkbox"/>	
		Active Problem & Date.	y	1		

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
154		2 Ability to document smoking, alcohol use, drug use.	y	1	<input checked="" type="checkbox"/>	
155		3 Ability to track and document allergies and response.	y	1	<input checked="" type="checkbox"/>	
156		4 Show problem status for each encounter.	y	1	<input checked="" type="checkbox"/>	
157		5 Ability to document Outcome & Date.	y	1	<input checked="" type="checkbox"/>	
158		6 Ability to archive/view problems complete with status history.	y	1	<input checked="" type="checkbox"/>	
159		7 Link problems automatically with orders and results.	y	1	<input checked="" type="checkbox"/>	
160		8 Linked to patient education materials.	y	1	<input checked="" type="checkbox"/>	
161	h	Allow authorized users to add problems to problem list in following way:	y	1	<input checked="" type="checkbox"/>	
162		1 User designates problem to be entered as active or inactive.	y	1	<input checked="" type="checkbox"/>	
163		2 When entering a problem, user selects problem category from user-defined table.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
164		3			<input checked="" type="checkbox"/>	
		User should be able to enter the problem severity.	y	1		
165	i	Ability to subcategorize problems by status: chronic, acute, recurrent, episodic, special needs.	y	1	<input checked="" type="checkbox"/>	
166	6	TREATMENT TEAMS			<input checked="" type="checkbox"/>	
167	a	System maintains a Multidisciplinary Treatment Plan Library with distinct sections that can be modified independently by authorized users.	y	2	<input checked="" type="checkbox"/>	Treatment Plan Library Cost
168		1			<input checked="" type="checkbox"/>	
		The system allows for the creation, alteration or update of all standard treatment plans at anytime. (Permanent changes performed only by authorized users).	y	1		
169		2			<input checked="" type="checkbox"/>	
		Treatment Plan standards individualized by system of care, program, team, or individual clinician.	y	1		

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
170	b	System can incorporate treatment plan standards individualized by system of care, program, team, or individual clinician.	y	2	<input checked="" type="checkbox"/>	Treatment Plan Library Cost
171	c	Based on the Provider Type, the preferred treatment plan library is presented to them.	y	2	<input checked="" type="checkbox"/>	Treatment Plan Library Cost
172	d	Selection of treatment plans is integrated with diagnosis.	y	1	<input checked="" type="checkbox"/>	
173	e	Create individual client treatment plan from the selected library.	y	1	<input checked="" type="checkbox"/>	
174	f	Provide mechanism for assigning responsibility for Treatment Plan section to specific staff or disciplines.	y	1	<input checked="" type="checkbox"/>	
175	g	Provide mechanism for assigning responsibility to update specific section of treatment plan.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
176	h	System keeps track of who is responsible for completing or updating which section of Treatment Plan and indicates date of completion or update.	y	1	<input checked="" type="checkbox"/>	
177	i	When Treatment Plan elements are also gathered automatically from other modules of the system (e.g., assessments, progress notes from previous episode, medications), data are shared with Treatment Plan and vice versa.	y	1	<input checked="" type="checkbox"/>	
178	j	System automatically notifies user when Treatment Plans requires review, as specified by department.	y	1	<input checked="" type="checkbox"/>	
179	k	Treatment Plan must include the following elements for viewing, printing, adding, or updating:	y	2	<input checked="" type="checkbox"/>	Treatment plan Library Cost
180		1 Treatment team disciplines (I.e. team members).	y	2	<input checked="" type="checkbox"/>	Treatment Library Cost

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
181	2	Five Axis DSM Diagnosis.	y	1	<input checked="" type="checkbox"/>	
182	3	ICD-9 Standard Medical Diagnosis.	y	1	<input checked="" type="checkbox"/>	
183	4	Summary sections of all assessments gathered in Assessment Section.	y	1	<input checked="" type="checkbox"/>	
184	5	Client Problems .	y	1	<input checked="" type="checkbox"/>	
185	6	Behavioral manifestations of problem.	y	1	<input checked="" type="checkbox"/>	
186	7	Problem status.	y	1	<input checked="" type="checkbox"/>	
187	8	Problem treatment status.	y	2	<input checked="" type="checkbox"/>	
188	9	Goals associated with each active problem.	y	2	<input checked="" type="checkbox"/>	
189	10	Measurable objectives associated with each goal.	y	2	<input checked="" type="checkbox"/>	
190	11	Treatment modalities/ interventions.	y	1	<input checked="" type="checkbox"/>	
191	12	Current Medications.	y	1	<input checked="" type="checkbox"/>	
192	13	Inmate participation in treatment planning process.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
193	14	Inmate and/or family agreement with Treatment Plan.	y	1	<input checked="" type="checkbox"/>	
194	15	Discharge criteria related to inmate problems.	y	1	<input checked="" type="checkbox"/>	
195	16	Date of next scheduled review of Treatment Plan as determined by the user.	y	1	<input checked="" type="checkbox"/>	
196	17	Functional strengths.	y	1	<input checked="" type="checkbox"/>	
197	18	Barriers to treatment.	y	1	<input checked="" type="checkbox"/>	
198	19	Motivation for treatment.	y	1	<input checked="" type="checkbox"/>	
199	20	Contraindicated procedures.	y	1	<input checked="" type="checkbox"/>	
200	21	Necessity of continued stay.	y	1	<input checked="" type="checkbox"/>	
201	22	Continuing care plan.	y	1	<input checked="" type="checkbox"/>	
202	23	Discharge Plan (Table driven and unlimited free text).	y	1	<input checked="" type="checkbox"/>	
203	24	Post discharge modalities associated with each level of care or program identified in Discharge Plan.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
204		25	Date of 1st scheduled appointment.	y	1	<input checked="" type="checkbox"/>
205		26	Client's agreement to be contacted for follow-up (Y/N).	y	1	<input checked="" type="checkbox"/>
206		27	Referrals including: Dental, WIC, Immunizations.	y	1	<input checked="" type="checkbox"/>
207	l		System maintains a department defined table of offered interventions.	y	1	<input checked="" type="checkbox"/>
208	m		Display and print on demand updated treatment plan.	y	1	<input checked="" type="checkbox"/>
209	7		CLINICAL NOTES AND DOCUMENTATI ON			<input checked="" type="checkbox"/>
210	a		System maintains different note categories, including:	y	1	<input checked="" type="checkbox"/>
211		1	Summary Notes which document a particular area of client functioning or summarize response to different discipline- specific treatment efforts.	y	1	<input checked="" type="checkbox"/>

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
212	2	Order-related Notes that correspond to particular types of orders and are automatically generated by such orders.	y	1	<input checked="" type="checkbox"/>	
213	3	Incident Notes which document the occurrence of particular incidents.	y	1	<input checked="" type="checkbox"/>	
214	4	Progress Note documentation is driven by the encounter so each treatment plan goal and intervention has associated progress notes.	y	1	<input checked="" type="checkbox"/>	
215	5	System allows each type of service note to be associated with an intervention from the Table of Interventions.	y	1	<input checked="" type="checkbox"/>	
216	6	Clinic notes should be specific to each area of service.	y	1	<input checked="" type="checkbox"/>	
217	7	Standard SOAP charting including vitals, skin test results, allergy alerts, disease history.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
218	b	System maintains Summary Notes including, at a minimum, the following:	y	1	<input checked="" type="checkbox"/>	
219	1	Progress Notes including:	y	1	<input checked="" type="checkbox"/>	
220	a	Selection of problems, goals or objectives being addressed by note.	y	1	<input checked="" type="checkbox"/>	
221	b	Severity ratings of selected active problems.	y	1	<input checked="" type="checkbox"/>	
222	c	Shift Notes.	y	1	<input checked="" type="checkbox"/>	
223	d	Discharge Planning Note.	y	1	<input checked="" type="checkbox"/>	
224	e	Treatment Plan Review Conference Note.	y	1	<input checked="" type="checkbox"/>	
225	2	Team Conference Note including:	y	1	<input checked="" type="checkbox"/>	
226	a	Participants in conference (Table driven).	y	1	<input checked="" type="checkbox"/>	
227	b	Automatic mailing of note to participants for electronic signature.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
228	c	System maintains Order-Related Notes including, at a minimum, the following:	y	1	<input checked="" type="checkbox"/>	
229		1 Admission Note.	y	1	<input checked="" type="checkbox"/>	
230		2 Discharge Note.	y	1	<input checked="" type="checkbox"/>	
231		3 Change in Status Note.	y	1	<input checked="" type="checkbox"/>	
232		4 Medication Change Note.	y	1	<input checked="" type="checkbox"/>	
233	d	System maintains Incident Notes including, at a minimum, the following:	y	1	<input checked="" type="checkbox"/>	
234		1 Aggression Control Note.	y	1	<input checked="" type="checkbox"/>	
235		2 Seclusion and Restraint Note.	y	1	<input checked="" type="checkbox"/>	
236		3 Special Precautions Note/ 15 minute checks.	y	1	<input checked="" type="checkbox"/>	
237		4 Suicidal ideation/behavior Note.	y	1	<input checked="" type="checkbox"/>	
238		5 Allergic Reaction Note.	y	1	<input checked="" type="checkbox"/>	
239		6 Activity Restriction Note.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
240	7	PRN administration Note.	y	1	<input checked="" type="checkbox"/>	
241	8	Communication Restriction/ gang affiliation.	y	1	<input checked="" type="checkbox"/>	
242	9	Note of Treatment Refusal.	y	1	<input checked="" type="checkbox"/>	
243	10	Report of Code Called.	y	1	<input checked="" type="checkbox"/>	
244	11	Medication Side Effect Note.	y	1	<input checked="" type="checkbox"/>	
245	12	Client Complaint Note.	y	1	<input checked="" type="checkbox"/>	
246	13	Report of client Illness.	y	1	<input checked="" type="checkbox"/>	
247	14	Emergency Room Transfer Note.	y	1	<input checked="" type="checkbox"/>	
248	15	Bed Rest Note	y	1	<input checked="" type="checkbox"/>	
249	e	System provides the capability to capture other types of Notes	y	1	<input checked="" type="checkbox"/>	
250	1	Ability to enter office visit notes.	y	1	<input checked="" type="checkbox"/>	
251	2	Ability to document demographics/famil y history, risk factors.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
252	3	Ability to write History and Physical/assessment notes.	y	1	<input checked="" type="checkbox"/>	
253	4	Ability to write or enter Medication List.	y	1	<input checked="" type="checkbox"/>	
254	5	Ability to build a Problem List.	y	1	<input checked="" type="checkbox"/>	
255	6	Ability to document smoking, alcohol use, drug use.	y	1	<input checked="" type="checkbox"/>	
256	7	Ability to track and document allergies and response.	y	1	<input checked="" type="checkbox"/>	
257	8	Ability to enter/record vital signs.	y	1	<input checked="" type="checkbox"/>	
258	9	Ability to document risk factors.	y	1	<input checked="" type="checkbox"/>	
259	10	Ability to enter or accept multiple note types: Radiology, Lab, etc.	y	1	<input checked="" type="checkbox"/>	
260	11	Ability to import notes from referral (as defined by Access Control) or allow entry of notes by referral provider.	y	1	<input checked="" type="checkbox"/>	
261	12	Ability to import notes from hospital (inpatient) record.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
262		13 Ability to capture social history.	y	1	<input checked="" type="checkbox"/>	
263		14 Record key information needed for exam types, i.e. sexual preference, number of sex partners, specific symptoms, serologic history, etc.	y	1	<input checked="" type="checkbox"/>	
264		15 CDI / Interviewer Notes.	y	1	<input checked="" type="checkbox"/>	
265	f	Ability for disciplines to enter, correct, authenticate notes.	y	1	<input checked="" type="checkbox"/>	
266		1 Ability to correct notes prior to authentication	y	1	<input checked="" type="checkbox"/>	
267		2 Ability to discard a note, with system warning, prior to authentication.	y	1	<input checked="" type="checkbox"/>	
268		3 Ability to authenticate (electronic signature) notes.	y	1	<input checked="" type="checkbox"/>	
269		4 Provides ability to add co-signature if needed.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
270	5	Linked to Clinical Decision Support (CDS) system and Controlled Medical Vocabulary (CMV) to provide alert if co-signature required.	n	0	<input checked="" type="checkbox"/>	
271	6	Ability to date/time stamp notes	y	1	<input checked="" type="checkbox"/>	
272	g	Ability for disciplines to append authenticated notes.	y	1	<input checked="" type="checkbox"/>	
273	1	Original documentation.	y	1	<input checked="" type="checkbox"/>	
274	2	Date and time of change.	y	1	<input checked="" type="checkbox"/>	
275	3	Responsible party (names).	y	1	<input checked="" type="checkbox"/>	
276	4	Corrected documentation.	y	1	<input checked="" type="checkbox"/>	
277	5	System records a flag displaying that a correction exists.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #		Resp.	Cap.	Comp	Commen
278	h Ability to provide language to satisfy Medicare requirements for precepting medical students/residents (ex. "I have personally interviewed, examined and discussed this patient's care with (name of student/resident).")	y	1	<input checked="" type="checkbox"/>	
279	8 FLOW SHEETS			<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
280	a	User-defined clinical pathways to include recapture of data elements (e.g. allergies, temperature (when applicable, pulse, respiration, blood pressure, height, gender growth grids, weight, smoker status, exposure to 2nd hand smoke, birth control method (when applicable), blood sugar (when applicable), pregnancy test (when applicable), and last normal menstrual cycle (when applicable) at every visit applicable to a particular flow diagram/flow sheet	y	1	<input checked="" type="checkbox"/>	
281	b	Ability to define which data fields require episodic completion and which are carried forward from the historic client record. Episodic data fields are flagged for update or completion at each client visit	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #					Resp.	Cap.	Comp	Commen
282	c	Ability to display Flow Sheet data that contain items, both table driven (where applicable) and text that comply with Medical and Mental Health standards. Examples are:					<input checked="" type="checkbox"/>	
283		1	HIV Flow Sheet.		y	1	<input checked="" type="checkbox"/>	System provides the ability for user to custom design flow sheets
284		2	DIABETIC MONITORING Flow Sheet.		y	1	<input checked="" type="checkbox"/>	System provides the ability for user to custom design flow sheets
285		3	HYPERTENSIVE MONITORING Flow Sheet.		y	1	<input checked="" type="checkbox"/>	System provides the ability for user to custom design flow sheets
286		4	SEIZURE DISORDER - CHRONIC CARE Flow Sheet.		y	1	<input checked="" type="checkbox"/>	System provides the ability for user to custom design flow sheets
287		5	ASTHMA/COPD MONITORING Flow Sheet.		y	1	<input checked="" type="checkbox"/>	System provides the ability for user to custom design flow sheets
288		6	COUMADIN Flow Sheet.		y	1	<input checked="" type="checkbox"/>	System provides the ability for user to custom design flow sheets
289		7	NEURO Flow Sheet.		y	1	<input checked="" type="checkbox"/>	System provides the ability for user to custom design flow sheets
290		8	DIABETES EVALUATION Flow Sheet.		y	1	<input checked="" type="checkbox"/>	System provides the ability for user to custom design flow sheets

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
291		9 Immunization Records.	y	1	<input checked="" type="checkbox"/>	
292		10 Child Growth Charts.	y	1	<input checked="" type="checkbox"/>	
293		11 Dental.	y	1	<input checked="" type="checkbox"/>	
294		12 Maternal Support Services.	y	1	<input checked="" type="checkbox"/>	
295		13 WIC.	y	1	<input checked="" type="checkbox"/>	System provides the ability for user to custom design flow sheets
296		14 Health Maintenance.	y	1	<input checked="" type="checkbox"/>	System provides the ability for user to custom design flow sheets
297		15 Depression Screening	y	1	<input checked="" type="checkbox"/>	
298		16 Self-Management Goals.	y	1	<input checked="" type="checkbox"/>	
299	9	ORDERS AND REPORTING			<input checked="" type="checkbox"/>	
300	a	Provide a clinically oriented multidisciplinary order entry tool that streamlines the order entry process with the treatment plan.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
301	b	Identify physician/provider initiating order, staff entering order, date, and time. If the name of the individual entering the order and/or date and time are not put in at time of order entry, the system should automatically do so.	y	1	<input checked="" type="checkbox"/>	
302	c	Ability to enter Orders On-Line and Display or Send Real-time to All Departments.	y	1	<input checked="" type="checkbox"/>	
303	d	Allow selection of orders by service and sub-service (e.g., Administration, Intervention, Laboratory, Pharmacy, and Radiology).	y	1	<input checked="" type="checkbox"/>	
304	e	Provide a menu display of orders and order panels.	y	1	<input checked="" type="checkbox"/>	
305	f	Provide user-defined order sets and order panels with easy support for additions and deletions from these sets/panels.	y	1	<input checked="" type="checkbox"/>	
306	g	Provide selection of orders via:	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
307		1 Alpha listing.	y	1	<input checked="" type="checkbox"/>	
308		2 Procedure codes.	y	1	<input checked="" type="checkbox"/>	
309		3 High-frequency menu listing.	y	1	<input checked="" type="checkbox"/>	
310	h	Enable user to enter order priority to include:	y	1	<input checked="" type="checkbox"/>	
311		1 Routine.	y	1	<input checked="" type="checkbox"/>	
312		2 STAT.	y	1	<input checked="" type="checkbox"/>	
313		3 ASAP.	y	1	<input checked="" type="checkbox"/>	
314		4 Today.	y	1	<input checked="" type="checkbox"/>	
315		5 Timed.	y	1	<input checked="" type="checkbox"/>	
316		6 Discharge.	y	3	<input checked="" type="checkbox"/>	Based on estimated hours, more detail specification required for actual cost. Actual cost could be less.
317	i	Allow authorized users to change Status of order including entering information on:	y	1	<input checked="" type="checkbox"/>	
318		1 Document new status.	y	1	<input checked="" type="checkbox"/>	
319		2 Documentation of justification for status change.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
320	j	Allow user to designate start time and stop time for all timed and continuing orders. Authorized users must be able to override stop time for designated orders.	y	1	<input checked="" type="checkbox"/>	
321	k	Provide ability for order to be marked as "expected to be renewed", with prompts to clinician to renew order at appropriate time.	y	1	<input checked="" type="checkbox"/>	
322	l	System has ability to "know" that orders expected to be renewed, which are associated with long acting medications given once a month, should appear as medications that the inmate is "on", even between orders.	y	1	<input checked="" type="checkbox"/>	
323	m	Provide inmate schedules and department work lists based on orders placed.	y	1	<input checked="" type="checkbox"/>	
324	n	Allow entering of free text comments with order.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen	
325	o	Provide step-by-step ("Help") guide for Order Entry activities	y	1	<input checked="" type="checkbox"/>		
326	p	Display possible conflict of current order with previously entered orders including drug incompatibilities, based on user-specified criteria.	y	1	<input checked="" type="checkbox"/>		
327	q	Allow authorized individuals to override order conflicts, and maintain audit trail of these events.	y	1	<input checked="" type="checkbox"/>		
328	r	System automatically identifies and notifies user online of:	y	1	<input checked="" type="checkbox"/>		
329		1	Apparent duplicate orders.	y	1	<input checked="" type="checkbox"/>	
330		2	Improper order in scheduling sequential interventions.	y	3	<input checked="" type="checkbox"/>	Based on estimated hours, more detail specifications required for actual cost. Actual cost could be less.

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
331	s	Upon attestation of medication order, create Medication Adjustment Note which indicates the order information and includes the reason for the medication change.	y	1	<input checked="" type="checkbox"/>	
332	t	When a medication is ordered that requires either one-time or ongoing associated blood work, the system should prompt users to automatically write the necessary orders and make the necessary appointments.	y	1	<input checked="" type="checkbox"/>	
333	u	Indicate verification status of each order including when order was countersigned per provider policy.	y	1	<input checked="" type="checkbox"/>	
334	v	Provide system acknowledgment of acceptance of order.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
335	w	Enable user to communicate routine, standing, and selective prior orders on day the client is registered/booked.	y	1	<input checked="" type="checkbox"/>	
336	x	Allow user to bypass menus when entering orders and directly key in desired order information.	y	1	<input checked="" type="checkbox"/>	
337	y	Provide an online narrative description of the use of each test, procedure, or intervention as well as any ordering policies and protocols affecting the ordering to assist the clinician when entering the order into the system.	y	1	<input checked="" type="checkbox"/>	
338	z	Identify and report specific procedures in the procedure master file which require verification prior to becoming active.	y	1	<input checked="" type="checkbox"/>	
339	aa	Allow sensitive orderable items to be flagged as confidential.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
340	ab	Permit inquiry into the exact status of all orders, by patient (e.g., ordered, verified, canceled, preliminary report, or final report).	y	1	<input checked="" type="checkbox"/>	
341	10	EDITING OF ORDERS			<input checked="" type="checkbox"/>	
342	a	Provide automatic edit of all orders for necessary data which must be included at time of entry (e.g., route, dosage, assessment, interactions based on CDS, treatment plan).	y	1	<input checked="" type="checkbox"/>	
343	b	Display message identifying missing data in the order.	y	1	<input checked="" type="checkbox"/>	
344	c	Display of alert if order varies from guidelines and rules and/or presents safety issue.	y	1	<input checked="" type="checkbox"/>	
345	d	Ability to flag duplicate or conflicting orders.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
346	e	Provide order correction mechanism without requiring cancellation and re-entering of entire order, automatically recording date, time, and person entering correction.	y	1	<input checked="" type="checkbox"/>	
347	f	Permit only authorized personnel to cancel orders and automatically notify ancillary area of cancellation.	y	1	<input checked="" type="checkbox"/>	
348	g	Allow for backdating of order times and dates if system has been unavailable. Maintain actual date and time when orders are entered.	y	1	<input checked="" type="checkbox"/>	
349	h	Require inmate identification in order (to avoid processing of order for inmate who is not in system).	y	1	<input checked="" type="checkbox"/>	
350	i	Allow multiple methods of order entry:	y	1	<input checked="" type="checkbox"/>	
351		1 Text entry allowed.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
352		2	Keyboard entry allowed.	y	1	<input checked="" type="checkbox"/>
353		3	Entry through handheld device allowed.	y	1	<input checked="" type="checkbox"/>
354	11	VERIFICATION OF ORDERS				<input checked="" type="checkbox"/>
355	a	System has the ability to verify orders		y	1	<input checked="" type="checkbox"/>
356	b	Prompt user for verification, including the following:		y	1	<input checked="" type="checkbox"/>
357		1	Completeness, such that all elements are included in order (e.g., route of administration, dose, time, frequency, and special instructions).	y	1	<input checked="" type="checkbox"/>
358		2	Nurse or presumed ancillary personnel collection.	y	1	<input checked="" type="checkbox"/>
359		3	Identification such that inmate with same or similar names are accounted for in the system.	y	1	<input checked="" type="checkbox"/>

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
360		4 Provide for dual verification by authorized personnel (e.g., physician/provider, pharmacist, etc).	y	1	<input checked="" type="checkbox"/>	
361		5 Authentication and electronic signature for order.	y	1	<input checked="" type="checkbox"/>	
362		6 Ability to authenticate and allow electronic co-signature if needed.	y	1	<input checked="" type="checkbox"/>	
363		7 If co-signature required, linked to CDS and alert provided.	y	1	<input checked="" type="checkbox"/>	
364		8 Date/time stamp for order.	y	1	<input checked="" type="checkbox"/>	
365	c	Ability to limit use of abbreviations to those on a list approved by department.	y	1	<input checked="" type="checkbox"/>	
366	12	TRANSMITTAL OF ORDERS			<input checked="" type="checkbox"/>	
367	a	System has the ability to transmit orders	y	1	<input checked="" type="checkbox"/>	
368	b	Orders tracked through processing (e.g. know when Pharmacy receives order and when it has filled Rx).	y	1	<input checked="" type="checkbox"/>	Pharmacy Interface

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
369	c	Completion of order documented.	y	1	<input checked="" type="checkbox"/>	
370	d	Alert or message generated if order is not followed through to completion (e.g. patient does not receive/pick-up Rx).	y	1	<input checked="" type="checkbox"/>	Pharmacy Interface
371	e	Provides ability to trigger medical necessity criteria.	y	1	<input checked="" type="checkbox"/>	
372	f	Prompt is given for a diagnostic code when order is entered.	y	1	<input checked="" type="checkbox"/>	
373	g	Ability to interface with in-house and referral lab systems through either direct connect or dial up	y	1	<input checked="" type="checkbox"/>	
374	h	Capability to "explode" orders, generating multiple orders from one request to all appropriate responsible parties.	y	1	<input checked="" type="checkbox"/>	
375	i	Capability to "explode" cancellations to appropriate providers when original order is canceled.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
376	j	Provide option of visual or auditory alarm which requires a response on receipt of STAT, ASAP, timed orders, or special instructions.	y	3	<input checked="" type="checkbox"/>	
377	k	Provide information online on status of a specific order being processed.	y	1	<input checked="" type="checkbox"/>	
378	l	Flag canceled or held orders with a visual or audible alarm. If order is not canceled at the provider location, also notify the provider.	y	1	<input checked="" type="checkbox"/>	
379	m	Flag any changed order with a visual or audible alarm in the ancillary area.	y	1	<input checked="" type="checkbox"/>	
380	n	Retain record of order cancellation to identify who ordered the	y	1	<input checked="" type="checkbox"/>	
381	o	Provide an audit trail of:	y	1	<input checked="" type="checkbox"/>	
382		1	Date and time an order was entered.	y	1	<input checked="" type="checkbox"/>
383		2	Date and time an order was received.	y	1	<input checked="" type="checkbox"/>

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen	
384		3	Time completed.		y	1	<input checked="" type="checkbox"/>
385		4	By whom completed.		y	1	<input checked="" type="checkbox"/>
386		5	The responsible party completing the order.		y	1	<input checked="" type="checkbox"/>
387	p	Display and print on demand an accumulated list of orders for a client for a designated time period.		y	1	<input checked="" type="checkbox"/>	
388	q	Ability to automatically print requisitions and labels in area of required service upon order entry for today's tests and on appropriate day for future orders.		y	1	<input checked="" type="checkbox"/>	
389	r	Ability to automatically override print requisitions and labels into the area where the order was placed in the system instead of the client's registered location.		y	1	<input checked="" type="checkbox"/>	
390	s	Flag STAT, ASAP, timed orders, or special instructions when the requisition prints.		y	1	<input checked="" type="checkbox"/>	

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Line #			Resp.	Cap.	Comp	Commen
391	t	Ability to flag or add prompts to follow-up and close:	y	1	<input checked="" type="checkbox"/>	
392		1 Dental.	y	1	<input checked="" type="checkbox"/>	
393		2 Radiology.	y	1	<input checked="" type="checkbox"/>	
394		3 LAB.	y	1	<input checked="" type="checkbox"/>	
395		4 Specialists.	y	1	<input checked="" type="checkbox"/>	
396	u	Ability to generate HL7 compliant electronic lab requisitions populated by data in system	y	1	<input checked="" type="checkbox"/>	
397	13	SCHEDULING OF ORDERS			<input checked="" type="checkbox"/>	
398	a	Allow scheduling of one-time and continuing orders.	y	1	<input checked="" type="checkbox"/>	
399	b	Allow scheduling of a test (procedure) when ordering. Notify provider (where test is scheduled) so time and date may be verified. Provide automatic feedback of verification to ordering area.	y	3	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
400	c	Provide automatic scheduling of tests requiring more than one session for completion.	y	1	<input checked="" type="checkbox"/>	
401	d	Provide authorized individuals with ability to override scheduling constraints.	y	1	<input checked="" type="checkbox"/>	
402	14	CANCELLATION , RENEWAL, AND MODIFICATION OF ORDERS			<input checked="" type="checkbox"/>	
403	a	Allow online update, cancellation, renewal, reschedule, modification and discontinuation of order/test. If order/test is canceled in error, there is a simplified way to reinstate it.	y	1	<input checked="" type="checkbox"/>	
404	b	Automatically notify appropriate provider(s) online and optionally in print of change(s) in order.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
405	c	Notify physician/provider online and optionally in print of need for renewal before expiration of continuing order(s) per provider criteria, including:	y	1	<input checked="" type="checkbox"/>	
406		1 Name of patient.	y	1	<input checked="" type="checkbox"/>	
407		2 Client ID number.	y	1	<input checked="" type="checkbox"/>	
408		3 Name of service.	y	1	<input checked="" type="checkbox"/>	
409		4 Beginning date and time of order.	y	1	<input checked="" type="checkbox"/>	
410	d	Provide for automatic cancellation of orders upon discharge, release, or death of an inmate.	y	1	<input checked="" type="checkbox"/>	
411	15	DISPLAY OF ORDERS			<input checked="" type="checkbox"/>	
412	a	Clearly displayed (and printed, if needed) documentation of order.	y	1	<input checked="" type="checkbox"/>	
413	b	Allows multiple views of orders:	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
414		1 Allows view of all active and/or discontinued orders.	y	1	<input checked="" type="checkbox"/>	
415		2 Allows view of orders attached to a particular problem.	y	1	<input checked="" type="checkbox"/>	
416		3 Allows historical view of orders by inmate.	y	1	<input checked="" type="checkbox"/>	
417		4 Allows view of orders by date.	y	1	<input checked="" type="checkbox"/>	
418		5 Allows view of orders by provider.	y	1	<input checked="" type="checkbox"/>	
419	c	Can be customized to meet department's needs:	y	1	<input checked="" type="checkbox"/>	
420		1 Commonly ordered tests can be added.	y	1	<input checked="" type="checkbox"/>	
421		2 Commonly ordered medications can be added (per department formulary).	y	1	<input checked="" type="checkbox"/>	
422		3 Medications and procedures not per department formulary or protocol can be removed from orders view.	y	1	<input checked="" type="checkbox"/>	
423		4 Commonly ordered tests/medications can be organized per specialty (e.g. protocols).	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
424	d	Order search ability by:	y	1	<input checked="" type="checkbox"/>	
425		1	Patient Name.	y	1	<input checked="" type="checkbox"/>
426		2	Patient/Medical Record Number.	y	1	<input checked="" type="checkbox"/>
427		3	Provider.	y	1	<input checked="" type="checkbox"/>
428		4	Location.	y	1	<input checked="" type="checkbox"/>
429		5	Diagnostic Codes and Names.	y	1	<input checked="" type="checkbox"/>
430		6	Procedure Codes and Names.	y	1	<input checked="" type="checkbox"/>
431		7	Date.	y	1	<input checked="" type="checkbox"/>
432	e	Ability to generate outbound message to other systems when/where needed.	y	1	<input checked="" type="checkbox"/>	
433	f	Ability to perform multiple passes (attempts) for outbound message if acknowledgement not received.	y	1	<input checked="" type="checkbox"/>	
434	g	Ability to Lock Out Ordering (e.g. ARNP not able to order medications for himself).	y	3	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #	Resp.	Cap.	Comp	Commen
435	16	RETRIEVAL OF ORDERS	<input checked="" type="checkbox"/>	
436	a	Display/retrieve and/or print multiple views of orders.	y	1 <input checked="" type="checkbox"/>
437	b	Display and/or print list of orders received, completed, canceled, postponed, held, or unreported, in chronological sequence by provider.	y	1 <input checked="" type="checkbox"/>
438	c	Display and/or print on demand status of order (e.g., routine, ASAP, STAT, scheduled including start time and intervals).	y	1 <input checked="" type="checkbox"/>
439	d	Display and/or print on demand orders for clients in the following manner:	y	1 <input checked="" type="checkbox"/>
440	1	All orders for the current episode of care.	y	1 <input checked="" type="checkbox"/>
441	2	Outstanding orders.	y	1 <input checked="" type="checkbox"/>
442	3	Unverified orders.	y	1 <input checked="" type="checkbox"/>

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen		
443		4		Orders for last 24 hours.	y	1	<input checked="" type="checkbox"/>	
444	17	DISPLAY RESULTS					<input checked="" type="checkbox"/>	
445		a		Ability to Display Results from All Departments (i.e. RAD, LAB, Rx, etc.).	y	1	<input checked="" type="checkbox"/>	
446		b		Allows multiple views of results:	y	1	<input checked="" type="checkbox"/>	
447		1		Ability to drill down into results for more detail.	y	1	<input checked="" type="checkbox"/>	
448		2		Longitudinal display of results available with normals/abnormals noted.	y	1	<input checked="" type="checkbox"/>	
449		3		Graphical display of results and/or response trended over time (e.g. Coumadin charted against INR and Pro-Time).	y	1	<input checked="" type="checkbox"/>	
450		4		Allows view of orders attached to a particular problem.	y	1	<input checked="" type="checkbox"/>	
451		5		Allows historical view of orders by patient.	y	1	<input checked="" type="checkbox"/>	Previously quoted
452		6		Allows view of orders by date.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
453		7 Allows view of orders by provider.	y	1	<input checked="" type="checkbox"/>	
454		8 Allows display by test result/result type (e.g. normal, abnormal).	y	1	<input checked="" type="checkbox"/>	
455		9 Allows import of scanned results.	y	1	<input checked="" type="checkbox"/>	
456		10 Allows display of digital images (e.g. radiograph) or video (e.g. ultrasound).	y	1	<input checked="" type="checkbox"/>	
457	c	Clearly displayed origin for results (where they came from).	y	1	<input checked="" type="checkbox"/>	
458	d	Date/time stamp for results.	y	1	<input checked="" type="checkbox"/>	
459	e	Results display can be configured by role, by specialty, by location, by date - down to individual level - e.g. backup provider can be designated to receive if primary out of office or first/second sequence can be defined.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
460	f	Ability to enter lab results for patient at the same time provider is entering chart notes for same patient.	y	1	<input checked="" type="checkbox"/>	
461	g	Results outside of normal values are noted through alerts	y	1	<input checked="" type="checkbox"/>	
462	h	Ability to generate post hoc notification to provider of electronic lab results	y	1	<input checked="" type="checkbox"/>	
463	i	Sign off by provider that provider has reviewed lab results	y	1	<input checked="" type="checkbox"/>	
464	j	Ability to delegate notification of lab results assigned to be read by non-referring provider	y	1	<input checked="" type="checkbox"/>	
465	k	Ability to delegate sign off by non-referring provider that lab results have been reviewed	y	1	<input checked="" type="checkbox"/>	
466	l	Results not viewed or associated with an action can result in an alert.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
467	m	Ability to search results by:	y	1	<input checked="" type="checkbox"/>	
468		1 Patient Name.	y	1	<input checked="" type="checkbox"/>	
469		2 Medical Record Number.	y	1	<input checked="" type="checkbox"/>	
470		3 Provider.	y	1	<input checked="" type="checkbox"/>	
471		4 Location.	y	1	<input checked="" type="checkbox"/>	
472		5 Diagnostic Codes (Problem).	y	1	<input checked="" type="checkbox"/>	
473		6 Procedure Codes.	y	1	<input checked="" type="checkbox"/>	
474		7 Date.	y	1	<input checked="" type="checkbox"/>	
475	n	Ability to display interface data as needed (e.g. from other systems).	y	1	<input checked="" type="checkbox"/>	
476	o	Action taken when viewing result followed - ability to link action to result by provider, patient, date, etc.	y	1	<input checked="" type="checkbox"/>	
477	p	Follow-up available for documentation.	y	1	<input checked="" type="checkbox"/>	
478	q	For test results, ability to display range of results in addition to normal/abnormal.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #		Resp.	Cap.	Comp	Commen
479	18 CONSENTS, RELEASE OF INFORMATION, REFUSALS			<input checked="" type="checkbox"/>	
480	a Ability to design and implement Consents, Release of Information Requests, Requests for Information, Health Treatment Refusals, Letters, and other forms as determined by the department. Functionality to include the following:	y	1	<input checked="" type="checkbox"/>	
481	1 Designed using Microsoft Word functionality.	y	1	<input checked="" type="checkbox"/>	
482	2 Ability to insert data from Patient Medical Record.	y	1	<input checked="" type="checkbox"/>	
483	3 Ability to automatically trigger the completion of a specific electronic form based on a clinical event (e.g. intake, encounter, etc.).	y	1	<input checked="" type="checkbox"/>	
484	4 Ability to complete any electronic form on-demand for a specific patient.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
485		5 Ability to (re)display or (re)print patient specific form on-demand from within the system.	y	1	<input checked="" type="checkbox"/>	
486		6 Secure form revision handling (i.e. unable to modify form once produced).	y	1	<input checked="" type="checkbox"/>	
487		7 Ability to support multiple languages.	y	1	<input checked="" type="checkbox"/>	
488	b	Ability to enter multiple electronic signatures via a variety of secure methods.	y	1	<input checked="" type="checkbox"/>	
489		1 Ability to authenticate and allow electronic signatures, co-signatures.	y	1	<input checked="" type="checkbox"/>	
490		2 Provide for dual verification by authorized personnel (e.g., physician/provider, pharmacist, etc).	y	1	<input checked="" type="checkbox"/>	
491	c	Ability to capture/print Authorization For ROI And Disclosure Of Protected Health Information, including:	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
492		1	y	1	<input checked="" type="checkbox"/>	Language and formatting comply with HIPAA requirements.
493	d	Ability to capture/print Immunizations Screening Questions, including:	y	1	<input checked="" type="checkbox"/>	
494		1	y	1	<input checked="" type="checkbox"/>	Immunization consent forms.
495		2	y	1	<input checked="" type="checkbox"/>	Family Planning procedure consent form.
496		3	y	1	<input checked="" type="checkbox"/>	Medicare ABN/Waivers.
497	e	Ability to capture/print Health Memo to Inmates, including:	y	1	<input checked="" type="checkbox"/>	
498		1	y	1	<input checked="" type="checkbox"/>	Scheduled substances/Narcotic contract.
499		2	y	1	<input checked="" type="checkbox"/>	Behavior contract.
500		3	y	1	<input checked="" type="checkbox"/>	Consent to participate in a study.
501	f	System provides capability to capture if Consent/Authorization to Treat form has been acknowledged/signed	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
502	19	REFERRALS			<input checked="" type="checkbox"/>	
503	a	Ability to capture department internal program referrals, including:	y	1	<input checked="" type="checkbox"/>	
504	1	Automatically generate department inter-facility referrals based on positive screening responses, including:	y	1	<input checked="" type="checkbox"/>	
505	a	Ability to automatically refer an inmate to PSYCH based on a positive Mental Health Screening response.	y	1	<input checked="" type="checkbox"/>	
506	b	Ability to automatically refer a pregnant inmate to OBSTETRICS based on a positive response to Prenatal Screening.	y	1	<input checked="" type="checkbox"/>	
507	2	Ability to send referral note on-line.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
508	3	Track status of referral (e.g., sent, received, under review, accepted, denied, etc.) and trigger alert when not responded to within predetermined time limits.	y	1	<input checked="" type="checkbox"/>	
509	4	Ability to provide multiple referral paths.	y	1	<input checked="" type="checkbox"/>	
510	a	Inter-Facility (e.g. to/from Infirmary, Psych.).	y	1	<input checked="" type="checkbox"/>	
511	5	Provide for referral approval/denial.	y	1	<input checked="" type="checkbox"/>	
512	6	Ability to co-sign referral using electronic signature and authentication capability.	y	1	<input checked="" type="checkbox"/>	
513	7	Provide for capability to configure so certain referrals do not require pre-approval (as defined by the department.)	y	1	<input checked="" type="checkbox"/>	
514	8	Ability to view referrals provided to patient authorized by role based security.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
515		9 Ability to track, log, view referrals, and number of visits.	y	1	<input checked="" type="checkbox"/>	
516	b	Ability to capture external referrals, including:	y	1	<input checked="" type="checkbox"/>	
517		1 Ability to enter Referral (and Benefits Authorization).	y	1	<input checked="" type="checkbox"/>	
518		2 Ability to send referral note on-line.	y	1	<input checked="" type="checkbox"/>	
519		3 Ability to include clinical data, results, and notes as well as a summary with the referral note.	y	1	<input checked="" type="checkbox"/>	
520		4 Track status of referral (e.g., sent, received, under review, accepted, denied, etc.) and trigger alert when not responded to within predetermined time limits.	y	1	<input checked="" type="checkbox"/>	
521		5 Ability to provide multiple referral paths, including:	y	1	<input checked="" type="checkbox"/>	
522		a				Hospitalization/inpatient stay.
523		b				Outpatient Ancillary Services

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
524		6 Provide for capability for referral approval/denial.	y	1	<input checked="" type="checkbox"/>	
525		7 Electronic signature and authentication capability.	y	1	<input checked="" type="checkbox"/>	
526		8 Ability to co-sign referral using electronic signature and authentication capability.	y	1	<input checked="" type="checkbox"/>	
527		9 Provide for capability to configure so certain referrals do not require pre-approval (as defined by department).	y	1	<input checked="" type="checkbox"/>	
528		10 Ability to view referrals provided to patient authorized by role based security.	y	1	<input checked="" type="checkbox"/>	
529	c	Ability to close a referral under the following conditions:	y	1	<input checked="" type="checkbox"/>	
530		1 When a report is received from the specialist.	y	1	<input checked="" type="checkbox"/>	
531		2 When the referral authorization is denied.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
532		3			<input checked="" type="checkbox"/>	
			y	1		When the patient does not appear for the referral appointment.
533		4			<input checked="" type="checkbox"/>	
			y	1		When the patient declines to accept the referral.
534	d				<input checked="" type="checkbox"/>	
			y	1		Ability to capture and access payor lists of referrals requiring prior authorization.
535	e				<input checked="" type="checkbox"/>	
			y	1		Ability to create trend reports for reasons for referrals, referrals by providers, reasons for denials, number, costs, YTD totals and practice-to-date etc.
536	20	ADMISSION			<input checked="" type="checkbox"/>	
537	a				<input checked="" type="checkbox"/>	
			y	1		Ability to capture, store, modify Admission information, including:
538		1			<input checked="" type="checkbox"/>	
			y	1		Allows authorized users to archive and retrieve inactive patients.

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Line #			Resp.	Cap.	Comp	Commen
539	2	When a previously discharged patient is re-admitted, automatically list the name of the Primary clinician of record upon discharge during that previous stay, and patient location at the time of discharge.	y	1	<input checked="" type="checkbox"/>	
540	3	Allow user to enter the name of a Primary clinician and two Associates, onto the Admission screen at the point of admission or at a later time or date.	y	1	<input checked="" type="checkbox"/>	
541	4	Allow user to change the Primary clinician designation throughout the patient stay.	y	1	<input checked="" type="checkbox"/>	
542	5	Allow user to assign patient to Complex Management List.	y	1	<input checked="" type="checkbox"/>	
543	21	DISCHARGE			<input checked="" type="checkbox"/>	
544	a	Ability to capture, store, modify Discharge information, including:	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
545	1	When an inmate is released from custody, the release generates an automatic predefined discharge summary and "cancels" all outstanding orders, treatments, appointments, medications, and notifies appropriate clinicians of discharge.	y	1	<input checked="" type="checkbox"/>	
546	2	Upon discharge from a program or service (e.g. Infirmary), allow user to indicate discharge status, date, "to location", and alert Offender Management System of disposition.	y	1	<input checked="" type="checkbox"/>	
547	3	Upon discharge from an Outpatient Stay (Hospital), allow user to capture discharge status, date, "to location", and alert Offender Management System of disposition.	y	1	<input checked="" type="checkbox"/>	
548	4	Upon discharge allow user capture the following:	y	1	<input checked="" type="checkbox"/>	
549	a	Mental status/level.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
550		b Condition at last visit.	y	1	<input checked="" type="checkbox"/>	
551		c Disposition of case.	y	1	<input checked="" type="checkbox"/>	
552		d Discharge DSM diagnoses and ICD-9 Medical diagnoses.	y	1	<input checked="" type="checkbox"/>	
553		e Discharge Plan.	y	1	<input checked="" type="checkbox"/>	
554		f Date of discharge.	y	1	<input checked="" type="checkbox"/>	
555		g Time of discharge.	y	1	<input checked="" type="checkbox"/>	
556	5	If any data (from above item) had previously been collected during episode, it should be retrieved when discharge screen is activated.	y	1	<input checked="" type="checkbox"/>	
557	6	System allows development and entry of an After Care Plan.	y	1	<input checked="" type="checkbox"/>	
558	22	TRANSFER			<input checked="" type="checkbox"/>	
559	a	Ability to capture, store, modify Transfer information, including:	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
560	1	System maintains history for transfers between facilities, units, services, or levels of care, including:	y	1	<input checked="" type="checkbox"/>	Pharmacy Interface
561	a	Date and Time.	y	1	<input checked="" type="checkbox"/>	
562	b	Type or Transfer (Inter-Facility Transfer, Medical/Psychiatri	y	1	<input checked="" type="checkbox"/>	
	c	Transfer, Hospital Inpatient Transfer, Specialty Service Transfer).				
563	c	Reason for Transfer.	y	1	<input checked="" type="checkbox"/>	
564	d	Current Location.	y	1	<input checked="" type="checkbox"/>	
565	e	To Location.	y	1	<input checked="" type="checkbox"/>	
566	f	Requested by Provider.	y	1	<input checked="" type="checkbox"/>	
567	2	Ability to automatically route Transfer Requests (e.g. Close custody Security Placement) for Approval(s).	y	1	<input checked="" type="checkbox"/>	

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Line #			Resp.	Cap.	Comp	Commen
568		3	y	1	<input checked="" type="checkbox"/>	When system displays list of episodes, this list includes transfer data within episodes.
569		4	y	1	<input checked="" type="checkbox"/>	A transfer report can be generated upon an inmate's transfer. The report will include all diagnoses, allergies, progress notes, services provided, test results and a list of medications the patient is currently taking.
570	23	REVERSAL			<input checked="" type="checkbox"/>	
571		a	y	1	<input checked="" type="checkbox"/>	Allow reversal by authorized user of an admission, discharge, or transfer with appropriate automatic adjustments to statistics and other related areas.
572	24	REGISTRIES / RESEARCH			<input checked="" type="checkbox"/>	
573		a	y	1	<input checked="" type="checkbox"/>	Ability to manage POPULATION BASED CLINICAL AREAS (i.e., Registries)

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
574	1	Ability to manage Population Based Clinical Areas within the system.	y	1	<input checked="" type="checkbox"/>	
575	2	Documentation of Plan of Care/Roadmaps.	y	1	<input checked="" type="checkbox"/>	
576	3	Ability to Provide Data for Utilization Review.	y	1	<input checked="" type="checkbox"/>	
577	4	Ability to Provide Data for Quality Management.	y	1	<input checked="" type="checkbox"/>	
578	5	Provides tools for management of chronic illness for provider and patient.	y	1	<input checked="" type="checkbox"/>	
579	6	Ability to send alerts/reminders by role based security, including to patients.	y	1	<input checked="" type="checkbox"/>	
580	7	Ability to easily access references for management (tie to CDS and CMV).	y	1	<input checked="" type="checkbox"/>	
581	8	Incorporate Risk assessments (e.g. clinical calculators).	y	3	<input checked="" type="checkbox"/>	
582	9	Ability to incorporate information into written form (letter, e-mail) for patient and/or others.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
583		10 Ability to create standard sets of orders/procedures per protocol for Health Maintenance "Registry" conditions.	y	1	<input checked="" type="checkbox"/>	
584		11 Ability to incorporate advanced directives such as Living Will, Power of Attorney, next of kin, dependents, and code status.	y	1	<input checked="" type="checkbox"/>	
585		12 Ability to customize for individual within populations.	y	1	<input checked="" type="checkbox"/>	
586		13 Ability to track cardiovascular collaborative patients by blood pressure, therapy, self-management goals, lipid panel, normal/abnormal BP's, number of BP checks and diagnosis	y	1	<input checked="" type="checkbox"/>	BCA is able to track Blood Pressure normal/abnormal and diagnosis
587	b	Ability to support contact investigations for communicable disease populations	y	1	<input checked="" type="checkbox"/>	
588		1 Ability to link contacts to source case via source identifier code.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
589		2 Ability to capture demographic data on each contact.	y	1	<input checked="" type="checkbox"/>	
590		3 Ability to capture intervention and follow up data.	y	1	<input checked="" type="checkbox"/>	
591	25 PHARMACY				<input checked="" type="checkbox"/>	
592	a	Ability to efficiently process (i.e. capture, maintain, display, print) data associated with Prescription Dispensing, including the following:	y	1	<input checked="" type="checkbox"/>	
593		1 New Prescription Process.	y	1	<input checked="" type="checkbox"/>	
594		2 Refill Prescription Process.	y	1	<input checked="" type="checkbox"/>	
595		3 Prescription Directions (Sig) - User friendly shorthand input.	y	1	<input checked="" type="checkbox"/>	
596		4 Renew Prescription Process - Update of expired prescription.	y	1	<input checked="" type="checkbox"/>	
597		5 Edit Prescription - All Fields (in compliance with Pharmacy regulations).	y	1	<input checked="" type="checkbox"/>	

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Line #			Resp.	Cap.	Comp	Commen
598		6 Cancel Prescriptions - That meet set criteria.	y	1	<input checked="" type="checkbox"/>	
599		7 Current NCPDP codes for prescriptions	y	2	<input checked="" type="checkbox"/>	Pharmacy Interface
600		8 Ability to generate and fax modem new or refill prescriptions to internal and external pharmacies, excluding Class II drugs, twenty-four hours a day, seven days a week.	y	1	<input checked="" type="checkbox"/>	
601		9 Ability to ALERT provider of generic drug options that are on formulary by insurance plan	y	1	<input checked="" type="checkbox"/>	
602	b	Ability to generate new or refill paper prescriptions for all Class II drugs, and pharmacies with whom we have no HL7 interface to order on-line or by fax modem.	y	1	<input checked="" type="checkbox"/>	
603	c	Ability to check new prescriptions against a patient's medication list and allergies to help prevent interactions	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
604		d Ability to add Patient Identification Number to faxed or printed prescriptions.	y	1	<input checked="" type="checkbox"/>	
605	26 DENTAL				<input checked="" type="checkbox"/>	
606		a Documentation:	y	1	<input checked="" type="checkbox"/>	
607		1 Periodontal charts.	y	1	<input checked="" type="checkbox"/>	
608		2 Adult and child tooth charts.	y	1	<input checked="" type="checkbox"/>	
609		3 Charting of soft tissue disease management and dental anatomy.	y	1	<input checked="" type="checkbox"/>	
610		b Decision Support:	y	1	<input checked="" type="checkbox"/>	
611		1 Ability to support dental triage system to assist nurse on determining need for a dental referral based on information at intake.	y	1	<input checked="" type="checkbox"/>	
612		c Patient Education:	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
613		1 Ability to provide on-line access to dental patient education materials and ability to print in multiple languages.	y	1	<input checked="" type="checkbox"/>	
614		d Ability to upload and capture data for field preventive sealant visits.	y	1	<input checked="" type="checkbox"/>	
615	27 OBSTETRICS				<input checked="" type="checkbox"/>	
616		a Ability to link all OB encounters, orders for ancillary services and results to create a comprehensive listing of services and outcomes for the episode of care for one pregnancy.	y	1	<input checked="" type="checkbox"/>	
617		b Ability to track when the pregnancy is completed and the outcome.	y	1	<input checked="" type="checkbox"/>	
618		c Capture estimated due date and date of last menstrual period.	y	1	<input checked="" type="checkbox"/>	Part of IRIS Scan Interface
619		d Ability to capture HIPAA OB transaction data.	y	1	<input checked="" type="checkbox"/>	
620	28 TUBERCULOSIS				<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
621	a	Ability to compile all historical tuberculosis information: all previous PPD's and results, all previous CXR orders, links to CXR results, all sputum results, any TB medications	y	1	<input checked="" type="checkbox"/>	
622	29	MEDICAL RECORDS FUNCTIONS			<input checked="" type="checkbox"/>	
623	a	System allows for a simple method to print entire chart, either to a printer or to a fax number.	y	1	<input checked="" type="checkbox"/>	
624	b	System allows for a simple method to print entire chart to PDF format on a CD ROM.	y	1	<input checked="" type="checkbox"/>	
625	c	System allows for a simple method to print a select portion of the chart (by date range, by note type, by physician, etc) to a printer or to a fax number.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
626	d	System allows for a simple method to print a select portion of the chart (as above) to PDF format on a CD ROM.	y	1	<input checked="" type="checkbox"/>	
627	e	Medical Record Chart Function allows for nested folders of at least 1 level inside the main folder.	y	1	<input checked="" type="checkbox"/>	
628	f	Ability to stage implementation of system from a point certain forward for all new medical records, dental records and pharmacy records	y	1	<input checked="" type="checkbox"/>	
629	g	Ability to link our existing medical numbering system on our folders to medical numbering system in proposed solution	y	1	<input checked="" type="checkbox"/>	
630	h	Ability to track physical medical records until system is fully implemented	y	2	<input checked="" type="checkbox"/>	Cost quoted on z-bar coding technology
631	i	Sites where physical medical record folders will be "scanned in" or "out" are user defined	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
632	j	System has ability to generate new medical records sticker for old physical medical record	y	2	<input checked="" type="checkbox"/>	Quoted on z-bar technology
633	k	Ability to scan external forms (correspondence, radiological reports, and other clinical ancillaries) to Medical Record	y	1	<input checked="" type="checkbox"/>	
634	l	Ability to add indexed fields to scanned forms (e.g. correspondence)	y	1	<input checked="" type="checkbox"/>	
635	m	Ability to provide an audit trail of all persons who access, add new and/or modify information in any individual record	y	1	<input checked="" type="checkbox"/>	
636	n	System automatically time stamps down to the minute, preferably second, access, additions and/or modifications of medical record	y	1	<input checked="" type="checkbox"/>	
637	o	Ability to generate reminder notices for immunizations, annual paps, etc	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
638	p	Ability to define date parameters and print or capture all data, documents, encounters, notes, etc. in system to printer or fax modem for that specified date range for specific patient	y	1	<input checked="" type="checkbox"/>	
639	q	Ability to improve accuracy and standardization of care and comply with standards such as CMS and HIPAA	y	1	<input checked="" type="checkbox"/>	
640	r	Ability to track Directly Observed Therapy and Directly Observed Preventative Therapy	y	1	<input checked="" type="checkbox"/>	
641	s	Triage tracking for persons who are established or pre-registered patients	y	1	<input checked="" type="checkbox"/>	
642	t	Ability to set reminders for: Labs sent out and not returned in a specified period	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
643	u	Ability to set reminders for: Letters to be sent reminding patient(s) of upcoming appointments, need for treatment, etc.	y	1	<input checked="" type="checkbox"/>	
644	v	Ability to auto-generate age from date of birth and display in system and across other screens as necessary	y	1	<input checked="" type="checkbox"/>	
645	w	Ability to capture immunizations in compliance with CDC National Immunization Guidelines and State of Arizona Immunization Registry	y	1	<input checked="" type="checkbox"/>	
646	x	Ability to write immunizations back to Arizona Immunization Registry via batch or real-time exchanges	y	1	<input checked="" type="checkbox"/>	Provided w/ interface
647	y	Scheduling and Values from CDC Immunization Registry Guidelines integrated (i.e. manufacturer, lot number, etc., not user defined)	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
648	z	Ability to select random patient medical records for auditing purposes.	y	1	<input checked="" type="checkbox"/>	
649	30	PATIENT ACCOUNTING				<input checked="" type="checkbox"/>
650	a	Provides ability to charge items individually or in batches.	y	1	<input checked="" type="checkbox"/>	
651	b	Ability to display total cost of items when ordered (e.g. test, medication, procedure).	y	1	<input checked="" type="checkbox"/>	
652	c	Ability to display "out of pocket" cost of items when ordered to provider and patient (See also Referral and Benefits Authorization).	y	1	<input checked="" type="checkbox"/>	
653	d	Ability provided for "no charge" items, such as test reruns or Rx fill repeat due to lab/radiology/pharmacy error.	y	1	<input checked="" type="checkbox"/>	
654	e	Ability to create Charge Master File with description and accompanying prices.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
655	f	Provide ability to charge institutional accounts for activity versus individual client.	y	1	<input checked="" type="checkbox"/>	
656	g	Ability to send or receive health claims electronically via on-line, real time submission of claims (cartridges, tapes, and other physical media are unacceptable)	y	1	<input checked="" type="checkbox"/>	
657	h	Ability to perform Cost of Benefits electronically.	y	1	<input checked="" type="checkbox"/>	
658	i	Ability at registration to query and update to view outstanding balances and collection notes of all accounts for the patient and/or guarantor who is financially responsible (i.e., minor children)	y	1	<input checked="" type="checkbox"/>	
659	j	Ability to create detailed statement, Explanation of Benefits, for specified period for interested parties, including attorneys	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
660	k	Ability to interface on-line, real time with collection system.	y	1	<input checked="" type="checkbox"/>	
661	l	Ability to interface to a third-party billing system. List compatible ones.	y	1	<input checked="" type="checkbox"/>	
662	m	Ability to determine if the patient has another active account on the system within a user-defined amount of days.	y	1	<input checked="" type="checkbox"/>	
663	n	Provide ability to automatically capture charges based on services provided.	y	1	<input checked="" type="checkbox"/>	
664	o	Ability of guarantor screen to default to self-pay for all patients (except minors) at registration.	y	1	<input checked="" type="checkbox"/>	
665	p	Provide AHCCCS secondary payer requirements with mandatory completion status for every Medicare registration.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
666	q	Ability to link all active accounts in a household and post charge data from two or more accounts to one statement, one account number without altering number or type of visits recorded in Patient Identification Number	y	1	<input checked="" type="checkbox"/>	
667	r	Provide capability to retroactively register a patient and post a charge.	y	1	<input checked="" type="checkbox"/>	
668	s	Provide capability for user-defined sliding scales	y	1	<input checked="" type="checkbox"/>	
669	t	Ability to post on-line MasterCard, Visa and Debit payments to patient account with electronic signature.	y	1	<input checked="" type="checkbox"/>	
670	u	CFR21 part11 Electronic Signature or HIPAA approved electronic signature standard.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
671	v	Ability to send or receive payment or remittance advice electronically and post payments within 24 hours.	y	1	<input checked="" type="checkbox"/>	
672	w	Ability for Accounts Receivable to post payments, adjustments, and refunds based on each patient's insurance contract.	y	1	<input checked="" type="checkbox"/>	
673	x	Ability to print on-demand statements for patient at time of service.	y	1	<input checked="" type="checkbox"/>	
674	y	Ability to select claims for payment that meet user-defined criteria	y	1	<input checked="" type="checkbox"/>	
675	z	Ability to automatically assign accounts to collection based on user specified criteria (e.g. number of days delinquent, minimum outstanding, first letter of employee last name).	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
676	aa	Support entry of comments for individual visits, three memo field up to 255 characters each field, one memo field up to 64,000 characters	y	1	<input checked="" type="checkbox"/>	
677	31	GENERAL SYSTEM FUNCTIONS				<input checked="" type="checkbox"/>
678	a	Multi-Entity				<input checked="" type="checkbox"/>
679	1	Provide a multi-facility longitudinal system with linkages to other computer systems, as required.	y	1	<input checked="" type="checkbox"/>	
680	a	Uses open architecture and can be interfaced/integrated with other applications.	y	1	<input checked="" type="checkbox"/>	
681	b	System is HIPAA compliant, will be system certified, and adheres to all regulatory body requirements.	y	1	<input checked="" type="checkbox"/>	
682	c	Support purging (i.e. archiving) of system data, as defined by department.	y	3	<input checked="" type="checkbox"/>	Based on estimated hours, more detail specifications required for actual cost. Actual cost could be less.

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
683		d	Support a "secondary" system for research purposes.	y	1	<input checked="" type="checkbox"/>
684	2		Ability to restrict access to medical record by providers to specific clinics and/or locations	y	1	<input checked="" type="checkbox"/>
685		b	Support a Master Patient Index (MPI)	y	1	<input checked="" type="checkbox"/>
686	1		System supports a Master Patient Index (MPI).	y	1	<input checked="" type="checkbox"/>
687	2		Functionality to minimize occurrence of duplicate patients e.g. system will not allow second patient with same SS#).	y	1	<input checked="" type="checkbox"/>
688		a	Ability to view MPI by enterprise or by facility.	y	1	<input checked="" type="checkbox"/>
689		b	Ability to link same patient records on same vendor's system at different facilities.	y	1	<input checked="" type="checkbox"/>
690		c	Provide several defined patient list formats. These lists are produced by a clinician signing on.	y	1	<input checked="" type="checkbox"/>

EXHIBIT B5-2

Line #		Resp.	Cap.	Comp	Commen
691	d	Indicators are provided on patient lists as defined above, which indicate new, abnormal, or critical data.	y	1	<input checked="" type="checkbox"/>
692	e	Patient lists will display multiple patients per screen.	y	1	<input checked="" type="checkbox"/>
693	f	Provide each clinician with his/her clients (i.e. default list) that are active and open, with patient demographics, and diagnosis and/or service.	y	1	<input checked="" type="checkbox"/>
694	g	Provide clinician with a display of his/her Group/Team's clients that are active and open, with patient demographics, and length of stay by diagnosis and/or service.	y	1	<input checked="" type="checkbox"/>
695	h	The caregiver may select a different patient list as a default sign-on screen for different locations, programs.	y	1	<input checked="" type="checkbox"/>

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
696		i	y	1	<input checked="" type="checkbox"/>	The caregiver may select a different patient list from the chosen default list.
697		j	y	1	<input checked="" type="checkbox"/>	Provide a list of all previously seen patients for whom new data is available.
698		k	y	1	<input checked="" type="checkbox"/>	The caregiver can print on-demand a copy of patient list.
699	3		y	1	<input checked="" type="checkbox"/>	User can locate inmates using several methods (e.g. by Name, SSN, medical record number, Service/Program, Housing Unit, etc.).
700	c	Tables And Master Files			<input checked="" type="checkbox"/>	
701	1		y	1	<input checked="" type="checkbox"/>	Provide multi-facility, multi-provider (i.e. role based) based set of tables and master files.

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen		
702		2			y	1	☑	
								Provide GUI utility to allow system administrators to build tables and master files in a hierarchical relationship (e.g. built at the enterprise level, then facility level, then at the provider type level, then at the provider level.).
703		3			y	1	☑	
								Provide a utility to load industry standard dictionaries and master files.
704	d	Clinical Access View					☑	
705		1			y	1	☑	
								Provide secure online and real-time access both locally and remotely via the Internet to system for client demographics, location, and census information, via integrated desktop work environment.

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
706	2	Provide secure online and real-time access both locally and remotely via the Internet to Data Repository for medical and clinical information, including treatment plans, progress notes, and assessments.	y	1	<input checked="" type="checkbox"/>	
707	3	Provide secure online and real-time access both locally and remotely via the Internet to Order Entry for transmission of orders, and status check on orders.	y	1	<input checked="" type="checkbox"/>	
708	4	Provide online access both locally and remotely via the Internet to staff and on-call schedules.	y	1	<input checked="" type="checkbox"/>	
709	5	Provides ability to conform to Health System patient confidentiality requirements.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
710	6	Provide context based switching between application modules (e.g., no need to re-identify patient when switching applications).	y	1	<input checked="" type="checkbox"/>	
711	7	Provide each clinician with display and printed listing of his/her clients that are active and open, with patient demographics, and diagnosis and/or service.	y	1	<input checked="" type="checkbox"/>	
712	8	Provide each clinician with display and printed listing of his/her Group/Team's clients that are active and open, with patient demographics, and length of stay by diagnosis and/or service.	y	1	<input checked="" type="checkbox"/>	Included in cost earlier
713	9	Provides several defined patient lists specific to clinician.	y	1	<input checked="" type="checkbox"/>	
714	10	A list of all previously seen clients for whom new data is available.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #		Resp.	Cap.	Comp	Commen
715	11 The caregiver may select a different patient lists based on different rules , i.e., inpatient lists for inpatient sign-on, office schedule lists for office sign-on, and so forth.	y	1	<input checked="" type="checkbox"/>	
716	12 Patient lists as defined above will display multiple patients per screen.	y	1	<input checked="" type="checkbox"/>	
717	13 The caregiver can print, easily, a copy of the above list.	y	1	<input checked="" type="checkbox"/>	
718	14 Color indicators are provided on patient list screens as defined above, which indicate new, abnormal, or critical data and the data is easily accessible.	y	3	<input checked="" type="checkbox"/>	Based on estimated hours, more detail specification required for actual cost. Actual cost could be less.
719	15 Provide online prompts where signatures or co-signatures are required in the completion of medical records documentation to avoid charting deficiencies.	y	1	<input checked="" type="checkbox"/>	Under development

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
720	16	Provide online access both locally and remotely via the Internet to one or more databases (e.g., Medline) of bibliographic information.	y	3	<input checked="" type="checkbox"/>	Based on estimated hours, more detail specifications required for actual cost. Actual cost could be less.
721	17	Provide online access both locally and remotely via the Internet to drug information databases and texts.	y	1	<input checked="" type="checkbox"/>	
722	18	The system allows for specific views (e.g. role based displays) via a person's sign on code.	y	1	<input checked="" type="checkbox"/>	
723	e	Clinical Decision Support System (CDS)			<input checked="" type="checkbox"/>	
724	1	Ability to configure the timing/location/frequency of alerts to support vs. control care.	y	1	<input checked="" type="checkbox"/>	
725	2	Incorporates a best practices library of interdisciplinary evidence based rules/alerts developed at leading institutions.	n		<input checked="" type="checkbox"/>	Under development

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
726	3	Provide ability to interface with third-party reference databases, (Medline, PDR, etc).	y	1	<input checked="" type="checkbox"/>	
727	4	Ability to easily access or link to references used in writing evidence-based guidelines.	n		<input checked="" type="checkbox"/>	Under development
728	5	Allow integration of external rules databases (e.g. Micromedix) into the ordering process.	n	0	<input checked="" type="checkbox"/>	Under development
729	6	Allows development of department specific rules and alerts that can be applied to library.	n	0	<input checked="" type="checkbox"/>	Under development
730	7	Ability for reminders/alerts to be differentiated by clinical category (e.g. radiology studies, medication order checks, lab).	y	1	<input checked="" type="checkbox"/>	
731	8	Provide time based checks (e.g. health screen intervals, assessments, drug monitoring ,etc.).	y	1	<input checked="" type="checkbox"/>	
732	9	Ability to prioritize levels of alerts specific to department.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
733	10	Ability to route alerts as defined by department.	y	1	<input checked="" type="checkbox"/>	
734	11	Uses rules to interpret specific but varied client data points to determine if a reminder should be generated.	y	1	<input checked="" type="checkbox"/>	
735	12	Provide rules based event detection.	y	1	<input checked="" type="checkbox"/>	
736	13	Ability to escalate non-response, as defined by department, to an alert will automatically escalate alert to another user.	n		<input checked="" type="checkbox"/>	Under development
737	14	Ability to configure method of alert notification using variety of methods (e.g., priority e-mail, pager, screen pop-up, etc.).	y	1	<input checked="" type="checkbox"/>	
738	15	Provides relevant information display (e.g., ancillary or reference information pertinent to an action as defined by department.).	n		<input checked="" type="checkbox"/>	Under development

EXHIBIT B5-2

Line #		Resp.	Cap.	Comp	Commen
739	16 Ability to identify clearly abnormal values (abnormal criteria can be based on standard sets or on client defined normal).	y	1	<input checked="" type="checkbox"/>	
740	17 Ability to display reminders/alerts based on past history, including social/family history as well as medical history.	y	1	<input checked="" type="checkbox"/>	
741	18 Ability to identify and clearly display safety issues, such as allergies and response to allergen.	y	1	<input checked="" type="checkbox"/>	
742	19 Ability to provide alerts regarding "medical necessity".	y	1	<input checked="" type="checkbox"/>	
743	20 Warns users of dangerous clinical states with access to incidents, outcomes, and assessment data.	y	1	<input checked="" type="checkbox"/>	
744	21 Ability, via alert to interactively order and document care against system and client defined rules (e.g., department guidelines).	y	1	<input checked="" type="checkbox"/>	
745	22 Ability to note and log response to alert.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
746	23	Ability to print alerts on-demand.	y	1	<input checked="" type="checkbox"/>	
747	24	Ability to log alerts.	y	1	<input checked="" type="checkbox"/>	
748	25	Provide reminders linked to problems on problem list.	y	1	<input checked="" type="checkbox"/>	
749	26	Recommends diagnosis based on assessment data entered.	n		<input checked="" type="checkbox"/>	Under development
750	27	User can look up definition of diagnosis.	n		<input checked="" type="checkbox"/>	Under development
751	28	Recommends standard clinical pathway or protocol based on medical diagnoses entered.	n	0	<input checked="" type="checkbox"/>	Under development
752	29	Provides pre-selected treatment plans when provisional diagnosis is entered for patient encounter.	n	0	<input checked="" type="checkbox"/>	Under development
753	30	Provide suggestions for treatment, diagnosis, etc. based on literature and user/clinician definition.	n	0	<input checked="" type="checkbox"/>	Under development
754	31	Recommends preventive medical interventions.	n	0	<input checked="" type="checkbox"/>	Under development

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
755	32	User can look up definition of interventions.	n	0	<input checked="" type="checkbox"/>	Under development
756	33	Provides list of possible activities based on intervention selected.	y	1	<input checked="" type="checkbox"/>	
757	34	Support standard sets of "normals" for findings.	y	1	<input checked="" type="checkbox"/>	
758	35	Support expedited template-based findings.	y	1	<input checked="" type="checkbox"/>	
759	36	Utilize iconic interface using human anatomy images.	n		<input checked="" type="checkbox"/>	Under development
760	37	Support RN triage screening system for use at jail intake, with pathways/guidelines.	y	1	<input checked="" type="checkbox"/>	
761	38	Support system to track disease outbreaks, including ability to link clients to an initiating case.	y	1	<input checked="" type="checkbox"/>	
762	f	Controlled Medical Vocabulary (CMV)			<input checked="" type="checkbox"/>	
763	1	Incorporates multiple controlled Vocabularies and Standard Code Sets.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #		Resp.	Cap.	Comp	Commen
764	a Support local, regional, national vocabularies; updates.	y	1	<input checked="" type="checkbox"/>	
765	b Use vocabulary control on all appropriate fields.	y	3	<input checked="" type="checkbox"/>	
766	c Use enhanced versions of ICD-9-CM as principle for the controlled vocabulary with ability to support ICD-10-CM.	y	1	<input checked="" type="checkbox"/>	
767	d Use Logical Observation Identifier Names and Codes (LOINC).	y	3	<input checked="" type="checkbox"/>	
768	e Use Home Care Financing Administration Common Procedural Coding System (HCPCS).	y	1	<input checked="" type="checkbox"/>	
769	f Use National Drug Code (NDC).	y	1	<input checked="" type="checkbox"/>	
770	g Use National Council for Processing Prescription Drug Programs (NCPDP).	y	3	<input checked="" type="checkbox"/>	
771	h Use Diagnosis Related Group Number (DRG).	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
772		i Use Claim Adjustment Reason Codes.	y	1	<input checked="" type="checkbox"/>	
773		j Use Remittance Remarks Codes.	y	1	<input checked="" type="checkbox"/>	
774		k Use another recognized vocabulary source.	y	3	<input checked="" type="checkbox"/>	Based on estimated hours, more detail specification required for actual cost. Actual cost could be less.
775		l Flexibility to support SNOMED code set at such time as this becomes a community standard.	y	1	<input checked="" type="checkbox"/>	
776	2	Relationships between Code Sets clearly defined.	y	3	<input checked="" type="checkbox"/>	
777	3	Standard Code Sets mapped with a common Dictionary Definition.	y	1	<input checked="" type="checkbox"/>	
778	4	Attributes for each data element; support all data types.	y	1	<input checked="" type="checkbox"/>	
779	5	Supports static/dynamic data element relationships.	y	3	<input checked="" type="checkbox"/>	Based on estimated hours, more detail specification required for actual cost. Actual cost could be less.
780	6	Accommodate new, unforeseen codes, data elements.	y	3	<input checked="" type="checkbox"/>	Based on estimated hours, more detail specification required for actual cost. Actual cost could be less.

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Line #			Resp.	Cap.	Comp	Commen
781	7	Ability to Recognize Semantic Differences (e.g. Heart and Cardiac).	y	3	<input checked="" type="checkbox"/>	Based on estimated hours, more detail specification required for actual cost. Actual cost could be less.
782	8	Controlled on-line data; can use different descriptions but get consistent display of a term (e.g. CBC, blood count).	y	1	<input checked="" type="checkbox"/>	
783	9	CMV is part of database with open functionality and can interface to other applications (Service-Oriented Architecture).	y	1	<input checked="" type="checkbox"/>	
784	g	Clinical Pathways and Guidelines			<input checked="" type="checkbox"/>	
785	1	Provide industry standard pathways and guidelines.	y	1	<input checked="" type="checkbox"/>	
786	2	Ability to modify any provided sets of pathways and guidelines.	y	1	<input checked="" type="checkbox"/>	
787	3	Provide the capability to develop custom department pathways and guidelines.	y	1	<input checked="" type="checkbox"/>	
788	4	Pathways and guidelines are tied to the generation of treatment plans and assessments.	y	1	<input checked="" type="checkbox"/>	

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Line #			Resp.	Cap.	Comp	Commen
789	5	Can be displayed as a calendar of clinical events to be accomplished.	y	1	<input checked="" type="checkbox"/>	
790	6	Can be displayed organized by care provider type (e.g., Therapist, Psychiatrist, Nurse, Physicians, Clinicians, etc.).	y	1	<input checked="" type="checkbox"/>	
791	7	Offer medical & mental health diagnosis decision matrix that addresses continuity of interventions in treatment planning.	y	3	<input checked="" type="checkbox"/>	Based on estimated hours, more detail specification required for actual cost. Actual cost could be less.
792	8	Provide dual diagnosis decision matrix that addresses the continuity of interventions in treatment planning following:	y	1	<input checked="" type="checkbox"/>	
793	a	Low severity mental illness/low severity substance abuse.	y	1	<input checked="" type="checkbox"/>	
794	b	Severe and persistent mental illness/substance abuse.	y	1	<input checked="" type="checkbox"/>	
795	c	Low severity psychiatric disorder/high severity substance disorder.	y	1	<input checked="" type="checkbox"/>	

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Line #			Resp.	Cap.	Comp	Commen
796		d	y	1	<input checked="" type="checkbox"/>	Severe and persistent mental illness/high severity substance disorder.
797		e	y	1	<input checked="" type="checkbox"/>	High severity psychiatric but not severe and persistent mental illness/high severity substance disorder.
798	9		y	1	<input checked="" type="checkbox"/>	Ability to set reminders for upcoming patient appointments, labs sent out and not returned for a specified period of time, and letters to be sent reminding patient(s) of upcoming appointments, need for treatment, etc
799		h			<input checked="" type="checkbox"/>	Cost Measuring and Quality Assurance
800	1		y	1	<input checked="" type="checkbox"/>	Built-in mechanisms/access to other systems to capture cost information.
801	2		y	1	<input checked="" type="checkbox"/>	Access to other systems to capture cost information, employing quality measurement tools.

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Line #			Resp.	Cap.	Comp	Commen	
802		3	Collects cost/quality information.	y	1	<input checked="" type="checkbox"/>	
803		4	Cost, quality, severity information structured to influence clinician decisions.	y	1	<input checked="" type="checkbox"/>	
804		5	Support multiple EDI Financial links.	y	1	<input checked="" type="checkbox"/>	
805	i		Integrated E-Mail (Secure Clinical Messaging)			<input checked="" type="checkbox"/>	
806		1	Ability to Communicate Clinical Information through Secure E- Mail.	y	1	<input checked="" type="checkbox"/>	
807		2	Ability to Conference (i.e., chat) on-line.	y	3	<input checked="" type="checkbox"/>	Based on estimated hours, more detail specification required for actual cost. Actual cost could be less.
808		3	Allow for both administrative and patient-centric email.	y	1	<input checked="" type="checkbox"/>	
809		4	Patient-centric email is posted to the patient's medical chart.	y	1	<input checked="" type="checkbox"/>	
810		5	Allow user messages and comments to be sent from one entity to another.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen		
811		6			y	1	<input checked="" type="checkbox"/>	Allow group email to staff, with groups defined by department administrator.
812	j	Access (Log-On)					<input checked="" type="checkbox"/>	
813		1			y	1	<input checked="" type="checkbox"/>	Provide on-line access both locally and remotely via the Internet to system via integrated desktop environment.
814			a		y	1	<input checked="" type="checkbox"/>	Display an on-line message at department designated points warning users that a record of their access is being maintained.
815			b		y	1	<input checked="" type="checkbox"/>	Data sent over the public network is encrypted (e.g., uses secured socket layer).
816		2			y	1	<input checked="" type="checkbox"/>	System access is secured via encrypted passwords and user identifications
817			a		y	1	<input checked="" type="checkbox"/>	Support multiple security levels.

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
818		1	y	1	<input checked="" type="checkbox"/>	Role based where User Groups are created with access levels, and individuals are assigned to those groups.
819		2	y	1	<input checked="" type="checkbox"/>	User based where each individual user is assigned the approved access levels.
820		3	y	1	<input checked="" type="checkbox"/>	Maintain an emergency access login that has the password reset after each use.
821	b	Support industry standard, Arizona State approved, electronic signatures.	y	1	<input checked="" type="checkbox"/>	
822		1	y	1	<input checked="" type="checkbox"/>	Provide on-line signatures or co-signatures where required to complete medical records documentation.
823	c	Password attempts are restricted, per department rules.	y	1	<input checked="" type="checkbox"/>	
824		1	y	1	<input checked="" type="checkbox"/>	Display on-line alert (optional report) to a designated PC when certain, department specified security violations occur.

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen		
825		2			y	1	<input checked="" type="checkbox"/>	System provides a 'disable warning' if a user's password is entered incorrectly a specified number of times.
826		3			y	1	<input checked="" type="checkbox"/>	Support automatic audit trail for all accesses.
827		4			y	1	<input checked="" type="checkbox"/>	Provide means to limit the number of log in attempts.
828		5			y	1	<input checked="" type="checkbox"/>	Support automatic analysis of audit trails/unauthorized access attempts.
829		6			y	1	<input checked="" type="checkbox"/>	Warns system designed user(s), in real time when user has tried to access restricted data as defined by department.
830		7			y	1	<input checked="" type="checkbox"/>	Password resets are required, per department defined schedule.
831		8			y	1	<input checked="" type="checkbox"/>	Password cannot be saved on the desktop (i.e. must be re-entered for every log-in).

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
832		9	y	1	<input checked="" type="checkbox"/>	Provide alternate user authentication methods other than the typical keypad entered user id and password.
833	3	Access to functions within the system are automatically controlled by secure user profiles.	y	1	<input checked="" type="checkbox"/>	
834		a Allow authorized user (System Administrator) to create, modify, and cancel user profiles (with reason code).	y	1	<input checked="" type="checkbox"/>	
835		b Create documentation of new, modified, and canceled user profiles.	y	1	<input checked="" type="checkbox"/>	
836		c Restrict access for given functions by location or designation of PC and/or time of day, day of week.	y	1	<input checked="" type="checkbox"/>	
837		1 User accounts can be built with expiration dates (temporary employees).	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
838		2	y	1	<input checked="" type="checkbox"/>	Users can be connected to a group and gain resource access at the group level.
839		3	y	1	<input checked="" type="checkbox"/>	User may belong to more than one security group.
840		4	y	1	<input checked="" type="checkbox"/>	Require users to change passwords every x days as specified by the security administrator.
841		5	y	3	<input checked="" type="checkbox"/>	Designated users can not be signed on to more than one PCI (device) at a time . Based on estimated hours, more detail specification required for actual cost. Actual cost could be less.
842		6	y	1	<input checked="" type="checkbox"/>	Allow multilevel, read-only access to the system by authorized personnel only.
843	d		y	1	<input checked="" type="checkbox"/>	Restrict additions to, changes to, and/or deletion of records by security level to only those authorized.
844	e		y	1	<input checked="" type="checkbox"/>	At user's request, print management report of security access by application and by department.

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
845	f	Provide a report of user's activity per sign-on for productivity tracking.	y	1	<input checked="" type="checkbox"/>	
846	g	Provide a report of user Logon ID's not used for a specified time.	y	1	<input checked="" type="checkbox"/>	
847	h	Provide a report whereby a user can list the names of all who have accessed a specific patient's record.	y	1	<input checked="" type="checkbox"/>	
848	i	Ability to process files from Human Resources system for terminated employees, and automatically turns off access.	y	3	<input checked="" type="checkbox"/>	Based on estimated hours, more detail specification required for actual cost. Actual cost could be less.
849	4	Response time and availability:			<input checked="" type="checkbox"/>	
850	a	Response times: in 2 seconds or less 99 percent of the time. Sub-second response time 98 percent of the time.	y	1	<input checked="" type="checkbox"/>	
851	b	Support redundancy/fault tolerance access.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
852		c System availability in excess of 99 percent excluding planned maintenance.	y	1	<input checked="" type="checkbox"/>	
853		d Time-out occurs, per department rules (e.g. PC specific, User specific, User Role specific).	y	1	<input checked="" type="checkbox"/>	
854	5	Ability to support multiple users.	y	1	<input checked="" type="checkbox"/>	
855		a Supports a minimum of 150 concurrent users.	y	1	<input checked="" type="checkbox"/>	
856		b Log all transaction processing and archiving.	y	1	<input checked="" type="checkbox"/>	
857		c Support write-locking mechanism to prevent unauthorized updates.	y	1	<input checked="" type="checkbox"/>	
858		d The system allows multiple users to access the same patient record simultaneously.	y	1	<input checked="" type="checkbox"/>	
859		e Alert simultaneous users of each other's presence on the same record.	y	3	<input checked="" type="checkbox"/>	Based on estimated hours, more detail specification required for actual cost. Actual cost could be less.

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
860		f Print at authorized user request, an audit report of every transaction initiated on the system (HIPPA compliant).	y	1	<input checked="" type="checkbox"/>	
861	6	Patient confidentiality can be protected, per HIPPA regulations, when data is extracted from repository through encryption.	y	1	<input checked="" type="checkbox"/>	
862		k Screen Displays			<input checked="" type="checkbox"/>	
863	1	Graphical rather than text based user interface.	y	1	<input checked="" type="checkbox"/>	
864	2	Ergonomic presentation.	y	1	<input checked="" type="checkbox"/>	
865		a Support user-friendly movement across the system.	y	1	<input checked="" type="checkbox"/>	
866		b Engineered with human factors emphasis.	y	1	<input checked="" type="checkbox"/>	
867		c Rapid screen "painting".	y	1	<input checked="" type="checkbox"/>	
868		d Provide consistent information and graphical queues.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
869	3	Ability to display updates or changes (e.g., edit an entry) in "real-time".	y	1	<input checked="" type="checkbox"/>	
870	4	Navigation through display well-organized and easy to use.	y	1	<input checked="" type="checkbox"/>	
871	5	Standardized screen design.	y	1	<input checked="" type="checkbox"/>	
872	6	User is able to identify where the current display is in the whole record (e.g. site map).	y	1	<input checked="" type="checkbox"/>	
873	7	Patient information (e.g. name, medical record #) clearly displayed on each page specific to that individual's system.	y	3	<input checked="" type="checkbox"/>	Based on estimated hours, more detail specification required for actual cost. Actual cost could be less.
874	8	Support simultaneous User Views in the system.	y	1	<input checked="" type="checkbox"/>	
875		a Support tailored specialty views at enterprise level.	y	1	<input checked="" type="checkbox"/>	
876		b Support departmental specific user views.	y	1	<input checked="" type="checkbox"/>	
877		c Support different views for different users.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
878	9	Provide views of patient data based upon user needs (e.g.. Clinician, Pharmacist, Administrative, Medical Records):	y	1	<input checked="" type="checkbox"/>	
879	a	Clinician view.	y	1	<input checked="" type="checkbox"/>	
880	b	Therapist view.	y	1	<input checked="" type="checkbox"/>	
881	c	Pharmacist view.	y	1	<input checked="" type="checkbox"/>	
882	d	Administrator view.	y	1	<input checked="" type="checkbox"/>	
883	e	Quality Assurance view.	y	1	<input checked="" type="checkbox"/>	
884	f	Medical Records view.	y	1	<input checked="" type="checkbox"/>	
885	g	Parent Child Health view.	y	1	<input checked="" type="checkbox"/>	
886	h	Immunization view.	y	1	<input checked="" type="checkbox"/>	
887	i	Managed Care view.	y	1	<input checked="" type="checkbox"/>	
888	j	Dental view.	y	1	<input checked="" type="checkbox"/>	
889	10	Provide the ability to "flip through" the patient data in a manner similar to reviewing a paper chart.	y	1	<input checked="" type="checkbox"/>	

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Line #			Resp.	Cap.	Comp	Commen
890		11 Provide key data as defined by the user (e.g., problem list, allergies) on a single screen.	y	1	<input checked="" type="checkbox"/>	
891		12 Provide access to patient data with minimal menu selections, including sign-on.	y	1	<input checked="" type="checkbox"/>	
892		13 Provide graphical capabilities for viewing data trends.	y	1	<input checked="" type="checkbox"/>	
893		14 Provide screen print capabilities of any screen, including screens with graphical displays.	y	1	<input checked="" type="checkbox"/>	
894	1	Data Entry			<input checked="" type="checkbox"/>	
895		1 Allows point of care entry/display.	y	1	<input checked="" type="checkbox"/>	
896		a Utilize hand held devices (i.e., wireless) or a PC.	y	1	<input checked="" type="checkbox"/>	
897		b Easy to use entry device (e.g., keyboard, touch pad) at point of care.	y	1	<input checked="" type="checkbox"/>	
898		2 Engineered with human factors emphasis.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
899		a Easy data entry (e.g. uses drop-down lists) for all fields.	y	1	<input checked="" type="checkbox"/>	
900		b Input protocol is easy/fast; intuitive input interface.	y	1	<input checked="" type="checkbox"/>	
901		c Display is easy to read.	y	1	<input checked="" type="checkbox"/>	
902	3	Common data is entered once (e.g. patient name) and displayed without requiring redundant data entry.	y	1	<input checked="" type="checkbox"/>	
903	4	System prevents users from moving to the next field (minimum next screen) if error or omissions exists.	y	1	<input checked="" type="checkbox"/>	
904	5	Ensure dynamic documentation during encounter complying with all coding rules.	y	1	<input checked="" type="checkbox"/>	Note Builder
905	6	Critical fields have on-line Help (data dictionary name and codes) for easy reference and look-up.	y	3	<input checked="" type="checkbox"/>	
906	7	Provide dynamic redesign of workflow for efficiency.	y	1	<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
907	8	System supports efficient workflow for user (makes job easier rather than harder):	y	1	<input checked="" type="checkbox"/>	
908	a	Charting by exception as much as possible.	y	1	<input checked="" type="checkbox"/>	
909	b	Use Microsoft word processing functions (e.g. formatting, cut-n-paste, spell check, paragraph control, and bullets).	y	1	<input checked="" type="checkbox"/>	
910	c	Seamless integration with Microsoft Word for creation, editing, spell checking of notes using Microsoft templates.	y	1	<input checked="" type="checkbox"/>	
911	d	Point and click choices.	y	1	<input checked="" type="checkbox"/>	
912	e	Minimize required free text.	y	1	<input checked="" type="checkbox"/>	
913	f	Provide structured format and content.	y	1	<input checked="" type="checkbox"/>	
914	g	Provide predefined list of words/phrases for specified: subtopics; diagnosis; interventions; procedures; findings; etc.	y	1	<input checked="" type="checkbox"/>	

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Line #			Resp.	Cap.	Comp	Commen
915	h	Note format and template can be customized based on the type of note.	y	1	<input checked="" type="checkbox"/>	
916	i	Templates can be customized by specialty, location, problems, and provider.	y	1	<input checked="" type="checkbox"/>	
917	j	Verbiage such as "canned" phrases or data elements are available for note types and contents	y	1	<input checked="" type="checkbox"/>	
918	k	Multiple means provided for notes entry - e.g. keyboard, mouse, handheld portable device, voice and to edit notes	y	1	<input checked="" type="checkbox"/>	
919	l	Support downloads from a dictation/transcription system for inclusion of clinician's progress notes.	y	2	<input checked="" type="checkbox"/>	included in Dictaphone Interface
920	m	Supports downloads from voice recognition software as integral part of notes.	y	1	<input checked="" type="checkbox"/>	
921	n	Ability to link notes with problems by patient.	y	3	<input checked="" type="checkbox"/>	

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Line #			Resp.	Cap.	Comp	Commen	
922		o	Type of notes entry allowed can be configured based on role.	y	1	<input checked="" type="checkbox"/>	
923		p	Support unlimited number of user definable time period views of notes (e.g. today, current week, monthly).	y	1	<input checked="" type="checkbox"/>	
924	m	Screen Builder				<input checked="" type="checkbox"/>	
925		1	Provide online screen building utility enabling authorized users to place data elements (from data dictionary) onto screen.	n		<input checked="" type="checkbox"/>	BCA will not be able support such functions for screen and system modifications allowed by users. This would compromise the system's intergrity, security, and the ability to support systems.
926		2	Provide edit options for each data element (e.g., Mandatory, optional, default, etc)	n		<input checked="" type="checkbox"/>	see 925
927		3	Provide input format attributes for each data element (e.g., any text, alpha, numeric, dollar, etc)	n	0	<input checked="" type="checkbox"/>	see 925

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Line #			Resp.	Cap.	Comp	Commen
928	4	Allow department to compose functions by linking screens into fixed or variable sequences, based on edit and format rules.	n	0	<input checked="" type="checkbox"/>	see 925
929	5	Distinguish between test versus production libraries of screens and functions.	n	0	<input checked="" type="checkbox"/>	see 925
930	6	Allow the department to label fields on screens and reports consistently with department's terminology, without program code changes.	n	0	<input checked="" type="checkbox"/>	see 925
931	7	Provide graphic building capabilities including (e.g., line drawing, drag-and-drop, color formatting, etc)	n	0	<input checked="" type="checkbox"/>	see 925
932	8	System allows new data elements to be added dynamically.	n	0	<input checked="" type="checkbox"/>	see 925
933	n	Report Generator			<input checked="" type="checkbox"/>	

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Line #			Resp.	Cap.	Comp	Commen
934	1	Ability for authorized employee's without programming skills to generate reports related to any identifier in the system.	y	1	<input checked="" type="checkbox"/>	Included Crystal reporting
935	2	Report generator is integrated into the production side of the EMR for basic reports.	y	1	<input checked="" type="checkbox"/>	
936	o	Standard Reports			<input checked="" type="checkbox"/>	
937	1	System has standard reports which can be easily adapted by individuals without programming experience	y	1	<input checked="" type="checkbox"/>	
938	2	Provide standardized formatting on all reports, including:	y	1	<input checked="" type="checkbox"/>	
939	a	Standard report headings and formats.	y	1	<input checked="" type="checkbox"/>	
940	b	Report will include definition of a printed code.	y	1	<input checked="" type="checkbox"/>	
941	c	Ability to define routes to printers by report type/process.	y	1	<input checked="" type="checkbox"/>	crystal reporting

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
942	d	Ability to track distribution of reports on-line.	y	1	<input checked="" type="checkbox"/>	Crystal reporting cost included.
943	e	Ability to define number of reports to print.	y	1	<input checked="" type="checkbox"/>	
944	f	Ability to define only portions of a report to print.	y	1	<input checked="" type="checkbox"/>	Included Crystal reporting cost
945	g	Ability to define automatic report schedules if desired.	y	1	<input checked="" type="checkbox"/>	Included Crystal reporting
946	h	Ability to print (both scheduled and on-demand) or display (at user's option).	y	1	<input checked="" type="checkbox"/>	
947	i	Ability to be produced in either summary or detail format (at user's option).	y	1	<input checked="" type="checkbox"/>	
948	j	Ability to select a specified time period (e.g. by day, by week, by month, etc.).	y	1	<input checked="" type="checkbox"/>	
949	k	Clinic Activity and Encounter reports for each area.	y	1	<input checked="" type="checkbox"/>	
950	l	Demographic Reports.	y	1	<input checked="" type="checkbox"/>	
951	m	Productivity Reports.	y	1	<input checked="" type="checkbox"/>	

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Line #			Resp.	Cap.	Comp	Commen
952	n	Diagnostic / Prevalence Reports.	y	1	<input checked="" type="checkbox"/>	
953	o	Positivity Rates.	y	1	<input checked="" type="checkbox"/>	
954	p	Serology Reports.	y	1	<input checked="" type="checkbox"/>	
955	q	Medications administered.	y	1	<input checked="" type="checkbox"/>	
956	r	Billing Reports.	y	1	<input checked="" type="checkbox"/>	
957	s	Ability to generate an audit report showing usage of online verification of insurance eligibility	y	1	<input checked="" type="checkbox"/>	Included in Crystal Reporting
958	t	Ability to generate report of all purged "no show pre-registered clients" as new	y	1	<input checked="" type="checkbox"/>	Included Crystal Reporting
959	u	Ability to capture all pertinent data required to complete all federal, state, and other third party programs and reports.	y	1	<input checked="" type="checkbox"/>	Included Crystal Reporting

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
960	v	Generate and display or print, at user's option, user-defined period (daily or monthly) activity reports listing pre-registration or registration activity by location, care provider, service, by patients or other user-defined criteria. Include YTD totals	y	1	<input checked="" type="checkbox"/>	Included Crystal Reporting
961	w	Ability to generate report of lab results, which have not been reviewed by provider or their delegate	y	1	<input checked="" type="checkbox"/>	Included Crystal Reporting
962	x	Ability to generate report of all lab requisitions sent out by user defined date parameters by provider by testing laboratory.	y	1	<input checked="" type="checkbox"/>	Included Crystal reporting
963	y	Ability to generate report of all lab results received and entered into EMR by user-defined date parameters, provider, technician and/or testing laboratory	y	1	<input checked="" type="checkbox"/>	Included Crystal Reporting

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
964		z	y	1	<input checked="" type="checkbox"/>	Included in Crystal Reporting
		Ability to generate report of patients for whom lab requisitions have been submitted with multiple lab tests ordered, and results from all lab tests have not yet been reported.				
965		aa	y	3	<input checked="" type="checkbox"/>	
		Ability to generate report of all lab tests by laboratory technician.				
966	3	Provide standard reports that correspond to existing documents in the paper chart.	y	1	<input checked="" type="checkbox"/>	Included Crystal reporting
967		a	y	1	<input checked="" type="checkbox"/>	
		Allow department to customize any standard report.				
968	4	Database supports more complex customized report writing using industry-standard reporting tool (indicate tool utilized in comments - e.g., crystal reports, etc).	y	1	<input checked="" type="checkbox"/>	

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Line #			Resp.	Cap.	Comp	Commen
969	5	Ability to perform patient flow analysis throughout all logical sites of patient and clinical contact (eg. intake, pre-registration, registration/walk-in to appointment to registration to nurse's station, to room, entry of provider, completion interaction with provider, to check out).	y	1	<input checked="" type="checkbox"/>	
970	6	Ability to create custom templates compatible with MSWord populated by fields from Patient Identification Number, e.g. correspondence to patient.	y	1	<input checked="" type="checkbox"/>	
971	p	Pharmacy Tracking (Please indicate if you have functionality to support the following sequence of steps)			<input checked="" type="checkbox"/>	

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen
972	1	Medication is ordered in the medication ordering module, a tracking number (order number) is generated. A receiving log is generated in the pharmacy module indicating that a certain order number is "due".	y	2	<input checked="" type="checkbox"/>	Included Pharmacy Interface
973	2	Medication is transmitted electronically to pharmacy or pharmacy vendor via interface.	y	2	<input checked="" type="checkbox"/>	Included Pharmacy Interface
974	3	Pharmacy fills medication and puts the order number on the label in barcode format.	y	2	<input checked="" type="checkbox"/>	Included Pharmacy Interface
975	4	Facility receives medications from pharmacy and opens the receiving log function. A clerk scans all of the bar-codes to enter them into the system and to subtract them from the "medication due to the facility" list.	y	2	<input checked="" type="checkbox"/>	Included Pharmacy Interface

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Line #			Resp.	Cap.	Comp	Commen
976		5	y	2	<input checked="" type="checkbox"/>	Included Pharmacy Interface
		When each medication is scanned, the room number on the label is checked against the current room number in JMS. If there is a discrepancy, the room number of the prisoner pops up to indicate to the staff where the medication needs to be delivered.				
977	q	Nursing treatments (Please indicate if you have functionality to support the following sequence of steps)	y	2	<input checked="" type="checkbox"/>	Included Pharmacy Interface
978		1	y	2	<input checked="" type="checkbox"/>	Included Pharmacy Interface
		A medication needs to be delivered or administered.				
979		2	y	2	<input checked="" type="checkbox"/>	Included Pharmacy Interface
		A "reminder" or "tickler" type list is generated for that to take into consideration whether the medication is a Keep on Person medication (delivered once per 15 days) or a Direct Observe Medication (each dose administered individually).				

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Line #			Resp.	Cap.	Comp	Commen
980	3	Nurses or pharm techs would then distribute or administer the medication to the patient.	y	2	<input checked="" type="checkbox"/>	Included Pharmacy Interface
981	4	They would log into their remote device at the start of their shift.	y	2	<input checked="" type="checkbox"/>	Included Pharmacy Interface
982	5	Scan the prisoner's ID barcode or put in his number.	y	2	<input checked="" type="checkbox"/>	Included Pharmacy Interface
983	6	Scan the medication bar code.	y	2	<input checked="" type="checkbox"/>	Included Pharmacy Interface
984	7	The system records the date, nurse, time, and puts it into memory of the handheld device.	y	2	<input checked="" type="checkbox"/>	Included Pharmacy Interface
985	8	For treatments, the nurse would print out a treatment list or download it to the handheld. This would need to be sorted by room / building / etc	y	2	<input checked="" type="checkbox"/>	Included Pharmacy Interface
986	9	They would scan the prisoner's barcode or enter his number.	y	2	<input checked="" type="checkbox"/>	Included Pharmacy Interface

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Line #			Resp.	Cap.	Comp	Commen
987	10	They would then perform the procedure / treatment / etc and enter the results into the handled device. This would be for wound care, blood pressure checks, blood sugar checks, withdrawal assessments, neuro checks, and any other variety of nursing treatment	y	2	<input checked="" type="checkbox"/>	Included Pharmacy Interface
988	11	The nurses would also need to have entry codes for all medications and treatments to accommodate exceptions: patient refused, patient in court, pt released from jail, etc.	y	2	<input checked="" type="checkbox"/>	Included Pharmacy Interface
989	12	They would then come back and synchronize their handheld device with the main system.	y	2	<input checked="" type="checkbox"/>	Included Pharmacy Interface
990	13	The data populates the real-time Medication Administration Screen that we can access from the chart.	y	2	<input checked="" type="checkbox"/>	Included Pharmacy Interface

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Line #			Resp.	Cap.	Comp	Commen
991	r	Dictation Interface with Dictaphone Technologies or equivalent (Please indicate if you have functionality to support the following steps)	y	2	<input checked="" type="checkbox"/>	Dictaphone
992	1	Dictaphone's technology can be either in-house or ASP based.	y	2	<input checked="" type="checkbox"/>	Dictaphone
993	2	Develop a behind-the-scenes interface to Dictaphone servers at the database level.	y	2	<input checked="" type="checkbox"/>	Dictaphone
994	3	Patient is scheduled and their "note status" is shown on the physician desktop or downloaded to a handheld pocket PC.	y	2	<input checked="" type="checkbox"/>	Dictaphone
995	4	Physician sees patient, dictates note(s).	y	2	<input checked="" type="checkbox"/>	Dictaphone
996	5	If on a PC, status changes from "not dictated" to "dictated" and any user can look up that patient visit, note and listen to it.	y	2	<input checked="" type="checkbox"/>	Dictaphone

EXHIBIT B5-2

Line #			Resp.	Cap.	Comp	Commen	
997	6	Once note is edited, transcribed, and finalized, the text replaces the sound file in the chart.	y	2	<input checked="" type="checkbox"/>	Dictaphone	
998	7	If on Handheld, the handheld is synchronized and the status changes to "dictated" as above.	y	2	<input checked="" type="checkbox"/>	Dictaphone	
999	8	All editing, voice recognition, transcribing will be done on the Dictaphone system, electronic signing of notes will be in the EMR.	y	1	<input checked="" type="checkbox"/>		
1000		s				<input checked="" type="checkbox"/>	Staff Scheduling
1001	1	Scheduling module allows flexible scheduling based on provider, location, resources, room, length of visit, calendar days.	y	1	<input checked="" type="checkbox"/>		
1002	2	Scheduling module allows for easy re-scheduling of appointments.	y	1	<input checked="" type="checkbox"/>		
1003	3	Scheduling module allows various levels of staff to develop schedules (nurses, mental health professionals, etc).	y	1	<input checked="" type="checkbox"/>		

EXHIBIT B5-2

Line #				Resp.	Cap.	Comp	Commen
1004		4	Scheduling module allows for printing of schedule without clinical information.	y	1	<input checked="" type="checkbox"/>	
1005		5	Scheduling module allows printing of appointment letters in advance of the appointment individually or in a batch.	y	1	<input checked="" type="checkbox"/>	
1006	t		Chart Completion	y	1	<input checked="" type="checkbox"/>	
1007		1	System checks for incomplete charts vs. facility timelines to determine if orders have not been signed in time, if notes are missing, if results are missing	y	1	<input checked="" type="checkbox"/>	
1008	u		Standard Patient Billing			<input checked="" type="checkbox"/>	
1009	v		Bar-coding capabilities	y	1	<input checked="" type="checkbox"/>	
1010		1	Bar-coded charts with chart tracking.	y	1	<input checked="" type="checkbox"/>	previously priced
1011		2	Bar-coded encounter labels for specific visits and labs.	y	1	<input checked="" type="checkbox"/>	previously priced
1012		3	Bar-coded products for pharmacy, supplies.	y	2	<input checked="" type="checkbox"/>	Zebra Barcoding

EXHIBIT B5-2

Line #	Req. Cap. Comp	Commen
1013	33	INTERFACES AND COMPATIBLE PROGRAMS <input checked="" type="checkbox"/>
1014	a	Ability to, in real-time, interface with Sheriff's Office offender management system (JMS) as well as the Iris Scan Database (Iridian Technologies) to capture Initial Receiving data. y 1 <input checked="" type="checkbox"/> Offender Management System interface cost
1015	1	Ability to enter data directly into the system when JMS interface is unavailable. y 1 <input checked="" type="checkbox"/>
1016	2	Ability to automatically synchronize JMS and EHR systems when interface becomes available again. y 1 <input checked="" type="checkbox"/>
1017	a	When synchronization occurs, notify System Administrator, via priority e-mail, when data discrepancies occur. y 1 <input checked="" type="checkbox"/>
1018	b	Produce exception report of data fields in conflict. y 1 <input checked="" type="checkbox"/>

EXHIBIT B5-2

Line #				Resp.	Cap.	Comp	Commen
1019	b	Interfaces				<input checked="" type="checkbox"/>	
1020		1	Ability to generate CSV file to interface STD data to ADHS.	y	1	<input checked="" type="checkbox"/>	Crystal Reporting
1021		2	Ability to generate CSV file for variables required by AZ Family Planning Council grant	y	1	<input checked="" type="checkbox"/>	Crystal Reporting
1022		3	Ability to interface (bi-directional) to the Arizona State Immunization Information System.	y	3	<input checked="" type="checkbox"/>	Able to program this functionality, currently operating with Georgia Immunization System (Match program). Unable to cost without specifications.
1023		4	Ability to interface to GE Centricity RA600 Digital X-Ray System	y	3	<input checked="" type="checkbox"/>	Based on estimated hours, more detail specification required for actual cost. Actual cost could be less.
1024		5	Bi-directional (order and results) HL7 interface, so results will auto populate individual medical records as soon as each test is performed and results are entered	y	1	<input checked="" type="checkbox"/>	Lab Interface Cost

06113 EXHIBIT B-6
BCA®
SOFTWARE MAINTENANCE AGREEMENT

Between Business Computer Applications, Inc., a corporation organized and existing under the laws of the State of Tennessee, and having its principal office at 2002 Summit Blvd, Suite 880, Atlanta, Georgia 30319 (hereinafter "BCA") and Maricopa County (hereinafter "Customer"), a political subdivision of the State of Arizona

Customer: Maricopa County

Customer's Address: Maricopa County
Department of Materials Management
320 West Lincoln Street
Phoenix, Arizona

Contact Person: Steve Dahle, Procurement Officer

Phone: 602-506-3540

Designated Clinic\Facility: Maricopa County Jail Facilities

WITNESSETH

WHEREAS, BCA and Customer have contemporaneously herewith entered into the BCA License Agreement, the BCA Service Agreement, and the BCA Hardware Agreement; and

WHEREAS, Customer desires to have ongoing maintenance and support services and access to Updates in order to more fully utilize the Licensed Programs; and

WHEREAS, BCA is willing to provide ongoing software maintenance and support services to Customer under the terms and conditions of this Agreement.

NOW, THEREFORE, in consideration of the premises and in further consideration of the terms and conditions hereinafter set forth, the parties hereto, intending to be legally bound, agree as follows:

ARTICLE I

DEFINITIONS

- 1.1** "Agreement" means this BCA Maintenance and Support Agreement.
- 1.2** "Effective Date" means July1, 2007.
- 1.3** "Hardware Agreement" means the BCA Hardware Agreement executed contemporaneously herewith.
- 1.4** "License Agreement" means the BCA License Agreement executed contemporaneously herewith.
- 1.5** "Service Agreement" means the BCA Service Agreement executed contemporaneously herewith.

1.6 “**System Error**” means a condition whereby a Work Station Access Node which is provided and configured by BCA, fails to perform in accordance with the documentation accompanying said Licensed Program and fails to perform those functions set forth in the Function List (as set forth in Schedule 1.3 of the License Agreement).

1.6 “**Covered Error**” means a System Error as described in Paragraph 2.2 hereof,

1.7 “**Non-Covered Error**” means without limitation, any malfunction or error described in Paragraph 3.1 hereof for which maintenance and support are not provided for by the terms of this Agreement.

1.8 “**Other Definitions**” Unless otherwise defined in this Agreement the definitions set forth in the License Agreement will control the definition of any capitalized term herein.

ARTICLE II

SERVICES PROVIDED

2.1 **Obligation of Customer to Report Malfunction** Customer will immediately notify BCA in writing regarding suspected System Errors, and will provide a listing of output and such other data as is required by BCA in order for it to reproduce operating conditions as existed when the suspected System Error occurred. Notwithstanding the provisions of Section 9.4 below, such notice shall be by telephone followed by confirmation by facsimile transmission.

2.2 **Investigation, By BCA, of Suspected System Error** BCA will attempt to identify the source of the System Error, determine the cause thereof and document its findings. If any System Error is determined by BCA to have been caused by BCA’s programming, by incorrect instructions by BCA’s personnel, or by documentation provided by BCA, then BCA will correct the System Error as a “**Covered Error**” pursuant to this Article. In addition, in the event that a System Error is attributable to any work station provided by BCA, and if the work station is still under warranty, then BCA will use its best efforts to cause the manufacturer or distributor of the hardware to correct the malfunction.

2.3 **Cost of Covered Services** The cost of covered services is included in Article V; provided, however, that if the correction requires the physical presence of BCA’s technical staff at Customer’s facility, and if such facility is located outside of the Atlanta metropolitan area, then Customer will pay BCA’s reasonable expenses for travel, lodging, and meals in an amount not to exceed Customer’s standard travel reimbursement policy (plus a 10% administration fee), a copy of which will be provided to BCA prior to the services being rendered by BCA.

2.4 **Availability of Covered Services** Services for Covered Errors are available between the hours of 8:30 A.M. and 5:30 P.M., Eastern Time, Monday through Friday, excluding holidays.

2.5 **Scope of Services for Covered Errors** Services for Covered Errors are only provided for the License Programs and supporting documentation licensed by BCA pursuant to the License Agreement (includes all interfaces developed by BCA and how they work with other Maricopa County existing programs) and does not extend to any other products or services of any nature or from any other source that are not part of the interface BCA developed. Additionally, fees due under this Agreement, the License Agreement, the Service Agreement, and the Hardware Agreement must have been paid current before BCA will have any obligation or liability to perform any work hereunder.

ARTICLE III

EXCLUDED SERVICE

3.1 **System Errors Not Covered** If any System Error is determined, pursuant to Paragraph 2.2, to have been caused by the use of incorrect data, by the use of incorrect procedure by Customer’s personnel, by the use

of equipment other than that specified in Schedule 2.3 of the License Agreement (unless approved in writing by BCA in advance) or by any other cause not attributable to BCA, then investigative services under Paragraph 2.2 which exceed one (1) hour will be treated as maintenance and support for “**Non-Covered Errors**” and will be charged to the Customer at BCA’s hourly rates then in effect. Additionally, BCA will provide Customer with an estimate of the cost necessary to correct any such Non-Covered Error and Customer may elect to purchase from BCA services necessary to correct such Non-Covered Error.

ARTICLE IV

UPDATES

4.1 Updates During the term of this Agreement, Customer will have access to all Updates that are released, by BCA, on or after the Effective Date. The Update will be made available to Customer within ninety (90) days after its general release by BCA. Customer’s use of any Update provided by BCA to Customer will be governed by the terms of the License Agreement. Maintenance and support of any Update will be governed by the terms of this Agreement.

ARTICLE V

DISCLAIMER OF WARRANTIES

5.1 Updates BCA makes no representation or warranty with respect to Updates provided by BCA under this Agreement as to merchantability or fitness for any particular purpose of such Updates nor any other warranty, express or implied arising by law or otherwise as to such Updates, and all such Updates are delivered on an “AS-IS” basis except as stated in this Agreement.

5.2 Services **THE SERVICES RENDERED PURSUANT TO THE TERMS OF THIS AGREEMENT ARE RENDERED ON A BEST EFFORTS BASIS AND BCA DISCLAIMS ALL OTHER WARRANTIES, EXPRESS, IMPLIED, OR STATUTORY, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT WILL BCA BE LIABLE FOR INDIRECT, SPECIAL, OR CONSEQUENTIAL DAMAGES, SUCH AS, BUT NOT LIMITED TO, LOSS OF ANTICIPATED PROFITS OR BENEFITS RESULTING FROM THE USE OF THE SOFTWARE SYSTEM, OR ARISING OUT OF ANY BREACH OF THIS WARRANTY, OR ARISING OUT OF ANY OTHER ACTION, WHETHER BASED ON BREACH OF CONTRACT OR TORT.**

5.3 Limitation of Liability BCA will not be liable for failure or delay in providing any Update or service specified herein due to fire, riot, war, labor disputes, acts of God, or causes or conditions beyond its reasonable control. In no event will BCA’s liability to Customer exceed the amount paid by Customer to BCA hereunder.

06113 EXHIBIT B-7

Third Party Software and Hardware End User Agreement

This Agreement is made by and between Business Computer Applications, Inc. ("BCA"), having its principal place of business at 2002 Summit Blvd. Suite 880, Atlanta, GA 30319; and Maricopa County ("Customer"), a political subdivision of the State of Arizona

In consideration of the mutual undertakings herein contained, BCA and Customer agree as follows:

1. **Sales:** BCA agrees to sell and Customer agrees to purchase from BCA the Equipment and features as outline in Exhibit A.

Certain items listed in Exhibit A, whether software, professional services or otherwise, may be subject to other agreements and are listed in Exhibit B for invoicing purposes only.

2. **Sales Price:** The sales price of the Equipment is See Exhibit A. Customer shall pay to BCA as follows: Payment of ninety (90%) percent prior to delivery and the balance upon delivery of the computer hardware and program products listed above. Customer agrees that if it intends to enter into a Lease Agreement with a Third Party Leasing Organization (LESSOR) to finance the items above, then delivery of the items above will be made upon; Payment in full to BCA by (A) Customer, or (B) LESSOR.

3. **Delivery, Freight, Cost, and Risk of Loss:** BCA shall deliver and Customer shall accept delivery of the Equipment at Customer's premises on a date to be mutually agreed upon in writing. Customer shall bear the risk of damage and destruction from every cause once the Equipment has been delivered to and installed for Customer or Customer's agent. The Customer shall pay for all normal shipping, handling and transit insurance charges for the Equipment to the delivery location. Customer shall inspect the Equipment upon delivery, and Customer shall be responsible for notifying BCA of any defect or damage to the Equipment or of any claim arising hereunder within 30 days of the Installation of the Equipment components. Customer's failure to advise BCA of such defect, damage or claim within the specified time period will release BCA from any liability for damages thereof. If the Customer notifies the BCA of any defect during the manufacturers warranty period, BCA shall repair or replace said equipment at no cost to the Customer. BCA shall repair or replace said equipment in not more than 30 days, from the date of notification from the Customer.

4. **Installation:** BCA will provide installation services for equipment as delineated in the BCA Standard Service Agreement.

5. **Title and Security Interest:** Title to the Equipment shall vest in Customer upon delivery and payment in full of the purchase price and costs required to be paid pursuant to Paragraphs 2, 3, 4 and 7 hereof. Customer hereby grants to BCA and its successors and assigns a security interest in the Equipment and all proceeds thereof to secure the prompt payment by Customer when due of all amounts payable to BCA and other obligations of Customer contained in this Agreement. Upon BCA's request, Customer will execute a UCC statement as may be necessary to evidence LESSOR's or BCA's security interest.

6. **Extra Features:** If the Equipment on delivery contains any features not specified in this Agreement, BCA, at its own expense, may remove them. Removal shall be performed by the manufacturer (or another party reasonably acceptable to Customer), upon the request of BCA and at a time reasonably convenient to Customer.

7. **Taxes:** Customer will be responsible for and shall pay when due all taxes, fees, withholdings or other charges (including any interest and penalties), if any, imposed by reason of this sale.

8. **Option to Terminate:** BCA may terminate this Agreement, if: (1) Customer refuses or is unable to accept delivery of any item of Equipment by the date specified in Paragraph 3 hereof; (2) Customer becomes insolvent or the subject of proceedings under any law relating to bankruptcy or the relief of debtors; or (3) Customer fails to

perform any other provision of this Agreement. BCA's right to terminate shall be exercised by written notice to Customer. Customer shall have 30 days from the date of notice of termination by BCA to remedy any default. If such default is cured within the time period, then no event of default shall be deemed to have occurred. If Customer fails to cure such default then BCA shall be entitled to immediate possession of the Equipment, without liability for entering Customer's premises for such purpose, and to retain all moneys paid hereunder as an offset to BCA's damages. The right of BCA to terminate this Agreement and recover the Equipment shall not be the exclusive remedies available to it and is in addition to any other rights and remedies provided by law or this Agreement, including but not limited to the right to recover damages from Customer.

9. Force Majeure: If BCA is unable to deliver the Equipment because of an act of God or other cause beyond the control of BCA, BCA shall not be liable for such failure during the period of and to the extent of the disability. If the disability prevents or interferes with the shipment of the Equipment by the carrier which BCA would ordinarily have used, shipment shall not be made by a more costly carrier unless Customer advises BCA that it will assume the additional costs.

10. Software: The Equipment listed herein may include third party software ("Software") in which BCA has no ownership or other proprietary rights and no such title shall be transferred to Customer hereunder, Customer agrees to enter into the License Agreement or other agreement for the use of the Software, and Customer agrees that, as between Customer and BCA, BCA shall be a third party beneficiary under such License Agreement or other agreement, and as such shall be entitled to the benefits thereof, including but not limited to limitation of liability. Any Software agreement shall be separate and distinct from this Agreement, and BCA and its assigns shall not have any rights or obligations thereunder or with respect to such Software. Customer represents that the Application Software described above and any Third Party Equipment, is marketed to Customer under a program requiring that the Software will be put into productive use, and is the primary justification for the purchase of the Equipment or Software. Customer understands that failure to certify the productive use of this Software to Third Party if requested, shall be cause for Customer to reimburse BCA for any damages, cost or expenses arising as a result of Customer's failure to use the Equipment or Software in accordance with the above representation. Customer agrees that the Software is indeed to be put in productive use and is the primary justification for the purchase of the Equipment.

11. Maintenance, Warranties and Disclaimers: BCA warrants that it will be the owner of the Equipment when it is delivered, free and clear of any liens and encumbrances, with the full right to sell the Equipment to Customer. BCA further warrants that the Equipment and the Third Party Software will be eligible for the manufacturer's standard maintenance agreement, providing Customer contracts for such maintenance from the manufacturer prior to installation of the Equipment and the Third Party Software. Customer, recognizing that BCA is not the manufacturer of the Equipment or the Third Party Software, expressly waives any claim against BCA based upon any infringement or alleged infringement of any patent, copyright or trademark with respect to the

Equipment and the Third Party Software. BCA MAKES NO ADDITIONAL WARRANTIES HEREUNDER WITH REGARD TO THE SOFTWARE AND PROFESSIONAL SERVICES OTHER THAN AS STATED IN THE LICENSE AGREEMENT, A COPY OF WHICH IS ATTACHED HERETO AS EXHIBIT "B". THE FOREGOING REPRESENTATIONS AND WARRANTIES ARE EXPRESSLY IN LIEU OF ANY OTHER EXPRESS OR IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND OF ANY OTHER OBLIGATION ON THE PART OF THE BCA. THE CUSTOMER ACKNOWLEDGES THAT IT HAS MADE THE SELECTION OF SAID EQUIPMENT BASED UPON THE RECOMMENDATION OF THE BCA. CUSTOMER AGREES THAT BCA WILL IN NO EVENT BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND WHATSOEVER, EXCEPT FOR DAMAGES TO EQUIPMENT DURING THE INSTALLATION OF SAID EQUIPMENT BY THE BCA.

12. License: The Third Party Lease Agreement (s) sets forth the terms and conditions under which Customer may utilize the Third Party Software. BCA shall have no obligations thereunder, but shall be entitled to all of the protections and benefits set forth therein, including but not limited to limitation of liability and responsibility. Unless such Agreement provides to the contrary, payment, of any license fees required thereunder shall be made on or before the date for payment required in Exhibit B, the Third Party Term Lease Agreement.

13. Assignment: Customer agrees to remit payment of all amounts due hereunder directly to BCA at the BCA's address. BCA shall be entitled to the protection and benefits of this Agreement, including but not limited to limitation of liability.

**06113 EXHIBIT B-8
BCA®**

**APPLICATION SERVICE PROVIDER
HYBRID DATA CENTER SUPPORT SERVICES AGREEMENT**

Customer: Maricopa County

Customer's Address: Materials Management Department
320 Lincoln Street
Phoenix, AZ 85003-2494

Contact Person: Steve Dahle, Procurement Officer

Phone: 602-506-3540

Designated Clinic\Facility: All Maricopa County Jail Facilities

WITNESSETH

WHEREAS, BCA and Customer have contemporaneously herewith entered into the BCA License Agreement, the BCA Service Agreement, the BCA Maintenance Agreement, and the BCA Third Party Software and Hardware End User Agreement; and

WHEREAS, Customer desires to have ongoing access to those applications licensed by Customer from BCA pursuant to the License Agreement and to provide various services related to such hosting; and

WHEREAS, BCA is willing to provide such services pursuant to the terms and conditions of this Agreement.

NOW, THEREFORE, in consideration of the premises and in further consideration of the terms and conditions hereinafter set forth, the parties hereto, intending to be legally bound, agree as follows:

ARTICLE I

DEFINITIONS

1.1 “**Agreement**” means this Hybrid Application Service Provider Data Center Support Services Agreement.

1.2 “**Data Center**” means Customer’s electronic data center where the applications licensed by Customer pursuant to the License Agreement are hosted and utilized by Customer. The current address of the Data Center is 301 West Jefferson Street, Phoenix AZ. 85003.

1.3 “**Effective Date**” means July 25, 2007.

1.4 “**Software Agreement**” means the Third Party Software and End User Agreement executed contemporaneously herewith.

1.5 “**License Agreement**” means the BCA License Agreement executed contemporaneously herewith.

1.6 “**Maintenance Agreement**” means the BCA Maintenance Agreement executed contemporaneously herewith.

- 1.7 “**Service Agreement**” means the BCA Service Agreement executed contemporaneously herewith.
- 1.8 “**Telecom Equipment**” shall have the meaning set forth in Section 2.1 below
- 1.9 “**Telecom Services**” shall have the meaning set forth in Section 2.1 below.
- 1.10 “**Other Definitions**” Unless otherwise defined in this Agreement the definitions set forth in the License Agreement will control the definition of any capitalized term herein.

ARTICLE II

SERVICES PROVIDED

2.1 Telecommunication Equipment and Services. Customer shall cause to be obtained and installed in the Designated Clinic/Facility and in any Additional Sites: (A) the telecommunications equipment set forth on Exhibit A, (the “**Telecom Equipment**”) and (B) those telecommunication services set forth on Exhibit B, (the “**Telecom Services**”). The purpose of the Telecom Equipment and the Telecom Services is to allow Customer communications connectivity to the Data Center and to permit BCA to support Customer’s use of the Data Center in a hybrid application service provider environment. Customer agrees to execute any and all documents required by the provider of Telecom Services, it being understood that BCA is not in the telecommunications business, but is only arranging for such telecommunications services through third parties on Customer’s behalf.

2.2 Data Center Services During the Term, BCA or Customer shall provide the following services, except as otherwise noted:

2.2.1 Provision of Data Center Customer will provide the central server at the Data Center necessary to support Customer’s current and expected future transaction volume. Customer may move the location of the Data Center as necessary or appropriate for efficient operations, so long as Bca access to the Server and Licensed Software is maintained.

2.2.2 Hybrid Data Center Operations

(a) **BCA Database Administration:**

BCA will install and maintain all Oracle Database related software, including DBMS, management tools, upgrades, and patches as appropriate. In addition, BCA will maintain the Pearl database schemas and structures and related database components, including regular updates to third-party data and codes (i.e. First Databank); table spaces, schemas and extents, and all other database structures and modalities.

The BCA Oracle Database Administrator’s (DBA) task are outlined as follows:

Oracle Database instance environment management and management of SGA regions. Also, Oracle table and index management, Creating the OFA file structures (\$DBA, bdump, udump, and pfiles), managing background processes as well as interfaces with server and disk I/O subsystems, setting up and managing Oracle control files, file locations for control files, creating and altering Undo segments, installing and managing flashback technology, as well as database archiving and recovery.

The DBA’s tasks also include Database security, which includes the following: Grant security/role-based security, grant execute, Creating New Database Users, Auditing User activity, Identifying System and Object Privileges, Granting and Revoking Privileges, Creating and Modifying Roles, Extracting and Displaying user security Information from the Data Dictionary in addition to creating secure connections to the database through creating the listener.ora and the tnsnames.ora files. Additionally, defining tablespaces, altering database datafiles, creating, managing DBA views and Database backup and recovery using OS-level backups when others fail, hardware-level backup & recovery, block-level change tracking, disk mirroring, Oracle-level backups including expdp & RMAN. .

Finally, the DBA will be responsible for ensuring that the Database is performing optimally, by creating a variety of function-based Indexes, finding indexing opportunities, maintaining indexes, and troubleshooting network connectivity as it relates to verifying network connectivity with ping and tnsping tools, as well as testing database links.

The DBA will manage the recurrence and timing for all of the above tasks by understanding the relationship between Pearl database datafiles, tablespaces and Oracle segments and by monitoring performance and altering parameters, which impact the overall system performance.

(b) **System Administrator Functions** (core elements the AIX Operating System) are as follows:

Oversee system storage by control the grouping and subdivision of disk space, control the location of data and programs for optimum performance, control the amount of space allocated for different purposes. Control resources including all applications programs by managing and controlling the use of sensitive or costly programs, install and performance-tune major applications, protecting application data and access to sensitive data and ensuring that appropriate backup measures are taken. Manage system process performance and memory resources and their performance by ensuring that resources are used in accordance with the organization's priorities, controlling access to the system by individuals and groups, and tuning the operating system for optimal use of the available resources. Assist in the configuring the server's network performance on local area networks (LAN) by ensuring that networks are tuned for optimum performance and managing the server's network addressing mechanisms. The LAN management responsibilities may also extend to connections to other networks, which will require the System Administrator to ensure that bridges and gateways to other networks are properly configured and properly managing to ensure that the interaction with remote networks does not degrade local systems. Thereby, controlling access to and from remote systems by controlling the access permissions in both directions including monitor and performance-tune the workload imposed by remote connections. Finally, the System Administrator is responsible for access to remotely owned data and therefore must control the methods and availability of access to such data.

(c) The Data Center operations shall have scheduled operational time of twenty-four (24) hours per day, seven (7) days per week, except for (i) scheduled maintenance downtime between the hours of _____.m. and _____.m. on _____, and (ii) unscheduled downtime which shall not exceed two percent (2%) of total scheduled operational time. Any inability of Customer to access the Data Center due to errors of Customer's personnel, failure of Telecom Services outside of BCA's control, failure of electrical utility services at any location other than the Data Center, any failure of the Internet, or any event of force majeure shall not be considered downtime, and shall not be the responsibility of BCA.

(d) Customer shall be responsible for providing first-tier technical support by direct telephone contact with BCA. Customer will be responsible for routing all issues relating to Data Center connectivity to Customer's internal support personnel. In the event that Customer's internal support personnel are unable to resolve the problem, then such internal support personnel will be responsible for contacting the BCA customer support by direct telephone, e-mail or other provisions as agreed in the Contract. BCA will provide Data Center customer support from 8:30 a.m. to 5:30 p.m. Arizona Time with technicians available by beeper at all other hours. BCA's first-tier technicians will handle calls in the order the calls arrive. The severity of the problem will then dictate the level of support required and the amount of time required for resolution. It is understood that the technical support provided for in this Section 2.2.2(b) is limited solely to issues involving access to and operation of the Data Center. Any issues involving the functionality of the software are covered by and subject to the terms of the Maintenance Agreement.

2.2.3 Contingency Plans and Archival Services

(a) Customer will be responsible for providing secure facilities for it's Data Center and contingency plans in effect. Such contingency plans includeinga backup database server for the Data Center in the event that circumstances prevent the Data Center's primary database server from functioning.

(b) BCA shall maintain in a location separate from the Data Center, copies of Licensed Software being used by the Customer that have been transmitted by Customer to BCA. Customer will be responsible for conducting full backup and restoration testing. Customer understands and agrees that the primary backup of data on Customer's local servers, including images, is the sole responsibility of Customer.

(c) In addition to the full backup provided in Section 2.2.3(b), Customer shall be responsible for making backups of Customer's data as required by Customer. In the event that Customer requests that BCA assist to restore any such data due to loss by Customer, BCA shall use its best efforts to help restore such data as promptly as possible and Customer shall pay to BCA, BCA's then current charges for such restoration, in addition to the fees payable under Article V below.

ARTICLE III

EXCLUDED SERVICE

All services not included in this Agreement are specifically excluded.

ARTICLE IV

COSTS AND FEES

4.1 Data Center Access Charges

(a) During the initial Term, Customer shall pay the charges for access to the Data Center and the services which are provided pursuant to this Agreement in Exhibit A.

ARTICLE V

DISCLAIMER OF WARRANTIES

5.1 Telecom Equipment and Telecom Services pursuant to Section 2.1 Customer acknowledges that BCA is neither the manufacturer nor the distributor of the Telecom Equipment, nor the provider of the Telecom Services. BCA's only responsibility under this Agreement or otherwise with regard to any malfunctioning Telecom Equipment or failure of the Telecom Services is to call upon the manufacturer, distributor or provider (as applicable) to honor any applicable warranties or service contracts (as to Telecom Equipment) or to restore service as promptly as possible (as to Telecom Services). **BCA MAKES NO WARRANTIES ON EITHER THE TELECOM EQUIPMENT OR THE TELECOM SERVICES.**

5.2 Services The services rendered pursuant to Section 2.2 of this Agreement shall be rendered in accordance with the specifications set forth in said Section. BCA is not responsible for the accuracy or completeness of any of Customer's data. **BCA DISCLAIMS ALL OTHER WARRANTIES, EXPRESS, IMPLIED, OR STATUTORY, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.** in no event will BCA be liable for indirect, special, or consequential damages, such as, but not limited to, loss of anticipated benefits resulting from the use of the Data Center, or arising out of any breach of the warranty, or arising out of any other action, whether based on breach of contract or tort. Customer's sole remedy shall be to terminate this Agreement pursuant to Section 5.3 above and be excused from paying any further sums that would have been due pursuant to this Agreement.

5.3 Force Majeure BCA will not be liable for failure or delay in providing or arranging for any Telecom Equipment, Telecom Services or Data Center services due to fire, riot, war, labor disputes, acts of God, terrorism, failure of the Internet, failure of telecommunications systems, storms or causes or conditions beyond its reasonable control which render both the Data Center and the backup data base server unavailable or unusable by Customer. In no event will BCA's liability to Customer exceed the amount paid by Customer to BCA hereunder.

ARTICLE VI

MISCELLANEOUS

6.1 Headings The Article and Section headings contained in this Agreement are for reference purposes only and will not affect in any way the meaning or interpretation of this Agreement.

6.2 Related Agreements This Agreement shall be of no force or effect, and BCA shall have no obligation hereunder, unless Customer executes, contemporaneously herewith, the following related agreements:

- Exhibit A Pricing Agreement
- Exhibit B-3. License Agreement;
- Exhibit B-4 Service Level Agreement;
- Exhibit B-7 Third Party Software Maintenance Agreement

Maricopa County Policies and Procedures	Subject: Policy for Contractor Travel and Per Diem	Number: MM0027 Issue Date: 03/15/07
Approved: Wes Baysinger	Initiating Department: Materials Management	

EXHIBIT C
06113

I. Purpose

This policy is established in order to maintain a uniform definition of allowable and allocable costs acceptable to Maricopa County / Special Districts (hereinafter "the County"). It is recognized that there will be times when it is necessary for contractors to travel to the County in order to perform services under a contract. Use of this policy should insure the County does not become liable for unwarranted or excessive travel expense invoices from contractors.

Policy

- A. All contract-related travel shall be prior-approved by the County.
- B. Travel, lodging, and per diem expenses incurred in performance of County contracts shall be reimbursed based on current U.S. General Services Administration (GSA) domestic per diem rates for Phoenix, Arizona. Contractors must access the following internet site to determine rates:

http://www.gsa.gov/Portal/gsa/ep/contentView.do?contentId=17943&contentType=GSA_BASIC
- C. Commercial air travel shall be scheduled at the lowest available and/or most direct flight airfare rate at the time of any approved contract-related travel. A fare other than the lowest rate may be used only when seats are not available at the lowest fare or air travel at a higher rate will result in an overall cost savings to the County. Business class airfare is allowed only when there is no lower fare available to meet County needs.
- D. Rental vehicles may only be used if such use would result in an overall reduction in the total cost of the trip, not for the personal convenience of the traveler.
 - 1. Purchase of comprehensive and collision liability insurance shall be at the expense of the contractor. The County will not reimburse the contractor if the contractor chooses to purchase these coverages.
 - 2. Rental vehicles are restricted to sub-compact, compact, or mid-size sedans unless a larger vehicle is necessary for cost efficiency due to the number of travelers. (NOTE: contractors

shall obtain written approval from the County prior to rental of a larger vehicle.)

3. The County will reimburse the contractor for parking expenses if free, public parking is not available within a reasonable distance of the place of County business.
 4. The County will reimburse for the lowest rate, long-term uncovered (e.g. covered or enclosed parking will not be reimbursed) airport parking only if it is less expensive than shuttle service to and from the airport.
- E. The contractor is responsible for any other miscellaneous personal expenses, as they are included in the contractor's lodging and per diem expenses.
- F. The County will reimburse any allowable and allocable business expense, excluding health club fees and business class air fares, except as indicated in paragraph "C" above.
- G. Travel and per diem expenses shall be capped at 15% of project price unless otherwise specified in individual contracts.

EXHIBIT D

Application Description

Pearl[®]

Electronic Medical Record System

Pearl's leading-edge medical software application integrates a comprehensive, computerized medical record with a robust financial management system for physician group practices, hospitals, and other healthcare organizations.

Designed for a client-server computing environment, Pearl can operate as a stand-alone system. Alternatively, it can operate within a healthcare alliance as a primary database, or as a feeder system to an enterprise data repository. Pearl's patient-oriented medical record gives physicians, nurses, healthcare providers, and other authorized personnel the ability to better organize and use a patient's medical information, including the documentation and analysis of outcomes.

Pearl's electronic medical record was created to be truly longitudinal – that is, a life-long patient record -- and was designed for universal use (i.e., by any of a patient's healthcare providers) through online access. Our philosophy is "One Patient, One Record;" our mission is to provide a medical record that can be used internationally, and which includes all medical information for the patient. Multiple system users can easily access a record simultaneously and in real-time. This design accommodates complex consultations and provides all users with a patient's entire medical history. Pearl thus facilitates the healthcare industry's prevailing need for connectivity and standardization.

PEARL'S KEY DIFFERENTIATING CHARACTERISTICS

Normalized Database

One of Pearl's key competitive advantages is the Oracle[™]-based *Centralized Information Repository* (CIR), a section of Pearl's Electronic Online Medical Record. Many electronic medical record systems collect patient information -- but most fail to gather it in a manner conducive to clinical analyses. The Pearl database was designed specifically to facilitate better analysis of clinical information. Pearl uses a unique indexing strategy that stores and maintains patient data from multiple facilities for an indefinite period of time, which is necessary to perform clinical analyses such as epidemiology studies and drug efficacy. Pearl's indexing strategy creates logical databases within a database to make available all the data (current and historic) on a particular patient or population of patients. Virtually any parameter in the database may be selected, alone or in combination with any others, and analyzed with respect to virtually any other parameter or combination of parameters.

For example, patient databases can be examined by demographic criteria, diagnoses, treatments, name of physician, insurer, frequency of use, lifetime appointment cancellation pattern, etc. Treatment options can be compared by outcomes, costs, side effects, patient demographics, physician utilization, and so on.

Pearl's Key Differentiating Characteristics

Advantages and attributes of the CIR are as follows:

- Clinical and patient data are totally integrated
- The patient record is longitudinal (lifelong)
- Information input and workflow are based on customized business rules
- Data is stored centrally
- Complete statistical information is available from complex multi-variable analyses
- All authorized users in multiple facilities access a complete medical record/history
- Extensive patient demographic information can be captured
- Patient Lookup can search by last name, first name, social security number, registration number, or MRN

The Pearl database has been designed so that authorized users can access the Pearl computerized patient record, no matter where that record resides. Patient files are stored in multiple locations on the network, allowing real-time access by critical care specialists and other time-sensitive healthcare givers. This comprehensive design allows critical patient record data and files to be immediately available to *simultaneous users*. Additional related features include:

- Full multi-level security (e.g., by Facility, Department, Section, Document, User, and User Type)
- Customer-driven reporting
- Ad hoc reporting
- Audits for Quality Assurance and Utilization Review
- Central informational control point
- Facilitates system Evaluation & Management
- Pearl electronic mail (secured)
- Secure Internet access to the patient record
- Supported emerging technologies include bar coded electronic forms, and hand held devices, such as Personal Digital Assistants (PDA's)
- Intelligent distribution of "Know How" documents
- Centralized "Fax Gateway" with logs which enables convenient faxing of patient records, patient forms, and patient prescriptions. Requires third party software and hardware.
- User-designed data-gathering forms are bar-coded for later scan recognition and automated attachment to the proper record
- MRN (Medical Record Number) customization
 - Allows user input and numbering scheme preferences
 - Creates numbering automatically or manually (based on facility preference)

Pearl's medical record offers free text entry fields that can easily be customized to

Pearl's Key Differentiating Characteristics

accommodate client-specific identifying information. Pearl includes a "wild card search" on all lookup fields; a user may enter as few as one or two letters of a name to promote investigation and preclude multiple patient records due to misspellings.

Intelligent Document Imaging

About 85% of the documents in a patient's chart are generated outside of a physician's office -- so the Pearl system features industrial quality document imaging, designed "from the ground up" to fit into a medical environment. Although Pearl users are not required to implement document imaging, it is the *only way* to achieve a paperless medical record in the near term. Pearl's Intelligent Document Imaging technology enables the system to capture and store information from many sources, including:

- Nurse's notes
- Patient history and physical
- Family/medical history
- Demographics
- Immunizations
- Progress notes
- Vital signs (may be displayed graphically)
- Time and date stamp of patient flow
- Disease flow sheets
- Growth flow sheets
- Lab flow sheets
- Photographs and images (including DICOM capability): x-rays, ultrasound, CT, MRI and EKG's

The benefits of Pearl's imaging and forms management include:

- Enhanced paper work flow and chart organization
- Controlled confidentiality and information access
- Fast and accurate record retrieval from anywhere on/off campus
- Tools for completing charts (including search for unsigned documents)
- Forms printing module eliminates need for preprinted forms
- Remote access facilitates early completion of physician attestation statements
- In-house generated forms are automatically indexed using barcode recognition
- Outside correspondence and miscellaneous forms are easily indexed into the patient record
- Backfile conversion allows legacy records to be scanned into Pearl
- Facility-specific forms are intelligently recognized and automatically processed
- Unsigned documents are noted for further attention
- Workflow can be custom-automated based on document type

Pearl's Key Differentiating Characteristics

- Charts may be printed, on demand, on laser-generated forms
- Forms data (when printed, etc.) may be statistically monitored

Pearl's scanning capability enables very simple input and storage of handwritten notes.

Intuitive Interaction

The Pearl system contains many qualities to assist in "user-friendliness." With the familiar Windows Graphical User Interface (GUI) screen layout, flat menu structure, and the use of mouse, or keyboard - manipulation of Pearl is simple, fast and easy.

Each provider can customize the way progress notes and physical findings are detailed in the chart -- in order to best reflect a physician's individual style. When a physician logs into the system, that physician's most frequently occurring diagnoses, problems, and medications are listed atop the choice lists. These factors, combined with the customizable Chart Lookup and Clinical Summary reporting features, help make the Pearl system one of the most intuitively appealing applications on the market.

Flexible Data Collection

The Pearl system features a full array of data collection technologies, all designed to make data automation and manipulation as effortless and intuitive as possible:

- Uni-directional and bi-directional interfaces exchange data with...
 - Laboratory systems
 - Radiology systems
 - Hospital systems
 - Pharmacy systems
 - Financials systems
- Point-and-click selection from menus or tables
- Keyboard
- Templates
- Scanning
- Portable wireless devices (Palm)

Pearl can be customized to suit the needs of the organization, facility, division, department, and the individual physician or user. Customizable templates can reflect the data that the client finds most relevant in the best possible format.

Third Party Billing and Patient Billing

CMS provides for Electronic Submission and Remittances based on carriers requirements. Also produced are Patient Statements, Company Statements,

Pearl's Key Differentiating Characteristics

Company Claims for capitated patients, HCFA-1500 Forms, UB92 Forms, Dental Forms, and any additional state forms needed. All of the above may be produced on demand for individual patient or company. Some features are:

- Electronic Submissions
- Electronic Remittances
- Multiple Pricing
- Automatic Sliding Fees
- Automatic Contractual Write-Ups and Downs
- Strict Controls
- Patient Itemized Statements or Patient Receipts
- Un-filed Charge Report
- Additional Requirements Report
- Unpaid Claims Report
- Automatic secondary claim filing based on remittance entry.
- Automatic Re-bill function by user defined date range.
- Patient and Company Statements may be printed by cycles.
- Statement Flag in patient's registration
- Statement Flag in Financial Class File
- User defined statement messages
- User defined collection letters
- Payment plan set-up
- Late payment report

Accounts Receivable

The Accounts Receivable System is designed to provide a method of improving cash flow, expediting collections, controlling write-offs and delinquent accounts, as well as monitoring patient's accounts and credit exceptions. The system is built around financial classes; therefore a patient will only have one account with multiple financial classifications. This eliminates the need to create a new account each time the financial classification changes for the patient. The system offers accounts receivable aging in both detail and summary modes. Also available are collection letters, mailing labels, and index card printing. A variety of management reports are produced through a comprehensive selection process allowing a set of flexible tools for controlling exceptional accounts. On-line displays of the patient accounts further enhance the system.

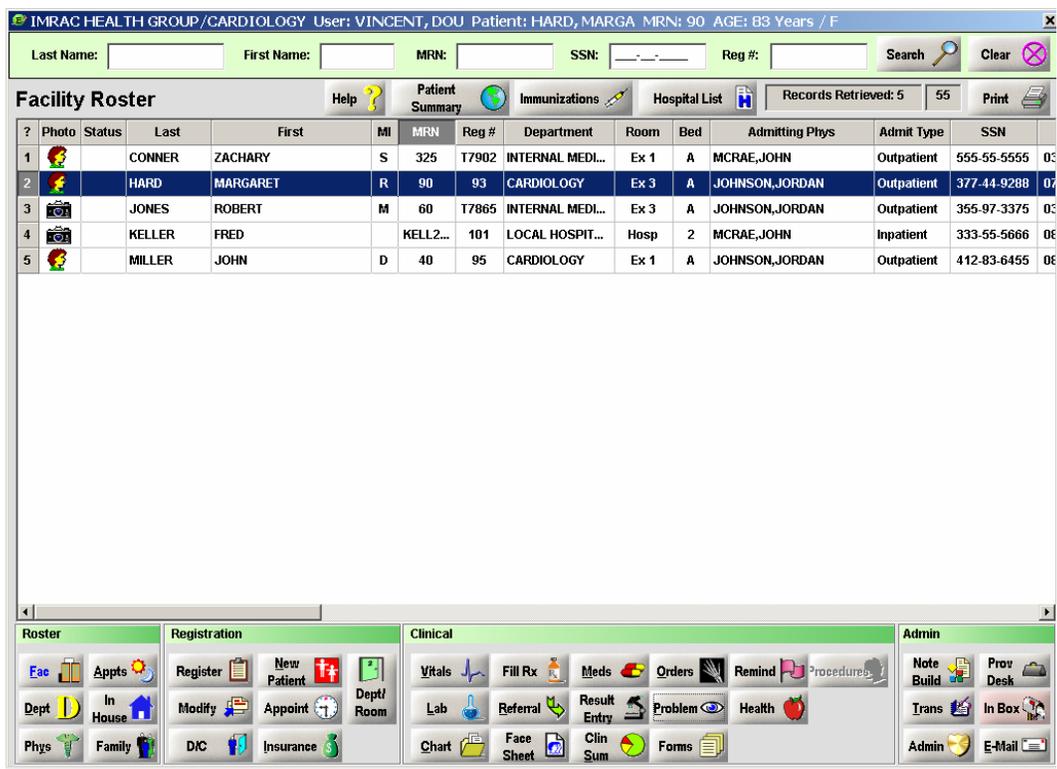
Some features are:

- Single Account Per Patient
- Open Item Processing
- Multiple Inquiry Methods
- User Defined Aging
- Collections Management
- Management Reports
- Refund Checks

Pearl's Supporting Functionality

A. Roster/Chart Lookup

Pearl's main screen is the Roster screen shown below. It shows the patients that are currently admitted to the facility, department, physician, etc, depending on the roster option chosen. Alternatively, it can be used to search for a particular patient. From this screen, the user can register/discharge the patient, book an appointment, assign the patient to a room, and update insurance information. Additionally, from this screen, the user can go directly to any of the clinical modules – Patient Summary, Immunization History, Chart, Meds, Labs, Lab Result Entry, Problems, Health Maintenance evaluation, Dialysis, Vital signs, etc. The user can also go directly to his/her mailbox to check his/her emails or to send an email.



If the user presses the Chart button, the chart view is displayed, shown below. It is displayed in tree format. Each branch can be easily expanded or collapsed. Any document in the chart can be easily viewed and signed.

Pearl's Supporting Functionality

Chart lookup for patient: SOBEL, RICHARD A MRN: 644 AGE: 65 SEX: M

Admission/Registration Start: 01/07/2004 End: 02/07/2004

LABORATORY DIRECTOR
URINALYSIS-MICRO

MRN : 71665 Age : 60
 Years
 Patient Name: SOBEL, RICHARD A Sex
 : Male
 Home Phone : (615)370-0858
 Work Phone :
 Physician : CLAUDE H WORKMAN M.D.
 Accession: 2824033
 Phone :
 Tech : CHRISTINE PATTON

Collection Date/Time: 05/21/99 09:27
 Result Date/Time : 05/21/99 09:27
 Report Date/Time : 05/21/99 09:28

Comment:

Test	Result	Abn	Normal Range	Units
BACT	VOIDED SPECIMEN	N	A	NEG
BLOOD		4+	A	NEG

Doc Desc: urinalysis report Srv/Scan Dt: 05/21/1999 - 05/21/1999 FacName: FileName: C:\temp\pr2900814.rtf DocTsn: 8514373

Pearl's Chart Lookup Module is a powerful tool for researching and reporting clinical data. Each provider can maintain customized chart sections to be incorporated in clinical summaries; the facility as a whole also can maintain chart sections and documents to go within each section, based on table-driven parameters.

- Authorized users can immediately review or print any section of the patient chart
- Images and documents (including faxes) can be e-mailed to other system users
- Chart sections can be viewed in single-screen or dual-screen format
- Authorized users can view...
 - Patient records
 - Laboratory results
 - Culture results
 - Medications
 - Allergies
 - Problem list
 - Procedures/diagnoses
 - Vital signs (which can be displayed graphically)
 - Referral information
 - Intake/output data, including ICU-style spreadsheets
 - Internet chart updates
 - Physician daily orders
- Customized summaries facilitate transfer of patient information

Pearl's Supporting Functionality

B. Clinical Summary

The most expensive resources in the healthcare environment are physicians and nurses. Pearl is designed to increase their efficiency, sometimes by as much as 50%, by relegating clerical work to lesser-paid staff and delivering timely, organized, meaningful information to the key providers. A conventional patient chart can take a caregiver up to thirty minutes to review in detail; Pearl's *Clinical Summary*, which includes trend analyses, can be reviewed in under two minutes. Instead of employees shuffling through accumulated stacks of paper "to be filed," the Pearl system's relational database and document imaging allows paperless workflow to all those who need access to the patient's chart.

The Clinical Summary Report is customized by the provider and/or facility to include any or all of the following chart sections, ranked in the desired order:

- Reminders
- Problem list
- Current medications
- Inactive medications
- Vital signs routine and graph (horizontal/vertical)
- Allergies
- Recent procedures/studies
- Major procedures
- Past admissions
- Lab results graph (horizontal/vertical)
- Insurance information
- Functional Status
- Documents and images
- Referrals
- Cultures
- Registration input/output
- Physical exam
- Dialysis Specific Info
- Health Maintenance
- Hemodialysis Summary
- Hospitalization Record

C. Pearl Registration Module

Pearl features a complete registration module that includes room status and occupancy information; physicians can admit their patients remotely from their offices. The module monitors the exact time and location of patients in full compliance with observation status and 23-hour admission patients.

Pearl's Supporting Functionality

The screenshot displays the Pearl software interface for patient information and admission details. The window title is "DIALYSIS ASSOC OF W. NA/IN-CENTER Patient: SOBEL, RICHARD MRN: 644 AGE: 65 / M". The interface is divided into two main sections: "Patient Information" and "Admission Information".

Patient Information:

- Name: SOBEL, RICHARD (Last, First, MI)
- Maiden Name: (Empty)
- Date of Birth: 07/12/1938
- Date of Death: (Empty)
- Marital Status: MARRIED
- SSN: 409-58-6441
- Race: WHITE
- Sex: MALE
- Address Street: 215 BOXWOOD
- City: FRANKLIN
- Country: USA
- State: TN
- Postal Code: 37069
- Phone: Home Phone 1, Number: (615)370-0858, Primary Phone checked
- Next of Kin: SOBEL, LOUISE (Last, First, MI)
- Employer: AMER. GEN. LIFE & ACCIDENT
- Employment Status: EMPLOYED FULL TIME
- Retirement Date: 07/01/2003
- Spouse Retirement Date: (Empty)
- Education Status: High School Diploma
- Place Of Worship: (Empty)
- Religion: OTHER
- Religious Leader: (Empty)
- Transport Mode: Patient walks
- Mothers Maiden: BOYLE
- National ID: US CITIZEN
- Language: ENGLISH
- Place of Birth: NASHVILLE, TN
- Release of Info.: Release
- Veteran Status: U.S. Citizen checked
- KOP Days: (Empty)
- Drivers Lic.: (Empty)
- State: TN
- Expires: (Empty)
- Pre-Admit Test, Teaching Case, Re-Admission, Privacy, Isolation, Airborne, Droplet, Contact (all unchecked)
- Transportation: (Empty)
- Emergency: ECKERD'S
- Hospital ID: (Empty)
- Email: Primary Email, Email Addr.: DICKSOBEL@AOL.COM

Admission Information:

- Admission Date: 11/01/2003 15:30
- Expected Discharge Date: (Empty)
- Actual: (Empty)
- MRN: 644
- Admission Type: RESUME DIALYSIS
- Admission Number: 1
- Patient Type: DIALYSIS PATIENT
- Encounter Type: ROUTINE DIALYSIS
- Admit Source: NEW DIALYSIS PATIENT
- Registration Number: 702
- Attending: HYMES, JEFFREY L.
- Admitting Physician: HYMES, JEFFREY L.
- Referred By: GRISCOM, M.D., JOHN
- Other Providers: (Empty)
- Provider List: HYMES, JEFFREY L., VANDEVENDER, F. KARL
- Patient Categories: ACUTE Dialysis, CAPD Dialysis, CAPD Dialysis
- Set Primary, View History (Buttons)
- Department: IN-CENTER
- Room: WAIT
- Bed: WR
- Misc Room Number: HOME / HR
- Accommodation: (Empty)
- Billing Info, Prompts (Buttons)
- Emergency Info / IMRAC Info, Notes (Buttons)
- Patient Protocol (Button)

At the bottom of the window, there is a navigation bar with buttons for: Complaint, Diagnoses, Func. Status, Insurance, Guarantor, Injuries, Face Sheet, Scan, Patient Pharmacy, Forms, Department, Previous, Cancel, and Finished.

Pearl can track a patient's admissions longitudinally by provider and frequency. During the patient's stay, provider and diagnosis/procedure can monitor costs at the patient level. At discharge, Pearl can print discharge instructions, as well as walkout billing statements.

- Records a patient's number of encounters and admissions per facility and department
- Records a facility's total number of encounters and admissions
- Records type of admission, admission date, and anticipated discharge date
- Tracks admitting department, patient type, functional status, encounter type and patient category assignment
- Tracks admit source, such as ambulance, clinic referral, emergency room, etc., with complete database capability
- Tracks attending, admitting, and referring physicians
- ICD9/CPT lookup for coding diagnoses and procedures
- Automatically assigns a unique registration number for each patient admission
- Allows user-defined required registration information to be assigned
- Allows the assigning of patient room type, room number and bed
- Contains alpha/numeric chief complaint field for each admission
- Access to problems/procedures (all, current admission, and past admission) from Registration screen

Pearl's Supporting Functionality

- Tracks registration billing information including courtesy discounts, dunning messages, direct billing to patient, patient insurance fee schedule acceptance, and SSI (Supplemental Security Income) status
- Maintains patient insurance coverage, including deductibles, co-pay and pre-certification rules
- Tracks guarantor information including payment method and credit card information
- Tracks emergency information including Internet Medical Record Access Card (BCA) and PIN
- Print or view a system-generated Face Sheet
- Maintains patient injuries with workers' compensation, claim and attorney information
- Electronic imaging of photographs, DICOM images (ultrasounds, etc.), dental images, x-ray images, identification cards, paper medical charts, etc.
- Allows pre-defined registration questionnaires to be assigned
- Automatically transmits an e-mail notifying the attending physician of a patient's admission to another Pearl facility
- Supports complete admission diagnosis functionality
- At discharge, client-specific discharge instructions and a clinical summary for the referral source can be printed

Chart location tracking, waiting lists, chart request slips, chart deficiencies, etc. are attributes of the paper chart. The Pearl system allows access to all patient information, simultaneously and in real-time, to any authorized user at any participating location.

D. Appointment Scheduling

Pearl allows the user to segregate clinical and non-clinical appointments for providers, equipment and rooms and organize them by:

- Facility
- Department
- Physician
- Type of appointment

Thus, a facility in one department at one location can enter appointments for a given patient at other locations. A comprehensive view of all appointments for the patient spanning all locations can also be viewed.

- A scheduler can view the appointment calendar of an individual physician or department; the calendar includes the following features:
 - Full day at a glance by physician or department in one screen
 - View includes physician specialty
 - Displays any overbooking
- Physician schedule templates enable a scheduler to easily create monthly master schedules

Pearl's Supporting Functionality

- Appointment templates can be individualized by physician indicating preferred types, times and restrictions
- Appointment segments can be adjusted individually to allow for extended physician schedules
- Unlimited number of users have access to a given schedule at the same time
- Automatically flags attempted overbooking
- Allows various time increments for any appointment type
- Assigns a return time based upon patient-preferred intervals
- Allows appointment reminders to be generated via the Patient Reminder Module
- Supports unlimited split screen capability so multiple providers can be scheduled at the same time
- Displays original operator that booked appointment, as well as operator that modifies appointment
- Stores patient preferences for day of the week, and morning or afternoon
- Allows advance scheduling for any future date
- Supports unlimited multiple resource scheduling whereby all associated resources (e.g., physician, anesthesiologist, surgery room, education room, attending nurse) are coordinated and scheduled when a procedure is scheduled
- Allows searching for available appointment times by the following criteria:
 - Next available appointment for a given physician and appointment type
 - Next available appointment within a user-defined number of days
 - Next available appointment for a specific date and/or time
- Allows scheduling of repeating appointments
- Allows overlapping appointments
- Allows multiple scheduling of appointment times
- Provides on-line inquiry to a daily schedule before an appointment is scheduled; appointment types for all scheduled appointments are displayed along with the schedule
- Appointments can be cancelled and re-scheduled from a physician's schedule without re-keying information
- Allows printing of day's expected appointments for physician or department by date range
- Works with Pearl's Insurance Authorization module to ensure that patient is scheduled with an authorized provider
- Features a "super user" concept to allow specified users to override provider's schedule regardless of appointment template setup

Pearl's Supporting Functionality

E. Order Entry and Results Reporting

IMRAC HEALTH GROUP/CARDIOLOGY User: VINCENT, DOU Patient: HARD, MARGA MRN: 90 AGE: 83 Years / F

Orders at IMRAC HEALTH GROUP for 09/08/2004 11:10

Search For: Order Code: CPT Code: Order Filter:

Standard Order Set for CARDIOLOGY

Visit / Exam	Laboratory	X-RAY
ANALYZE PACEMAKER SYSTEM/DUAL CHAMBER	CBC, INC PLATELETS AND DIFFERENTIAL	CARDIOVASCULAR NUCLEAR EXAM
CARDIOVASCULAR STRESS TEST	CHOLESTEROL	CHEST X-RAY, TWO VIEWS
CAROTID DUPLEX	DIGOXIN (LANOXIN)	DOPPLER COLOR FLOW
ECG MONITOR/REPORT, 24 HRS	ELECTROLYTE PANEL	DOPPLER ECHO EXAM, HEART, COMPLETE
ECHOCARDIOGRAM-EXERCISE	LIPID PANEL	ECHO EXAM OF HEART, COMPLETE
EKG (ELECTROCARDIOGRAM)	MAGNESIUM (MG)	FLUOROSCOPY PACEMAKER (PROFESSIONAL COMPO
HOLTER 24 HOUR	POTASSIUM, K (SERUM)	MYOCARDIAL IMAGING (PET)
OFFICE VISIT ECG COMP	TROPIC STIMULATION HORMONE TEST	

Ordering Phys: JOHNSON, JORDAN R DR
 Outside Client: CONDON, EDWARD M
 Patient Primary Category: PRE-TRANSPLANT

	Procedure	Qty	Date Time	Freq.	Provider	Facility
1	GLUCOSE, BLOOD SUGAR	1	09/16/2004 16:25		JOHNSON, JORDA...	IMRAC HEALTH GROUP
2	CHEST X-RAY (CXR), SINGLE VIEW	1	09/16/2004 16:25		JOHNSON, JORDA...	IMRAC HEALTH GROUP

Billing Detail for Selected Row
 CPT Code: 71010
 Modifier 1:
 Modifier 2:
 Modifier 3:
 Modifier 4:
 Condition:
 Discount %: 0
 More Detail

For Selected Orders: Label Request
 Order Detail: Multiple Dx Delete

Totals	Tax Amt.	Charge	Discount	Cost
	0.00	103.00	0.00	0.00

Copies of Requisitions: 1
 Finished Cancel

Pearl features a complete order-entry module. Users can access relevant modules (such as medications, order history, problems and supplies) directly from the order-entry screen. Order sets can be entered by facility, division, department, provider, and diagnosis, with user-defined links between diagnoses and procedures (allowing for modifiers, conditions, and discount percentages). Pearl monitors diagnoses, procedures, and Global Care Days for reimbursement validity, and initiates real time insurance eligibility. In addition, the order-entry module can specify orders by facility and department based on the procedure and/or the insurance plan; charges, discounts and pricing totals are automatically tabulated. Pearl's Online Order Entry system allows a user to interface electronically with Laboratories (in-house or off-site) and Radiology Departments. Pearl also allows online results reporting, which is directed to the prescribing physician and to the patient's chart.

- Patient identifiers include date of birth, social security number, MRN, registration number and other identification options
- Stored Care Paths allow a provider to choose a procedure from a user-defined list of the most common procedures ordered for a particular diagnosis. Pearl can also accommodate a list of diagnoses for a given procedure.

Pearl's Supporting Functionality

- Tests and procedures can be selected from user-defined databases of CPT codes and order codes
- Physicians can specify a standard set of Tests/Procedures or an “at random” selection
- Procedures may be selected by procedure name, CPT code, or local code
- Online interface to labs & radiology departments facilitates one-step order entry
- Links to Problems/Procedures for reference and ordering purposes
- Links to Medications/Allergies for reference and ordering purposes
- Orders are checked for duplication and/or conflicts
- Alerts are generated for contraindications based on age, gender, procedure and time interval
- Rules in Pearl's Insurance Module are cross-referenced for required diagnosis and pre-certifications
- Print requisitions and specimen labels
- Vital signs can be graphed over time to more quickly detect trends
- Results can be printed in multiple numeric or graphical formats
- Result reporting
 - Pearl handles lab results in any or all of the following three ways:
 - 1) automatically route all lab results to the physician's inbox for review and electronic signature,
 - 2) highlight abnormal lab results in red on the lab results matrix, or
 - 3) alert a specific end-user of an abnormal lab result.

Patient: SOBEL, RICHA MRN: 644 AGE: 65 Years / M PHONE: (...)

Order ID: 1473566f

Collection D/T: 02/11/2004 09 Test D/T: 02/11/2004 09

Comment:

	Test	Descrip	Result	Normal	Range	Cc
1	INTER	CBC			-	
2	WBC	WBC	5		4 - 11	
3	RBC	RBC	5.1		4.2 - 5.4	
4	HEMOGLOBIN	HEMOGLOBIN	15.8	H	11.3 - 15.5	
5	MCV	MCV	85		81 - 102	
6	MCH	MCH	25	L	27 - 35	
7	MCHC	MCHC			31 - 37	
9	DRW	DRW			11.5 - 14.5	

Pearl's Supporting Functionality

F. Medications/Allergies

Pearl's Medications/Allergies Module uses the First DataBank Drug database for formularies and monographs. First Databank allows detailed comparisons of average wholesale cost; therapeutic class analysis according to multiple national standards with respect to drugs; and therapeutic substitutions based on the formulary recommendations. These relational tables are built into Pearl's medication entry system, and are regularly updated on the central server; they are provided to the customer as part of software maintenance and support. Drugs may be chosen from 1) a patient's prescription history, 2) a list of the physician's most frequently prescribed drugs, or 3) a long list of all available drugs. Coupled with the ability to e-mail or fax prescriptions with electronic signature, Pearl's prescription process with is one of the easiest and most intuitively appealing on the market.

Pearl's Medications/Allergies Module also includes...

- The National Drug Code (NDC) drug formulary
- The Generic Drug Code (GDC) drug formulary
- Drug Monographs (English and Spanish versions available)
- At the user's request, the formulary will equate branded drugs to generic versions

Pearl's Supporting Functionality

- A formulary display is based upon user preferences to display by
 - Facility
 - Department
 - Physician
 - Normal list (most frequently used medications)
 - Long list (all medications in the preferred list)
- Patient medication therapy may include (as needed):
 - PRN
 - Sliding scale orders
 - Special instructions
- Pearl regulates the dispensing number for each medication
- Medications are coded with a Generic Code Sequence (GCS) that contains therapeutic class and cost per unit
- Refills are recorded
- Medication start date is cited
- An automatic stop date may be specified
- Ability to track number of Keep On Person days (for correctional institutions)
- A note section is available specific to the patient and individual medication being prescribed
- All medications ever prescribed through the Pearl system are recorded in the patient's record
- Patient allergies are listed in alphabetical sequence
- Medications appear in red if contraindicated due to an allergic reaction to a medication and in yellow for a sensitivity to a medication
- Inactive medications are moved to an inactive file, but never deleted
- Pearl maintains a history of all drugs prescribed, with supporting detail including:
 - Dosage and frequency
 - Start and stop dates/Duration
 - Dispense mode, method and amount
 - Cost per prescription
 - Cost per unit dose
 - Miscellaneous criteria (class of drug, drug strength, unit of administration, ordering physician, date of order, pharmacy where prescription was filled, start reason, and number of refills used)
- Dosages calculated based on a sliding scale, body weight, or body surface area
 - Contains a cumulative dose calculator
 - Dispense amounts can be expressed in metric or standard units
- Users may print a list of medications that includes:
 - Dosage
 - Times due per your facility dialysis shift schedule
- Pearl notes drug/drug interactions, drug/allergy interactions, and drug/age

Pearl's Supporting Functionality

contraindications

- Patient's preferred pharmacy will automatically populate when printing or faxing the prescription(s)

G. Transcription

Pearl's Transcription Module is used as a word processing system for entering transcription. Pearl's basic word processing functionality may be used to input all types of patient-related information, as well as inter-office memos.

- Extremely user-friendly and easy to use
- Microsoft Word capability
- Patients can be searched by name, DOB, SSN, registration number or MRN
- Originator and receiver of transcription may be selected from Pearl's user database
- Transcription can be merged with patient demographic information
- Pearl e-mail can send consultation notes to any other system user
- Transcribed notes may be faxed to non-system users (with cover note)
- Non-patient-related documents may be processed
- A "save without signature" option is available for documents that don't require a physician's signature
- Document distribution lists may be indicated
- Storage file holds any unfinished/corrected documents
- Transcribed documents are automatically forwarded to physician's inbox for review and approval
- Physician/user can correct any type of document online
- User may specify automatic document handling for all document types
- Images/documents may be attached from patient's medical record
- System facilitates user-specific forms (with your letterhead)
- Allows document printing from screen (WYSIWYG)

Pearl's Supporting Functionality

H. Dialysis Module

User: NURSE, TEST R.N., Patient: MIMSTEST, ANNIE MRN: 1186 AGE: 28 Years / F PHONE: (615)882-2285

File Clinical Information Dialysis Orders Data Entry Documents

Pre Dialysis Assessment Access Checklist **Dialysis In Progress** Fluid Intake & Vital Signs and Dialysis Info Post Dialysis Assessment Dialysis Check

Patient: MIMSTEST, ANNIE

Physician Visits:
Time: 09:00 Physician: DOCTOR, DOCTOR Round: ATTENDING
Time: Physician: DOCTOR, DOCTOR Round: ROUNDING
Start Dialysis 01/23/2004 07:23 Clear Start Date

Today's Tasks

Reminders for the next 45 Days Pending Only Search Reminders

? Due Date	Description	Comment	Ordering User	Status
1 02/06/2004	GLUCOSE (LEVEL WITH GLUCOM...		DOCTOR, DOCTOR	Due Now
2 02/06/2004	MONTHLY LABS		DOCTOR, DOCTOR	Due Now
3 02/09/2004	NERVE CONDUCTION STUDIES		DOCTOR, DOCTOR	Due Future

Nutritional Supplement on Dialysis
 Meal on Dialysis

Nursing Comments Dietitian Visit
Adverse Events Access Malfunction
Social Worker

Medications Health Maintenance

Medications Active Meds Only Dialysis Meds Only

? Brand Name	Drug Strength	Dose	Dose Unit	Route Type	Frequency Code	Special Instruct...	Ordering User	St
1 CALCIJEX	1MCG/ML	1	MCG	INTRAVENOU	PER/RX/3/W		RIDINGS, JENNIFER	05
2 EPOGEN	U/ML	2300	UNITS	INTRAVENOU	3/WEEK		RIDINGS, JENNIFER	04
3 HEPARIN SODIUM (PORCINE)	1000U/ML	2000	UNITS	INTRAVENOU	INITIAL		BICKIMER, R.N., TAMMY	10
4 PHOSLO	667MG	1	TABS	ORAL(po)	TID		RIDINGS, JENNIFER	10

Current Measurements

Last BP Last Pulse Last Temp Time Rem 0 minutes Val Rem 1500 Time Interval For Displaying Warning Msg (Min.) 0

The Pearl Dialysis Bedside Module is customized for the Nephrology environment, with primary functionality involving Dialysis Flow Sheet Processing. The Pearl Bedside module was designed to integrate computerized documentation into the Dialysis setting and eliminate paper documentation currently used by the NNA facilities. Four dynamic features of the Dialysis Module are unique to Pearl: Bedside module, tracking vascular and peritoneal access, dialysis alert levels (pre-determined by the Physician), and tracking of adverse events.

- Bedside Module for real-time entry of treatment data at the patient's bedside
- Utilizes patient prescription parameters
- Supports vascular and peritoneal access tracking by type and by site
- Performs user-definable tracking of adverse events and trends
 - Out-of-range variables are highlighted
 - Adverse event report is automatically forwarded to attending physician
- Tracks physician visiting times
- Provides a note tool for Physicians, Nurses, Dieticians, and Social Workers
- Access Malfunctions and Adverse Events can be well documented
- Records dialyzer number and alerts if dialyzer I.D. is incorrect
- Supports in-house dialysis or acute hospital dialysis
- Produces a completed system-generated Flowsheet that is automatically stored in

Pearl's Supporting Functionality

- the patient's chart
- Calculates Kt/V and URR %
- Supports personnel shift list
- Facilitates Continuous Quality Improvement across multiple facilities, with roll-up and drill-down functionality
- Tracks reuse performance by brand and lot number
- Assigns proper billing codes automatically
- Supports UB92 billing preparation
 - Condition Code Tracking
 - Matches for Billing

I. Obstetrics Module

The Pearl Obstetrics Module is customized for the Obstetrics/Gynecology environment. The Obstetrics Module supports links to other Pearl modules including Registration, Vital Signs, Patient Problems and Laboratory Results.

J. Administrative Documents

Pearl's Administrative Document module allows facilities to set up and maintain various types of administrative documents such as contracts, agreements, employee files, etc. These documents can be scanned into the system or imported (documents and spreadsheets) from your hard drive or network. Prior to indexing, the user will have the ability to change a document's file format. Once the documents are indexed, the user can add further security based on specific User, User Types, Insurance, etc. and can attach key words and descriptions that will assist in the Document Look-up process.

K. Equipment Maintenance

Equipment Maintenance allows tracking and maintenance of fixed assets (various types of furniture, machines, equipment, etc.). Equipment needs to be periodically tested. Equipment maintenance records are tracked on the equipment including routine preventive maintenance and unscheduled repairs. The equipment maintenance program provides a mechanism for ordering and storing laboratory tests, indicates when preventive maintenance and unscheduled repairs were made (including notes related to such repairs and cost of such repairs, parts used, and the person or entity performing the repair). A reminder list must be created to keep track of when a repair is next due.

A. Provider Desktop

Pearl's Provider Desktop is a powerful organizational tool designed specifically for the clinician to coordinate patient care from one module. The initial screen displays lists of appointments for the selected day, patients currently waiting, documents in the providers In Box, and patient calls awaiting review. Double clicking on any patient listing will bring up the Pearl *Patient Summary*, an access screen dynamically linked to the relevant data resident within the system for that particular patient. With the Provider Desktop, clinicians can optimize their time by quickly accessing and manipulating the data most relevant to their daily activities.

DIALYSIS ASSOC OF W. NAIN-CENTER

By Department Show Providers Only
 By Current Provider DOCTOR, DOCTOR
 Select Different Provider

Appointments (0) Sched Cancelled Arrived Walkin

Patient Name

Patients Waiting (0) 111

Arrival Date	Appointment Date	Time Frame	Patient Name

In Box (400)

Patient Name	Description	User Name	Date
AZPEITIA, MARCO	SOCIAL WORKER N...	DOCTOR, DOCTOR	11/18/2003...
AZPEITIA, MARCO	SOCIAL WORKER N...	DOCTOR, DOCTOR	11/18/2003...
BARRON, CONSUELO	PRESCRIPTION REP...	AUTOMATIC_MES...	09/05/2003...

Patient Calls (0)

Patient Name	Description	User Name	Date

February 2004 February 2004

Sun	Mon	Tue	Wed	Thu	Fri	Sat
25	26	27	28	29	30	31
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	1	2	3	4	5	6

Medical Pearls

Journals Reuters Health News

Curbside Consults Internet Access

E-Mail View Calendar

OK Cancel

B. Patient Summary

IMRAC HEALTH GROUP/CARDIOLOGY User: VINCENT, DOU Patient: HARD, MARGA MRN: 90 AGE: 83 Years / F

File Vital Signs Meds/Allergies Orders Reminders Lab Referral Note Builder E-Mail Chart Problems Insurance

Problems Active Problems Only

DEPRESSION, NOS
CHRONIC ISCHEMIC HEART DISEASE, UNSPECIFIED, C/I
CONGESTIVE HEART FAILURE(CHF)
UNSPECIFIED CHEST PAIN

Major Procedures/Hospitalizations

Recent Procedures Sort by Date

EKG (ELECTROCARDIOGRAM) 06/05/2000
OFFICE VISIT-NEW-COMP-HIGH 06/05/2000
BASIC METABOLIC PANEL (BMP) 06/02/2000
CBC, INC PLATELETS AND DIFFERENTIAL 06/02/2000

Health Maintenance

All Due Now

NOW CREATININE, (S)
NOW EKG (ELECTROCARDIOGRAM)
NOW ELECTROLYTE PANEL
NOW EYE EXAM & TREATMENT

Patient Reminders Show Closed

09/29/2004 13:15 ROUTINE HISTORY & PHYSICA

Future Days: 30

Patient Allergies

A S ASPIRIN-LIKE ANALGESIC, SALICYL

Patient Medications

Label

A ANAPROX DS 550MG TABS
A K-DUR 10MEQ TABS

Admin History Rx Detail

Vital Signs

Lab Results

Personal Info

Pending Orders

Medications Detail

Chief Complaint

Problems by Category

Referring Physician

CONDON, EDWARD M

Advanced Directives

Other Providers

ASHER, JORDAN R
JOHNSON, JORDAN R

Personal Information

Patient lives alone



Problem Legend:

DIAG NOT BILLABLE

DIAG IS OBSOLETE

Medications Legend:

HISTORICAL AUTO STOP

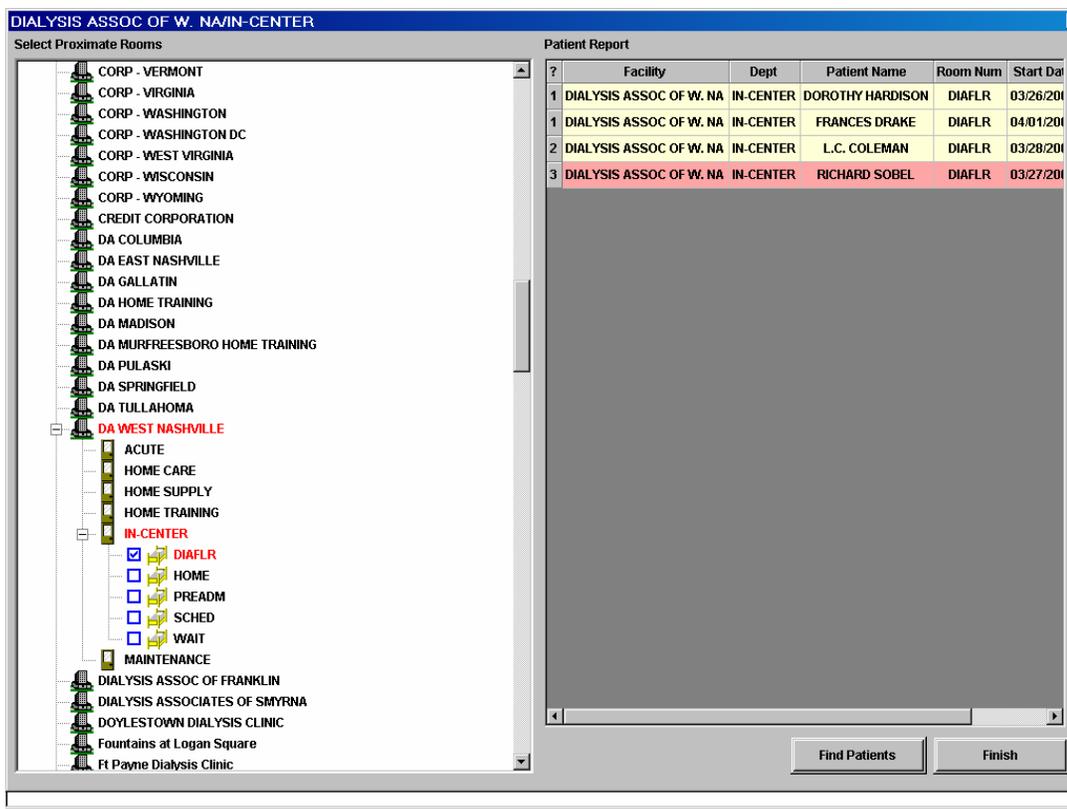
ON HOLD

Pearl's Patient Summary is another powerful organizational tool designed specifically to view a patient's clinical data from one screen. In essence, the Patient Summary tool displays the electronic chart "at a glance." The Patient Summary is designed to interface with the Clinician at the point-of-care. The Clinician can choose any clinical item for additional detail. With the Patient Summary, clinicians can optimize their time by quickly accessing and updating all relevant patient clinical data, including...

- Recent Procedures, and Major Procedures/Hospitalizations
- Personal Information, Vital Signs
- Lab Results, Pending Orders
- Chief Complaint, Patient Problems, Problems by Category – Pearl also gives the ability to detail problems through a facility defined "branch" listing detail such as severity levels, specific areas of the body, symptoms, treatment plan, etc
- Health Maintenance
- Patient Reminders
- Allergies, Medications, Medications Detail
- Patient Proximity Report

C. Patient Proximity Report

- From within the Patient Summary module, Pearl features the Patient Proximity Report. The purpose of this report is to provide clinics with the ability to see a list of all patients that were near a particular patient, during a particular time frame if that patient was later found to have a contagious illness. From the “Room History” tab section, Pearl gives the full room history of the selected patient. A tree will display with all of the rooms in the departments of the selected entries from the prior screen. The selected patient's actual departments/rooms are displayed in red. This report can be saved to Excel and then printed from Excel, if desired.



D. Tracking Physician Referrals

Pearl has a unique feature of tracking both incoming and outgoing referrals. This is the basis of the Pearl MSO Claims Adjudication Module. Referrals can be selected by subspecialty and insurance plan acceptance. Pearl captures a record of every referral from your facility, including urgency status and the diagnosis(es) and procedure(s) to be performed.

- Maintains a complete database of referral sources
- Referral is noted at registration

- Multiple referrals may be recorded for each patient
- Referrals may be noted from multiple sources
 - Insurance Plans, Groups, Companies
 - Business, Companies, Industry
 - Other Physicians, Groups
 - Individuals

E. Pearl Inventory Management

Pearl allows the facility to track supplies, supply carts, suppliers, and wholesale/resale prices for supplies and drugs dispensed in-house. Inventories on hand are maintained in the system by facility and department.

F. Health Maintenance

Pearl's Health Maintenance module reviews all data about the patient's diagnoses, procedures, medications, and lab results. Based upon these indicators -- and taking into account the patient's age and sex -- a list is produced showing:

- procedures recommended for this patient,
- the interval at which procedures should be performed,
- the place and time of last performance, and
- the next due date for the procedure.

Each facility specifically establishes the rules for determining procedures to propose based on these indicators.

G. Patient Reminders

One of the many significant features of the Pearl system is the Patient Reminder Module. Its primary function is to serve as an electronic "to-do" list. This module can store patient reminders at the facility and department level. Thus, a user in one location can enter reminders for a given patient at other locations. Interfaced data, such as lab results and x-rays, are directed to the physician's inbox for review and entry into the patient record. Reminders can be linked to procedures in a patient's chart for activation at pre-selected times.

When entering a reminder, the user may specify the user type (or a particular user) to complete the required action. A report can be run showing detailed information on all reminders for a specific facility, department, user type and/or user. A comprehensive view of all reminders and prompts for a particular patient, spanning all locations and systems, can be viewed and printed simultaneously and in real-time. Also, a reminder list can be reviewed and generated for all reminders or groups of reminders (lab, x-ray, meds, misc, etc.) for patients by specific departments, providers, users, user types, or facility.

H. Pearl Patient Education

Pearl's medication module includes a full spectrum of drug monograph sheets that are generated based on medication(s) prescribed by the provider. These monographs are available in either English or Spanish versions. Patient education material also can be stored as "forms" in Pearl's forms printing module and can be stored by facility.

I. Forms Printing

Pearl's Forms Printing Module eliminates the need for preprinted forms. Standard forms can be entered into the system and stored by facility. These forms can be automatically generated upon patient registration or according to the dates/times specified within the appointment scheduling system. Forms can be bar-coded to automate indexing into the patient's record later on when they are scanned back into the system.

J. System Administration

Pearl's Administrative Module relates personnel to the overall system. Your facility's System Administrator is responsible for inputting the following data for each employee: Name, title, degree, user class, social security number, date of birth, user type, security level, phone numbers, password assignment, PIN number, address, education, license, and facility access.

K. Pearl Interface Router

Pearl's Interface Router automatically distributes orders, billing information, and requisitions for lab reports or x-rays. The interface router also accepts results from outside systems. This capability requires a running interface.

L. Interfaces

Pearl integrates into existing or new healthcare information systems with ease. The Pearl system is designed to allow tailoring of many functions to meet individual facility requirements, and to allow interfaces with a variety of other systems. Many Pearl features can accommodate not only variations by facility, but also variations by individual department within the facility - or by individual physician. Certain data can thus be presented differently for each physician, as identified by his or her sign-on identification.

Direct interfaces have been established with several reference labs, permitting electronic transfer of test orders and test results. Pearl also provides master files of procedure codes and other medical coding; these enable specific variations in coding to accommodate the customer's current codes and descriptive names.

Interfacing with existing systems will be handled on a case by case basis, due to wide variations from site to site in such requirements as:

- Which functions are to be retained in the current system or transferred to Pearl
- What data will be sent or received from Pearl to the existing system

- Translations of data formats between the two systems
- Conformance of files when both systems maintain master files containing the same or similar data

Pearl also offers interfaces with existing lab, pharmacy, ADT, suppliers, order/entry and billing systems, inventory, G/L, and other financial sub-systems.

- Data can be exchanged with ADT, pharmacy, lab, and other information systems
- Pearl is HL7 compliant, and utilizes industry standard data tables to interface with other HL7 -compliant applications
- Pearl allows multiple data repositories to be normalized to a uniform dataset
- Pearl is designed to integrate with both existing networking topologies and emerging high speed data networks (i.e. "Future Data Highways")

M. Physician Inbox

Documents that have been scanned, transcribed, or emailed for placement in the patient's chart can be placed in a physician's Inbox for review and signature. Pearl's maintenance function specifies which documents are to be submitted for signature. Physicians can define their own folders and can email to non-Pearl users. The main roster screen alerts the physician when he/she has 'mail' to be reviewed and/or signed. Any patient related emails that are sent between users are automatically stored in the patient's chart.

M. Intra-office Messaging

Pearl offers electronic mail, with which a user can communicate with any other system user or send a message to an Internet recipient. Scanned document(s), image(s), or items from your local pc may be used as attachments to internal mail messages. Senders may immediately notify the recipients that a message carries an important or priority status. Users may print messages. A Message Log registers (and allows access to) all messages you have sent and received.

Call-in Message templates can be created by the System Administrator to reflect the needs of a particular organization, facility, department or physician. This way if a particular patient calls in with a standard request (e.g. to refill a prescription or schedule an appointment), this information can be entered directly into the patient's chart and accessed in real-time by the physician. The system can also contain personalized standard response templates to facilitate electronic authorization.

O. Imaging

Pearl supports both TIFF and JPEG images. Pearl accepts DICOM compliant x-ray images as well as VHS "snapshots" and color photos from digital cameras.

P. Report Tool

Pearl's Report Tool allows standard reports to be loaded into Pearl. This feature must be loaded by Pearl Staff but does not require a programmer.

Q. Graphs and Reports

Pearl comes complete with an array of pre-defined reports, developed by IMRAC to perform commonly used queries. User-defined parameters for a given report are accessible by pop-up windows, and will vary based on the type of information the report generates. Pearl offers the following standard graphs and reports:

- Admissions Graph
- Patient Demographics Graph
- Administrative Patient Audit
- Office Visits Graphs
- Most Prescribed Medications Graph
- Most Prescribed Medications
- Most Frequent Diagnosis Graph
- Most Frequent Diagnosis
- Patient List by Diagnosis
- Open Dialysis Sessions
- Overdue Labs
- Medication Costs per Physician
- Medications by Therapeutic Classes Graph
- Medications Orders Graph
- Top Prescribing Doctors Graph
- Patient Listing (Selected Medications/Diagnoses) Report
- Lab/Procedure Log
- Medication Cost per Physician
- Medication On/Off Hold
- Census
- Midnight Census
- Payor Mix Analysis
- Vital Signs Graph
- Diagnosis - Vital Signs Graph
- Laboratory Test Graph
- Laboratory Tests - Medications Graph/Report
- Laboratory Tests - Vital Signs Graph/Report
- Laboratory / Procedure Log Report
- Overdue Labs Report

- Procedure Costs of Diagnosis Report
- Procedure Orders Ranking Report
- Frequency of Adverse Events for a Selected Procedure Graph
- Frequency of Selected Adverse Event/Procedure All Facilities Graph
- Dialysis / Transplant Reports
- Patient Active HD Access Report
- Patient Average Dialysis Values Report
- Dialysum Report
- Epogen Dosage Change
- Facility Average Values Report
- Dialysis Patient HCT Tracking
- RenTran Report
- Coordinator Current Patient Load Report
- Facility Deaths Report
- Active Dialysis Patients
- Patient Insurance Detail
- Hemo Payor Analysis
- Dialysis Session Exception
- Financial Reports
- General Ledger
- Productivity
- Procedure Type Cost
- Procedure Period Analysis
- Procedure Revenue
- GL Reconciliation
- Inventory Productivity
- Payroll Productivity
- Procedure Distribution
- Patient Charges
- Ledger Transactions
- Account Balance
- Ledger Balance
- Weekly Charges
- Patient Category Summary
- RBRVS Procedure Analysis
- MCP Billing
- Rentran Billing
- Eligible Receivables
- Borrowing Base

For non-standard reports, all data elements within Pearl can be queried through a third-party report writer that is compliant with Oracle and the Structured Query Language, or

SQL (e.g. Crystal Reports, Cognos Reports or Platinum Reports).

R. Chart Completion

Most healthcare facilities must keep complete records and comply with Federal standards of chart completion. This involves manually checking each chart to find documents that are missing (e.g. History and Physical Exams, Operative Notes, Discharge Summaries) or documents that are not signed by the attending physician. Pearl can be adapted to do automated chart review by establishing certain standard parameters within the system. Some documents must be completed within a specific time frame, including availability in the record and signature by the physician.

Pearl's Chart Completion tool allows users to define certain events occurring within the facility and track them to ensure that the events are completed in the patient's chart according to the facility's protocol. An example is: A patient admission (based on Encounter Type, Admission Type, and Patient Type) is tied to a document (office visit note, release of information, etc.). The document must be sent to the chart within X hours and signed by the provider within X hours.

S. Billing Exception Review

Billing Exception Review lists charges, patients, claims and medical information that do not meet the expected standards, or are missing required information. The disputed data can possibly cause reduced payment for services provided, denied claims and/or inaccurate clinical documentation if not corrected, or indicates that a company standard is not being met. This program enables users to review, research, and in most cases the ability to correct these 'exceptions.' Each Exception Type has specified conditions that will cause the event to be created. Each Exception Event has 'Actions' assigned for use in documenting research and corrective measures taken to resolve and close the exception.

T. Physician Daily Orders

Physician Daily Orders are system-generated patient summary reports that are sent to the physician's inbox for review and signature. These reports are intended to provide a recap to the supervising physician for that day's orders by patient. Examples of this include new medication orders, changes to medication orders, dialysis order changes, etc.

U. Prompts and Alerts

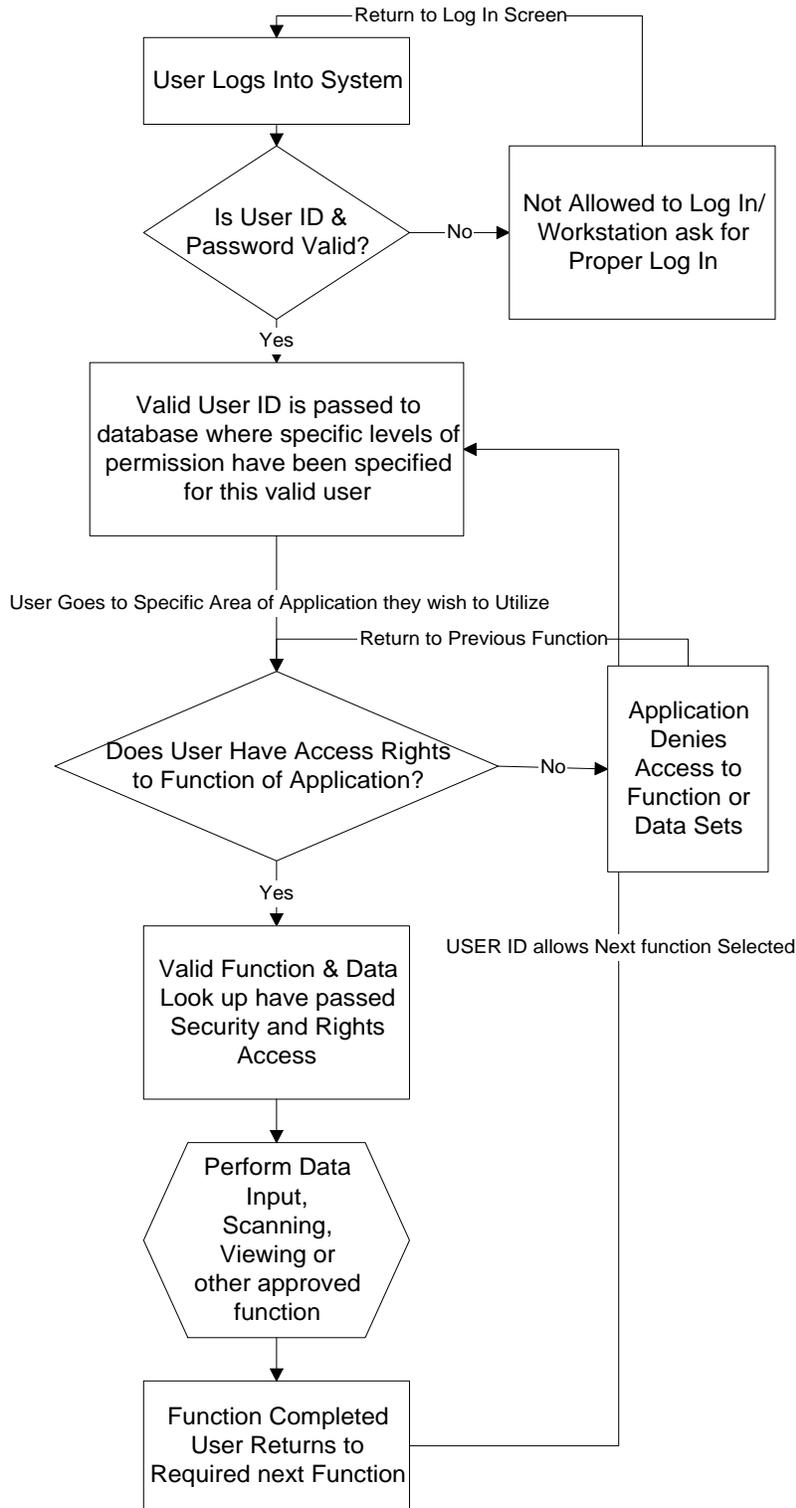
Pearl's Prompts and Alerts functionality starts with a trigger event (ex. - the addition of a new medication to the patient's record, the addition of a new order/procedure, etc.). It then processes an algorithm that includes an analysis of the patient's diagnoses, existing medications, procedures previously performed, demographic data, vital signs, and laboratory values. Facilities are able to define these trigger events with specified details (medications, diagnosis, etc.).

V. Notebuilder

Pearl's functionality allows users to create patient-related documents within the system. This functionality is similar to transcription – it allows the user to select from a list of a facility's predefined templates and define a document specifically for a patient. Pearl will automatically pull predefined items into the document based on the facility's preferences (ex. – medications, problems, allergies, any registration information, etc.). Once documented, the user may "sign" the document and Pearl will automatically attach it to the patient's chart. If the user is not a physician, the document will be forwarded to the physician's inbox for review and signature.

W. Security/Confidentiality

Pearl's security is effective, efficient and uniquely tailored to the healthcare environment. Several levels of information access must be attained before any user can access data, images or records within Pearl. During installation and configuration by the Pearl team, each user will be identified by a unique User ID and Password. The Customer will determine which levels of access are appropriate for each system user. Pearl tracks and logs most transactions, registering who made them and when. Data acquired through system interfaces also are logged; a separate section of the system notes all relative data, where and which systems it came from, time the data was transferred, and all-important input information. These levels of tracking and monitoring provide an extremely high level of data integrity and security. The system also contains facility-definable "time out" features, so that users are automatically logged-off from the roster screen after a predetermined time period of inactivity. The flow chart below illustrates the security system within the Pearl environment:



X. Third Party Billing and Patient Billing

PEARL provides for Electronic Submission and Remittances based on carriers requirements. Also produced are Patient Statements, Company Statements, Company Claims for capitated patients, HCFA-1500 Forms, UB92 Forms, Dental Forms, and any additional state forms needed. All of the above may be produced on demand for individual patient or company. Some features are:

Accounts Receivable

The Accounts Receivable System is designed to provide a method of improving cash flow, expediting collections, controlling write-offs and delinquent accounts, as well as monitoring patient's accounts and credit exceptions. The system is built around financial classes; therefore a patient will only have one account with multiple financial classifications. This eliminates the need to create a new account each time the financial classification changes for the patient. The system offers accounts receivable aging in both detail and summary modes. Also available are collection letters, mailing labels, and index card printing. A variety of management reports are produced through a comprehensive selection process allowing a set of flexible tools for controlling exceptional accounts. On-line displays of the patient accounts further enhance the system.

Some features are:

- Single Account Per Patient
- Open Item Processing
- Multiple Inquiry Methods
- User Defined Aging
- Collections Management
- Management Reports
- Refund Checks

CMS Reporting

The reporting functionality in the Billing System includes:

- Production and Revenue Analysis
- Visit Analysis
- User Analysis
- Practice Analysis

BCA's System provides a thorough analysis of procedures and diagnosis for Clinical Tracking. The system produces thousands of reports by over 33 sequences based on each of the user defined database files. All reports are available in both summary and detail, allowing 2 (two) date ranges for comparison reporting. Selection criteria also allows select and omit parameters for various data elements. All of these reports are generated without a complex report generator. Some features are:

- Flexible reporting - In order to produce reports for tracking of Prenatal, HIV, Immunization, etc. Easy collection of data for assisting in Grant preparation.
- Comparison reporting - Provides 2 (two) date range selections. For example: Month-to-Date and Year-to-Date totals. The date may be any date range of the detail transactions that reside on the machine.
- No need for a report writer - Thousands of report options can be selected based on user defined criteria and user's imagination.
- Detail or Summary Reporting - Provides the overall management reports in summary and also provides detail Reports for the staff for auditing purposes.

UDS Reporting

BCA's System provides user defined support file set-up for UDS Reporting. The system allows users to view and update reports on-line. The system retains the history of all UDS reports based on user specified time. Reports are printed in the table formats.

The UDS Reporting system is used by grantees of the primary care system development programs administered by the Bureau of Primary Health Care (BPHC), Health Resources and Service Administration. The UDS is capable of responding to "market-driven" emerging information needs of the health care market place.

This UDS Reporting system is designed to allow clinical users to defined collected date needed to provide uniformly-defined information for major BPHC grant programs; yield consistent information on patient characteristics and clinical conditions that can be compared with other national and state data; eliminate duplication and inconsistency in reporting; and build on data requirements of major payors, promoting and expanding the use of market driven data on a daily, monthly, quarterly, and annual basis. Through the selection of support file information and date ranges, this system enables the user to build and maintain information needed for unduplicated data on BPHC programs.

Clinical Data and Reporting

BCA's System provides the ability to track patients with specified conditions who have not made a visit in a user-defined range of dates. It provides the ability to track patient's procedures that have and have not been met within a given time period, and the ability to track the most prevalent diagnoses. In addition, the system provides the ability to list the percentage of patients that comply with specific preventive health measures.


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What's New

Automated Systems, Inc. Completes Cash Letter Testing and Certification between the Bennington State Bank and the Federal Reserve Bank [7/5/2005]

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- Provide the widest range of document delivery choices-fax, email or over the Internet.
- Reduce the cost of communicating with customers and suppliers.
- Provide complete and secure delivery and receipt of all critical business documents at the enterprise level on a global scale.
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Contact Information

Sales Contacts:

- [Rob Sherwood](#), Sales Manager, CCSP
- [Peter Rohman](#), Account Executive, CCSP
- [Craig Slaby](#), Senior Account Executive, CCSP
- [General, Non-Sales Questions](#)

Service Contacts:

- [Gary Esau](#), Service Manager



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What's New?

Crystal Reports XI

Most Requested User Enhancements – Included in Crystal Reports XI:

- Dynamic and Cascading Prompts
- HTML Preview
- Dynamic Image Location
- Editable RTF Format
- Intelligent Charting

Design, Manage, and Deliver Reports for Extreme Insight

A world standard for enterprise reporting, Crystal Reports is an intuitive reporting solution that helps customers rapidly create flexible, feature-rich, high-fidelity reports and tightly integrate them into web and windows applications.

The Crystal Reports enterprise reporting solution consists of:

- **Powerful report design:** Report authors can use the visual report designer (with a complete set of layout and design controls), to design highly formatted, interactive, and professional looking reports. And they can design within the leading .NET and java development tools without having to step out of their chosen development environment.
- **Flexible application development:** Developers can leverage cross-platform support for Java, .NET, and COM development technologies. HTML is generated directly by Crystal Reports, allowing developers to focus on application business logic, rather than tedious, time-intensive hand coding. Separation of application development and report design tasks allow developers to focus on application development, while the report authors can focus on report design.
- **Report management and delivery:** Reports are easily published to the web, for better business decisions at all levels of the organization. Reports can be exported and repurposed to the electronic formats used by most end users (e.g. PDF and Excel). IT can centralize the management of operational reporting while distributing the report authoring function out to the lines of business.

New to Crystal Reports XI are improved productivity features allowing you and your end users to experience high quality viewing, printing and exporting with less effort. This release also includes a new edition, Crystal Reports Server, designed for departmental enterprise reporting.

The following themes are an overview of what's new in Crystal Reports XI:

- Powerful Data Access and Report Design
- Enhanced Productivity and Maintenance
- Report Management and Delivery

Significant enhancements have also occurred within the existing feature set. New feature and enhancement highlights are provided in this document.

Crystal Reports XI

Design, Manage, and Deliver Reports for Extreme Insight

Powerful Data Access and Report Design

Business Views

Access to Business Views eliminates the hassles associated with manually moving reports from development to production.

BusinessObjects Universes

Connect to BusinessObjects™ Enterprise universes, a powerful semantic layer that masks the complexity of the data, so that new or less experienced users can still understand the data.

Updated Drivers

Crystal Reports XML, JDBC, IBM DB2 and Exchange data drivers have been updated to give you an incredible range of data access options.

Dynamic Image Location

Pictures and graphics can now be placed in a report through a link in the database so that it is no longer necessary to store images within the database. This supports the common practice of storing images on the web server and storing references to those images in the database.

Updated Visual Report Designer

Use the updated point-and-click designer to create reports and alleviate intensive coding.

Intelligent Charting

New drag and drop charting and cross-tabs allow for intelligent charting. Variables are approximated when a chart is dropped into a section. Chart design is now faster and easier because charts will be updated automatically when new variables are added.

Hierarchical Grouping

Layout control is enhanced so that users can create their reports in a hierarchical, rather than just a relational manner. This provides a better fit for organizational charts and summary reports.

Enhanced Productivity and Maintenance

Dynamic and Cascading Prompts

Report prompts can be based on dynamic values. This means that report designers no longer have to maintain static prompt value lists within individual reports. Instead, they can reuse existing prompts stored in the repository.

HTML Preview

The iterative report design/view process is streamlined, with a new HTML preview that allows report authors to see how reports will look when published to the web.

Editable RTF Format

This new feature is ideal for report export editing. It delivers reports to end users in a new RTF format, so they can easily make their own document modifications.

Report Export Configuration

The report designer can save report export configuration information within the report itself so that the end user forgoes the time and trouble of reconfiguring the export each time a report is run.

Repository Explorer

Navigation within the BusinessObjects Enterprise system is easier. The user can to share reporting components with other users within the Crystal Reports Designer.

Workbench

The workbench keeps projects organized allowing report designers to group reports according to preference.

Dependency Checker

With the new dependency checker, report authors can quickly find broken links, formula errors, and dependency issues. This greatly reduces the time spent on QA.

Flexible Application Integration

Free Runtime Licensing

Crystal Reports Developer Edition includes a royalty-free runtime license that allows for unlimited internal corporate deployment of the Crystal Reports .NET, Java and COM (RDC) report engine components without the need to pay additional licensing fees for multiple servers or CPUs.

New and improved APIs

New and improved cross-platform APIs include server-side printing as well as the ability to configure sub reports as if they were full-blown reports.

Custom Java function Libraries

Developers can incorporate their own code within Crystal reports.

Data Binding

Java and .NET developers can take advantage of data binding by using unbound fields in the Crystal Reports Designer and binding application data to those fields at runtime.

Crystal Reports XI

Design, Manage, and Deliver Reports for Extreme Insight

Crystal Reports Server Lets You:

- Access and present data any way you want
- Deliver the right information to the right people at the right time
- Provides universal integration with applications and portals
- Drives your business with proven technology

Crystal Reports Server - Report Management and Delivery

New to the Crystal Reports product suite, Crystal Reports® Server is an enterprise reporting solution that helps companies create, manage, and deliver reports over the web or embedded in enterprise applications. Crystal Reports Server is designed to support departmental or workgroup requirements and is ideal for small- and medium-sized businesses. With Crystal Reports Server, you can design Crystal reports and then publish them to the web in a single server environment. To further support this new release, all Crystal Reports Server customers will receive one free year of technical support and maintenance.

Security

Take advantage of granular object, user, and data-level security by specifying user access and actions within a particular report.

Scheduling

Flexible scheduling capabilities allow you to ensure that information can be processed efficiently when and where you need it. Schedule reports based on events or at specific times and in the formats you require.

Scalable Central Architecture

To support high volume reporting, Crystal Reports Server uses a scalable, central architecture. It includes a set of report processing services for speed-of-thought information access. Innovative page-on-demand technology helps expedite processing by serving up only those pages requested by end users. On-demand caching helps maintain fast performance levels by reusing common content requests to service multiple users.

Get Help When You Need It

To help you overcome roadblocks as quickly as possible, the Business Objects online communities (Business Objects Developer and Report Design Zones) offer the latest sample applications, code snippets, troubleshooting tips, and white papers.

With Crystal Reports XI, you will be automatically alerted to the latest hot fixes and service packs.

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Dictaphone

Speech Recognition

Powering productivity across the enterprise.

Dictaphone

DICTAPHONE SPEECH RECOGNITION

Powering productivity across the enterprise...

Why You Need to Consider it Now

It is estimated that the annual cost of medical transcription will top \$6 billion in North America for labor alone. Even with this expenditure, providers are hard pressed to keep up with growing report volume. The result is rising transcription costs, back-logs, and potential long-term negative impact on patient care, reimbursement and cash flow, and physician satisfaction.

While digital dictation and transcription management systems, like Dictaphone's Enterprise Express® have revolutionized voice and text processing, back-logs persist, and many organizations struggle to achieve target turnaround goals. The scarcity of well-trained medical transcriptionists makes the problem difficult to overcome through labor alone. Outsourcing only defers the issue.

Technology must be part of the answer, and speech recognition is rapidly proving to be the key solution for driving major productivity gains in patient reporting. After years of promise, today speech recognition in healthcare is delivering major gains.



Dictaphone

Speech Recognition



"PowerScribe® has done more than save time and money; it's really changed the culture of our radiology group. None of us would go back to the old way of doing things."

Speech Recognition's High Impact

Today Dictaphone Speech Recognition is having a dynamic and direct impact on cost and productivity in ways that are making hospital CEO's, CIO's, CFO's, and HIM Directors take notice.

- > Customers are achieving documented 30% and greater overall transcription productivity gains—across the enterprise.
- > Individual transcriptionists are achieving gains in productivity of 50-60%.
- > Reporting turnaround times are being reduced by 50-75%, with report back-logs dropping from days and weeks to hours.
- > Many organizations have been able to reduce reliance on transcription outsourcing, having gained significant capacity from their internal resources.
- > The net result of all these gains is savings of hundreds of thousands of dollars—or more—in yearly operating expense, with most Dictaphone Speech Recognition systems paying for themselves in 9-24 months.

Dictaphone Leading in Speech Recognition

Dictaphone is a longtime leader in the healthcare industry, and more than 3,500 hospitals, clinics, and groups are using Dictaphone voice, text, and data management systems to capture an estimated 100,000 hours of dictation, resulting in some one million transcribed reports daily. Hundreds of thousands of doctors interact with Dictaphone voice tools regularly.

Now Dictaphone is bringing that experience and knowledge to bear in helping customers to deploy speech recognition across the enterprise...achieving a leadership role once again in this next-generation technology:

- > Dictaphone has over 2,500 radiologists actively using speech recognition daily. Most departments use speech recognition to produce all of their reports.
- > Non-radiology speech recognition implementations are growing rapidly with hundreds of organizations rolling out use to thousands of users.
- > Dictaphone customers are implementing speech recognition on an enterprise-wide level—most implementing to 50-75% of their physician population, and in disciplines ranging from emergency medicine to cardiology to mental health.

“Speech recognition is the perfect blend of technology fitting into a clinical environment. There is the cost savings, but beyond that there is the substantial improvement in turnaround time and quality of reporting. I can’t think of another solution that offers both of those benefits.”

Dictaphone Speech Recognition Solutions

Dictaphone offers the industry's most complete complement of speech recognition technology, matching the needs of a full range of caregivers in organizations of all sizes and scope.

- > **EXSpeech[®]**—Seamlessly meshes speech recognition with your present workflow through full integration with Dictaphone's Enterprise Express[®] dictation/transcription system. Dictators can use the telephone, PC with microphone, or mobile devices for voice input. Transcriptionists employ specialized software—with many features that optimize editing productivity—while allowing them to use the very same software for both traditional transcription and speech recognition editing. Broad language models cover all the major inpatient and outpatient work types.
- > **Enterprise Workstation[™]**—The provider's Web-based workspace for taking control of documentation. PC-based dictation, electronic signature, and convenient voice-driven self-editing of speech-recognized documents permit “once and done” patient reporting that is attracting a growing number of physicians.

- > **PowerScribe® for Radiology**—Designed specifically for radiologists in hospital departments and independent imaging centers. PowerScribe is optimized for high-accuracy, real-time recognition and self-editing to meet the demanding turnaround requirements of this discipline. Standard templates and normal text can be created easily for each user, and driven completely by voice navigation and editing, further speeding reporting.
- > **PowerScribe® Workstation for General Medicine**—Brings the flexibility of real-time recognition and convenient self-editing to individual hospital departments and clinics/physician groups. Appropriate where a full enterprise-wide solution is not relevant.
- > **ichart® Recognition**—Offers access to speech recognition through the Internet as part of a pay-for-use ASP service, minimizing up-front capital investment. Organizations that rely heavily on outsourced transcription can use the ichart Preferred Service Provider program to access our network of transcription companies committed to speech recognition editing on our technology platform.

Dictaphone Consulting Group—Your Key to Maximizing Returns

Going beyond standard installation and training, the Dictaphone Consulting Group offers the services and support of advanced experts focused solely on streamlining the integration of speech technology into your organizational culture.

Capabilities include:

- > **Expert consultation and guidance** based on the experiences of many speech recognition deployments and studies we conduct among our user population.
- > **Strategies and programs** to improve productivity of speech recognition.
- > **Analysis of existing workflow and practices** to help uncover ways to accelerate your rollout of speech recognition, thereby speeding your ROI.



"This is a no-brainer. Few technologies offer a 12 month ROI. It works...it works well... as a CIO I can't walk away from something like Dictaphone Speech Recognition."

Questions to ask when considering speech recognition...

> **Does speech recognition fully integrate with my existing workflow?**

Your need to manage all of your dictation work does not change with the introduction of speech recognition. Dictaphone's solution builds on the industry-leading Enterprise Express® system, so your speech recognition work can be managed alongside your traditional transcription.

> **Does the speech recognition system offer flexible voice input?** Many speech systems require PC-based dictation. Dictaphone's EXSpeech® goes beyond this capability, allowing telephone and PDA-based dictation as well. Such flexibility opens speech recognition use to a very wide array of providers.

> **How about flexibility in editing and finalizing speech recognition documents?** Over time you will want the ability to optimize your productivity gains. Dictaphone lets you choose transcriptionist editing of recognized text integrated with your current workflow, or real-time recognition and self-editing at the physician workstation to bypass the transcription step. Even in the self-editing mode, flexibility is maintained since dictators can opt to send work off to a transcriptionist whenever they choose.

> **Will all physicians be able to use speech recognition?** Accuracy levels have improved substantially to the point that productivity gains can be achieved from most dictators. Institutions are finding that upwards of 75% of a broad-based physician population can qualify for effective speech recognition use, and in many disciplines nearly all can use the technology for significant efficiency gain.

*For product information please visit
Dictaphone Healthcare Solutions at
www.nuance.com/dictaphone or
call **888-350-4836**.*



NUANCE

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ADRENALINE

Overview



Adrenaline® is a complete family of scanner controllers, image processing accelerators, and software engines designed to offer the best support possible for professional document scanning.

From workgroup to high-volume, SCSI to video, black and white to color -- Adrenaline makes your scanning experience easier, better, faster, and more reliable. The Adrenaline product family provides:

- **Certified compatibility.** Kofax® tests and certifies Adrenaline products to work with document scanners from Bell & Howell, Canon, Fujitsu, Hewlett-Packard, Kodak, Panasonic, and Ricoh.
- **Unrivaled technical support.** Unlike generic connector boards, Adrenaline is supported by people who know scanning: Kofax.
- **Dependable installation and operation.** Adrenaline is designed for document scanners, so installation and operation are consistent and reliable.
- **Sophisticated image processing,** including black border removal, deskew, line removal, deshade, destreak, despeckle, and character repair. (650i, 850, 1700 models)
- **Unsurpassed bar code recognition,** plus advanced recognition features such as patch code recognition, page registration, and form recognition. (650i, 850, 1700 models)



No matter which Adrenaline product fits your needs, you'll get the best, most reliable scanning experience available.

Adrenaline products support hundreds of scanning applications that use ISIS®, TWAIN or Kofax **ImageControls**, including applications from Captiva, Cardiff, Hyland, iComXpress, Microsystems Technology, and **Kofax**.

Adrenaline products are tested and certified with scanners from Bell & Howell, Canon, Fujitsu, Hewlett-Packard, Kodak, Panasonic, and Ricoh. To find out which Adrenaline product supports your scanner, check our online **Scanner Configurator**

Next-Generation Bar Code Recognition

Kofax has "raised the bar" for bar code recognition. The Adrenaline 650i, 850

Com

Products

Re

PRODUC

and 1700 include the most accurate bar code recognition and decoding software in the document imaging market.

The enhanced bar code software provides unrivaled recognition of traditional bitonal bar codes, reading even damaged or poor quality bar codes easily and accurately. This powerful software can also read bar codes directly from 100 or 150 dpi color images, saving processing time and providing more accurate recognition, plus 2D bar codes and bar codes scanned in grayscale.

Learn more by reading our informative [whitepaper](#) (PDF file, 130 kbytes) or our [frequently asked questions](#) document (PDF file, 96 kbytes).

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ORACLE DATABASE 10g ENTERPRISE EDITION

OVERVIEW



ENTERPRISE EDITION

- For enterprises of any size
- For databases up to 8 Exabytes in size.
- Either \$800 per Named User Plus (minimum of 25 Users per CPU).
- Or \$40,000 per CPU for unlimited use.
- Supported on all Environments
- Manages all Your Data
- Integrates all your Information
- Runs all your Applications
- Available all the Time
- Proven Security Assurance
- Quick to Install, Easy to Manage
- Built for the Grid

Oracle Database 10g Enterprise Edition is ideal for enterprises that need to support high volume on-line transaction processing and query intensive data warehousing applications. It provides proven scalability on all hardware configurations, and can be used to manage very large amounts of information, with the highest level of security assurance in the industry. Oracle Database 10g Enterprise Edition provides unique availability benefits that protect your data from costly human error, reduce the downtime associated with routine maintenance, and includes self-managing capabilities to help you lower your operational costs. As the first database designed for Grid Computing, you can use Oracle Database 10g Enterprise Edition to significantly reduce your infrastructure costs, through the efficient use of shared pools of low cost, standardized hardware components. With every release, Oracle furthers its commitment to grid computing, database automation and self-management capabilities.

Supported on all Environments

Oracle Database 10g Enterprise Edition is available on all Oracle's supported operating systems, including Windows, Linux and Unix, and is supported on all hardware configurations, from small single processor machines to high-end SMP environments. Cluster and Grid environments are also supported with the Oracle Real Application Clusters option.

Manages All Your Data

Oracle Database 10g Enterprise Edition supports all standard relational data types, as well as native storage of XML, Text, Documents, Images, Audio, Video and Location data. Additionally, complex spatial data can be added with the Oracle Spatial option.

Access to data stored is via standard interfaces such as SQL, JDBC, SQLJ, ODBC, OLE DB and ODP.NET, SQL/XML, XQuery, and WebDAV. Business logic deployed in the database can be written in both Java and PL/SQL.

Oracle Database 10g Enterprise Edition can store up to 8 Exabytes of data in a single database. Data currently stored outside of the database can be loaded in parallel, while data already stored in an existing Oracle Database can be transported

online across operating system platforms and added in bulk without the need to unload the data.

Once stored, all data can be transformed, indexed and summarized using powerful parallel operations. Business Intelligence applications will particularly benefit from the Enterprise Edition's unique bitmapped indexing and join capabilities, transparent query re-write to use pre-summarized data, and comprehensive parallel query operations, all which result in dramatic query performance improvements.

The Oracle Partitioning Option can also be used to simplify common administration operations in very large database environments, with support for Hash, Range, List, and Composite data partitioning strategies.

Integrates All Your Information

Oracle Database 10g Enterprise Edition supports distributed queries and transactions between two or more databases, and includes built-in support for connecting via ODBC to common 3rd party databases. In addition, Transparent Gateways to specific 3rd party databases are available, providing a highly optimized information integration solution. Oracle Database 10g Enterprise Edition also provides a built-in framework for capturing, staging and processing events in the database, such as those that are caused by data changes or created via business applications. These events, along with the associated data changes or application messages, can be automatically propagated to and applied by one or more consuming databases or applications, providing an integrated solution for message queuing and data replication. Oracle Database 10g Enterprise Edition can be used as the central coordinated data store in a replicated branch office environment, in conjunction with a local Standard Edition or Standard Edition One database. Peer-to-peer multi master replication is also supported between two or more Enterprise Editions of Oracle Database.

Runs All Your Applications

For demanding online transaction processing environments, Oracle Database 10g Enterprise Edition supports deployments of large numbers of users by utilizing unique row level locking and multi-version read consistency, allowing an application to quickly and easily scale from tens to tens of thousands of online users.

For Business Intelligence, Oracle Database 10g Enterprise Edition provides built-in analytical, statistical and modeling capabilities which may be directly accessed from any SQL based environment. These built-in capabilities may be further expanded with the use of the Oracle OLAP and Oracle Data Mining options, providing a high-performance OLAP calculation engine, and the ability to mine and score data in place.

Available all the Time

Oracle Database 10g Enterprise Edition provides unique capabilities to ensure the availability of your mission critical applications. Oracle's Real Application Clusters (RAC) option supports the transparent deployment of a single database across a cluster of hardware servers, providing fault tolerance from hardware failures or

planned outages. Oracle Database 10g Enterprise Edition also builds-in unique Fast-Start Fault Recovery technology that automatically bounds database crash recovery to a number of seconds, making recovery time fast and predictable, and improving your ability to meet availability service level objectives.

Oracle Database 10g Enterprise Edition provides unique data protection capabilities. The automated storage management capabilities built into Oracle Database 10g mirrors data across available storage devices for protection against storage failure. New built-in data validation algorithms have been implemented in conjunction with common storage devices, eliminating a large class of failures caused by corruption. Automatic backup to and recovery from a disk based recovery area is provided, ensuring backups are always readily available, eliminating the likelihood of operator error and improving recovery time. The automatic merging of fast incremental backups into existing backup images is also provided with Oracle Database 10g Enterprise Edition, significantly reducing the time required for online backups, and minimizing the storage needed for daily backup operations.

Oracle Database 10g Enterprise Edition also provides a suite of unique Flashback capabilities that help administrators easily diagnose and undo the effect of human errors including changes to a single row, changes made by a rogue transaction, all changes made to one or more tables (including the dropping of a table), and all changes made to an entire database. With Oracle Database 10g Enterprise Edition, the time needed to correct a human error equals or is less than the time it took to make the error, revolutionizing recovery from the most common cause of data loss.

Oracle Database 10g Enterprise Edition also includes proven Data Guard technology to protect your site from crippling events such as a power outage or natural disaster. You can use Oracle Data Guard to set up and automatically maintain multiple remote standby copies of your production databases, and then with a single mouse click, fail over processing from the production environment to these standby databases, greatly reducing downtime in a disaster situation. Oracle Database 10g Release 2 introduces Fast-Start Failover for rapid and automatic failover to standby databases, without requiring manual intervention.

Oracle Database 10g Enterprise Edition is also designed to protect your mission critical business operations from the impact of routine maintenance. New hardware, memory and storage can all be added and used by Oracle Database 10g Enterprise Edition without the need to re-start your systems. In the database, tables can be relocated or have their storage type changed, new indexes can be added or rebuilt, and columns can be added, dropped and renamed, without any interruption to the end-users' ongoing access to the data. Oracle Database 10g Enterprise Edition also supports rolling upgrades of database and operating system patches and releases, enabling true 24x7 operations for your enterprise.

Proven Security Assurance

The Oracle Database provides the strongest security available in the industry today. Over the past decade Oracle has successfully completed 17 independent security evaluations. Data consolidation, privacy requirements and government regulations

such as HIPAA require sophisticated security features. Oracle Database 10g Release 2 delivers industry leading security features such as fine grained/row level security, column security, fine-grained auditing, data encryption, key management, proxy authentication, application context and secure application roles. These are in addition to commonplace security features such as auditing, password complexity checks, database roles, stored procedures and functions.

Oracle Advanced Security protects privacy and confidentiality of data over the network by addressing data sniffing, data loss, replay and person-in-the-middle attacks. All communication with an Oracle Database can be encrypted with Oracle Advanced Security. Oracle Advanced Security also provides strong authentication solutions for Oracle Database 10g. Oracle Label Security provides an ideal solution for customers who need to protect private or sensitive information. Based on multilevel security technology, Oracle Label Security restricts access to data using sensitivity labels and security clearances.

For enterprise wide management, user accounts and authorizations can be managed centrally with Oracle Database 10g enterprise user security and Oracle Identity Management, eliminating the need for individual database user schemes and making it easy to manage user authorizations across an entire organization.

Quick to Install, Easy to Manage, Easy to Develop

The screenshot shows the Oracle Enterprise Manager 10g Database Control console. The main content area is titled 'Cluster Database: pacrac'. Under the 'General' section, the status is 'Up', with 2/2 instances and 100.0% availability. The cluster name is 'dclab_cluster', time zone is 'EST', and the database name is 'pacrac'. The 'High Availability' section shows 'Last Backup' as 'Jan 28, 2004 8:14:10 PM' and 'Flashback Logging' as 'Enabled'. The 'Space Usage' section shows 'Database Size (GB)' as 0, 'Problem Tablespaces' as 1, and 'Policy Violations' as 0. The 'Alerts' section shows a table with one critical alert:

Severity	Target Name	Target Type	Category	Name	Message	Alert Triggered	Last Value	Time
Critical	pacrac	Cluster Database	Tablespaces Full (dictionary managed)	Tablespace Space Used (%) (dictionary managed)	Tablespace [SYSTEM] is 100% full	Jan 28, 2004 3:22:29 PM	98.56	Jan 28, 2004 8:52:29 PM

Figure1. Oracle Enterprise Manager 10g Database Control for a 2 Node RAC cluster

Oracle Database 10g Enterprise Edition provides a very quick install on all environments. Out of the box, your database is pre-configured for production usage, complete with automated space, storage and memory management, automatic backup and recovery, and automatic optimizer statistics management. The built-in Enterprise Manager 10g Database Control console provides a web-based interface that shows at a glance, the status of your database and cluster environment, and allows database administration actions from any browser connected to your system.

Oracle Database 10g Enterprise Edition includes Oracle's unique HTML DB capabilities, an online development environment built directly into the database that allows developers to quickly build database applications using nothing more than a Web browser.

Oracle Database 10g Enterprise Edition is a part of the family of Oracle Products. The following related editions are also available

- Oracle Database 10g Standard Edition
- Oracle Database 10g Standard Edition One
- Oracle Database 10g Personal Edition

Oracle Database 10g Enterprise Edition with Oracle Real Application Clusters option also takes full advantage of Oracle's built-in clusterware solution, removing the complexity of having to install and configure third-party clusterware. The automatic storage management capabilities efficiently stripe the data stored across the available disks, ensuring optimal performance, and removing the need for third-party volume managers or cluster file systems.

As well as the built-in self-managing capabilities, additional automated administration capabilities are available that further streamline operations and reduce operational cost. The Oracle Diagnostics Pack provides a comprehensive set of automatic performance diagnostics and monitoring capabilities built into the database, while the related Oracle Tuning Pack offers an easy-to-use solution that automates the complex and time-consuming task of application tuning. The Oracle Change Management Pack analyzes the complex dependencies associated with application change and automatically performs the required database changes, reducing errors, while the Oracle Configuration Management Pack reduces the labor associated with managing multiple database deployments, by automating installation, patching and database cloning and keeping system configurations under control through best practice policies and extensive change tracking.

For ease of development, Oracle Database 10g Release 2 furthers Oracle's support for the Windows platform with tight integration with Visual Studio, and Common Language Runtime stored procedures.

Built for the Grid

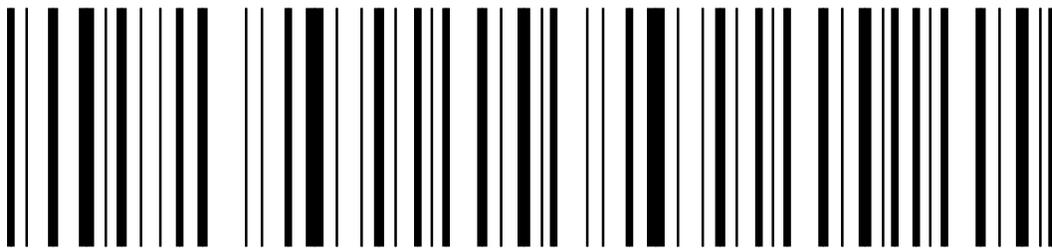
Grid Computing is the coordinated use of a large number of low-cost servers and storage devices acting as one shared computer resource. As the first database designed for the Grid, Oracle Database 10g Enterprise Edition allows you to adopt Grid Computing in three easy steps, with minimal investment, zero disruption, and fast return on investment:

- Through standardization on low-cost servers and storage,
- Via dynamic provisioning of all your databases and application servers
- By the end-to-end automation of day-to-day management tasks, allowing a single administrator to simultaneously handle hundreds of servers

Oracle Database 10g Enterprise Edition and the Oracle Real Application Clusters Option make it easy for you to install and configure a database environment that leverages these low cost hardware servers, including the dynamic provisioning of resources and balancing of workload across your environment to meet defined service levels. The automatic storage management capabilities allow you to utilize low-cost storage, while still providing the highest levels of data protection and performance. And the self-managing capabilities in Oracle Database 10g automate the management of your operations on the Grid.

With Oracle Database 10g Enterprise Edition, the benefits of Grid Computing are real: increasingly flexible, self-managing systems, better availability, performance and scalability at a lower cost.

Bar Code Printing Options for Zebra Printers with Oracle WMS and MSCA



APPLICATION WHITE PAPER



Zebra Technologies



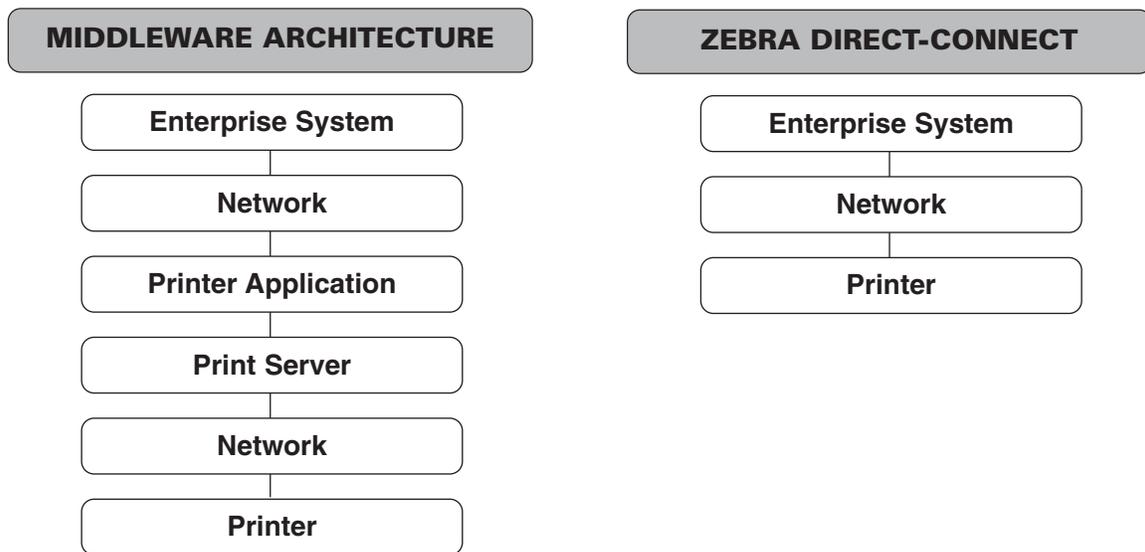
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Unauthorized reproduction of this document or the software in the label printer may result in imprisonment of up to one year and fines of up to \$10,000 (17 U.S.C.506). Copyright violators may be subject to civil liability.

Executive Summary

Bar code output from the Oracle® environment is traditionally accomplished through third-party software. However, Oracle's Warehouse Management System (WMS) and Mobile Supply Chain Applications (MSCA) offer a new approach that can simplify bar code label printing. Oracle WMS and MSCA produce output in XML data streams, instead of a proprietary Oracle format. Zebra Technologies has embedded an XML parser in its XML-enabled printers, so output from Oracle WMS and MSCA is natively understood by the printer without additional middleware or server hardware. The graphic below illustrates the system architectures and components required for bar code output from Oracle WMS and MSCA using the middleware and Zebra direct connection approaches.



This white paper describes the middleware and direct-connect bar code printing options for Oracle WMS and MSCA, explains the system requirements for each, and provides guidance as to when each approach is best suited to particular environments.

Introduction

Bar codes are integral to warehouse and inventory control operations and are often used with Oracle WMS and MSCA. Oracle software includes 10 default pre-seeded label types for shipping, inventory movement and item identification processes. Additional formats are often required for compliance labeling, report printing and other applications. These labels are typically created with third-party label design applications that must integrate with the Oracle system.

Oracle's WMS and MSCA applications communicate print jobs natively in an XML data stream. To print bar codes, the XML print job data must be processed and encoded into a bar code format that a printer can recognize. Traditionally, third-party software has been used to design label formats and manage output to the bar code label printer. The Oracle applications and system administrator handle all the steps in between, including management of user profiles and privileges, managing print requests, label format and printer selection, and generation of the XML data stream.



The print job is then communicated to a bar code printer over a TCP/IP network or other connection using either synchronous or asynchronous communication.

In **asynchronous mode**, the Oracle application drops an XML file into a directory. A third-party application is responsible for monitoring the directory, processing the XML data, merging the data with the label format, and then routing it to the appropriate printer.

Synchronous mode is a simpler approach. It uses a PL/SQL application program interface (API) to integrate the Oracle application and the third-party application (or printer) in real time. Oracle WMS and MSCA use the PL/SQL API to make a call to the printer or third-party application, which then processes the incoming XML data stream for output. Oracle's synchronous communications architecture results in no files to transfer, eliminates cross-platform labeling issues and stores success or failure messages within the Oracle application.

The printing process described above is roughly the same regardless of what form of output is used. Third-party applications and the Zebra direct-connect method differ by how the Oracle XML stream is processed and how printer communications are managed. These approaches are described in the following sections.

M i d d l e w a r e

Middleware, which can take the form of label design software, print server applications, or document management software, is the most common method for generating bar code output from Oracle applications. There are many bar code label design software packages, but few offer true, certified Oracle connectivity. In fact, Oracle has only certified five label printing partners for its WMS and MSCA applications. The select list includes Zebra Technologies and two of its alliance partners, Adobe (for the JetForm Central product that Adobe acquired when it acquired Accelio Corp.), and Loftware.

Middleware performs the XML conversion that enables Oracle data to be expressed in bar code and text on the label. Middleware can be used for synchronous and asynchronous printing. In asynchronous mode the middleware, not the Oracle application, is responsible for monitoring the directory and transferring files to the appropriate printer for timely output.

One common and popular approach is to use third-party applications in conjunction with a print server to manage the communications and processing of print jobs. The Oracle applications route the print request and output destination through middleware that resides on a dedicated print server. The middleware application processes the XML data streams, generates the bar code, populates the label fields and sends the print job to the designated printer over a wired or wireless network connection. A single, central middleware application can manage all enterprise bar code printing requirements within a facility, provided there is network access to remote locations. The middleware/print server approach may also direct all enterprise bar code printing operations in a distributed environment by using wide-area network connections, although firewalls can make this difficult to execute. Separate print servers and software licenses for each facility are often required. Middleware applications are advantageous because they can support bar code printers from multiple vendors.

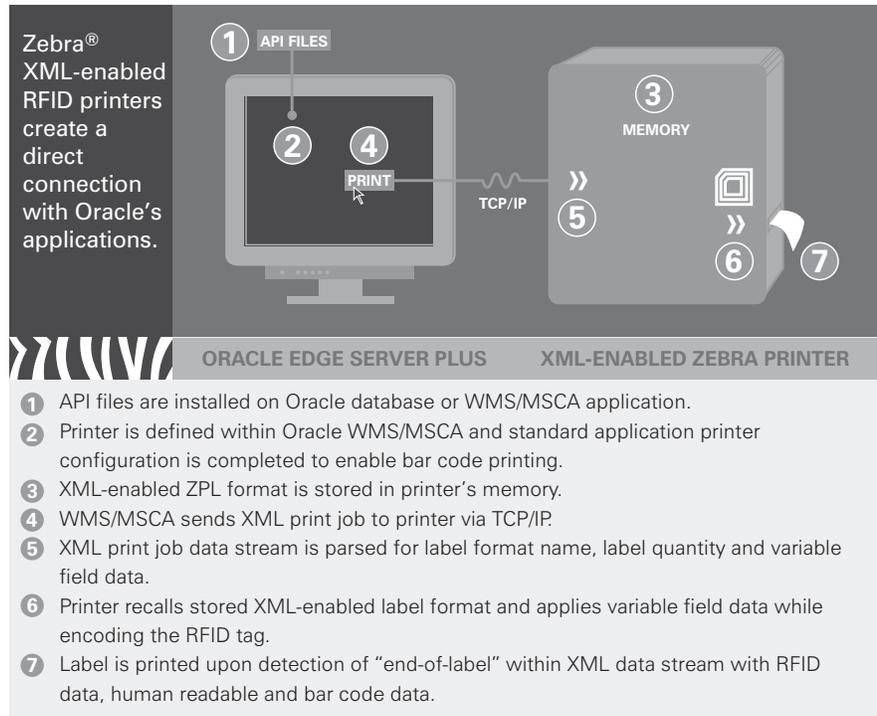
Another option is to write code or use middleware to give the Oracle application the ability to generate bar code output. This method can be used for label printing or to add bar coding to forms and reports. Bar code labeling operations require the development of printer drivers so the Oracle application can communicate with the specific models of label printers that are used. The customization required for this approach can be



time consuming and expensive. Maintenance and total cost of ownership expenses may also be high because software development costs could be incurred every time new label formats, features or printer models are added to the operation.

Z e b r a D i r e c t - C o n n e c t

Zebra's direct-connect solution uses firmware on the Zebra bar code label printer and synchronous mode communication with Oracle WMS and MSCA to process the Oracle XML data stream. Here is how it works.



An event in the Oracle business process triggers a request for a bar code label. The request may be generated automatically as part of the business rules, or may be requested by the Oracle user.

Bar code label requests are forwarded to the Oracle application, where rules and profiles verify that the user is authorized to access the information and produce the desired label. The profile also directs the label output to a specific Zebra printer associated with the user.

The Oracle application then makes procedure calls in Java code to access the information needed to produce the label. The label request and required data are formatted into a native XML message for synchronous communication. The print job is transmitted to the Zebra printer via TCP/IP. Wireless, Ethernet and other TCP/IP-supported networking can all be used for communication between the Oracle application and the printer.

Zebra's XML-enabled printers understand the native XML data streams that Oracle WMS and MSCA produce. The incoming XML message includes a header that specifies the required label format name and label quantity,



and the rest of the data stream specifies the variable field data. Printer firmware processes the incoming XML data stream, calls up the label format, and populates it with the variable data from the XML message.

The printer then outputs the bar code label. All the different label formats required to support Oracle business processes can be stored directly in printer memory.

A p p l i c a t i o n R e q u i r e m e n t s

The host application, Zebra printer, and label formats must all be enabled to support direct connection and label printing. The requirements for each component are outlined below.

The solution is currently available for the Oracle Warehouse Management System and Mobile Supply Chain Applications version 11i9 or higher. A PL/SQL script to process the procedure calls is added to the Oracle application. This small script requires one-time installation and manages the API for synchronous communications.

On the printer side, direct connection requires XML-enabled printers that operate on Zebra Programming Language (ZPL®). Printer firmware determines which Zebra models can process Oracle data streams. Zebra's XML-enabled *XiIIIPlus*™ series were the first printers to support direct connection to Oracle. Now, Zebra also offers XML printing capability on its rugged Z Series® printers as well as on its *PAX4*™ series print engines.

The label format itself must also be XML-enabled. Zebra has already XML-enabled 10 label formats that support the 10 default label types in Oracle WMS and MSCA. These pre-formatted XML formats have been loaded and are resident on XML-enabled *XiIIIPlus* printers. If additional label formats are needed, users will need to create them with label design software. One option is to use Zebra's ZebraDesigner for XML label design software, a demo version of which is included on the CD that comes with XML-enabled printers. Designing labels within ZebraDesigner requires no ZPL programming skills to create XML-enabled label formats.

W h e n t o U s e E a c h A p p r o a c h

Neither middleware nor the Zebra direct-connect approach is ideal for all user environments. Each has specific advantages depending on an enterprise's legacy printing system and application management preferences. Zebra recognizes that one approach is not right for all users and will continue to support and promote its partner solutions when they are a superior alternative to the direct-connect offering.

Third-party applications are the best option for companies who use bar code printers from multiple vendors. Middleware converts Oracle XML data streams so they can be recognized by each different printer control language (PCL) present in the enterprise printing operation.

Middleware also provides centralized management and control features that many users find desirable. These features are not unique to the Oracle environment and may be available in other networking and connectivity tools.

Zebra's direct connection approach is appealing to organizations that want to minimize their bar code printing support requirements and simplify their system architecture. Direct connection eliminates the need for middleware to intervene and process communication between Oracle WMS or MSCA and the printer, which removes a potential source of failure from the system. It also eliminates related support costs and licensing fees. The direct-connect approach is also simpler to set up and maintain because it requires less programming and software integration than a system including middleware products. Enterprises that use the default label





types native to Oracle WMS and MSCA may not even have to design new labels because Zebra ships XML-enabled versions of these label formats pre-loaded on its printers. Zebra’s direct-connect solution is the most cost-effective and simplest option for enterprises that will begin bar code printing from Oracle for the first time, and those who have an all-Zebra bar code printing environment.

Guidelines for when each approach is advantageous are summarized in the table below.

Condition	Zebra Direct-Connect	Third-party Application
New application, homogeneous printer environment	√	
Printers from multiple vendors		√
Single application desired for bar code printing on labels, documents and reports		√
Lowest total label printing cost	√	
Ease of integration, implementation and support	√	

C o n c l u s i o n

Direct connection represents a fresh new alternative for bar code printing in the Oracle environment, but is not the optimal choice for all environments. Besides understanding the technical requirements of each approach, organizations need to analyze their support, software development, and architecture strategies to understand which approach is best for them. Zebra offers direct connection as one option in a range of solutions, and will continue to work with its partners to provide solutions for a variety of enterprise bar code printing activities.

Zebra offers a variety of connectivity, networking and software tools to support its products. With over 35 years of experience and more than 5 million printers in use, Zebra is the trusted brand for more than 90 percent of Fortune 500 companies. Visit www.zebra.com to learn more about Zebra printers, labeling software, connectivity and support options and integration partners.



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It's All in the Wrist: Improving Patient Safety with Bar Code Wristbands



A ZEBRA BLACK&WHITE PAPER





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Executive Summary

The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) placed “Improving patient identification” at the top of its list of National Patient Safety Goals (NPSG) again for 2006, a position it has held for years. “Reduce the risk of healthcare-related infections” is on the list for the third consecutive year. Also in 2006, the FDA will begin requiring unit-of-use bar code identification on medications to be dispensed in healthcare facilities. The *Hospitals and Health Networks* 2005 Most Wired Hospitals analysis showed for the first time that hospitals with broad use of information technology have better patient outcomes. Efforts to improve patient safety and quality of care must still be balanced against privacy requirements. Accurately identifying patients with bar coded wristbands is the key to all these initiatives. Numerous reports have shown bar code-based systems prevent medical errors. This white paper will show how.

By now most healthcare administrators are well aware of the Institute of Medicine (IOM) report *To Error is Human: Building a Safer Health System*. The IOM report stated preventable medical errors cause up to 98,000 deaths and 770,000 adverse events in the U.S. each year. Another 90,000 deaths result from the up to 2 million infections patients acquire in U.S. hospitals, according to Centers for Disease Control (CDC) estimates. The report helped motivate the FDA to create its first requirement for pharmaceutical bar code labeling at the unit-of-use level. The FDA’s own research concluded that increased use of bar code-based bedside medication administration systems alone will prevent 500,000 adverse drug events and blood transfusion errors over 20 years, keeping an estimated \$93 billion in treatment costs out of the healthcare system. Identifying patients with bar coded wristbands is a first step healthcare organizations can take to make these improvements.

Checking the “Five Rights”—Right Patient, Right Medication, Right Dose, Right Time and Right Method of Administration—prevents most medication errors. But all too often, the five rights check is flawed because it fails to guarantee the right patient. Today, approximately 5 percent of patient wristbands are erroneous or missing altogether. Missing, poor-quality, and incorrect wristbands are a major contributing factor to many adverse events.

Bar coded patient wristbands provide the necessary foundation for preventing errors by ensuring accurate patient information is always available at the point of care. Bar code wristbands will improve the effectiveness of five rights checks for drug administration and provide a platform to extend safeguards to other patient care activities. Wristbands are now available with antimicrobial coatings that help prevent infection by killing leading types of bacteria, including *S. aureus*, *P. aeruginosa* and *E. coli*.

Automated medication administration, electronic patient records, computerized prescriber order entry (CPOE), and bar code point-of-care (BPOC) and other automated procedures for improving patient care all rely on accurate input that bar coding can provide. This white paper will explain the role wristbands can play in improving patient safety and freeing nurses and other valuable medical personnel from paperwork and clerical tasks. It will clearly explain:

- How bar coded wristbands can satisfy JCAHO National Patient Safety Goals (NPSG) and other requirements;
- Infection-fighting wristband material options;



- Applications for bar coded wristbands, including medication administration, test and sample management, blood dispensing, CPOE and other patient-care actions, plus uses for billing and administrative activities;
- What information can be contained in the bar code and the types of bar codes that can be used;
- How radio frequency identification (RFID) fits in;
- Options for printing and reading bar code and RFID wristbands in patient care settings.

Healthcare providers don't need to create full-scale, facility-wide systems to benefit from bar coded wristbands. Limited applications that can be developed fairly quickly can provide tremendous safety and time-saving benefits. By understanding the capabilities, options, and advantages that bar coded wristbands provide, organizations can begin planning systems that will provide the foundation for multiple improvements and long-term benefits. After all, the foundation of the "Five Rights" is "Right Patient." Once organizations can consistently and accurately identify the right patient, many improvements can follow.

Wristbands, Bar Codes, and JCAHO

Bar coded wristbands provide a convenient way to comply with the National Patient Safety Goal (NPSG) to "Improve the accuracy of patient identification," which JCAHO has included in its goals annually since 2003. Antimicrobial wristbands also contribute to fighting infection, which is another recurring NPSG. Compliance with the patient ID goal requires that at least two patient identifiers be used whenever blood samples are taken and medications or blood products are administered. A bar-coded wristband can provide two forms of identification in one easy-to-access place by encoding the patient name and identification number. JCAHO recognized the value of this approach in an FAQ item on its Web site that explains the safety goal: *"The two identifiers may be in the same location, such as a wristband.... Acceptable identifiers may be the individual's name, an assigned identification number, telephone number, or other person-specific identifier. Bar coding that includes two or more person-specific identifiers (not room number) will comply with this requirement."* Once wristbands are bar coded to provide basic patient identification, numerous other identification, tracking, and data collection applications can be added to take advantage of bar code data entry.

How Bar Code Wristbands Work

The bar code is simply an alternative to text for expressing information. Anything that can normally be printed on a wristband can be encoded in a bar code. The bar code frequently serves as a key to a database. When it is read, the scanner decodes the symbol and instructs a computer to look up or update the specific record that corresponds to that patient. Bar code scanners are always used with computers, although they are frequently combined into a single handheld unit. Bar code scanners can also be used with virtually any type of computer including PCs, laptops, tablets, and PDAs. The bar code reader may communicate with the computer through a cable or wireless connection.

Bar code wristbands protect patient privacy because the patient's name does not need to appear anywhere on the wristband for the scanning system to recognize it. There is usually no patient information encoded in the bar code itself, but merely an ID number (like a serial number) that tells the software application where to look



up the patient information. Information encoded in a bar code instead of being expressed in text aids compliance with HIPAA privacy requirements. The patient may be identified by encoding their name in the wristband, or by assigning a random, unique patient ID number that can be encoded and printed in human-readable text. This approach satisfies both JCAHO and HIPAA requirements.

Because bar codes store data in less space than is required for the same text, bar coded wristbands can include more information than traditional text wristbands. In addition, two-dimensional (2-D) bar codes can store exponentially more information, so they can serve as portable records or could even allow a digital photograph of the patient to be encoded on the wristband and viewed on a PC or portable computer whenever the bar code is scanned.

The biggest advantage bar code wristbands provide in healthcare settings is not in the amount of information they hold, but in how they enable information to be presented and recorded. A study of wristband problems by the College of American Pathologists (CAP) found that 8.6 percent contained erroneous data and 5.7 percent had illegible data. With bar coded wristbands, as long as information is entered accurately at admitting, nurses, doctors, medical assistants, lab technicians, and other personnel can be sure that the patient will be identified correctly and the right information will be presented every time the wristband is scanned. Bar code scanning is extremely accurate—much more accurate than any manual means of information recording. Studies have shown that skilled typists make an average of one error per every 300 keystrokes. Busy nurses on their feet can scarcely be expected to do as well. The error rate for bar code data entry is less than one per 3 million scans. Bar codes improve patient safety by improving the quality of information in patient records.

Bar code data entry is also much faster than manual data entry. The Carilion Health System reported time savings of 2.75 hours per 12-hour nursing shift after switching to a bar code-based system to record medication administration.

Uses for Bar Code Wristbands

Bar code wristbands can be beneficial wherever patients need to be identified or information needs to be recorded. Improved accuracy and time savings translate into benefits in any environment. This enables facilities to earn a positive return on investment with relatively small, standalone applications, then extend the use of wristbands into additional departments. The best-known uses for bar code wristbands are in conjunction with automated medication administration or computerized prescriber order entry (CPOE) systems. However, smaller applications that require less time and resources to implement can also provide many accuracy and time saving improvements. Scanning the patient wristband can help prevent errors in sample collection and processing, administration of tests and therapies, patient transfers and meal management, plus several administrative and billing activities. Uses can be expanded without requiring changes to information on the wristbands or the equipment used to produce them.

Besides serving as the key to accurately recording what is done with patient care, computerized systems can offer the additional safeguard of issuing alerts when things are not done. This is one of the most valuable aspects of medication administration applications. Approximately one in five doses of medication administered in hospitals and skilled nursing facilities is given in error according to an *Archives of Internal Medicine* study. Time of administration was the most common mistake. Computerized systems can issue alerts if the end of the prescribed time is nearing and the medication hasn't been administered. Different applications may also issue



alerts or reminders to collect samples, or check vital signs or other conditions. More details on the uses, functions, and benefits of bar code wristbands are presented in the following sections.

Medication Administration

One of the most effective ways to take advantage of bar coded wristbands is to combine them with automated medication administration systems. First, the nurse scans the wristband to identify the patient with a bar code scanner that is interfaced to a mobile or bedside computer. The nurse then enters information about the drug to be administered, typically by key-entering the NDC number, ideally by scanning a bar code on the pharmaceutical itself. (All pharmaceuticals dispensed in hospitals are required to have a bar code identifier at the unit-of-use packaging level by April, 2006, according to an FDA rule issued in February, 2004.) Application software compares the medication to information in the patient's electronic record, which was called up by the wristband scan, to verify that the patient should be receiving the medication at the indicated dosage at that time. The nurse continues after getting a confirmation or warning on the computer screen. Warnings are often accompanied by an audible beep. Finally, nurses scan their own bar coded ID badge to record who administered the medication. The system essentially automates the Five Rights check, with the wristband scan verifying right patient, and the database lookup from the medication scan verifying the other elements.

The FDA estimates the use of such systems would intercept 50 percent of all medication administration errors. In practice, healthcare providers have achieved much better results. The Veteran's Administration (VA) implemented point-of-care scanning for medication administration at all 173 of its hospitals after reducing errors by 86.2 percent during a trial.

Anecdotal information about the cost of automated medication administration systems is not especially useful, because the implementation cost varies widely according to the number of nurses that need to be equipped; the status of existing networks, databases, and information systems; the type of mobile computers that are desired; and the sophistication of the software. For example, the application could be an internally developed database lookup, or could be part of a much larger computerized prescriber order entry system. In documentation released with its unit-of-use bar code rule, the FDA estimated the average hospital would spend \$448,000 to implement a computerized medication administration system. This figure gives some idea what a system might cost, but is not necessarily a good rule of thumb because of the variables described above. See the complete FDA unit-of-use rule at www.fda.gov/OHRMS/DOCKETS/98fr/04-4249.htm for a detailed analysis of projected implementation costs and benefits.

Better information is available regarding the benefits a system can provide. First and foremost, automated medication administration improves patient safety by preventing errors. The widely cited Institute of Medicine report *To Error is Human, Building a Safer Health System* estimated there are more than 770,000 adverse events, resulting in up to 98,000 deaths, in the U.S. each year from preventable medical errors. One study suggested one in five medication doses administered in hospitals or skilled nursing facilities is given in error. The FDA studied the incidence of adverse drug events (ADEs) and found they range from 2.4 percent to 6.5 percent per facility, with a mean rate of 4.3 percent. For its analysis, the FDA used an average cost per ADE of \$2,257, although many other estimates have been put forth, most of them higher. Therefore, hospitals spend an average of \$9,705 per 100 admissions in treating the effects of ADEs (4.3 ADEs per 100 patients x \$2,257 per incident). This equates to ADE-related costs of \$97 per admission.

Thus, there is a strong financial incentive to prevent medication errors in addition to safety and moral considerations. A facility that averages 20 daily admissions could expect to incur \$708,100 in annual expenses related to



ADEs. If an automated administration system intercepted just 50 percent of potential medication errors, as the FDA suggests, the facility would avoid costs of \$354,050. If the system was 86 percent effective, like the U.S. Department of Veterans Affairs (VA's), the cost avoidance climbs to \$608,966, or \$8,342 per 100 admissions.

Reduced errors also lead to reduced liability and exposure to malpractice suits. Medication errors are the basis of 5 percent of all malpractice claims, according to an analysis by Dr. Byron J. Bailey, a fellow of the American College of Surgeons (FACS); an article published in *Legal Medicine* reports approximately 30 percent of all malpractice suits involve drug-related injuries. In 2000, the average jury award in medication error cases was \$636,844, according to Jury Verdict Research. An automated medication administration system could pay for itself by preventing one malpractice suit, while improving the safety of every patient in the facility.

Blood Administration

The process for verifying that patients receive the right blood products is very similar to the process for medication administration. Blood products carry a standardized bar code identifier, which makes it easy to create scan-based safety checks. There are an average of 414 annual transfusion errors in the U.S., or about one in 38,000 transfusions, compared with 1.25 million adverse drug events annually, according to the FDA. The maturity of bar code identification in blood collection, processing, and distribution may explain the tremendous disparity in the amount of blood administration errors compared to medication administration errors.

Sample Management

Bar codes are important quality assurance tools for tracking medical samples. Quality assurance procedures can be extended right to the patient's bedside by using bar code scanning to associate samples with the patients. For example, before taking a sample, a nurse could scan the patient's wristband and check a mobile computer to verify that the sample is needed and hasn't already been taken. While the sample is being drawn, a mobile printer would automatically produce a bar coded sample ID label, using information from the patient scan and the test order in the mobile computer. The label would be applied to the sample immediately, which would significantly reduce the possibility that the sample would be misidentified. An alternative is to produce a set of bar code labels during the admissions process and keep them with the patient's chart to be applied when needed. However, this process is not recommended because it is not failsafe. The wrong label can be put on the wrong sample, and labels can easily be lost or misplaced, or worse yet, attached to the wrong patient's chart.

In the lab, scanning the bar code on the sample container saves technicians the time of entering the patient information into their computer systems. The required tests could even be encoded on the sample label in a two-dimensional (2-D) bar code, to eliminate any chance of confusion as to what tests should be performed. Bar code data entry could also aid test result recording and improve patient record accuracy, while simultaneously providing time savings for laboratory staff.

Treatment

Imagine an x-ray technician telling his replacement during the shift change, "I'm running a little late. Can you take my last patient and give a portable chest x-ray to Mrs. Johansson down the hall?" The technician just coming on then takes the equipment down the hall, sees a patient room marked "Johnson" and enters to take the x-ray. A bar code-based confirmation system would prevent him from performing the procedure on the wrong patient. In this case, the error would probably have resulted in little more than having taken a wasted x-ray and having to redo the procedure on the right patient. Had the patient been misidentified for surgery, the result could have been fatal.



Wristband scanning for patient verification could help surgical teams, respiratory therapists, radiology technicians, physical therapists, and other professionals ensure they are providing the right treatment or service for the right patient. “Procedures performed when not indicated” trails just behind “Medication error” among causes for malpractice claims, according to the Bailey analysis. Avoiding these errors provides very significant safety and liability benefits.

Non-medical Applications

However it is used, bar coding provides fast, accurate data entry. The benefits of saving time for nurses are obvious. However, timesaving benefits also can be gained in a variety of administrative and non-medical activities where patient information is recorded. The wristband can serve as a credit card to be scanned to capture charges for supplies or optional services like telephone. Bar coding can even make hospital food more palatable: At some facilities, foodservice workers scan the patient wristband and enter the meal order into a PDA. The process helps ensure patients will get what they requested, without generating paper orders for foodservice staff to sort, read, and process. Many facilities use non-wristband bar code systems for materials management, asset tracking, and inventory control. Zebra’s white paper “Increasing Profits and Productivity: Accurate Asset Tracking and Management with Bar Coding and RFID” provides a thorough overview of these systems, including guidelines for calculating return-on-investment. It can be found at www.zebra.com.

Wristbands can also be incorporated into physical security systems, which is often done by using wristbands with radio frequency identification (RFID) chips. RFID is the same technology used in hands-free key cards used to open doors and parking gates. RFID chips can be embedded within bar code wristbands to provide an invisible, unobtrusive form of protection. The chip on the wristband is read when the patient attempts to leave the ward, which may sound an alarm, trigger a notification at the nurses station, or even lock the door. In healthcare settings RFID wristbands are typically used to protect infants, Alzheimer’s patients, and others deemed a high risk for abduction or wandering.

P r o d u c i n g B a r C o d e W r i s t b a n d s

The attributes of a good wristband are easy to understand but surprisingly difficult to attain. Numerous studies have shown that between 2 percent and 6 percent of patients aren’t properly identified by their wristbands. Missing wristbands are by far the most common problem, accounting for about half of all wristband errors, but erroneous information and illegible text all plague healthcare professionals who rely on wristbands to accurately deliver care. A College of American Pathologist’s (CAP) study of 142 institutions uncovered 22,267 patient identification errors. First and foremost, the wristband must stay on the patient and remain readable for the duration of the hospital stay. It also must uniquely identify the patient in a HIPAA-compliant manner. Bar code wristbands produced with purpose-built printers will conveniently and cost effectively satisfy all these conditions.

The process for planning and producing bar code wristbands is not much different than for traditional wristbanding. There are four decisions that must be made to plan a wristband printing system, and only one is unique to bar coding:

1. What information will be included on the wristband?
2. What kind of bar code will be used to encode it?
3. How should the wristband be printed?
4. What material should be used?



The following sections will help answer these questions so you can create a wristband program that provides the foundation for numerous quality and efficiency improvements.

What Information to Include

The information content of the wristband is a key factor in determining the type of bar code to use and how to produce the wristband itself. Ideally, the wristband will include two forms of patient identification. Encoding the patient's name in a bar code and printing an ID number in human-readable text will satisfy both JCAHO and HIPAA requirements. Any type of text can be encoded in a linear bar code, so blood type, allergies, primary physician, and other information could also be securely included on the wristband. The wristband material itself may also be color-coded to convey special cautions or other information. Still more information can be encoded in an RFID chip in the wristband.

Patient care practices and the information systems infrastructure also play roles in determining wristband content. The more frequently information needs to be accessed, the more it makes sense to include the information on the wristband, in text and/or bar code format. If nurses can't conveniently access routine information from the bedside, there is a compelling reason to investigate ways to provide the information on the wristband. Conversely, if nurses use mobile computers to access complete electronic patient records over a wireless LAN, there is little need for the wristband to serve as anything more than a key to a database lookup.

Selecting a Bar Code Type

There are many different types of bar codes, which are called symbologies. They vary by the amount and type (e.g. numeric only or alphanumeric) of data they can encode, the space they require to do so, and other factors. Virtually any bar code symbology can encode patient ID information to conveniently fit on a wristband and leave room for text and graphics. Two-dimensional (2-D) symbologies can serve as limited portable record files or to provide commonly needed patient information such as allergies, primary physician, blood type and reason for admission.

Bar code scanners can recognize multiple symbologies. Therefore, it is generally not necessary to match the symbology on the wristband with bar codes that may be scanned on blood bags or unit-of-use medication packaging. It is generally recommended to choose a symbology that encodes the desired information in the least amount of space. Extra space on the wristband can be used for additional text or graphics, or for the bar code to be printed larger, which makes it easier for scanners to read. Once the information content requirements are set, the bar code solutions provider will be able to recommend a symbology that provides the best combination of performance and space efficiency.

Popular options include Code 128 and Code 39 linear symbols, PDF417, Data Matrix and Aztec Code two-dimensional symbologies, and the reduced space symbology (RSS) family, which includes linear and 2-D formats. Laser bar code scanners cannot read matrix-type 2-D symbologies (e.g. Data Matrix and Aztec Code). These symbologies must be read with a CCD or imager, which are available as integrated units within handheld computers used for point-of-care applications, and as peripheral units that plug into handheld computers or PCs.

Code 128

Code 128 can encode the full 128-character ASCII character set. It is popular for use on wristband bar codes because it is one of the densest linear symbologies, meaning it can encode information in less space than symbologies with lower densities. Code 128 is a variable-length symbology so symbols can be as long as necessary to encode required data. Code 128 is also the standard for identifying blood products. Codabar, an all-numeric symbology, was previously the bar code standard for blood bag identification.



Code 39

Code 39 (also called Code 3 of 9) is one of the oldest and most widely used symbologies in the industry. It is a variable-length alphanumeric symbology for encoding 26 capital letters plus numerals and seven special characters. An extended version is available that supports all 128 ASCII characters. Code 39 is less dense than Code 128.

PDF417

PDF417 is a two-dimensional symbology that can resemble a series of small 1-D codes stacked upon each other. PDF417 offers high data capacity in a relatively small space, and is a popular option when organizations want to include information beyond the patient name or ID number on the wristband. Alphanumeric text, photographs, signatures, and other images and file types can be encoded in PDF417 symbols. Up to approximately 2,000 alphanumeric characters can be encoded in a PDF417 symbol, although symbols printed on wristbands of normal width would hold less.

Data Matrix

The Data Matrix 2-D symbology is excellent for encoding information in a small space. Symbols are scalable and can hold a variable amount of alphanumeric information up to about 500 characters. Data Matrix is a matrix symbology made up of light and dark squares, and can't be read with laser scanners.

Aztec Code

Aztec Code is a 2-D matrix symbology capable of containing from 13 to 3,832 numeric characters or 12 to 3,067 alphabetic characters. Aztec Mesas are Aztec Code-based supplements that can be added to linear bar code symbols to encode additional information. The resulting symbol is a composite of linear and 2-D symbologies.

RSS

The RSS family of symbologies was created specifically for use in applications where space is limited. RSS-14 is an all-numeric symbology that is a leading option for unit-of-use pharmaceutical marking, but can also be used on wristbands. RSS Stacked is an alphanumeric symbology that provides additional data capacity by stacking a series of RSS symbols. Other symbologies in the RSS family, including RSS Truncated and RSS Composite, provide options for additional space savings and data capacity. The RSS family has primarily been used for item marking and not for patient identification.

Wristband Printing Options

Bar codes can be printed directly on wristbands when they are produced, or printed as separate labels and applied by hand. The one-step process is the most convenient, although separate label printing is a good option for organizations that want to use insert-type wristbands (more on this in the Selecting Wristband Material section). Bar code labels can also be applied to non-insert wristbands, but great care must be taken to ensure the label will not peel, the adhesive will not fail, and the symbol will not become damaged.

Either thermal or laser printers can be used to print bar code wristbands. Thermal printers are much better suited for producing bar codes, while lasers offer the convenience of using the same unit to output forms and wristbands. Both technologies can print bar code directly on wristbands and on adhesive labels.

Thermal printing's performance and total cost of ownership advantages more than offset the perceived convenience of using an office laser printer for creating wristbands. Thermal is the dominant bar code printing



technology used throughout industry for mission-critical operations. Global express delivery services, manufacturers, military organizations, and logistics providers all use thermal printers to ensure their bar codes will get materials where they're needed without fail.

Healthcare quality requirements and usage environments demand the excellent bar code symbol quality that thermal printers provide. Scanners decode the information from bar codes by measuring the differences between narrow and wide elements, and the contrast between dark bars and light spaces. If the ratios or contrast are slightly off, the bar code may be difficult or impossible to read. Think about the times you've seen a supermarket checkout clerk struggle to get an item to scan. After multiple attempts the clerk becomes frustrated and key-enters the U.P.C. number. By valuing bar code quality, hospital administrators can prevent a similar scenario from happening at the patient bedside. A nurse's time is too valuable to waste by repeatedly trying to read poor-quality bar codes, and rushed, manual data entry by a frustrated nurse carries too high of a risk for errors. Printing the bar codes in vertical, or ladder, orientation, facilitates faster, easier scanning than when symbols are printed horizontally (a.k.a. picket fence orientation).

Thermal printers produce wristbands and labels on demand, one at a time. Laser printers, by contrast, often need to print an entire sheet of labels at once, which creates waste and unnecessary expense. Laser printers can be prone to jamming when used to print labels because of adhesive buildup, which isn't a problem for thermal printers, which are specifically designed to print labels, not documents. Thermal printers can accept a very wide variety of wristband and label media, so a single unit can be used to print wristbands, sample labels, asset tags, file labels, and other bar code identifiers. The differences in printing and media capabilities give thermal printers a total cost of ownership advantage over lasers for bar coding in healthcare. For more information about print technologies for bar coding, see Zebra's white paper "*Best-in-Class Bar Coding: The Business Case for a Dedicated Thermal Label Printer*" on Zebra's Web site at www.zebra.com.

Currently, only thermal printers can print a bar code wristband while simultaneously encoding an RFID chip embedded in either the label material or wristband itself. Thermal wristband printers are therefore an excellent, efficient choice whenever RFID is used, either in combination with bar codes or as the primary information carrier.

RFID is an emerging technology throughout healthcare, life sciences, and other industries. Labels with RFID chips embedded within them can hold more data than bar codes and be read automatically with no user intervention required. The FDA has strongly suggested the use of RFID to safeguard against pharmaceutical counterfeiting. Many other organizations are promoting the technology for inventory, asset, and supply chain management. To learn more about RFID and its potential implications in healthcare, visit www.rfid.zebra.com and www.lifesciences.zebra.com.

Wristband Materials

The print method, bar code symbol, and data content won't make any difference if the wristband doesn't stay on the patient's wrist. All too often, it doesn't. Missing wristbands are the most common wristband error identified in every published study on the subject. Missing wristbands account for about half of all wristband errors, and different studies have found between 2 percent and 10 percent of all hospital patients are without a wristband at any given time.

There are many secure and durable wristband materials that enable bar codes and text to be printed directly on the wristband. If bar code labels will be inserted into the wristband, even more materials are available because there are no limitations regarding thickness or fasteners that will run through the printer.



Because the wristband must remain with the patient and the bar code must remain readable for the duration of the admission, it is important to consider all the potential exposures and usage conditions when selecting material. Moisture, soaps and foam washes, temperature extremes, and repeated handling all have the potential to damage images, dissolve adhesives, or destroy the wristband. Using low-quality printers and materials may also cause fading, scratching, or wrinkling that renders the bar code useless.

Materials must be matched to the print method. There are two forms of thermal printing, direct thermal and thermal transfer, and each has different media requirements. Thermal-transfer printers use a printhead to heat a ribbon that produces images on the surface being marked. The ribbon can retain the printed image, so it should be incinerated or shredded to meet HIPAA privacy requirements. No ribbon is used in direct thermal printing, which applies heat directly to the material to produce the image.

Introducing bar coding puts a few limitations on the palette of wristband colors to choose from. Because successful bar code reading relies on contrast between dark and light elements, dark backgrounds are not recommended because they may not provide enough differences between bars and spaces. Some bar code reading technologies are much more tolerant than others regarding contrast, and colorful bar coded wristbands are commonly used without causing problems. Printing a black bar code on a white label and applying it to any colored wristband is always an option.

Zebra Wristband Solutions

Zebra Technologies offers a complete range of thermal printers and wristband supplies, including antimicrobial wristbands that can be used in bar code and RFID applications. Zebra's solutions include multiple models of wristband printers, including those capable of encoding RFID tags and printing photos, and Z-Band® Direct wristband supplies, which are available in dozens of size, color, and fastener combinations. Z-Band Direct earned the 2004 Frost & Sullivan Product Leadership of the Year Award for healthcare informatics.

Zebra's Healthcare Starter Kit includes an H 2824-Z™ direct thermal bar code printer, a full roll of award-winning Z-Band Direct thermal wristbands, and a special adapter to ensure proper media handling and outstanding print performance on wristband sizes ranging from pediatric to adult.

The H 2824-Z printer is available with a variety of interfaces, including Ethernet, USB, serial and parallel, so it can be seamlessly connected with a variety of hospital computer systems. The printer is a direct-thermal model with an ultra-compact footprint that can accept a variety of wristbands with different protective coatings and fastener types. It can also accept label media and print labels to identify specimens, prescription vials, equipment, charts, test results, and other documents.

The S600™ tabletop printer is recommended for high-volume operations requiring between 1,000 and 5,000 wristbands daily. It also supports a variety of interfaces and accepts multiple types of wristband material.

All Z-Band Direct wristbands are latex-free and formulated to resist blood, soaps, lotions, alcohol, and other fluids that can make text and bar codes unreadable. Tamper-evident features and a UV varnish are standard on all Z-Band Direct Wristbands to provide additional protection. Z-Band Direct wristbands are available in multiple colors, which can be used to provide quick visual references for allergies, special types of care, privileges, wards, etc. Z-Band QuickClip™ has a clip closure to provide a secure seal.

Z-Band 4000 wristbands are for use with thermal-transfer printers. They are available in white, yellow, and blue in many size and coating options. Antimicrobial coating is available for Z-Band Direct and Z-Band QuickClip



wristbands. Antimicrobial wristbands can still include topcoats that provide other protection. Zebra's antimicrobial wristbands kill *S. aureus*, *P. aeruginosa* and *E. coli* bacteria, which are the three leading causes of infection in U.S. hospitals.

Zebra also has numerous other printers and supplies that are well-suited for a variety of healthcare labeling needs, including unit-of-use pharmaceutical marking, specimen tracking, file and form ID, asset management, inventory control, RFID tagging applications, and more. Visit www.zebra.com and browse the Industry Solutions section for more information about bar code and RFID printers and supplies and how they can be used to improve patient safety and procedural efficiency.

C o n c l u s i o n

There are many ways to benefit from bar coded patient wristbands, which means there is no need to wait for mandatory bar code drug labeling to take effect to begin taking advantage of the accuracy and convenience that bar coding provides. Bar coded patient wristbands can help healthcare facilities comply with JCAHO National Patient Safety Goals today, while positioning them for dramatic safety and quality improvements enabled by complementary systems. Quality care begins with quality wristbands.

Zebra Technologies is a world leader in bar code, RFID and ID card printing with an installed base of more than 4 million units, including systems at healthcare facilities for patient identification, pharmacy, materials management, security, and employee identification. Together with its partners, Zebra has the experience, industry knowledge, and specialized products needed for successful healthcare implementations. Zebra is also a leader in bar code and RFID standards development that actively participates in the work of life sciences industry associations so that it will be prepared to meet the emerging needs of its customers. Contact Zebra at +1 800 423 0442 or visit www.lifesciences.zebra.com for more information about bar code printing solutions for healthcare.



Notes



Notes



GLOBAL/AMERICAS

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Kingdom

ASIA-PACIFIC

Australia, China, Japan, South Korea

LATIN AMERICA

Florida (USA), Mexico

AFRICA/MIDDLE EAST

South Africa, United Arab Emirates

**Business Computer Applications
Information Services**
Atlanta, Georgia

Guide

**To the
BCA Data Center
Disaster Recovery Program**

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I. Introduction

Business Computer Applications Information Services (BCAIS) owns and operates a computer data center in Dalton, Georgia, with an alternate site in Nashville, Tennessee, which supports data processing services for the internal office business functions as well as database servers and ancillary equipment (tape drives, etc) designed to support the Pearl application used by Pearl clients in an ASP model. BCAIS is the custodian of these applications and their associated data assets and is responsible for the physical environment and equipment assets. It employs generally accepted systems management practices in its daily operation and in its contingency planning.

In the event of a disaster that would render the database and or application servers unable to provide normal production computing services, BCAIS has an obligation to restore service in a timely manner. Toward that end, BCAIS has established a Disaster Recovery Program. This program exists to benefit BCAIS clients and create a guideline to follow for the BCAIS disaster recovery team.

Use of this Manual

This manual describes the program that BCAIS has set in place and outlines disaster recovery roles and obligations within this program. It provides steps to be followed to meet the disaster recovery requirements.

Program Mission

The mission of the BCAIS Disaster Recovery Program is:

To develop, demonstrate and sustain a capability to restore the computing environment provided by BCAIS to its internal business functions and clients before the unavailability of these systems causes the company or clients to experience unacceptable financial losses or organizational disruption and before the client is rendered unable to meet its obligations to its patients.

The mission of this program is enduring and not expected to change over time.

Program Scope

The BCAIS Disaster Recovery Program described herein addresses the production servers and databases supported on the IBM P Series AIX/IBM AIX servers, Windows Servers, and Oracle databases operated by BCAIS on behalf of its business office and clinics. These machines and databases drive the Pearl Electronic Medical Record (EMR) system used at by clients, and the Oracle Financials application used to keep the company books

The following are **excluded** from the scope of this program:

- Test and development platforms on the HP 9000/IBM AIX computers.
- Company: Local Area Networks (LANs), associated file and network services, LAN-attached or stand alone personal computers (PCs).
- Other

The scope of the BCAIS Disaster Recovery Program may be revised over time as a response to new or changing requirements. Any modification in scope will be included in revisions of the document.

Program Objectives

The current objective of the BCAIS Disaster Recovery Program is to restore and make accessible to its end users critical and vital operating environments and data within **24 hours** of a disaster declaration. This 24-hour period was established to be the *outage tolerance* of the overall computing environment.

Objectives of the BCAIS Disaster Recovery Program are expected to evolve with new technology deployment and personnel.

II. Program History

Background

Hot Site

In order to facilitate the restoration of applications within 24 hours, BCAIS has implemented a hot backup site for critical applications and network services. Backup copies of all major financial and clinical systems run in near real time mode with production at this site. This hot site is also available for BCAIS to exercise its recovery plan in test mode. The hot site is currently configured and on line.

Disaster Management Support

Administration Support

The Administration Support Team provides administrative support for disaster team activities; assists in the preparation of insurance claims; types team documentation and collects/coordinates team reports and information; and assists with disaster notification of Recovery Teams.

Logistic Support

The Logistics Support Team provides procurement of goods and services, transportation, mail processing, warehousing and furniture installation and repair.

Human Resources Support

The Human Resources Support Team works with the Disaster Management Team to coordinate human resource activities and resolve human resource issues; determine status of personnel adversely affected by the disaster; and coordinates replacement personnel requirements. The recovery strategy is to make use of other available BCAIS facilities for basic technology requirements so that service can continue.

Communications Services Support

The Communications Services Support Team works with the Disaster Management Team to gather accurate disaster information and promptly inform management, customers, employees and the general public using appropriate communication channels. The recovery strategy is to make use of other available BCAIS facilities for basic technology requirements so that service can continue.

Financial Support

The Financial Support Team provides emergency financial support for those involved in disaster recovery for BCAIS. The team will acquire funds from the Treasurer's office and oversee emergency financial transactions during a disaster.

Accomplishments to Date

Computer System Restoration Process

After determining its methods, BCAIS immediately launched a test project. Separate processing teams were formed to address the technical challenges of various hardware, database, and application platforms, as well as the common logistic issues of data capture, off-site storage and transfer to the data center. Early exercises were conducted as "proof of concept" and results were positive.

The following demonstrations have been successfully concluded:

System	Date	Objectives	%	
Pearl Database/Server				
HP K580	Jan-05	Proof of Concept:		
		> Restore HP/IBM System	100	
		> Restore Oracle Structure	100	
			> Restore Data	100
	Jun-04	Full System Restoration		100
		> Use off-site weekly data		100
		> Restore all HPUX/IBM systems		100
		> Activate all production activity		100
		> Validate activity from remote site		100
	Jan-05	Data Recovery Demonstration		
		> Use off-site daily data		100
		> Restore complete Oracle DB		100
> Restore all data to "day of" disaster			100	
> Conduct functional tests from remote site			100	

Disaster Prevention Measures

BCAIS has taken a number of steps to limit the likelihood of a computing outage in the data center:

- Access controls, alarms and scanning equipment
- Backup generator
- FM200 fire suppression systems
- Physical systems monitoring equipment
- Alternate/spare components for critical equipment
- Operational recovery procedures and practices

Command Center

To ensure that critical decisions can be made and recovery procedures coordinated in a timely manner, the BCAIS Disaster Recovery Program has identified a series of alternate locations where the executive and recovery management teams can meet and confer with damage assessment personnel.

The command centers include:

- Director of Data Center Services Office
- Director of MIS office
- BCA Union Street Office

The person who, as circumstance dictates and according to pre-planned notification trees, inaugurates the disaster alert process will also select the command center location that is appropriate to the emergency situation. He or she will direct all other disaster recovery personnel who have roles to fulfill during the initial assessment phase to the named command center.

III. Program Organization

Executive Team

The executive team of BCAIS' disaster recovery team is staffed by executive management of the department. This team has the responsibility to provide executive-level decisions in the period following a disaster and the authority to declare a disaster and initiate disaster recovery. This decision will be made after input from the damage assessment process. The executive team will make policy decisions, oversee internal and external communications, and serve as the official source of information during the recovery process.

Disaster Management Team

It is the role of the disaster management team to provide the overall direction of recovery operations. Activities will be coordinated under the direction of the executive team. The disaster management team will establish the emergency command center where damage assessment and recovery operations will be directed. It will analyze damage reports and make recommendations to the executive team on the need for disaster declaration. It notifies all disaster recovery teams with concurrence from the executive team. Once recovery has begun, this team coordinates all internal BCAIS recovery activities and monitors progress. It schedules BCAIS personnel for appropriate support activities and serves as the focal point for all technical and operational questions posed by users during the recovery process. This team has a key role in ongoing disaster recovery preparedness. It is responsible for all planning, testing and maintenance activities necessary to sustain the recovery capability over time. A number of functional teams report to the disaster management team.

Administrative Support

Administrative support reports to the disaster management team and is responsible for record keeping (financial, personnel, materials, etc.) during the period following a disaster. It will support all teams mobilized in the event of disaster at the direction of the disaster management team. It develops expense reporting documentation, prepares insurance claims, supports the preparation of other team reports and assists in the disaster notification process.

Disaster Declaration

This process notifies support team, data archive services, Chief Information Officer and others with an immediate need to know, that BCAIS services are not available and efforts are underway to restore service.

Logistics/Supplies

This team arranges for the transportation of materials, equipment, documentation and personnel, as needed. This includes an ongoing role in the off-site shipment of vital information media, as well as the post-disaster movement of personnel, equipment and backup media to the data center. It will support other post-disaster transportation needs as identified.

Human Resources Support

This team will determine the status of personnel affected by the disaster. It will coordinate replacing personnel if necessary and provide support for such activities as medical or disability claims.

Communication Services

This team will gather accurate and substantiated information regarding the disaster situation and the BCAIS response. It will provide notification to employees on recovery progress via internal communications. Its charter is to minimize adverse publicity.

Financial Support

This team will ensure access to cash and credit as necessary for the execution of the recovery process by the various BCAIS disaster recovery teams. Records of all Expenditures will be maintained for subsequent insurance, tax and financial reporting purposes.

Processing Teams

Several Computer Services Division teams within BCAIS support the restoration of computing services. These teams are directed by the Disaster Recovery Program Manager, and report up to the disaster management team. All technical, operational and logistical activities associated with the restoration of service are the charter of these teams.

Operating Systems

This team is responsible for the HP/UX/IBM AIX operating system. The team has an obligation to maintain the ongoing recoverability of these systems as they migrate through new releases, new functions, new technologies and new configurations.

Software Support

These teams ensure the availability and functionality of major software utilities in the restored system environment.

IV. Data Backup and Restoration

Purpose

Electronic data is the single most valuable asset in BCAIS data center. While disaster-damaged equipment can be replaced with new computers and facilities can be restored or reconstructed, BCAIS system control data and electronic patient information cannot be obtained from *any* outside source. It is unique, volatile and irreplaceable and must be protected.

As owner and operator of several large systems and databases (financial, clinical, mail, operational), and as custodian of the company's electronic patient information and company books, BCAIS is led the project to design and implement a comprehensive data disaster protection program. It is our intent to continually update and enhance the processes whereby BCAIS can be accountable for system and control data recoverability.

The purpose of this data backup and restoration program is to ensure that system and vital application data (to be detailed in the following sections) will be captured regularly and shipped off premises to a protected location so that it will be available in the event of a catastrophe at the BCAIS data center.

The BCAIS portion of this process is now fully implemented. **This data is created solely for disaster recovery purposes and is not available for day-to-day production data re-creation purposes.** The data is shipped in tape transportation containers to a professional data archive service located off-site.

HP 9000/IBM AIX/Oracle Environment – Pearl

BCAIS Role and Responsibilities

BCAIS assumes the responsibility to backup the HP 9000/IBM AIX/Oracle and Windows operating environments, including the system software, system utilities, database managers and necessary tables and indices to restore the computing system.

HPUX/AIX Operating System

The operating systems are backed up onto tape in "boot"-able format whenever a change is made in:

- The OS version
- The BCAIS HP 9000/IBM AIX hardware configuration, or
- The HP Data Protector/Legato backup software configuration.

The backup tape is shipped directly to Iron Mountain data storage where it remains until a new OS boot tape is produced in response to changes, as outlined above. Should a disaster be declared, this tape will be loaded on the recovery hardware immediately to begin the HPUX/AIX restoration process.

Each Sunday evening, a full operating system backup is conducted using the HP Data Protector or Legato backup manager and/or the HPUX SAM backup utility (for HPUX Servers).

No user application programs or data are included in this weekly backup. Only system support removable disk volumes are included.

The backup tapes are shipped off premises on Monday of each week to Iron Mountain, where they remain for two weeks and then are returned to BCAIS for scratch use. Should a disaster be declared, these weekly backup tapes are shipped immediately to the data center for use in the HP 9000/IBM AIX system restoration process.

Windows Operating System

The operating systems are backed up onto tape in "boot"-able format whenever a change is made in:

- The OS version
- The BCAIS Dell hardware configuration,
- The HP Data Protector backup software configuration, or
- The IBM Tivoli Storage Management (TSM) Software.

The backup tape is shipped directly to Iron Mountain data storage where it remains until a new OS boot tape is produced in response to changes, as outlined above. Should a disaster be declared, this tape will be loaded on the recovery hardware immediately to begin the Windows restoration process.

Each Sunday evening, a full operating system backup is conducted using the HP Data Protector or TSM system.

No user application programs or data are included in this weekly backup. Only system support removable disk volumes are included.

The backup tapes are shipped off premises on Monday of each week to Iron Mountain, where they remain for two weeks and then are returned to BCAIS for scratch use. Should a disaster be declared, these weekly backup tapes are shipped immediately to the data center for use in the Dell/Windows system restoration process.

Oracle Databases

Full backups of the Oracle Financial and Pearl Database are conducted every Monday, Wednesday, and Friday of each week. Transaction logs generated by these databases are backed up every fifteen minutes, 24 hours per day, 365 days per year. Recovery of either database requires the media from the last full backup and the media containing all transaction logs since the last full backup.

Non-schedule full backups are conducted anytime a major database structure change is made or additional disk partitions are added.

The backup tapes from the previous day's backups are shipped to Iron Mountain on a daily basis for a 3 month cycle. A backup set from each 3 month cycle is archived for 4 archives per year.

Recovery Process:

A list of the daily backup tapes is sent off-site with the output of backup tapes. The recovery is performed using the latest backup number for input first, then regressing each day until the full weekly set is read in. This is done to ensure the most current backup is recovered.

V. User Interface

Introduction

In the event that a catastrophe occurs and one or more of the mission critical applications is unavailable, system users must be notified in a timely matter. Additionally, they should be kept informed as to the progress of the disaster recovery efforts as well as the projected time of disaster recovery completion.

Disaster Recovery Contacts

In the event of an emergency affecting BCAIS production services, BCAIS disaster recovery team members will alert the appointed customer agency disaster recovery contact. Status updates and recovery activity will be provided to the site contact. In order to assure that contact can be made under a variety of unpredictable circumstances; BCAIS recommends that the each site identify a **Primary** contact and at least one alternate. These personnel should provide **all** of the following:

- Office telephone that is always answered during normal business hours and not subject to power outages (*i.e.*, Centrex telephone service, not electronic key or PBX without power back up).
- Home telephone
- Home address
- Job title
- Cellular and/or pager number

BCAIS has provided a list of current customer agency disaster recovery contacts, refer to section entitled **Telephone Directory**, that has been provided by our customer agencies. This list should be reviewed to insure that the appropriate agency contact is listed. If there are any updates to this list, please contact Fabian Yates of BCAIS at 706-279-4141.

VI. Disaster Team Members

Executive:

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Chief Executive Officer
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Disaster Management:

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Doug Vincent
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Communications:

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Network Communications Engineer
706-279-4141

Operating Systems:

Brandon Beck
Data Center Services Administrator
706-279-4141

Software:

Tomicka Yates
Oracle Database Administrator
706-279-4141

VII. Telephone Directory

BCA Clinic Site Addresses and Contacts:

Alabama: University of Alabama
Dr. Rod Nowakowski
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Ph: 205-934-4748

Illinois: Carbondale Clinic
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Ph: 618-549-5361

Mississippi: Jackson Medical Clinic
Tremise Williams
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Jackson, MS 39202
Ph: 601-714-3230

Rhode Island: Hypertension and Nephrology
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Providence, RI 02904
Ph: 401-861-3880

Tennessee: St. Thomas Medical Group
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The Heart Group at St. Thomas
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Nephrology Associates
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EXHIBIT D-2

BCA Business Continuity Plan



Business Computer Applications
Information Services
Atlanta, Georgia

BCA Business Continuity Plan
Guide

Fabian Yates
Business Continuity Manager

Revision Date 9/30/2006

BCA Business Continuity Plan

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Introduction

Business Computer Applications, Inc. (BCA) is committed to providing uninterrupted service and support to its clients. BCA recognizes that uncontrollable events can cause disruption to our normal business and data center operations. For example we recognize that certain electrical and communication outages can adversely affect our Customer's ability to access our data centers, contact our customer support resources or receive technical support from our software, hardware and communications engineers. BCA and its business associates recognize the critical nature of our customers businesses, their dependency on the information systems that we provide and the need to continue to provide healthcare services to patients especially during unforeseen events that may pose a treat to certain patient populations. Our goal is to meet this obligation, usually within 24 hours, with minimal interruption to either our Customers or our business operations.

BCA wants its Customers and potential Customers to be aware that we have developed, maintain and continuously improve written business continuity plans that provide effective responses to wide variety of disruptive events that better enable BCA to continue operations during a business disruption.

Overview

BCA's business continuity plans provide for continuity of critical business and data center operations and other activities during a variety of disruptions. These include disruptions to our Customer's ability to access our data center for Applications Support Provider programs, receive customer support services, including help desk support, receive technical support of their software, hardware and network systems, communicate with BCA on a number of business issues including administrative, financial and business development issues. BCA plans are designed to enable the company to continue critical operations whether the disruption are local, regional or national.

It is important to BCA that our customers remain confident in our commitment and ability to provide ongoing services and uninterrupted access to the information technology products and services that we provide, and especially to their data that maybe stored in our data centers throughout the country. BCA business continuity plans provide for access to alternative data centers, customer support centers and business offices during a disruption. BCA is committed to maintaining effective communications with its clients during a business disruption. General information about BCA may be obtained by visiting our corporate internet site at www.bca.us.

Our business continuity plans are reviewed to ensure appropriate enhancements are implemented as technology improves, business plans evolve and when regulatory requirements change. BCA's management has designed a corporate head of business continuity and our plans are subject to regular review internally and externally by independent parties.

Business Continuity Plans

BCA maintains a comprehensive business continuity plan designed to respond effectively to events that lead to significant business disruptions, such as natural disaster, power outages, or other events of varying scope. BCA continuity plan defines the leadership structure, human resources needs, alternative work locations, alternate data centers as well as SW/HW technology. Also included in the plan are the backup and recovery procedures, disaster recovery plans and BCA alternative communication access systems. As a measure to allow our customers the continued ability to manage and operate their businesses, BCA has included the critical records of operating policies and procedures. It is designed to anticipate disruptions to our business and resume operations as quickly as possible, given the scope and severity of the significant business disruption.

In the event a BCA business office becomes unavailable for any reason communication with BCA would be rerouted to other BCA offices, to key BCA personnel cellular phones and/or to BCA personnel e-mails addresses.

In the event that a BCA data center becomes unavailable for more than 48 hours, BCA would establish Customer access to another BCA data center, a BCA business partner data center or to a BCA Customer data center as described in our Disaster Recover Plan. BCA maintains a complete set of its Data Centers Software and Data Files off site at secure locations in order to be able to restore information technology systems and create a data center production environment in short order.

In the event a BCA call center, or help desk support center, becomes unavailable for any reason calls would be rerouted to one of the firm's alternative call centers, directly to BCA customer support personnel cellular phone or e-mail addresses. BCA provides a secure internet based system which allows customers to log problems and questions to BCA from anywhere in the world where the internet is available and allows all approved BCA personnel to retrieve, respond and download software repairs.

Business Continuity Leadership Team

In case of a major business disruption the BCA leadership team will be comprised of the following senior managers who are responsible for providing and directing BCA resources needed to meet its business continuity goals and objectives. If other business disruptions occur from time to time, these senior managers will be responsible for directing the management of the BCA resources needed to bring specific areas of the business, assigned to them, back to full function once a disruption occurs.

Executive Manager: John Cook
President and Chief Operating Officer
Location, Atlanta, GA
E-mail address-jcook@bca.us
Phone- 678-221-9001
Cell phone- 703-628-0825
Responsible for directing all BCA resources in case of a major business disruption

Business Operations Manager: June Nuckolls
Executive Vice President of Professional Services
Location, Dalton GA
E-mail address, jnuckolls@bca.us
Phone, 706-279-4141
Cell phone-706-270-2770
Responsible for re-establishing all BCA business operations, including alternative locations and resources in case of a major business disruption

Customer Relations Manager: David Wellons,
Vice President of Sales and Marketing
Location, Atlanta, GA
E-mail address, dwellons@bca
Phone, 678-221-9009
Cell phone, 404-213-9197

Responsible for ongoing communications and support services to Customers in case of a major business disruption

Administrative and Financial Manager: Gary Shepardson
Executive Vice President of Administration and Chief Financial Officer
Location, Atlanta, GA
E-mail address, gshewardson@bca.us

Phone, 678-221-9001
Cell phone- 678-372-4811
Responsible for providing and directing administrative and financial support in case of a business disruption

**Technical Operations
Manager**

Fabian Yates
Vice President of Technical Operations
Location, Dalton GA and Nashville, TN
E-mail address, fyates@bca.us
Phone, 706-279-4141
Cell phone- 770-262-7044
Responsible for providing and directing customer, technical, communications and data center support services in case of a business disruption

**Business Partner
Relationship Manager**

David Wellons,
Vice President of Sales and Marketing
Location, Atlanta, GA
E-mail address, dwellons@bca
Phone, 678-221-9009
Cell phone, 404-213-9197
Responsible for ongoing communications and support services with major BCA business partners and suppliers in case of a business disruption

Other Key Personnel

Data Center Manager

Daniel Hildalgo
Data Center Manager
Location, Dalton, GA
E-mail address, dhildalgo@bca.us
Phone, 615-777-8214
Cell phone,
Responsible for establishing and managing data center, and network communication, operations in case of a business disruption

Customer Support Manager

Doug Vincent
Customer Support Manager
Location, Nashville, TN
E-mail address, dvincent@imrac.com and dvincent@bca.us
Cell phone- 615-500-8072
Responsible for establishing and managing all customer support resources and activities in case of a business disruption

Financial Support

Kim Elswick
Accounting Manager
Location, Dalton GA
E-mail address, kelswick@bca.us
Phone, 706-279-4141
Responsible for providing financial support in case of a business disruption

Administrative Support

Jennifer Hurl
Executive Assistant
Location, Atlanta, GA
E-mail address, jhurl@bca.us
Office phone- 678-221-9001
Responsible for providing administrative support in case of a business disruption

BCA Locations and Alternative Work Sites

In the event a BCA business office becomes unavailable for any reason, communication with BCA would be rerouted to other BCA offices, to key BCA personnel cellular phones and/or to BCA personnel e-mails addresses.

BCA Headquarters: Business Computer Applications, Inc.
2002 Perimeter Summit Boulevard
Suite 880
Atlanta, GA 30319
Phone, 678-221-9001
Toll free, 877-853-2342
FAX, 770-931-4191
www.bca.us

**BCA Atlanta, GA
Second Location:** Business Computer Applications, Inc.
3375 NE Expressway
Koger Center / Harvard Building
Atlanta, GA 30341
Phone, 770-234-6513
Fax, 770-234-6502

BCA Dalton, GA: Business Computer Applications, Inc.
1008 Professional Boulevard
Suite 3
Dalton, GA 30720
Phone, 706-279-4141
Fax, 706-279-4116
Toll free, 800-648-1555

BCA Nashville, TN: Business Computer Applications, Inc.
230 Great Circle Road
Suite 218
Nashville, TN 37228
Phone, 615-312-5313
Fax, 615-312-5305

BCA Redding, PA: Business Computer Applications, Inc.
1540 Allegheny Avenue F4
Redding, PA 19601
Phone, 610-372-1236
Cell Phone- 914-224-2887

BCA Birmingham, Al: Business Computer Applications, Inc.
553 Summit Circle
Birmingham, AL 35068
Phone, 205-849-9052
FAX, 205-849-9987

Other BCA Locations:

BCA encourages many of its employees who are responsible for developing BCA and Customer mission critical systems to work from home with BCA furnished home offices. All BCA personnel are capable of working from home or from any other location around the world where internet or telephone communications are available. In case of a disruption to our business, BCA personnel has continued access to BCA Customers, Customer mission critical systems, BCA data centers and BCA mission critical systems. BCA records, files, and policies and procedures are also accessible. A directory of BCA employees is available in each major BCA office and online via a BCA secured internal communications network.

Alternative Data Centers

In the event a BCA data center becomes unavailable for more than 48 hours, BCA would establish Customer access to a backup BCA data center, a BCA business partner data center or to a BCA Customer data center as described in our Disaster Recover Plan. BCA maintains a complete set of its Data Centers Software and Data Files off site at secure locations in order to be able to restore information technology systems and create a data center production environment in short order.

BCA Dalton, GA Data Center: Business Computer Applications, Inc.
1008 Professional Boulevard
Suite 3
Dalton, GA 30720
Phone, 706-279-4141
Fax, 706-279-4116
Toll free, 800-648-1555

BCA Nashville, TN Data Center: Business Computer Applications, Inc.
230 Great Circle Road
Suite 218
Nashville, TN 37228
Phone, 615-777-8070
Fax, 615-312-5305

**BCA Nashville, TN Data Center:
Hot Site** Business Computer Applications, Inc.
230 Great Circle Road
Suite 218
Nashville, TN 37228
Phone, 615-777-8070
Fax, 615-312-5305

Backup and Recovery of BCA and Customer Mission Critical Systems

BCA's backup and recovery procedures are described in the BCA backup and recovery policies and procedures manual. BCA uses these policies and procedures as guidelines to backup and recover both BCA and Customer mission critical systems.

Disaster Recovery Plan

BCA's disaster recovery procedures are described in the BCA disaster recovery policies and procedures manual. BCA uses these policies and procedures as guidelines to recovery both BCA and Customer mission critical systems and data centers if a major disaster of any kind disrupts its data center operations.

Hot Site

In order to facilitate the restoration of applications within 24 hours, BCA has implemented a hot backup site for critical applications and network services. Backup copies of all major financial and clinical systems run in near real time mode with production at this site. This hot site is also available for BCA to exercise its recovery plan in test mode. The hot site is currently configured and on-line.

BCA Customer Contacts

BCA maintains a list of all of its Customers and Customer contacts at all BCA facilities, and online at each BCA data center, to insure that it can remain in contact with its Customers, in case a disruption to the business occurs. BCA Customer information is confidential, and is therefore not published with this document.

Emergency Numbers:

BCA	800-648-1555
Hewlett Packard Hardware/Software Response Center:	800-633-3600
IBM Software Response Center:	800-426-7378
Oracle Software Response Center:	800-223-1711
R and P Controls (Data Center Air-Conditioning)	615-255-6910
Nixon Power Services (Emergency Generator Services)	615-244-0650
International Equipment Company, Inc. (Fire Detection and Alarm System for Data Center)	615-782-0042

EXHIBIT D-3

BCA Customer Support Policies and Procedures



BCA Customer Support Policies and Procedures

Software Support

BCA's Customers are responsible for providing first-tier technical support. The Customer's support technicians shall route all hardware, network and interface related calls to the appropriate in-house technical department.

Customer support technicians shall route all issues related to BCA Software to BCA's Customer Support Department by direct telephone, e-mail or electronically through the Mantis help-desk system software. The Customer shall designate a limited number of personnel who, in most circumstances, shall act as the primary interfaces to the BCA CUSTOMER SUPPORT DESK.

BCA's Customer Support (help desk) Department is available from 7:00 a.m. to 5:00 p.m. Pacific Time, with technicians available by beeper at other hours. Extended coverage for nights, weekends and holidays are available at an extra service charge for BCA's Practice Management and Managed Care Systems and 24 x 7 x 365 days a year support for the BCA Electronic Medical Records Systems. The Customer Support Department responds to calls in the order the calls arrive, with the goal of every call being answered and documented within five (5) minutes. The severity of the Customer's problem dictates the level of support and the amount of time required to resolve the problem.

Although the BCA software products include written user documentation and online help text, users occasionally do not understand all of the ramifications of their interaction with the system. General user training is the responsibility of the Customer after the initial training period or after the initial training after a new release update. When the Customer's internal user support staff needs clarification of an existing BCA software function, a call may be placed through the BCA toll free number to the BCA CUSTOMER SUPPORT DESK. Under normal circumstances, this type of "problem" can be resolved immediately. The BCA CUSTOMER SUPPORT DESK personnel have direct access to the BCA technical team who develop the BCA software products, who in turn has in-depth knowledge of the software module's technology and expected functionality.

If the Customer's internal support staff identify a software malfunction, it must be reported as soon as reasonably possible to the BCA CUSTOMER SUPPORT DESK. Malfunctions of software are divided into three broad categories: 1) malfunctions that may result in the loss or corruption of data, 2) malfunctions that prevent a small part of a module within the BCA Software Module from being used, and 3) malfunctions that are "cosmetic" (the system remains usable and will achieve the desired function, but with more operator intervention than should be necessary).

Category 1 malfunctions receive the highest priority.¹ A senior database manager and/or applications software developer is immediately notified of such problems. Immediate recommendations are made to the Customer regarding continued use of the system and the steps required to preserve data integrity. A written recommendation shall be issued to the Customer's internal support staff within eight hours after notification of such problem. In all cases of this nature, BCA shall assign staff to resolve the problem as soon as possible. Problems that threaten the integrity of the data take priority over all other activities, and BCA will re-assign staff from other areas, if necessary, to resolve such problems in the earliest possible time frame. Daily progress reports will be issued to Customer's internal support group until the problem is resolved.

Category 2 problems, which prevent the full use of the BCA software modules deemed to be fully functional and "delivered," also receive high priority in the problem resolution queue. Depending on the potential impact to the overall use of the system, some of these problems may be escalated almost to the same level of intense activity described under category 1 problems. The Customer shall be given a reasonable time estimate for correcting the problem. A written report will be sent to the Customer's internal support staff with a plan of action and an anticipated "fix" date.

Category 3 problems, which deal with the ease of use of the application software, are really requests for enhancements. In some instances the changes, if made, could adversely impact the way other customers use the BCA software system.

Hardware

The Customer's internal support staff shall be responsible for determining, to the best of their knowledge, whether a problem is hardware, software or network related. Depending on the hardware involved, and depending on the specific manufacturer's warranty, service, support or maintenance agreement on that particular device, the BCA CUSTOMER SUPPORT DESK can be notified for assistance. In some instances, service engineer will be dispatched (generally under Customer's written authorization). Service engineer services are normally billable, unless the Customer maintains a separate maintenance agreement with the hardware manufacturer.

All problem resolution calls shall be directed to the BCA CUSTOMER SUPPORT DESK, which shall log all calls into BCA's problem resolution tracking system (Mantis Attachment). A specific problem reference number shall be given to the Customer.

Implementation Support

Each new customer is assigned a Project Manager to coordinate all the activities of system implementation and provide direct customer support during the phases of system configuration. At the time of go-live, extra staff will be sent to the customer site to assist with any support

¹ BCA has developed a series of backup procedures for use with the PEARL® application related database. It shall be Customer's responsibility to adhere to these protocols to ensure maximum ability to preserve/recover data in the event of corrupted database files.

needs and answer questions. This period is usually two weeks. After that time, the Customer will direct support issues to the BCA CUSTOMER SUPPORT DESK for logging and resolution. However, the Project Manager will continue to provide additional customer support as needed for the first 6 months after go-live, at which time the BCA CUSTOMER SUPPORT DESK will assume primary responsibility for support. The Project Manager will continue to assist the customer in the future as requested, but these will be billable hours.

BCA encourages feedback and ideas from its customers on improvements to the software. The Mantis Help Desk software is available for customers to log Enhancement Requests.

Reporting

Customers are responsible for reporting all incidences involving disputes between themselves and BCA as soon as possible after they are identified. Every attempt should be made by the Customer's staff and BCA's staff to resolve such disputes at the level at which they occur utilizing negotiation, compromise and corporation. BCA staff at the worker and intermediate management levels are trained and empowered to work with customers to resolve disputes quickly and fairly. BCA's historic experience reflects that a vast majority of disputes can be resolved at the level of their identification through the establishment of a well defined partnership between it and its customers.

EXHIBIT D-4

Network Security Policy



Business Computer Applications
Information Services
Dalton, GA

BCA Network Security Policy

Revision Date 11/21/06

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I. Introduction

Business Computer Applications (BCA) recognizes that information is a company asset, and has created security measures and assigned responsibilities to protect this asset from loss, theft, and unauthorized modification or disclosure. All security measures conform to established BC A company policies and applicable federal, state, and local laws.

II. Responsibility

Every BCA employee is responsible for safeguarding company information and the physical assets that store this information. Every BCA employee is also responsible for using computing resources in an effective, ethical, and lawful manner.

The BCA Information Services (IS) department leads the security effort and must work with department heads to ensure that employees are informed of a security practices and policies.

III. Physical Security

Adequate physical security measures must provide for the protection of human resources, physical and logical assets, and sensitive applications and data. Department managers must protect all hardware assigned to their department. BCA has implemented the following security devices:

- **Data Center**

- Key Pad Entry Access – Requires electronic token plus key combination which is changed on a regular basis. Combination delivered by sealed envelope to the personnel listed below upon change:
 - Doug Vincent –VP, Director of Application Support
 - Fabian Yates – VP, Director of Technology Infrastructure Support
- Automatic log of all token/key pad access.
- Video camera monitoring present on all doors and key areas in the building and is recorded to streaming backup for later viewing in case of any security question.
- Fire detection and suppression – FM 200
- Emergency Power generator for lights, equipment, and air-condition in the data center
- Automatic temperature and humidity control and alerts
- Raised floor in the data center

- **BCA Facility**

1. Key distribution monitoring
2. Electronic Security System (Fire and Intrusion)

IV. Network Security

The BCA IS assesses the risks to BCA information from network, remote, and Internet connections and implements cost-effective security measures to protect the company. All users must be granted their own user account on the BCA network. Users must select a secure password and must not divulge that password to anyone.

Window NT Environment

1. Administrative Privileges

Only network administrators, the Director of MIS and certain development staff may have administrative privileges on the Domain. Where possible, users who need to do work on the network are given membership in lesser administrative groups that still allow them to perform their job. The CIO or MIS Director must grant administrative privileges.

2. Administrative Passwords

The Domain Administrator password is only given to MIS staff. It expires every 30 days. This password should always incorporate capital letters and numbers for maximum security. In addition, the administrator account was renamed to something other than "administrator" to make it harder to attack. When setting up new PCs, the local Administrator password is set for each machine and is the same company wide.

3. Adding New Users

Department heads or Human Resources submit requests for new users to the MIS Department. A network administrator adds new users. They should be assigned to a primary User Group that corresponds to the department(s) they will be working in. A group exists for each department, as well as for some general functions, like Clinic User. Users are added by using the appropriate template in User Manager for Domains. The following are required fields:

User Name	First initial and last name of the user.
Full Name	First and last name of the user
Description	Job title and department or location of user

4. User Account Policies

User accounts have the following policies enabled for the entire Domain:

Maximum Password Age	90 days
Minimum Password Age	Immediate
Minimum Password Length	6 characters
Password Uniqueness	8 passwords
Account Lockout	After 5 attempts

Count Reset	30 minutes
Lockout Duration	30 minutes

In addition, certain accounts used in common areas in the clinic may have additional policies or profiles enabled to prevent use or tampering with the system.

5. Deleting User Accounts

When an employee leaves the company, the MIS Department should be notified by Human Resources. A network administrator immediately disables the network account of the user. After ninety days, the account may be permanently deleted from the system. In the event that a member of the MIS staff leaves the company, the Domain Administrator password will immediately be changed.

6. Resource Security

Shared resources on the Domain have varied access restrictions. In general, when creating a shared resource, the following guidelines should be applied:

- a.) Short share names should be chosen. Long share names have caused problems in the past, especially with shared network printers.
- b.) The default security setting of "Everyone, Full Control" should be deleted.
- c.) Appropriate User Groups should be selected and given permissions appropriate to the resource. Domain Administrators should be the only group with "Full Control"

HPUX/Cisco Environment

1. Root/Super User Privileges

The root user has carries tremendous power over control of an HPUX/AIX Operating System or Cisco IOS. Distributing the root login information is severely restricted and can only be approved by the CEO, CIO, or MIS Director.

2. Root/Super User Passwords

The root passwords must be changed every 30 days in accordance with BCAIS policy. The password must incorporate upper and lower case letters as well as numbers. Additionally, the password must be at least 6 characters in length. No direct access to the root will be allowed from remote sessions. The root user must either login as a general user and then "su" to root, or login from the console.

Each time the root/super-user passwords are changed, they will be distributed to the appropriate BCAIS and BCA executive personnel via sealed envelope. Passwords cannot be distributed via email.

3. Adding New Users

Department heads or Human Resources submit requests for new users to the MIS Department. The HPUX/AIX system administrator adds new users. They should be

assigned to a primary User Group that corresponds to the department(s) they will be working in.

4. Deleting Users

When an employee leaves the company, the MIS Department should be notified by Human Resources. The HPUX/AIX System Administrator immediately disables the system account of the user. After ninety days, the account may be permanently deleted from the system.

Internet Security

Internet access has become an integral part of everyday business. BCA IS has responded to this need by providing Internet access to every desktop within the BCA business office in a secure manner.

Firewall

All BCA networks, equipment, and data must be protected from the Internet by a firewall. BCA has implemented a Linux Bastion Firewall using the TIS (Trusted Information Systems) Tool kit and Apache Firewall Proxy Server.

The firewall was designed and configured with the philosophy of “that which is not expressly permitted is prohibited”. All internal applications which must communicate with the Internet must do so via the firewall’s http proxy facility. Smtip mail transport will be allowed, all other protocols are blocked from internal or external access.

The BCA Bastion firewall is monitored using “TCP Wrapper” and “TripWire” to detect possible intrusions into the internal network. Detected intrusions will be promptly investigated internally, and if the need warrants, they will be investigated by Local, State, and/or Federal investigators. Person(s) caught attempting to breach the BCA security will be prosecuted to the fullest extent of the law.

Remote Access

Certain BCA employees require remote access to the BCA intranet. BCAIS has responded to this need by providing a secure, efficient method of connecting to the BCA intranet from the outside. All users will be issued a Security Dynamics SecureID card for authentication into the BCA intranet. The SecureID card used in conjunction with the user’s private PIN number, provides a changing (each minute) authentication sequence into the system. All remote access requires the use of SecureID.

V. Software Security

Commercial software must be used in accordance with licensing agreements and copyright law. Noncommercial and personal commercial software should not be installed on BCA computers unless approved by the BCA IS department. In addition, employees should not download software from the Internet.

VI. Acceptable Use Policy

The following statement provides a guideline for use of the BCA Local (LAN) and Wide Area Network (WAN).

1. All use must be consistent with the purposes of the BCA network.
2. The intent of the use policy is to make clear those cases that are consistent with the use of the BCA network, not to exhaustively enumerate all such uses.
3. The BCA IS department may at times make determinations that particular uses are impacting the operation of the network and take appropriate action to curtail them. These determinations and actions will first be escalated through the normal management processes and then, as necessary, reported to and reviewed by the executive management.
4. BCA IS may at times make assessments that particular uses are or are not consistent with the purpose of the network. Such assessments will be escalated through the normal management processes and then reviewed by executive management.

VII. Security Awareness

Department managers must ensure that all employees in their department are aware of, have access to, and comply with BCA's security measures. The IS department will provide security-awareness training for all new employees.

VIII. Compliance

In the event that a Business Computer Applications employee violates any of the company's security measures, BCA may restrict that employee's use of computing services, terminate the employee, and/or report the employee to the appropriate law enforcement agency.

EXHIBIT D-5

BCA Problem Resolution Policy and Procedures



BCA Customer Support

Problem Reporting, Escalation and Resolution Policies and Procedures

Reporting:

Customers are responsible for reporting all incidences involving disputes between themselves and BCA as soon as possible after they are identified. Every attempt should be made by the Customer's staff and BCA's staff to resolve such disputes at the level at which they occur utilizing negotiation, compromise and corporation. BCA staff at the worker and intermediate management levels are trained and empowered to work with customers to resolve disputes quickly and fairly. BCA's historic experience reflects that a vast majority of disputes can be resolved at the level of their identification through the establishment of a well-defined partnership between it and its customers.

If the Customer's internal support staff identify a software malfunction, it must be reported as soon as reasonably possible to the BCA CUSTOMER SUPPORT DESK. Malfunctions of software are divided into three broad categories: 1) malfunctions that may result in the loss or corruption of data, 2) malfunctions that prevent a small part of a module within the BCA Software Module from being used, and 3) malfunctions that are "cosmetic" (the system remains usable and will achieve the desired function, but with more operator intervention than should be necessary).

Category 1 malfunctions receive the highest priority.¹ A senior database manager and/or applications software developer is immediately notified of such problems. Immediate recommendations are made to the Customer regarding continued use of the system and the steps required to preserve data integrity. A written recommendation shall be issued to the Customer's internal support staff within eight hours after notification of such problem. In all cases of this nature, BCA shall assign staff to resolve the problem as soon as possible. Problems that threaten the integrity of the data take priority over all other activities, and BCA will re-assign staff from other areas, if necessary, to resolve such problems in the earliest possible time frame. Daily progress reports will be issued to Customer's internal support group until the problem is resolved.

Category 2 problems, which prevent the full use of the BCA software modules deemed to be fully functional and "delivered," also receive high priority in the problem resolution queue. Depending on the potential impact to the overall use of the system, some of these problems may be escalated almost to the same level of intense activity described under category 1 problems. The Customer shall be given a reasonable time estimate for correcting the problem. A written report will be sent to the Customer's internal support staff with a plan of action and an anticipated "fix" date.

¹ *BCA has developed a series of backup procedures for use with the PEARL® application related database. It shall be Customer's responsibility to adhere to these protocols to ensure maximum ability to preserve/recover data in the event of corrupted database files.*

Category 3 problems, which deal with the ease of use of the application software, are really requests for enhancements. In some instances the changes, if made, could adversely impact the way other customers use the BCA software system.

All problem resolution calls shall be directed to the BCA CUSTOMER SUPPORT DESK, which shall log all calls into BCA's problem resolution tracking system.

Escalation:

If the plan of action outlined by the BCA CUSTOMER SUPPORT DESK (Exhibit E) is unacceptable to the Customer, then the problem can be directed to the BCA Vice President of Customer Relations. This staff member is directly responsible for the overall implementation of systems at BCA customer sites. Acting as a liaison between "hands-on users" and the software development staff, this individual will provide additional insight to both parties on the ramifications and potential obstacles of the problem and its proposed solution. The Vice President of Customer Relations has the authority, in concert with the Vice President of Technical Services, to marshal the internal programming and development forces that deal with software and database issues.

If the dispute is not resolved at the Vice President Level, or the plan of resolution is unacceptable to the Customer's Executive Staff, then the dispute is elevated to the Senior Executive level of BCA where the Company's President and Chief Executive Officer become personally involved in negotiating an acceptable resolution.

Should acceptable dispute resolution not be obtained at the Senior Executive level, both the Customer and BCA agree to send the dispute in question to an independent third party arbitrator selected through mutual agreement of both parties. The arbitrator's decision would be binding on both parties.

06113 EXHIBIT D-6
Health Insurance Portability and Accountability Act of 1996 (“HIPAA”)
(Public Law 104-191)
Business Associate Provisions

This Attachment sets out the HIPAA-related responsibilities and obligations of Contractor pursuant to the Contract between Contractor and Department.

1. Definitions

- A. Business Associate means an entity that performs or assists in the performance of a function on behalf of a Covered Entity, which involves the use, or disclosure of Individually Identifiable Health Information as defined in 45 C.F.R. § 160.103. Contractor is a Business Associate of Department under this Contract, and for purposes of Contractor’s obligations under this Attachment “H”, the terms “Business Associate” and “Contractor” are synonymous. Notwithstanding this definition, if Contractor does not have access to or create Protected Health Information under this Contract, Contractor is not a Business Associate, and the terms of this Attachment “H” do not apply to Contractor.
- B. Contract means the entire agreement between the parties.
- C. Contractor for purposes of this Attachment “H” means any party to this Contract which is not a department of Maricopa County government.
- D. Covered Entity means a health plan, a health care clearinghouse, or a health care provider that transmits any health information in electronic form in connection with a transaction covered by HIPAA as defined in 45 C.F.R. § 160.103. Department or a part of Department, as designated by Maricopa County, is a Covered Entity under this Contract.
- E. Data aggregation means the function of combining the Protected Health Information received by a Business Associate from another Covered Entity with that of Covered Entity, to allow data analyses related to the health care operations of the covered entities as defined in 45 C.F.R. § 164.501.
- F. Department means the party to this Contract that is part of Maricopa County government.
- G. HIPAA refers to the Health Insurance Portability and Accountability Act of 1996 (PL 104-191) and the United States Department of Health and Human Services’ (DHHS) final regulations on “Privacy Standards for Individually Identifiable Health Information,” which comprise 45 C.F.R. §§ 160.101 through 164.534, as amended and modified from time to time.
- H. Individual means the Individual who is the subject of the Protected Health Information.

06113 EXHIBIT D-6

Health Insurance Portability and Accountability Act of 1996 (“HIPAA”) (Public Law 104-191)

Business Associate Provisions

- I. Individually Identifiable Health Information (“Protected Health Information”) is health information that is created or received by a Covered Entity; and relates to the physical condition, mental health or other health condition of an Individual, or to the provision of health care to the Individual (including but not limited to the payment for such health care); and identifies or can be used to identify the Individual as defined in 45 C.F.R. § 160.103.

2. Permitted and Required Uses and Disclosure of Protected Health Information

- A. Permitted Uses and Disclosures: Business Associate is permitted to use and disclose Protected Health Information only for those purposes necessary to perform its duties, obligations and functions under this Contract, or as otherwise expressly permitted in this Contract or as required by law, including as follows:
 - i. To the Individual;
 - ii. For treatment, payment, or health care operations, as permitted by and in compliance with § 164.506 of HIPAA;
 - iii. Incident to a use or disclosure otherwise permitted or required by §§ 164.500 through 164.534, provided that the Covered Entity has complied with the applicable requirements of §164.502(b), § 164.514(d), and § 164.530(c), all of HIPAA, with respect to such otherwise permitted or required use and disclosure;
 - iv. Pursuant to and in compliance with an authorization that complies with § 164.508 of HIPAA;
 - v. Pursuant to an agreement under, or as otherwise permitted by, § 164.510 of HIPAA; and
 - vi. As permitted by and in compliance with § 164.502, § 164.512, or § 164.514(e), (f), or (g) of HIPAA.
- B. Required disclosures: A Covered Entity is required to disclose Protected Health Information and/or other information as follows:
 - i. To an Individual, when requested under, and as required by §§ 164.524 or 164.528 of HIPAA;
 - ii. When required by DHHS, Business Associate shall make its internal practices, books, and records relating to the use and disclosure of

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Health Insurance Portability and Accountability Act of 1996 (“HIPAA”) (Public Law 104-191)

Business Associate Provisions

Protected Health Information received from, or created or received by Business Associate on behalf of Department available to DHHS for purposes of determining compliance with HIPAA. Notwithstanding this provision, no attorney-client, accountant-client or other legal privilege will be deemed waived by Business Associate or Department as a result of this section; and

- iii. When required by Department, Business Associate shall make its internal practices, books, and records relating to the use and disclosure of Protected Health Information received from, or created or received by Business Associate on behalf of Department available to Department.

- C. Prohibited Use or Disclosure and Exceptions: Business Associate shall not use or further disclose Protected Health Information in a manner that would violate HIPAA, except that:

- i. Business Associate may use and disclose Protected Health Information for the proper management and administration of Business Associate, or to carry out the legal responsibilities of Business Associate, if:

- a. The disclosure is required by law; or
- b. Business Associate obtains reasonable written assurances from the person to whom Protected Health Information is disclosed that it will be held confidentially and used or further disclosed only as required by HIPAA or other applicable laws or for the purpose for which it was disclosed to the person; and

The person notifies Business Associate of any instances of which it is aware in which the confidentiality of Protected Health Information has been breached.

- ii. Business Associate may provide data aggregation services relating to the health care operations of the Covered Entity.

3. Business Associate agrees that it shall:

- A. Not use or further disclose Protected Health Information other than as permitted or required by this Contract or as permitted or required by HIPAA;

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Health Insurance Portability and Accountability Act of 1996 (“HIPAA”)
(Public Law 104-191)
Business Associate Provisions

- B. Use appropriate safeguards to prevent use or disclosure of Protected Health Information other than as provided by this Contract;
- C. Report to Department any use or disclosure of Protected Health Information not permitted by this Contract within 5 days of learning of such use or disclosure;
- D. Ensure Department that any of Business Associate’s agents, including its contractors and subcontractors (collectively, “agents.”) to whom it provides Protected Health Information received from, or created or received by Business Associate on behalf of Department, agrees to the same restrictions and conditions that apply to the Business Associate with respect to such information;
- E. Make available Protected Health Information in accordance with § 164.524 of HIPAA;
- F. Make available Protected Health Information for amendment and incorporate any amendments made by the Individual to Protected Health Information in accordance with § 164.526 of HIPAA;
- G. Make available the information required to provide an accounting of disclosures in accordance with § 164.528 of HIPAA;
- H. At termination of this Contract, return or destroy all Protected Health Information received from, or created or received by Business Associate on behalf of, Department that Business Associate or its agents still maintain in any form and retain no copies of such information. If the Protected Health Information is destroyed, Business Associate shall provide Department with an affidavit to that effect. If such return or destruction is not feasible, Business Associate agrees that it shall extend the protections of this Contract to Protected Health Information and limit further uses and disclosures to those purposes that make the return or destruction of Protected Health Information unfeasible; and
- I. If Business Associate and/or its agents, conduct transactions or any part of transactions as defined in § 160.103 of HIPAA under this Contract, Business Associate shall comply, and shall require that its agents, comply with all applicable requirements of HIPAA regarding such transactions.

4. Termination by Department

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Health Insurance Portability and Accountability Act of 1996 (“HIPAA”)
(Public Law 104-191)
Business Associate Provisions

In addition to other termination provisions of this Contract, Business Associate agrees that Department may terminate this Contract, if Department determines, in its sole discretion, that Business Associate has violated a material term of this Attachment “H”.

5. Indemnification

In addition to its other indemnification obligations pursuant to this Contract, Business Associate shall defend, indemnify and hold Maricopa County, Department, its agents, representatives, officers, directors, officials and employees harmless from and against any and all claims, suits, expenses (including reasonable attorneys’ fees and court costs), liabilities or damages (whether resulting from settlement, judgment, arbitration or otherwise) arising directly or indirectly from Business Associate’s and/or Business Associate’s agents’ violation of HIPAA in connection with this Contract. This indemnification provision and Business Associate’s indemnification obligations shall survive the termination of this Contract.

6. No Third Party Beneficiaries

Nothing express or implied in this Attachment “H” is intended to confer, nor shall anything herein confer, upon any person other than Covered Entity, Business Associate, and their respective successors or assigns, any rights, remedies, obligations, or liabilities whatsoever.

7. Amendment to Comply with Law

The Parties acknowledge that state and federal laws relating to electronic data security and privacy are rapidly evolving and that amendment of this Attachment “H” may be required to ensure compliance with such developments. Should such developments occur, and upon either Party’s good faith request, the other Party agrees to enter good faith negotiations concerning the terms of an amendment to this Attachment “H”.

8. Conflict with Other Terms and Conditions

In the event of a conflict between this Attachment “H” and other terms and conditions agreed to by the parties, the Attachment “H” shall control with respect to its subject matter.

BUSINESS COMPUTER APPLICATIONS, 2002 PERIMETER SUMMIT BLVD., SUITE #880, ATLANTA, GA 30319

PRICING SHEET: 9200702

Terms:	NET 30
Vendor Number:	W000005319 X
Telephone Number:	770/279-9774
Fax Number:	770/931-4191
Contact Person:	Albert P. Woodard
E-mail Address:	sales@bca.us
Certificates of Insurance	Required
Contract Period:	To cover the period ending August 31, 2013.