

Quarterly Epidemiologic Report

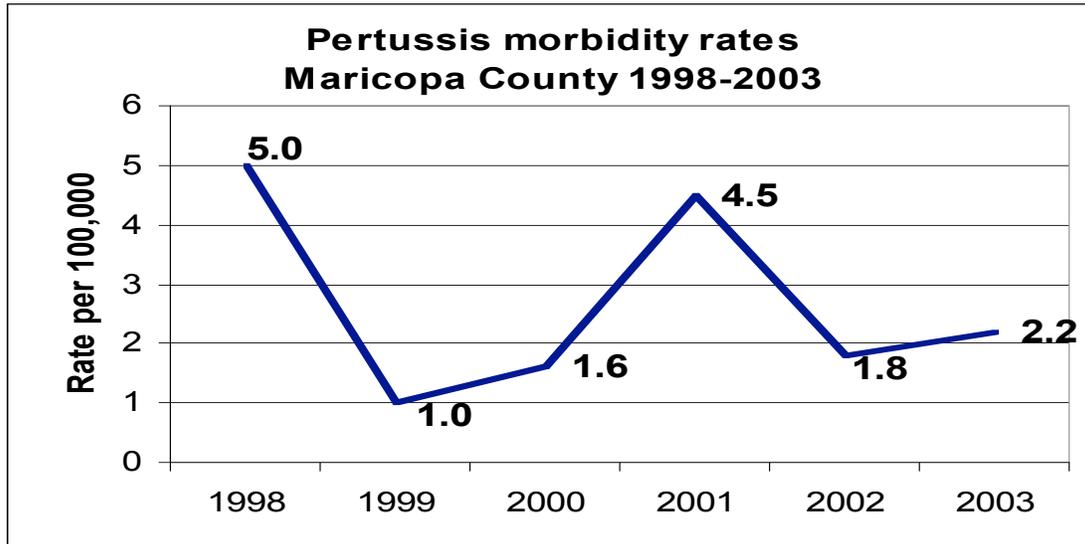
Oct – Dec '04

INSIDE THIS ISSUE

- Disease of the quarter: Pertussis
- Maricopa County Influenza Surveillance
- World AIDS Day
- West Nile Virus update
- 2004 Maricopa County Communicable Disease summary

Disease of the Quarter: Pertussis (Whooping Cough)

There has been an increase in the number of cases of *Bordetella pertussis* ("whooping cough") reported to the Maricopa County Department of Public Health (MCDPH). Pertussis is an endemic illness. In the United States epidemics occur every 3-5 years. In Maricopa County the disease tends toward a 3 year pattern indicating we are due for another outbreak (see chart below).



Pertussis should be suspected in all symptomatic children and adults *regardless of immunization status*. Fully immunized children can still develop Pertussis disease and present with milder symptoms, as vaccine efficacy is not 100% and wanes with age. Typically, infected adults or older children transmit disease to infants in the household. Exposed infants frequently become seriously ill with complications requiring hospitalization.

You can help prevent the transmission of Pertussis by taking the following actions:

- ❑ **Consider Pertussis in any patient presenting with a severe or episodic cough of seven days or longer** and report these suspect cases to the MCDPH. (Chances of culture confirmation are increased if specimens are obtained prior to 14 days of cough.)
- ❑ In accordance with State regulations, **immediately report all cases or suspect cases within 24 hours** of recognition to the **MCDPH Community Health Nursing at (602) 506-6767. After regular business hours, weekends and holidays call (602) 747-7111.**
- ❑ **DO NOT DELAY REPORTING** while awaiting laboratory confirmation.
- ❑ Whenever possible, **collect nasopharyngeal specimens from suspect cases.** Please contact MCDPH to obtain media and access to free testing from the ADHS laboratory.
- ❑ **Immediately treat all cases and suspect cases and prophylax all household contacts** with oral erythromycin for a full 14 days. This is required to eradicate carriage and prevent bacteriologic relapse and antibiotic resistance.
- ❑ Age appropriately **immunize all children under seven years of age against Pertussis** with DTaP vaccine.

If you have questions or need further assistance, you are welcome to contact the MCDPH office of Community Health Nursing at (602) 506-6767.

Disease of the Quarter: Pertussis (Whooping Cough) continued

Excerpt from CDC's Division of Bacterial and Mycotic Diseases

http://www.cdc.gov/ncidod/dbmd/diseaseinfo/pertussis_t.htm

What is Pertussis?

Pertussis, or whooping cough, is an acute infectious disease caused by the bacterium *Bordetella pertussis*. Pertussis is a highly communicable, vaccine-preventable disease that lasts for many weeks and is typically manifested in children with paroxysmal spasms of severe coughing, whooping and posttussive vomiting.

Pertussis is thought of as a childhood disease, but we now know that adults can get pertussis as well. Adults who get pertussis have a cough, but do not "whoop". Unfortunately, many adults with pertussis are not treated by their doctor and pass this disease on to others, including unimmunized or underimmunized infants.

Clinical features

The incubation period is 7-10 days, with a range of 4 to 21 days. The clinical course of the illness is divided into three stages.

The first stage, the **catarrhal stage**, is characterized by the insidious onset of coryza (runny nose), sneezing, low-grade fever, and a mild, occasional cough, similar to the common cold. The cough gradually becomes more severe, and after 1-2 weeks, the second, or paroxysmal stage, begins.

During the second, or **paroxysmal stage**, the diagnosis of Pertussis is usually suspected. Characteristically, the patient has bursts, or paroxysm of numerous, rapid coughs. At the end of the paroxysm, a long inspiratory effort is usually accompanied by a high-pitched whoop. Vomiting and exhaustion commonly follow the episode. These attacks occur more frequently at night, with an average of 15 attacks per 24 hours. This stage generally lasts 1 to 6 weeks, but may persist for up to 10 weeks.

In the third stage, the **convalescent stage**, recovery is gradual. The cough becomes less paroxysmal and disappears in 2 to 3 weeks. Fever is generally minimal throughout the course of Pertussis.

Complications

Young infants are at highest risk for complications. The most common complication is secondary bacterial pneumonia. Seizures and encephalopathy may occur as a result of hypoxia from coughing, or possibly from toxin. Most deaths occur among unvaccinated children or children too young to be vaccinated.

Pertussis complications*			
Condition	% reported	Condition	% reported
Pneumonia	5.2	Death	0.2
Seizures	0.8	Hospitalization	20
Encephalopathy	0.1		

*cases reported to CDC 1997-2000 (N=28,187)

Transmission

Occurs through direct contact with discharges from respiratory mucous membranes of infected persons.

Other links:

CDC's National Immunization Program: <http://www.cdc.gov/nip/publications/pink/pert.pdf>



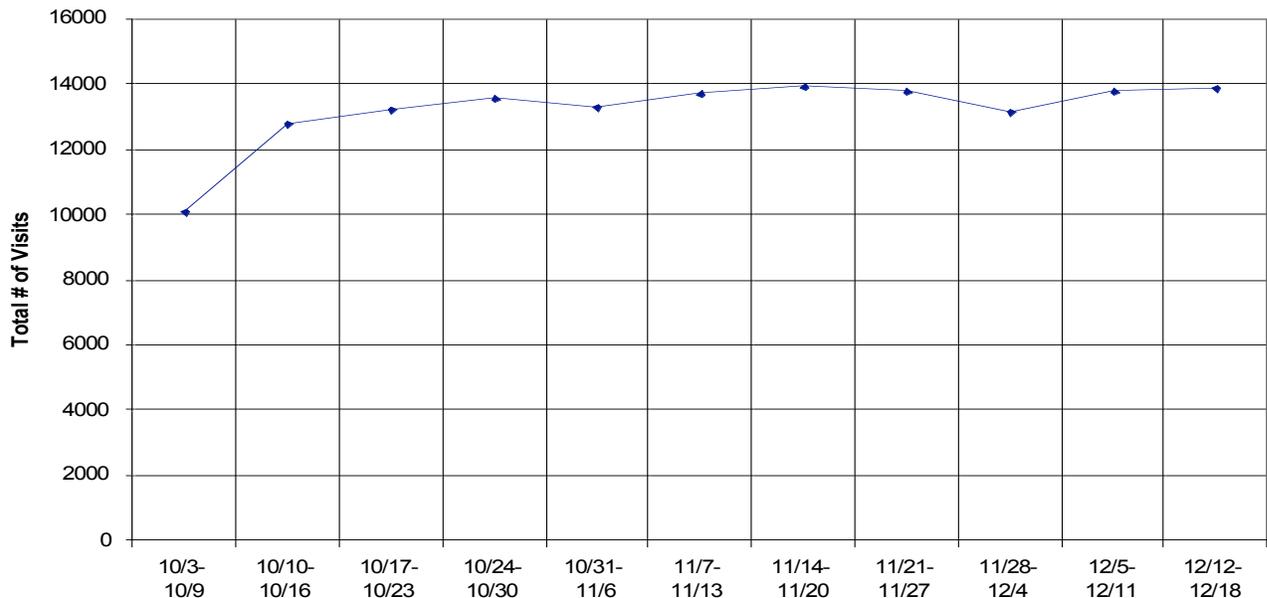
Influenza Surveillance in Maricopa County 2004-2005

The Maricopa County Department of Public Health (MCDPH) Division of Epidemiology/BDPR began its annual influenza surveillance for the 2004-2005 season in October. Currently, a total of 83 sites (17 hospital emergency departments, 20 Cigna health care centers, 4 long term care centers, 41 schools and the ASU Student Health and Wellness Center) have been recruited to report, on a weekly basis, the number of patients with influenza-like illness (ILI). The Cigna health care centers and the ASU Student Health and Wellness Center are participants in the Centers for Disease Control and Prevention's (CDC) Sentinel Surveillance Program.

The case definition for reporting of ILI is fever of 100° or higher plus cough and/or sore throat.

Example of data included in the Maricopa County weekly influenza report:

**Total Number of Visits to 17 Valley Emergency Departments,
Maricopa County Summary 2004-05**



For a complete local weekly report, visit:

http://www.maricopa.gov/public_health/epi/flu.asp

For more information on influenza surveillance in the US conducted by CDC, visit:
<http://www.cdc.gov/flu/weekly/fluactivity.htm>



Influenza vaccination in Maricopa County

Community Health Nursing rises to the challenge

In response to the shortfall of flu vaccine production this season, the Maricopa County Department of Public Health (MCDPH) is assisting in administering the flu vaccine. The Division of Community Health Nursing (CHN), normally responsible for childhood immunizations, was charged with the task of operating the first ever by-appointment adult influenza vaccination clinic. The operation was organized swiftly with efficiency, strong public support and positive media attention. CHN set a new operational standard for executing adult immunization clinics in a short amount of time.

MCDPH is following [CDC recommendations](#) as to who should be given priority for getting the flu shot. The list of priority groups can be found in the box on page 6. These are people that are at high risk for serious flu complications or who are in contact with people at high risk for serious flu complications.

On October 29, 2004, the MCDPH received 12,270 flu vaccinations from the Arizona Department of Health Services (ADHS). There were additional doses purchased by MCDPH that 1) have been provided to those who remained in the lottery and not selected the first time, 2) has allowed MCDPH to provide for those who have not received one from another source and still want one, 3) are considered high risk according to [CDC guidelines](#) and 4) are residents of Maricopa County. MCDPH purchased an additional 8,000 doses in December and will join forces with Cigna Medical Group to hold flu clinics to administer the vaccine. Clinics will be held in December and January.

Breaking news...on December 21, 2004, ADHS, working closely with CDC, is recommending that if, by January 3, 2005, physicians have completed vaccinating the highest risk patients in their practice, or if demand for influenza vaccine among their high-risk patients has diminished, they begin vaccinating contacts of high-risk patients and patients 50-64 years old.

Where can I get a flu shot?

For information on these vaccination clinics, go to: <http://www.maricopa.gov/flu>.

Visit www.cir.org or contact your health care provider or health care plan.

Looking for more information?

US influenza activity: <http://www.cdc.gov/flu/weekly/fluactivity.htm>

CDC vaccination recommendations ~ next page



CDC recommendations ~ Who should get vaccinated?

Anyone who wants to reduce their chances of getting the flu can get vaccinated. However, certain people should get vaccinated each year either because they are at high risk of having serious flu complications or because they are in close contact with someone who is at high risk for serious complications and they could make them sick. People who should get vaccinated each year are:

- 1. People at high risk for complications from the flu;**
 - **People 65 years and older;**
 - **People** who live in **nursing homes** and other **long-term care facilities** that house those with long-term illnesses;
 - **Adults** and **children 6 months and older** with **chronic heart or lung conditions**, including asthma;
 - **Adults** and **children 6 months and older** who needed **regular medical care** or were in a **hospital during the previous year** because of a **metabolic disease** (like diabetes), **chronic kidney disease**, or **weakened immune system** (including immune system problems caused by medicines or by infection with human immunodeficiency virus [HIV/AIDS]);
 - **Children 6 months to 18 years** of age who are on **long-term aspirin therapy**. (Children given aspirin while they have influenza are at risk of developing Reye syndrome.);
 - **Women who will be pregnant** during the influenza season; and
 - **All children 6-23 months of age.**
- 2. People 50 to 64 years of age;** (Nearly 1/3 of people 50-64 years of age in the United States have one or more medical conditions that place them at increased risk for serious complications from influenza.)
- 3. People who can transmit influenza to others at high risk for complications.** (This means that if you have contact with anyone in a high risk group (see listing above), you should get vaccinated. This includes health-care workers and parents or other close contacts of children 6-23 months of age and close contacts of seniors.)

For the complete fact sheet or more information on the flu, visit www.cdc.gov/flu

Is it a cold or the flu?

Both colds and the flu are highly contagious and, in the initial stages, might seem alike. It's important to know the difference between the two. The table* below provides distinctions between them.

Symptoms	Cold	Flu
Fever	Rare	Characteristic, high (102-104°F); lasts 3-4 days
Headache	Rare	Prominent
General aches, pains	Slight	Usual, often severe
Fatigue, weakness	Quite mild	Can last up to 2-3 weeks
Extreme exhaustion	Never	Early and prominent
Stuffy nose	Common	Sometimes
Sneezing	Usual	Sometimes
Sore throat	Common	Sometimes
Chest discomfort, cough	Mild to moderate; hacking cough	Common; can become severe
Complications	Sinus congestion or earache	Bronchitis, pneumonia; can be life-threatening
Prevention	None	Annual vaccination; antiviral medicine – see doctor
Treatment	Only temporary relief of symptoms	Antiviral medicines – see your doctor

*April 2001, From the National Institute of Allergy and Infectious Diseases:
<http://www.niaid.nih.gov/publications/cold/sick.pdf>



Looking for a way to give back in the new year? Try volunteering!

There are a number of volunteer opportunities available throughout the valley. Please visit the Make a Difference website at:

<http://www.makeadifference.org/> OR

Check out the 2004 Guide to Volunteering ~ Phoenix Holiday Guide for volunteering ideas for the holiday season and year-round.

<http://www.volunteerphoenix.org/holiday.pdf>

Volunteer opportunities in Public Health

Volunteers are needed for various activities within the Department, including translating information between providers and clients, greeting customers, special projects and surveys.

The following locations are seeking volunteers:

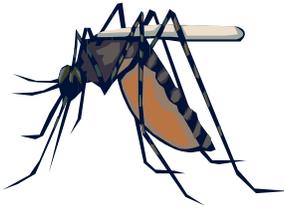
Public Health Clinic (1825 E Roosevelt St, Phoenix)

Health Care for the Homeless (1201 W Madison, Phoenix)

Call 602.506.6768 for an application or visit:

http://www.maricopa.gov/public_health/about/volunteer.asp?Q=volunteer%20opportunities.

West Nile Virus (WNV) Update



Enhanced surveillance for West Nile Virus (WNV) has ended for the 2004 mosquito season. This includes mosquito pool testing, dead bird collection, and sentinel chicken flock surveillance.

The table below shows the final numbers (as of December 28, 2004, unless otherwise noted) for WNV activity in Arizona and Maricopa County for 2004. WNV was found in 11 of Arizona's 15 counties in 2004.

West Nile Virus activity for 2004 in Arizona and Maricopa County

+ for WNV	Arizona (includes Maricopa County)	Maricopa County
Dead birds	98	53
Mosquito pools	249	102
Chicken flocks	42	28
Human	390	356
Equine	114	56
Deaths	14	12

Overall, 2448 total human cases were reported to CDC in the United States from January 1 through December 28, 2004. Of these, 888 (36%) were reported as West Nile meningitis or encephalitis (neuroinvasive disease), 1011 (41%) were reported as West Nile fever (milder disease), and 549 (22%) were clinically unspecified at this time.

For more information:

Maricopa County website on WNV: http://www.maricopa.gov/public_health/wnv/

MC Environmental Services WNV site:

<http://www.maricopa.gov/envsvc/WATER/VECTOR/westnile.asp>

ADHS website on WNV: <http://www.westnileaz.com/>

CDC WNV website:

http://www.cdc.gov/ncidod/dvbid/westnile/surv&controlCaseCount04_detailed.htm

.....

Current Cigarette Smoking Among Adults, United States 2003



In Arizona, 21% of adults reported having smoked ≥ 100 cigarettes during their lifetime and currently smoke everyday or some days. More men (23.8%) reported current cigarette smoking than women (18.2%) in Arizona. (see MMWR article referenced below)

On November 18, 2004, the [American Cancer Society](#)* (ACS) sponsored the 28th Annual Great American Smokeout to encourage nearly 46 million adult smokers in the United States to quit smoking for at least 24 hours in the hope that they may remain forever smoke free. Additional information about the [Great American Smokeout](#) is available from ACS, telephone 800-227-2345 or at <http://www.cancer.org>.

According to an article in the November 12, 2004 MMWR entitled "State-Specific Prevalence of Current Cigarette Smoking Among Adults --- United States, 2003", cigarette smoking causes approximately 440,000 deaths annually in the US. To assess the prevalence of current cigarette smoking among adults, CDC analyzed data from the 2003 Behavioral Risk Factor Surveillance System (BRFSS) survey. For the complete article go to:

<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5344a2.htm>



New Family History Initiative

Do you know your family's health and disease history? Do you know how it could be important to your health?

The Family History Initiative was developed to help focus attention on the importance of knowing your family health history. A survey conducted by the CDC, the Healthstyles 2004 Survey, found that 96% of Americans believe that knowing family history is important to their health yet only 1/3 have ever tried to gather and organize this information.

To encourage everyone to become involved in his or her health, the US Surgeon General, Richard H. Carmona, declared Thanksgiving Day 2004 to be the first annual National Family History Day. Thanksgiving was chosen because it is a time when American families traditionally gather. Everyone is encouraged to

use this time, or any time the family meets, to collect important family health history information that can then be used during a visit to a health care provider.

The Initiative provides a computerized family history tool called “My Family Health Portrait” that allows users to compile valuable health information about six common diseases for each family member and also has an option for users to add conditions that are not on the list. This information can be updated as needed and a graphic print-out is created that can be printed and used by the health care provider.

For more information about the Initiative or to download the FREE family history tool, visit: <http://www.hhs.gov/familyhistory>



World AIDS Day ~ December 1, 2004

From the Department of Health and Human Services (HHS), Office of Minority Health at: <http://www.omhrc.gov/hivaidsobservances/index.html>

This annual global event is dedicated to remembering the victims of AIDS, learning more about the devastating effects of the disease around the world, and reaffirming the commitment to fight it.

AIDS has killed more than 20 million people since the first cases were diagnosed in 1981, including 2.9 million in 2003 alone. It is estimated that 37.8 million people were infected with HIV at the end of 2003, with 2.9 million new cases that year.

This year’s theme is **“Women, Girls, HIV and AIDS,”** which reflects a focus on how the effects of HIV/AIDS have significantly increased among women. Women now make up half of all people living with HIV worldwide, and 57 percent of these women live in sub-Saharan Africa. In that region, women are infected at an earlier age than men, and the ratio of new infections among women compared to men is even higher within the 15–24 age group. Poverty, instability, violence, lack of access to adequate health care, and ignorance all contribute to the problem.

In the United States, up to 950,000 Americans are estimated to have HIV, with 40,000 new infections every year. During 2003, there were 536 emergent cases of HIV/AIDS in Maricopa County. Of those 345 (64%) were emergent HIV cases (15% women) and 191 (36%) were emergent AIDS cases (11% women). Emergent cases are defined as those cases that are newly reported, previously unknown cases, during a defined time period. Among women, minorities—particularly African Americans—have the highest rates of AIDS cases. In the United States, these women are suffering from rates of HIV infection 10 to 20 times those of white women, and AIDS is one of the leading causes of death among women aged 25-44

years. In Maricopa County, rates of HIV infection among African American women are almost 7 times those of white women.

In support of World AIDS Day, HHS is hosting an Awareness Day Web site at <http://www.omhrc.gov/hivaidsobservances/wad/index.html>, which offers information on prevention, testing, treatment, and vaccine research. Information about finding testing locations, planning local events, how to craft public-awareness messages, and working with your local media can be found here.

The MCDPH, Division of HIV/HCV Services conducted free HIV counseling and antibody testing at locations across the Valley in support of World AIDS Day. For more information on the HIV services offered at MCDPH, visit: http://www.maricopa.gov/public_health/hivtest.asp.

National HIV/AIDS Observance Days Message

From the Department of Health and Human Services, Office of Minority Health at: <http://www.omhrc.gov/hivaidsobservances/index.html>

Educate, Motivate, and Mobilize against HIV/AIDS

It is important to know the facts, how to prevent being infected, and how to live with the disease. We need to continue to talk and learn about HIV/AIDS, and the observances listed here provide an excellent opportunity for discussion and information sharing. Our goal is to provide timely information and resources for these awareness days.

- [National Black HIV/AIDS Awareness and Information Day](#) (February 7)
- [HIV Vaccine Awareness Day](#) (May 18)
- [National HIV Testing Day](#) (June 27)
- [National Latino AIDS Awareness Day](#) (October 15)
- [World AIDS Day](#) (December 1)

We encourage you to visit this Web site throughout the year and to click on the icons above to download materials, educational tools, and information [...]. We hope the resources and information will assist your efforts to educate, motivate, and mobilize your local community in the fight against HIV/AIDS!

Maricopa County Communicable Disease Summary
Confirmed and probable cases reported in 2004 (as of December 31,
2004)

Disease					Yearly totals		
	1 Q	2 Q	3 Q	4 Q*	2004 YTD	2003 YTD	2002 YTD
Amebiasis	5	1	2	1	9	36	20
Anthrax	0	0	0	0	0	0	0
Aseptic Meningitis: viral	93	169	191	114	567	1265	229
Botulism	0	0	1	0	1	0	2
Botulism, Infant	0	0	0	0	0	0	0
Brucellosis	0	0	1	1	2	4	6
Campylobacteriosis	74	145	91	69	379	433	357
Cholera	0	0	0	0	0	1	0
Coccidioidomycosis (valley fever)	300	275	273	198	1046	872	1008
Colorado tick fever	0	0	0	0	0	0	0
Congenital Rubella	0	0	0	0	0	0	0
Conjunctivitis: acute	0	0	0	0	0	3	0
Creutzfeldt-Jakob disease	0	1	0	2	3	3	1
Cryptosporidiosis	0	3	1	2	6	6	16
Dengue	0	0	1	0	1	1	2
Diphtheria	0	0	0	0	0	0	0
Ehrlichiosis	0	1	0	0	1	0	0
Encephalitis: viral	5	15	13	10	43	44	18
<i>Escherichia coli</i> O157:H7	2	5	7	6	20	19	24
Giardiasis	34	31	23	21	109	178	138
H. influenzae: Invasive	20	7	9	4	40	46	49
Hansen's disease (Leprosy)	0	0	0	0	0	0	1
Hantavirus	0	0	0	0	0	0	3
Hepatitis A	17	29	23	17	86	127	146
Hepatitis B	263	291	286	227	1067	1043	900
Hepatitis C	448	296	290	252	1286	1908	1498
Hepatitis D	0	0	0	0	0	2	7
Hepatitis Non-A, Non-B	0	0	0	0	0	0	0
Legionellosis	2	3	4	7	16	12	11
Leptospirosis	0	0	0	0	0	0	1
Listeriosis	2	0	2	1	5	5	8
Lyme Disease	1	5	11	2	19	13	13
Malaria	1	5	3	3	12	12	13
Measles	0	0	0	0	0	4	0
Meningococcal Invasive	2	5	3	1	11	18	21
Mumps	0	2	1	3	6	3	5
Pertussis (whooping cough)	37	70	79	60	246	124	121
Plague	0	0	0	0	0	0	0
Poliomyelitis	0	0	0	0	0	0	0
Psittacosis	0	0	0	0	0	0	1
Q fever	1	0	0	1	2	3	0
Rabies exposure	3	2	2	6	13	3	0
Relapsing fever (Borreliosis)	0	0	0	0	0	0	0

Maricopa County Communicable Disease Summary
Confirmed and probable cases reported in 2004 (as of December 31,
2004)

Disease					Yearly totals		
	1 Q	2 Q	3 Q	4 Q*	2004 YTD	2003 YTD	2002 YTD
Reye syndrome	0	0	0	0	0	0	0
Rocky Mountain spotted fever	1	0	1	1	3	4	6
Rubella	1	0	0	1	2	1	0
Salmonellosis	69	77	92	51	289	384	297
Scabies	1	5	1	1	8	25	4
Severe acute respiratory syndrome	0	0	0	0	0	0	0
Shigellosis	41	53	62	52	208	305	362
Streptococcus pneumoniae	115	69	44	46	274	365	304
Streptococcal Group A: invasive	150	59	27	33	269	360	197
Streptococcal Group B: invasive	82	59	47	26	214	99	64
Taeniasis	0	1	0	2	3	5	1
Tetanus	0	0	0	1	1	0	0
Toxic shock syndrome (TSS)	1	3	0	0	4	6	0
Trichinosis	0	0	0	0	0	0	0
Tularemia	0	0	0	0	0	0	0
Typhoid Fever	2	0	0	0	2	1	1
Typhus Fever	0	0	0	0	0	1	1
Vancomycin-resistant Enterococcus	246	233	169	176	824	620	606
Varicella (chickenpox)	462	338	72	137	1009	669	185
Vibrio infection	0	1	4	0	5	6	7
West Nile virus	2	203	193	5	403	10	0
Yellow fever	0	0	0	0	0	0	0
Yersiniosis	1	2	1	0	4	5	7

Source: MCDPH Communicable Disease Reporting system, 12/31/04.

*Q4 counts are underestimates of the actual count due to delays in data entry.

MCDPH Divisions of Epidemiology and BDPR
Contact Numbers (all 602 area code)

Vjollca Berisha	Senior Epidemiologist	372-2611
Kristin Cass	Executive Assistant	372-2604
Marcos Coria	MCH Data Analyst	372-2632
Alisa Diggs	Epidemiologist	372-2612
Andrew Edmonds	Surveillance Data Analyst	372-2619
Abrium Escárzaga	BT Epidemiologist	372-2643
Robert French	Deputy Director, BDPR	372-2658
Natalie Fuller	Surveillance Data Analyst	372-2613
Jeanette Gibbon	Epidemiologist	372-2642
Robert Jones	Medical Dir, Surveillance/BDPR	372-2650
Ron Klein	Disease Surveillance Sup	506-6722
Chris Mahon	Program Admin, CHN	506-6771
Karen Moffitt	Senior Epidemiologist	372-2636
Liva Nohre	Senior Epidemiologist	372-2631
David Dubé	Interim Director, Chronic Disease	372-8402
Sarah Santana	Director, Epidemiology	372-2601
Mare Schumacher	Deputy Director, Epidemiology	372-2602
Jennifer Stewart	Epidemiologist	372-2621
Heather Wanatowicz	Administrative Supervisor	372-2605
Gary West	Statistical Programmer	372-2603

To report communicable diseases, unusual health occurrences, and public health emergencies
(all 602 area codes unless otherwise noted)

	Business hours M-F 8a-5p	After 5p
Bite reports	506-7387	506-7387
Communicable diseases	506-6767	747-7111
Death/birth certificates, funeral homes, human remains	506-6805	450-9982 or 229-9315
HIV (reports)	506-6426	Next business day
Public health emergencies	747-7111	747-7111
Rabies exposure	779-1358	747-7111
STDs (other than HIV)	506-1678	Next business day
TB	506-5065 or 372-1408	747-7111

**For change of name or address or to be removed or added to this mailing list, please e-mail
Jeanette Gibbon at: jeanettegibbon@mail.maricopa.gov or call (602) 372-2642.**