QUARTERLY REPORT

Marion County Health Department
3180 Center St NE
Salem OR 97301-4592
(503) 588-5357
http://health.co.marion.or.us

4th Quarter
December 2007

To report a communicable disease
(24 hours a day, 7 days a week)

Telephone: **(503) 588-5621**
Fax: **(503) 566-2920**

Vital Statistics Quarter Ending: Dec. 2007	4th Quarter 2007	4th Quarter 2006	Year to Date 2007	Year to Date 2006
BIRTHS TOTAL DELIVERIES	1415	1313	5823	5605
Delivery in Hospital	11	16	52	45
Teen Deliveries (10-17)	65	55	238	210
DEATHS TOTAL	662	630	2584	2454
Medical Investigation	63	47	277	212
Homicide	2	5	5	12
Suicide	10	5	45	34
Accident – MVA	7	7	20	27
Accident – Other	12	8	57	50
Natural / Undetermined / Pending	32	22	100	88
Non-Medical Investigation (all natural)	599	583	2357	2242
Infant Deaths	2	4	9	23
Fetal Deaths	1	5	30	17
COMMUNICABLE DISEASES E-Coli: 0157	0	4	4	11
Hepatitis A	1	1	1	4
Acute Hepatitis B	1	2	6	4
Chronic Hepatitis B	13	5	37	35
Meningococcus	0	0	3	3
Pertussis	5	2	6	7
Tuberculosis	2	2	10	13
SEXUALLY TRANSMITTED DISEASE PID (Pelvic inflammatory Disease)	0	1	0	1
Chlamydia	326	191	1076	840
Gonorrhea	40	30	110	143
Syphilis	5	1	9	5
AIDS	5	3	11	12
HIV Positive	8	2	26	14

2007 – The Year in Review

Karen Landers MD MPH, Marion County Health Officer

It's a new year. Resolve to keep these public health issues in mind as we proceed through 2008:

Norovirus

"Winter vomiting disease" continues to comprise a significant proportion of the disease outbreak investigations conducted by Marion County Health Department. Laboratory-confirmed norovirus was responsible for 11 of the 25 (44%) outbreaks investigated by Marion County in 2007. Three additional outbreaks were highly suspected to be the result of norovirus , but were not confirmed by the laboratory. The majority of the outbreaks (8) occurred during the months of December, January, and February. Both the seasonality and the symptom profile of the illness which includes nausea, vomiting, watery non-bloody diarrhea, and abdominal cramps are responsible for the descriptive moniker noted at the beginning of this discussion.

The bulk of norovirus outbreaks in Marion County have occurred in healthcare facilities. Noroviruses are highly contagious with as few as 100 virus particles needed to cause infection. Transmission is primarily through the fecal-oral route, either directly from person to person or through fecally-contaminated food or water. Norovirus can also spread via air droplets contaminated with vomitus or through transfer of the virus from environmental surfaces contaminated with feces or vomitus. These viruses are relatively stable in the environment and can survive freezing and heating to 140ºF. Careful hand hygiene and cleaning and disinfection of contaminated surfaces are key to controlling outbreaks. The Centers for Disease Control and Prevention (CDC) recommends either bleach or a U.S. Environmental Protection Agency (EPA)-approved disinfectant. Surgical masks are recommended for persons cleaning areas heavily contaminated with vomitus or feces. Viral shedding in the stool can continue for up to 2 weeks after the illness. The recommendation for ill staff working in facilities with outbreaks to remain off work for 72 hours after symptoms resolve is also critical to interrupting transmission.

CA-MRSA

Community-associated methicillin-resistant *Staphylococcal aureus* (CA-MRSA) received national attention in 2007 with the MRSA-related deaths of high school athletes in 3 states and numerous other cases of MRSA in schools.

Continued

Although most MRSA infections are still acquired in the health care setting, there have been increasing reports of MRSA infections occurring in healthy individuals who have not been hospitalized or undergone a medical procedure such as dialysis, surgery, or catheter insertion in the past year. The majority of CA- MRSA infections present as skin and soft tissue infections such as boils or abscesses, but staph infections can also lead to more invasive disease such as pneumonia, bacteremia, osteomyelitis, and septic arthritis.

S. aureus is a bacterium commonly carried on the skin or in the nose and throat of healthy people. An estimated 30% of the population is colonized with staph (1.2 million Oregonians); about 1% carry MRSA (estimated 28,000 people in Oregon).Staphylococcal bacteria are also commonly found in the environment and can survive on surfaces for days to weeks. One study of public transportation areas detected MRSA in 100% of subways, buses, trains and planes that were sampled. Factors associated with transmission of staph skin infections include close skin-to-skin contact, openings in the skin such as cuts or abrasions, sharing of contaminated personal items or equipment, crowded living conditions and poor hygiene. CDC has investigated clusters of CA-MRSA skin infections among children, athletes, military recruits, prisoners, Pacific Islanders, Alaskan Natives, Native Americans, and men who have sex with men.

Control of staph infections in the community setting involves a range of strategies from detection and treatment to preventing the acquisition and spread of infections. Antibiotics may not always be required to treat MRSA infections; greater than 90% of deep skin abscesses can be treated with incision and drainage alone. Personal control measures include frequent and thorough hand washing, covering of draining or open wounds, and avoiding the use of shared personal items such as towels, razors, or soap. Routine cleaning practices are generally sufficient to reduce the risk of staph transmission. Environmental disinfection should be focused on those items coming into contact with more than one person, or surfaces that may come into contact with wound drainage such as sports equipment, whirlpools and spas, or gym mats. The risk of subsequent symptomatic infection in individuals colonized with the same strain of MRSA is not well documented. Decolonization is not generally recommended, but may be considered in selected situations where colonization has been identified in the context of recurrent infections from culture-proven *S. aureus* demonstrating a similar susceptibility pattern.

Pertussis

Despite a relative lull in reported pertussis cases since the epidemic year of 2005 (see graph), we have evidence that pertussis is still present in Marion County with the recent laboratory-confirmed case in a 3 month old infant at the end of 2007. After reporting an average of approximately 3000 cases/year in the United States from 1980-1990, the incidence of pertussis increased to nearly 26,000 in 2004, with the highest proportion of cases in adolescents and adults. Waning immunity after natural infection or immunization has contributed to the development of a reservoir of susceptible individuals in whom pertussis diagnosis may be delayed or missed. Infants under one year of age who have close contact with pertussis and who have not yet received the full benefits of vaccination are at greatest risk of hospitalization and death due to this vaccine-preventable disease.

Pertussis is a highly contagious bacterial infection characterized by prolonged cough. As many as 80% of susceptible household contacts will develop infection when exposed. Cases are most contagious in the catarrhal phase and the first two weeks after cough onset (i.e. approximately 21 days). Disease in infants less than 6 months of age can be atypical with gagging, gasping, or apnea as prominent manifestations. Disease in older children and adults can also be atypical with cough that is not accompanied by a whoop. Culture of posterior nasopharyngeal swab or aspirate remains the "gold standard" for diagnosis. Polymerase chain reaction (PCR) testing on nasopharyngeal specimens is highly sensitive and provides earlier results than culture, but may need to be interpreted with caution as high rates of false positives have been reported in some areas. Correlation with clinical symptoms and culture is recommended.

Control of pertussis is dependent on two main strategies – vaccination and post-exposure prophylaxis to protect vulnerable contacts. The recommended schedule for children includes four doses of pertussis-containing vaccine by 18 months of age followed by a fifth dose at school entry. With the advent of two new pertussis vaccines approved for use in adolescents and adults in 2005, there is now an opportunity to provide additional protection to a population whose immunity may have waned over time. Children should now routinely receive a single dose of Tdap in place of Td at age 11-12 years. Adults, particularly health care workers and persons who will be in contact with young infants, should receive a single dose of Tdap when a tetanus booster is indicated. Post-exposure prophylaxis is recommended to protect high-risk contacts. This includes infants less than 1 year of age, pregnant women in the third trimester (who will soon have contact with a young infant) and others in households or settings where these high-risk contacts are found. **Pertussis is a reportable condition**. In order to facilitate earliest prophylaxis of at-risk contacts, **report all suspect and confirmed pertussis cases to the local health department within one working day. Call Marion County Health Department at (503) 588-5621, 24 hours a day, 7 days a week.**