Utah Health Status Update:

Chlamydia and Gonorrhea Infection as a Reproductive Health Issue

June 2008

Utah Department of Health

Chlamydia is the most commonly reported infectious disease in the U.S.; over one million cases were reported in the U.S. in 2006. Chlamydia has been the most frequently reported infectious disease in Utah for at least the last ten years.

Numbers of reported chlamydia and gonorrhea cases have been increasing for several years in Utah. Over the past five years, reported chlamydia cases have increased by 48% and gonorrhea cases by 123%. Adolescents and young adults are the age groups at greatest risk for acquiring a sexually transmitted disease (STD). Over two-thirds of Utah's chlamydia cases have been reported among females (69% in 2007), with females, aged 15–24, accounting for 49% of all reported chlamydia infections during 2007. During 2007, 42% of reported gonorrhea cases were among females, with 16% reported among the 15–24 age group.

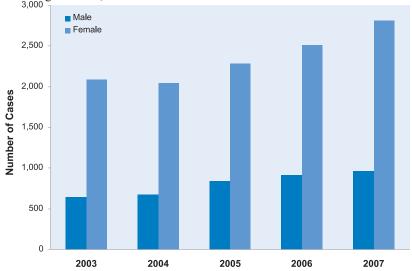
Chlamydia infection is usually asymptomatic and often goes unrecognized and untreated; chlamydia is often referred to as the "silent epidemic." Thirty to eighty percent of women with gonorrhea have no symptoms and 85% of women with chlamydia have no symptoms to indicate that they are infected. Left untreated, chlamydia and gonorrhea can cause serious reproductive health problems, including short-term (e.g. pelvic inflammatory disease, pregnancy complications) and longterm consequences (e.g. infertility, ectopic pregnancy, and chronic pelvic pain leading to hysterectomy). Women and young women in particular are much more likely to suffer serious consequences of STDs.

Pelvic Inflammatory Disease

One of the most serious threats to the reproductive capability of women is infection of the upper genital tract, referred to as pelvic inflammatory disease (PID). Most cases of PID are associated with untreated chlamydia or gonorrhea infections, which initially involve the cervix, but can spread into the uterus, tubes and abdominal cavity. Each year, more than one

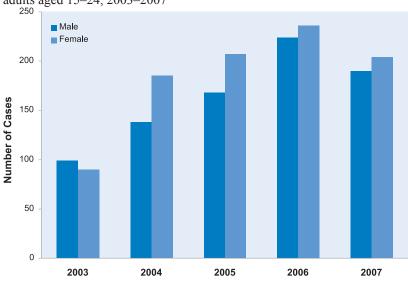
Chlamydia, Ages 15–24

Figure 1. Number of reported chlamydia cases, Utah adolescents and young adults aged 15–24, 2003–2007 $_{\rm 3,000}$



Gonorrhea, Ages 15–24

Figure 2. Number of reported gonorrhea cases, Utah adolescents and young adults aged 15–24, 2003–2007



million U.S. women experience an episode of PID. It is estimated that 10–30% of women with untreated chlamydia infections, and 10–45% of women with untreated gonorrhea infection develop PID. Some cases of PID require surgical intervention. At least 25% of women with acute pelvic inflammatory disease will experience serious long-term sequelae. Of women who have had PID, one in five will become infertile; one in ten will have a tubal pregnancy; and about 20% of women will experience chronic pelvic pain. Sixty percent of the women diagnosed with

PID will have "silent" PID; that is, they experience only mild symptoms or no symptoms. This form of PID is less likely to be detected and treated, thus placing women at increased risk of subsequent complications.

An average of 635 women are treated for PID at Utah's emergency departments each year. Women between the ages of 15–34 comprise 75% of these visits. The average charge associated with those visits, as reported, was \$3,100 per visit or \$1,968,000 per year (data from Utah's Emergency Department Database). Early treatment of PID can be easily managed with a regime of antibiotics, for under \$50 per client, as opposed to delayed treatment which could result in hospitalization at an average cost of \$11,000. Nearly 1,400 Utah women are hospitalized each year for PID.

Ectopic Pregnancy

PID can permanently damage the fallopian tubes, uterus and surrounding tissues, leading to infertility, ectopic pregnancy (pregnancy outside the uterus), and chronic pelvic pain.

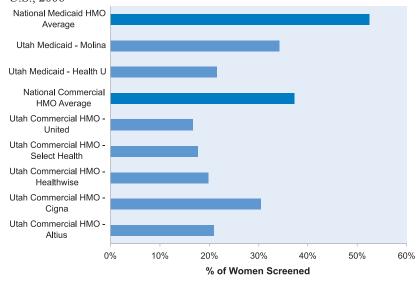
An ectopic pregnancy usually results from partial blockage due to pelvic inflammatory disease. After one episode of PID, a woman is six to ten times more likely to have an ectopic pregnancy than women who have not had PID. Approximately 9% of women with laparoscope-confirmed pelvic inflammatory disease experience an ectopic pregnancy for their first pregnancy after the episode of PID.

The average hospital charge for an ectopic pregnancy is approximately \$8,819 per patient. Twelve percent (12%) of women with silent PID may be infertile and approximately 25% will often require an infertility work-up. Data from Utah's Pregnancy Risk Assessment Monitoring System suggest that of all women delivering a live birth between 2004 and 2006 (152,913) 5.3% of them received reproductive assistance to get pregnant. Reproductive assistance included the use of reproductive technology, fertility enhancing drugs, artificial insemination and other treatments.

The costs associated with the complications resulting from untreated chlamydia or gonorrhea infections can be reduced significantly. The 2007 Sexually Transmitted Diseases Treatment Guidelines, released by CDC in February, recommended that all sexually active women under 25 years of age receive

Chlamydia Screening in Women

Figure 3. Percentage of sexually active women aged 16–25 in HMOs who had at least one test for chlamydia during the measurement year, Utah and U.S., 2006



annual screening. Utah's 2007 Performance Report for HMOs evaluated the chlamydia screening rates among sexually active women, ages 16–25 cared for by Utah HMOs. Those data indicated that rates of this recommended preventive screening test were lower than national averages at both commercial and Medicaid HMOs. Chlamydia screening in women has been demonstrated to reduce both the prevalence and rates of PID.

References:

Office of Health Care Statistics. 2007 Performance Report for Utah Commercial HMOs and Medicaid & CHIP Health Plans, Performance Measures (HEDIS) and Consumer Satisfaction Survey Results (CAHPS). Accessed at: http://health.utah.gov/hda/Reports/hmo/index.php

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For additional information about this topic, contact the Bureau of Communicable Disease Control, Utah Department of Health, P. O. Box 142105, Salt Lake City, UT 84114-2105, (801) 538-6096, FAX (801) 538-9913, or visit http://www.health.utah.gov/els; or the Office of Public Health Assessment, Utah Department of Health, Box 142101, Salt Lake City, UT 84114-2101, (801) 538-6108, FAX (801) 538-9346, email: phdata@utah.gov

Spotlights for May 2008

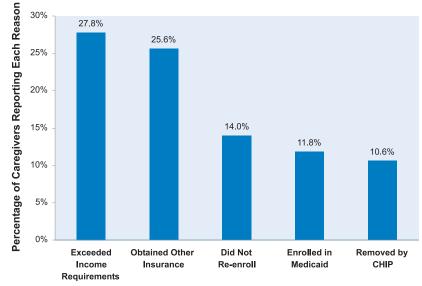
Breaking News, May 2008

Children's Health Insurance Program (CHIP) Disenrollment Report

In 2008, CHIP partnered with the Office of Health Care Statistics and sent out a survey to the caregivers of children that were no longer enrolled in the program. The purpose of the survey was to examine the reasons that eligible children that were once enrolled in the program, have not re-enrolled. It is important to note that caregivers could choose more than one response to

the question of why the child is no longer enrolled in CHIP. The top five responses are provided. The most common response given for the child not reenrolled in the program was that the caregiver believed they had exceeded the income requirements; this response was given by 27.8% of the children's caregivers. 25.6% of the caregivers had found another source of insurance, 14.0% of the caregivers did not re-enroll their child by choice, 11.8% of the caregivers enrolled their child with Medicaid since they became eligible for that program, and 10.6% of the caregivers believed their child was removed by CHIP itself. Caregivers were also asked to rate CHIP on a scale from 1 to 10. 81.2% of caregivers rated CHIP an 8, 9, or 10. The survey provided valuable insight regarding the reasons caregivers are not re-enrolling their children with CHIP, but it also demonstrates that CHIP is perceived to be a valuable program with its enrollees.

Top 5 Reasons Given by Caregivers for Not Re-enrolling Their Children With CHIP



Note: Respondents were allowed to cite more than one reason.

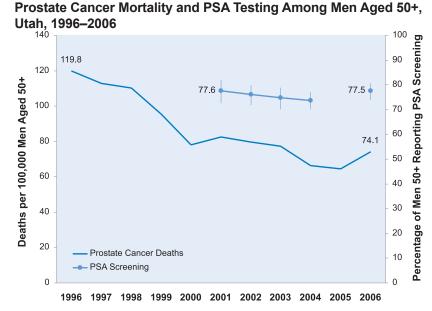
Community Health Indicators Spotlight, May 2008

Prostate Cancer Mortality and PSA Testing

Early prostate cancer often causes no symptoms. Prostate-specific antigen (PSA) testing can effectively detect prostate cancer in its early pathologic stages. PSA is a substance made by the prostate gland. Most men have levels under 4 ng/mL (nano-

grams per milliliter) of blood, and prostate cancer can cause the level to go up. The PSA blood test should be offered annually, beginning at age 50 for men who are at average risk, and age 45 for men who are at increased risk, such as African American men and men with a family history of a first degree relative (father, brother, or son) diagnosed with prostate cancer before 65 years of age. However, clinicians should not order the PSA test without first discussing with the patient the possible harms of prostate cancer screenings, such as false positive results, unnecessary biopsies, and possible complications. If a patient's PSA level is high, the clinician may advise a prostate biopsy to conclusively detect the presence of prostate cancer.

According to Utah Vital Records data, the mortality rate for prostate cancer among men aged 50 and above has decreased significantly from 119.8



men per 100,000 in 1996 to 74.1 men per 100,000 in 2006. In 2006, 77.5% of Utah men surveyed who were aged 50 and above reported they ever had a PSA test according to the Utah Behavioral Risk Factor Surveillance System. The PSA test may result in stage shifts from distant (advanced) disease to more treatable stages of the disease.

Monthly Health Indicators Report (Data Through April 2008)

Monthly Report of Notifiable Diseases, April 2008	Current Month # Cases	Current Month # Expected Cases (5-yr average)	# Cases YTD	# Expected YTD (5-yr average)	YTD Standard Morbidity Ratio (obs/exp)				
Campylobacteriosis (Campylobacter)	22	25	74	74	1.0				
Enterotoxigenic Escherichia coli (E. coli)	5	4	9	12	0.8				
Hepatitis A (infectious hepatitis)	0	2	1	10	0.1				
Hepatitis B (serum hepatitis)	1	4	7	11	0.6				
Influenza [†]	Weekly updates at http://health.utah.gov/epi/diseases/flu								
Measles (Rubeola, Hard Measles)	0	0	0	0					
Meningococcal Diseases	0	1	4	3	1.3				
Norovirus	0	2*	8	8*	1.1				
Pertussis (Whooping Cough)	31	35	118	131	0.9				
Salmonellosis (Salmonella)	23	23	91	69	1.3				
Shigellosis (Shigella)	3	3	6	13	0.5				
Varicella (Chickenpox)	97	66*	408	352*	1.2				
Viral Meningitis	3	5	14	19	0.7				
	J	3	17	19	0.7				
Notifiable Diseases Reported Quarterly, 1st Qtr 2008	Current Quarter # Cases	Current Quarter # Expected Cases (5-yr average)	# Cases YTD	# Expected YTD (5-yr average)	YTD Standard Morbidity Ratio (obs/exp)				
Notifiable Diseases Reported	Quarter	arter ge)	Cases YTD						
Notifiable Diseases Reported Quarterly, 1st Qtr 2008	Current Quarter # Cases	Current Quarter # Expected Cases (5-yr average)	# Cases YTD	# Expected YTD (5-yr average)	YTD Standard Morbidity Ratio (obs/exp)				
Notifiable Diseases Reported Quarterly, 1st Qtr 2008 HIV	Current Quarter # Cases	Current Quarter # Expected Cases (5-yr average)	# Cases YTD	# Expected YTD (5-yr average)	YTD Standard Morbidity Ratio				
Notifiable Diseases Reported Quarterly, 1st Qtr 2008 HIV AIDS	Current Quarter # Cases	Current Quarter # Expected Cases (5-yr average)	# Cases YTD	# Expected YTD 05 (5-yr average)	YTD Standard Morbidity Ratio 0 1 (obs/exp)				
Notifiable Diseases Reported Quarterly, 1st Qtr 2008 HIV AIDS Chlamydia	# Cases # 1,415	Current Quarter # Expected # Expected 11 246	# Cases AID 11,415	# Expected YTD	YTD Standard Morbidity Ratio 1.1 (obs/exp)				
Notifiable Diseases Reported Quarterly, 1st Qtr 2008 HIV AIDS Chlamydia Gonorrhea	# Current Quarter # Cases # Ca	Current Quarter # Expected # Expected 139 13	# Cases XID # 1,415	# Expected YTD	XTD Standard				
Notifiable Diseases Reported Quarterly, 1st Qtr 2008 HIV AIDS Chlamydia Gonorrhea Tuberculosis	# Contract C	Current Quarter # Expected # Expected 139 8 8 8 8 8 8 8 8 8	# Cases YTD 1,415 137 9	# Expected YTD	ATD Standard Norbidity Ratio (ops/exp) 1.1 1.0 1.5 1.0 1.1				
Notifiable Diseases Reported Quarterly, 1st Qtr 2008 HIV AIDS Chlamydia Gonorrhea Tuberculosis Program Enrollment for the Month of April 2008	# Current Quarter # Cases Month 9	Current Quarter Previous # Expected Month 8 8 (5-yr average)	% Changes # Cases YTD # Cases YTD Month # Cases YTD	1 Year Ago # Expected YTD 1 Year Ago 8 2 - yr average 8 2 - yr average 1 2 - yr average 2 -	% Change [§] From 1 Year 1 Con 1 Year 4go 7TD Standard Morbidity Ratio				

Medicaid Expenditures (in Millions) for the Month of April 2008	Current Month	Expected/ Budgeted for Month	Fiscal YTD	Budgeted Fiscal YTD	Variance - over (under) budget
Capitated Mental Health	\$ 8.6	\$ 9.0	\$ 84.0	\$ 80.9	\$ 3.0
Inpatient Hospital	\$ 18.1	\$ 16.3	\$ 173.3	\$ 164.2	\$ 9.0
Outpatient Hospital	\$ 7.8	\$ 6.7	\$ 70.1	\$ 67.7	\$ 2.3
Long Term Care	\$ 14.6	\$ 16.5	\$ 154.5	\$ 162.0	(\$ 7.6)
Pharmacy	\$ 10.1	\$ 10.5	\$ 105.6	\$ 112.7	(\$ 7.1)
Physician/Osteo Services‡	\$ 6.6	\$ 5.5	\$ 56.6	\$ 55.0	\$ 1.6
TOTAL HCF MEDICAID	\$ 129.7	\$ 135.8	\$ 1,252.9	\$ 1,264.1	(\$ 11.2)
Health Care System Measures	Number of Events	Rate per 100 Population	% Change [§] From Previous Year	Total Charges in Millions	% Change [§] From Previous Year
Overall Hospitalizations (2006)	272,404	9.9%	-0.9%	\$ 3,874.8	+10.7%
Non-maternity Hospitalizations (2006)	161,398	5.7%	-2.5%	\$ 3,235.3	+11.0%
Emergency Department Encounters (2006)	670,168	24.7%	-1.3%	\$ 667.2	+20.6%
Outpatient Surgery (2006)	304,511	11.3%	-3.1%	\$ 1,020.9	+7.7%
Annual Community Health	Current Data Year	Population at Risk	Number Affected	Percent/ Rate	% Change [§] From Previous Year
Measures	ದ ರ	Po at	N _U	Pe Ra	% Ch From Previe Year
Measures Overweight and Obesity (Adults 18+)	2007	2 to 1,861,147	1,077,600	57 .9%	+5.5%
Overweight and Obesity (Adults 18+)	2007	1,861,147	1,077,600	57.9%	+5.5%
Overweight and Obesity (Adults 18+) Cigarette Smoking (Adults 18+)	2007 2007	1,861,147 1,861,147	1,077,600 217,800	57.9% 11.7%	+5.5% +19.4%
Overweight and Obesity (Adults 18+) Cigarette Smoking (Adults 18+) Influenza Immunization (Adults 65+)	2007 2007 2007	1,861,147 1,861,147 227,928	1,077,600 217,800 173,700	57.9% 11.7% 76.2%	+5.5% +19.4% +5.7%
Overweight and Obesity (Adults 18+) Cigarette Smoking (Adults 18+) Influenza Immunization (Adults 65+) Health Insurance Coverage (Uninsured)	2007 2007 2007 2007	1,861,147 1,861,147 227,928 2,699,554	1,077,600 217,800 173,700 287,200	57.9% 11.7% 76.2% 10.6%	+5.5% +19.4% +5.7% -10.4%
Overweight and Obesity (Adults 18+) Cigarette Smoking (Adults 18+) Influenza Immunization (Adults 65+) Health Insurance Coverage (Uninsured) Motor Vehicle Crash Injury Deaths	2007 2007 2007 2007 2006	1,861,147 1,861,147 227,928 2,699,554 2,582,371	1,077,600 217,800 173,700 287,200 296	57.9% 11.7% 76.2% 10.6% 11.5 / 100,000	+5.5% +19.4% +5.7% -10.4% -0.7%
Overweight and Obesity (Adults 18+) Cigarette Smoking (Adults 18+) Influenza Immunization (Adults 65+) Health Insurance Coverage (Uninsured) Motor Vehicle Crash Injury Deaths Suicide Deaths	2007 2007 2007 2007 2006 2006	1,861,147 1,861,147 227,928 2,699,554 2,582,371 2,582,371	1,077,600 217,800 173,700 287,200 296 357	57.9% 11.7% 76.2% 10.6% 11.5 / 100,000 13.8 / 100,000	+5.5% +19.4% +5.7% -10.4% -0.7% +1.6%
Overweight and Obesity (Adults 18+) Cigarette Smoking (Adults 18+) Influenza Immunization (Adults 65+) Health Insurance Coverage (Uninsured) Motor Vehicle Crash Injury Deaths Suicide Deaths Diabetes Prevalence	2007 2007 2007 2007 2006 2006 2007	1,861,147 1,861,147 227,928 2,699,554 2,582,371 2,582,371 2,699,554	1,077,600 217,800 173,700 287,200 296 357 127,000	57.9% 11.7% 76.2% 10.6% 11.5 / 100,000 13.8 / 100,000 4.7%	+5.5% +19.4% +5.7% -10.4% -0.7% +1.6% +15.0%
Overweight and Obesity (Adults 18+) Cigarette Smoking (Adults 18+) Influenza Immunization (Adults 65+) Health Insurance Coverage (Uninsured) Motor Vehicle Crash Injury Deaths Suicide Deaths Diabetes Prevalence Coronary Heart Disease Deaths	2007 2007 2007 2007 2006 2006 2007 2006	1,861,147 1,861,147 227,928 2,699,554 2,582,371 2,582,371 2,699,554 2,582,371	1,077,600 217,800 173,700 287,200 296 357 127,000 1,563	57.9% 11.7% 76.2% 10.6% 11.5 / 100,000 13.8 / 100,000 4.7% 60.5 / 100,000	+5.5% +19.4% +5.7% -10.4% -0.7% +1.6% +15.0% -2.3%
Overweight and Obesity (Adults 18+) Cigarette Smoking (Adults 18+) Influenza Immunization (Adults 65+) Health Insurance Coverage (Uninsured) Motor Vehicle Crash Injury Deaths Suicide Deaths Diabetes Prevalence Coronary Heart Disease Deaths All Cancer Deaths	2007 2007 2007 2007 2006 2006 2007 2006 2006	1,861,147 1,861,147 227,928 2,699,554 2,582,371 2,582,371 2,582,371 2,582,371 2,582,371	1,077,600 217,800 173,700 287,200 296 357 127,000 1,563 2,600	57.9% 11.7% 76.2% 10.6% 11.5 / 100,000 13.8 / 100,000 4.7% 60.5 / 100,000 100.7 / 100,000	+5.5% +19.4% +5.7% -10.4% -0.7% +1.6% +15.0% -2.3% +1.4%
Overweight and Obesity (Adults 18+) Cigarette Smoking (Adults 18+) Influenza Immunization (Adults 65+) Health Insurance Coverage (Uninsured) Motor Vehicle Crash Injury Deaths Suicide Deaths Diabetes Prevalence Coronary Heart Disease Deaths All Cancer Deaths Births to Adolescents (Ages 15-17)	2007 2007 2007 2007 2006 2006 2007 2006 2006	1,861,147 1,861,147 227,928 2,699,554 2,582,371 2,582,371 2,582,371 2,582,371 58,992	1,077,600 217,800 173,700 287,200 296 357 127,000 1,563 2,600 981	57.9% 11.7% 76.2% 10.6% 11.5 / 100,000 13.8 / 100,000 4.7% 60.5 / 100,000 100.7 / 100,000 16.6 / 1,000	+5.5% +19.4% +5.7% -10.4% -0.7% +1.6% +15.0% -2.3% +1.4% +5.9%

^{*} Due to limited historical data, the average is based upon 4 years of data for norovirus, varicella, and West Nile virus infections.

[†] Influenza activity is now sporadic in Utah. Influenza-like illness activity is decreasing statewide. As of May 28,

^{2008, 514} influenza-associated hospitalizations have been reported to the UDOH. More information can be found at http://health.utah.gov/epi/diseases/flu.

^{§ %} Change could be due to random variation.

[‡] Medicaid payments reported under Physician/Osteo Services do not include enhanced physician payments.

Note: Data for notifiable diseases are preliminary and subject to change upon the completion of ongoing disease investigations. Active surveillance for West Nile Virus has ended until the 2007 season.