

Chlamydia Screening Among Sexually Active Young Female Enrollees of Health Plans --- United States, 2000--2007

Chlamydia trachomatis infection is the most common bacterial sexually transmitted disease (STD) in the United States, with more than 2.8 million new cases estimated to occur each year (1). During 2007, approximately 1.1 million cases of chlamydia were reported to CDC; more than half of these were in females aged 15-25 years (2). Untreated chlamydia can progress to pelvic inflammatory disease (PID), infertility, ectopic pregnancy, and chronic pelvic pain. In 1989, the U.S. Preventive Services Task Force (USPSTF) recommended routine chlamydia screening of sexually active young women (3).^{*} To evaluate the rates of chlamydia screening among sexually active young females, CDC analyzed data reported by commercial and Medicaid health plans to the Healthcare Effectiveness Data and Information Set (HEDIS) during 2000–2007. The percentage of enrolled sexually active females who were screened for chlamydia was estimated for each of 41 states that had at least five health plans reporting HEDIS chlamydia screening data and for four U.S. geographic regions. Nationally, the annual screening rate increased from 25.3% in 2000 to 43.6% in 2006, and then decreased slightly to 41.6% in 2007. The regional rate of chlamydia screening in 2007 was highest in the Northeast (45.5%) and lowest in the South (37.3%). Increased screening by health-care providers is necessary to reduce the burden of chlamydial infection in the United States.

The National Committee for Quality Assurance (NCQA), a private not-for-profit organization, monitors the quality of U.S. health plans using data that are submitted voluntarily to HEDIS by health plans annually.[†] HEDIS is used by 90.0% of U.S. health plans to evaluate the quality of health-care services and benchmark performance. During 2000-2007, commercial plans and Medicaid plans reported health services data to HEDIS, including annual chlamydia screening. These health plans were a subset of all health plans in the United States and represented 44.3% (89.5 million of the U.S. population) of commercial enrollees and 24.9% (9.8 million) of Medicaid enrollees in 2007. The 99.3 million enrollees represented 41.1% of the private and Medicaid insured U.S. population (241.5 million) in 2007. The number of health plans reporting data to HEDIS increased substantially from 2006 to 2007, from approximately 500 plans to approximately 800. All health plans that submit chlamydia screening data provide screening as a benefit to enrollees, although they might require a copayment for the service.

HEDIS has included annual chlamydia screening rates since 1999. Annual chlamydia screening rates were measured among sexually active females aged 16-25 years using medical claims, health-care visit data, and pharmacy data submitted by the health plans to NCQA. For the HEDIS measure, sexually active females were defined as those who had a claim or visit for pregnancy; contraception; STD diagnosis, screening, or treatment; or cervical cancer screening. A woman was counted as having a test if she had a claim or health-care visit for any chlamydia test. Mean chlamydia screening rates were calculated by dividing the total number of enrollees screened by the total number of sexually active enrollees for each region and each state. Only states with at least five health plans reporting chlamydia screening data to NCQA for a measurement year were included in this report.

In 2007, chlamydia screening data were analyzed for 583 health plans with 2.8 million sexually active, continuously enrolled females. Among sexually active female enrollees aged 16-25 years (aged 16-26 years during 2000-2002) in commercial and Medicaid health plans in the United States, the annual chlamydia screening rate increased from 25.3% in 2000 to 41.6% in 2007 ([Table](#)).

Increases in the screening rate were observed through 2006 for enrollees in both commercial and Medicaid plans ([Figure](#)), and for enrollees in all four U.S. regions ([Table](#)). Screening rates were stable from 2006 to 2007 for the Northeast and most states. The highest regional rate of chlamydia screening in 2007 was in the Northeast (45.5%) and the lowest was in the South (37.3%). Screening increased most in New Jersey (167.1%, from 15.2% screened in 2000 to 40.6% in 2007). Screening decreased in several states from 2006 to 2007, and decreased most in Alabama (26.4%, from 31.4% screened in 2006 to 23.1% in 2007). In 2007, Hawaii had the highest chlamydia screening rate (57.8%), and Utah had the lowest (20.8%).

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Editorial Note:

From 2000 to 2007, annual chlamydia screening rates generally increased among sexually active females aged 16-25 years accessing care and enrolled in U.S. commercial and Medicaid health plans that reported chlamydia screening data. Although the rate of screening had increased during the preceding 7 years, it decreased from 2006 to 2007 nationally and for some states. Further monitoring of screening rates is needed to determine whether the decreased screening rate observed during 2007 represents a true decrease or might reflect changes in the mix of plans and plan types included in the HEDIS chlamydia screening dataset as a result of the substantial increase in participating plans. State and national screening rates can be affected by changes in the mix of plans included in the chlamydia screening dataset.

A recent nationally representative study of chlamydia screening at visits to hospital outpatient clinics also found low chlamydia screening rates in the United States, with 48.0% of young females screened for chlamydia during a visit to a gynecology clinic for a Papanicolaou (Pap) test (4). In the current report, chlamydia screening rates were substantially lower than other women's health services measured by HEDIS, including Pap tests to screen for cervical cancer (73.9% among enrollees in commercial and Medicaid plans in 2007).

Chlamydia screening and treatment of young women can preserve reproductive health by preventing PID and potential infertility, ectopic pregnancy, and chronic pelvic pain. Barriers to provider screening include 1) lack of reimbursement for the time required to conduct screening tests and to counsel patients, 2) lack of awareness that patients are sexually active and at risk for STDs, and 3) lack of knowledge that chlamydia screening can be performed without a pelvic examination (4,5). Barriers to patient use of screening include 1) inability to pay the copayment of a screening test, and 2) lack of knowledge of the asymptomatic nature, high prevalence, and possible adverse long-term reproductive effects of chlamydial infection (6).

In addition to potential variations caused by the substantial increase in participating plans, the findings in this report are subject to at least three other limitations. First, the findings cannot be generalized to all women in the United States nor to all women enrolled in commercial or Medicaid plans because the data reported to NCQA were from a subset of all health plans and only from a proportion of states. Second, assessment of time trends was limited for those states without data available for the entire evaluation period. Finally, HEDIS estimates might overestimate or underestimate the actual chlamydia screening rate among health plan enrollees. Overestimation likely occurred because the method used to estimate the screening rate excluded a substantial percentage of sexually active enrollees who might not have claims or health-care visits for pregnancy, contraception, STDs, or cervical cancer screening (7). Underestimation might occur if chlamydia tests were actually performed but not captured in the claims data.

Chlamydia screening has been ranked by the National Committee on Prevention Priorities as a top priority service, based on its clinically preventable burden, its cost-effectiveness, and its low current use rate (8). Increased public and provider awareness of the high prevalence of chlamydia in young women, and its preventable sequelae, should lead to increased chlamydia screening of these women. However, education campaigns alone are not sufficient to encourage physicians to increase rates of chlamydia screening (5). The findings in this report highlight the need for simple and effective interventions to increase access and use of chlamydia screening services. Structural interventions have been shown to increase screening rates. For example, the obstetrics and gynecology department of a large managed care organization increased its chlamydia screening rate simply by placing an endocervical swab alongside a Pap test in the examination room (6).

Although this report examined chlamydia screening rates among participants in health plans who were insured and accessed care, 18.4% of females aged 16–20 years and 28.2% aged 21–25 years were uninsured in 2007. § Uninsured women are less likely to access care and less likely to have resources to pay for chlamydia screening (9). Steps must be taken to increase screening among insured women who access care, but addressing the burden of chlamydia among uninsured women also is a public health priority because uninsured women have higher rates of infection (10).

§ Additional information available at http://www.census.gov/hhes/www/cpssc/cps_table_creator.html.

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* Current USPSTF recommendations for screening for chlamydial infections are available at <http://www.ahrq.gov/clinic/uspstf07/chlamydia/chlamydiars.htm#summary>.

† Additional information about HEDIS and NCQA quality measurement programs is available at <http://www.ncqa.org/tabid/59/default.aspx>.

TABLE. Percentage of sexually active female enrollees aged 16-25 years* who were screened for Chlamydia trachomatis infection, by region, state, and year - Healthcare Effectiveness Data and Information Set, United States, 2000-2007

Region/State	No. of health plans reporting in 2007	No. of sexually active enrollees in 2007†	Year									% change from 2000-2007
			2000	2001	2002	2003	2004	2005	2006	2007		
United States	583	2,809,100	25.3	26.7	29.8	35.5	38.3	41.2	43.6	41.6	64.4	

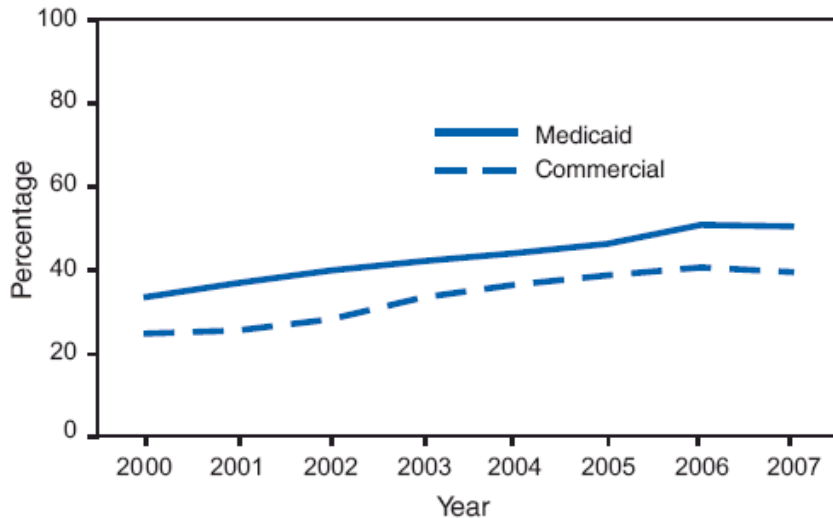
Midwest	158	567,400	23.0	24.5	28.1	32.3	34.1	37.2	39.0	38.5	67.4
Iowa	8	16,700	20.1	20.2	-	-	-	-	-	30.8	53.2
Illinois	22	94,700	16.2	15.0	18.8	22.3	25.3	28.5	30.2	28.3	74.7
Indiana	17	40,500	19.0	19.9	22.2	28.0	30.4	35.3	37.1	36.4	91.6
Kansas	14	37,600	17.3	16.5	22.7	22.6	24.2	30.0	30.3	32.2	86.1
Michigan	24	92,600	30.6	29.3	33.4	38.9	40.6	43.9	45.6	46.4	51.6
Minnesota	17	70,400	19.1	21.5	26.4	29.2	29.8	36.4	40.3	43.1	125.7
Missouri	14	26,600	-	46.1	45.2	50.6	51.7	51.2	50.2	45.7	-
Ohio	21	129,400	25.7	30.1	35.0	35.8	36.0	34.3	35.4	38.7	50.6
Wisconsin	21	58,900	32.6	33.4	29.8	33.0	35.4	35.8	40.6	41.3	26.7
Northeast	116	711,500	22.5	23.6	27.6	34.3	36.5	40.9	43.4	45.5	102.2
Connecticut	15	58,200	23.1	27.1	32.6	37.6	39.7	43.0	46.5	47.3	104.8
Massachusetts	17	102,600	20.9	25.9	34.3	40.0	44.5	47.6	51.4	53.4	155.5
Maine	7	31,800	27.6	25.2	28.6	37.3	-	-	-	48.1	74.3
New Hampshire	5	12,400	-	-	-	-	-	-	-	45.9	-
New Jersey	18	118,900	15.2	16.2	16.6	26.4	31.9	36.0	38.7	40.6	167.1
New York	33	223,800	26.4	27.8	31.4	38.3	40.0	44.6	47.4	47.8	81.1
Pennsylvania	21	163,700	19.7	18.9	24.3	29.7	30.4	35.6	38.0	39.8	102.0
South	173	803,900	25.1	25.8	26.9	33.1	35.6	37.3	40.0	37.3	48.6
Alabama	5	5,700	-	-	-	-	-	29.3	31.4	23.1	-
Arkansas	6	12,500	-	-	-	-	-	-	-	26.2	-
Delaware	11	23,900	21.1	23.4	29.0	32.1	33.4	38.2	37.5	41.7	97.6
Florida	26	134,500	24.7	20.3	19.3	27.8	29.8	35.6	37.7	38.6	56.3

Georgia	12	79,700	31.1	31.7	34.5	39.8	39.4	41.2	44.1	38.0	22.2
Kentucky	7	23,000	-	-	-	32.9	-	-	-	36.1	-
Louisiana	7	18,400	-	-	-	-	-	-	-	28.5	-
Maryland	19	88,700	36.9	39.8	41.1	44.7	49.2	48.9	50.7	49.1	33.1
North Carolina	8	32,200	20.1	21.8	21.6	-	28.0	31.8	35.1	34.7	72.6
Oklahoma	6	7,100	10.6	13.6	15.4	-	-	-	-	25.3	138.7
South Carolina	5	15,400	-	-	-	-	-	-	-	29.8	-
Tennessee	19	114,000	19.3	-	20.3	-	41.9	47.9	43.6	38.0	96.9
Texas	25	152,600	20.9	18.9	24.7	28.8	32.2	34.6	36.1	34.4	64.6
Virginia	11	89,800	25.2	31.3	30.3	31.5	32.0	39.1	43.2	33.8	34.1
West Virginia	6	6,400	-	-	-	-	-	-	-	32.5	-
West	136	726,300	30.8	32.6	35.9	40.4	45.5	49.0	49.6	45.0	46.1
Arizona	12	59,300	23.3	16.5	26.0	34.7	39.2	41.0	42.7	41.4	77.7
California	43	448,800	32.2	35.5	38.7	41.9	47.3	51.2	53.1	48.6	50.9
Colorado	18	45,100	27.6	26.3	29.6	36.5	43.9	45.2	43.0	43.4	57.3
Hawaii	5	8,200	-	-	-	-	-	-	-	57.8	-
Idaho	7	42,100	-	-	-	-	-	-	26.8	29.0	-
New Mexico	13	30,100	33.4	32.8	30.5	31.4	32.8	36.3	46.1	46.9	40.4
Nevada	6	9,400	-	31.4	-	42.2	37.4	46.0	50.1	50.2	-
Oregon	9	35,500	34.5	38.9	-	-	-	-	46.5	35.8	3.8
Utah	8	7,900	-	13.8	15.1	16.8	19.4	21.3	-	20.8	-
Washington	15	39,900	17.9	31.3	29.7	39.5	40.0	44.9	47.7	36.2	102.2

Retrieved from <http://www.cdc.gov> during 2000-2002.

FIGURE 1 Percentage of sexually active female enrollees aged 16–25 years* who were screened for Chlamydia trachomatis infection, by

health plan type and year - Healthcare Effectiveness Data and Information Set, United States, 2000-2007



* 16-26 years during 2000-2002.

The figure above shows the percentage of sexually active female enrollees aged 16 through 26 years who were screened for Chlamydia trachomatis infection, by health plan type and year, according to the Healthcare Effectiveness Data and Information Set for the years 2000 through 2002, and the percentage of enrollees aged 16 through 25 years for the years 2003 through 2007.

In 2000, 33.3% of Medicaid enrollees had been screened, compared with 24.7% of commercial health plan enrollees. In 2001, 37.0% of Medicaid enrollees, compared with 25.5% of commercial enrollees. In 2002, 39.8% of Medicaid enrollees, compared with 28.3% of commercial enrollees. In 2003, 42.2% of Medicaid enrollees, compared with 33.4% of commercial enrollees. In 2004, 44.2% of Medicaid enrollees, compared with 36.4% of commercial enrollees. In 2005, 46.4% of Medicaid enrollees, compared with 38.6% of commercial enrollees. In 2006, 50.8% of Medicaid enrollees, compared with 40.6% of commercial enrollees. In 2007, 50.5% of Medicaid enrollees, compared with 39.6% of commercial enrollees.

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