

COST-EFFECTIVENESS OF CHLAMYDIA SCREENING IN WOMEN BETWEEN 15 AND 29 YEARS

Investigators developed a computer-based mathematical model to assess the cost-effectiveness of new chlamydia screening guidelines for women between ages 15 and 29 years as compared with alternative, well-accepted clinical interventions. Four strategies were analyzed for 3 different age groups (15–19 years, 15–24 years, and 15–29 years): 1) no screening; 2) annual screening for all women; 3) annual screening followed by 1 repeated test within 3 to 6 months after a positive test result; and 4) annual screening followed by selective semi-annual screening for women with a history of infection. Outcome measures were clinical events, lifetime costs, quality-adjusted life-years (QALYs), and incremental cost-effectiveness ratios. Annual screening followed by semi-annual screening for women aged 15 to 29 years with a history of infections was the most cost-effective and efficient strategy, with a consistent incremental cost-effectiveness ratio less than \$25,000 per QALY as compared with the next most efficacious strategy. The incremental cost-effectiveness ratio associated with screening was consistently below \$50,000 per QALY, which is a commonly accepted threshold for preventive healthcare interventions, in probabilistic analysis. Screening women between ages 15 and 29 years for *Chlamydia trachomatis* on an annual basis using a more frequent screening interval for women with previous infections is cost-effective and compares well with other accepted screening strategies.

Hu D, Hook EW 3rd, Goldie SJ. Screening for Chlamydia trachomatis in women 15 to 29 years of age: a cost-effectiveness analysis. *Ann Intern Med* 2004;141:501–13.

EFFICACY OF VALACYCLOVIR AND ACYCLOVIR FOR SUPPRESSING HERPES SHEDDING IN THE GENITAL TRACT

Researchers compared the efficacy of valacyclovir with acyclovir on viral shedding in persons with recently acquired or recurring genital herpes simplex virus (HSV)-2 in a double-blind, 3-period crossover trial. Patients (N = 69) were included if they were seropositive for HSV-2 and were considered to be otherwise healthy. All patients were randomly assigned to 1 of the following interventions: oral acyclovir 400 mg twice daily, valacyclovir 500 mg twice daily, or placebo twice daily. All participants received all 3 treatments for 7 weeks; the first and second treatments were followed by a 1-week washout period with placebo. Participants provided daily genital mucosal swabs for HSV detection by viral culture and polymerase chain reaction (PCR). HSV was detected at least once in 62 (90%) patients by culture and in 68 (98%) by PCR. During the placebo treatment, the total HSV

shedding rate was 15.4% of days by culture (PCR, 40.2%); the subclinical shedding rate was 6.6% by culture (PCR, 27.1%). Both antivirals were associated with lower HSV shedding by culture (relative risk [RR], 0.03 [95% confidence interval {CI}, 0.01–0.07] for valacyclovir; RR, 0.05 [95% CI, 0.03–0.10] for acyclovir) and by PCR (RR, 0.18 [95% CI, 0.12–0.26] for valacyclovir; RR, 0.20 [95% CI, 0.15–0.28] for acyclovir). No significant difference in frequency and quantity of HSV were detected by PCR between the valacyclovir and acyclovir arms. Although HSV suppression is not complete, valacyclovir and acyclovir are highly effective at reducing the quantity and frequency of genital HSV shedding.

Gupta R, Wald A, Krantz E, et al. Valacyclovir and acyclovir for suppression of shedding of herpes simplex virus in the genital tract. *J Infect Dis* 2004;190:1374–81.

VACCINE POLICY CHANGES AND POLIOMYELITIS EPIDEMIOLOGY

The authors reviewed the epidemiology of paralytic poliomyelitis and documented the association between vaccine schedule changes and vaccine-associated paralytic poliomyelitis (VAPP) occurrence in the United States. Data were obtained from national surveillance records from 1990 to 2003. Outcome measures were the number of confirmed paralytic poliomyelitis cases (including VAPP) and ratio of VAPP cases to number of doses of oral poliovirus vaccine (OPV) distributed before, during, and after implementation of policy changes (ie, transition from all-OPV schedule to inactivated poliovirus vaccine [IPV]-OPV schedule to all-IPV policy in 2000). Between 1990 and 2003, 61 of 130 (47%) suspected cases were confirmed as paralytic poliomyelitis, of which 59 were identified as VAPP (1 case per 2.9 million OPV doses). The other 2 cases were classified as imported-indeterminate and sporadic-indeterminate. Thirteen cases occurred during the 1997 to 1999 transitional policy and were associated with the all-OPV schedule; no VAPP cases occurred with the IPV-OPV schedule, and no cases of VAPP occurred after an all-IPV policy was implemented in 2000. The last VAPP case occurred in 1999. Switching to an all-IPV schedule from an all-OPV schedule was successfully implemented and resulted in the elimination of VAPP in the United States.

Alexander LN, Seward JF, Santibanez TA, et al. Vaccine policy changes and epidemiology of poliomyelitis in the United States. *JAMA* 2004;292:1696–701.

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