

Vaccination coverage improves among low-income children, but disparities persist

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More children in low-income households are receiving childhood vaccinations on schedule than in previous years, but disparities based on economic status remain, according to a report in the May issue of *Archives of Pediatrics & Adolescent Medicine*, a theme issue on vaccines.

A measles resurgence in 1989 to 1991 was partially attributed to low vaccination rates among low-income [children](#), according to background information in the article. In response, government officials aimed to address disparities in vaccination coverage. In October 1994, the Vaccines for Children Program was established to eliminate cost barriers and provide publicly purchased vaccines at no cost to eligible children. "An important conclusion of Centers for Disease Control and Prevention [CDC] research conducted during the U.S. measles resurgence was that vaccines need to be administered on time because delays indicate inadequate protection against vaccine-preventable diseases," the authors write.

To assess progress since the establishment of the program, Philip J. Smith, Ph.D., and colleagues at the CDC, Atlanta, analyzed data from 232,318 children in low-income households (annual income of 133 percent or less of the federal poverty level) who participated in the U.S. National Immunization Survey between 1995 and 2007. Those who had received the recommended doses of vaccinations against diphtheria, tetanus, pertussis, polio, measles, mumps, rubella, Haemophilus influenza type b, hepatitis B and varicella by age 19 months were categorized as having timely vaccination coverage. Coverage rates were

compared with those of children in high-income households (400 percent or more of the federal poverty level) and changes were tracked over time for children born each year between 1994 and 2004.

"In our analyses, we found that among low-income children, timely vaccination coverage rates for all vaccines except Hib [Haemophilus influenza type b] have increased significantly between consecutive cohorts born after the measles resurgence," the authors write. For low-income children born between 1994 and 2004, timely coverage increased each year by 5.3 percent for varicella vaccines, 1.2 percent for hepatitis B, 0.6 percent for [measles](#), mumps and rubella (MMR), 0.5 percent for the diphtheria, tetanus and pertussis (DTaP-DTP) vaccine and 0.3 percent for polio.

"Also, significant disparities in timely vaccination coverage were found between low- and high-income children for all childhood vaccines and nearly every birth cohort born between 1994 and 2004," the authors write. "However, these disparities have been declining significantly for the MMR [an estimated 0.3 percent decline], hepatitis B [0.3 percent] and varicella [0.5 percent] vaccines." In contrast, [disparities](#) increased significantly by 0.4 percent for the DTaP-DTP [vaccine](#) and did not change for polio.

The results suggest that progress has been made but that additional efforts are needed, the authors note. "Further progress in timely vaccination may be achieved by improving health care providers' reminder/recall systems, implementing educational interventions that address barriers to vaccination and increasing parents' awareness of the Vaccines for Children Program," they conclude.

More information: Arch Pediatr Adolesc Med. 2009;163[5]:462-468.

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