BY MARY ANNE JACKSON, M.D.

ID CONSULT

Don't Be Complacent About Polio

As physicians who vaccinate children, we are becoming too complacent about polio. The risk has not disappeared. On the contrary, it's just a plane ride away.

Of recent concern, an ongoing outbreak of polio in Tajikistan and possibly Uzbekistan represents the first importation of polio in the World Health Organization European Region since it was certified polio free in 2002. I find this alarming, and I believe that the media has not given it enough attention.

As of this spring, the Tajikistan Ministry of Health has reported 432 cases of acute flaccid paralysis, of which 129 were confirmed as polio. Of the confirmed cases, 107 were children aged 5 years or younger. Twelve deaths were reported.

In Uzbekistan, several cases of acute flaccid paralysis have been reported near the border with Tajikistan, according to the Centers for Disease Control and Prevention (CDC). The recent flooding in nearby Pakistan is also cause for concern, because the disease remains endemic there and may be easily spread in the unsanitary conditions that exist now.

Indeed, Pakistan is one of four countries in which wild poliovirus circulation has never been interrupted. The other three are India, Afghanistan, and Nigeria. But since 2005, imported poliovirus has been reported in a long list of countries. In the past year, those have included Angola, Chad, Ethiopia, Indonesia, Nepal, Somalia, and Uganda.

We had been doing well prior to 2005. Between 1988 and 2004, global eradication efforts—in particular, the Global Polio Eradication Initiative —reduced the number of polio cases from 350,000 annually to a low of 1,189 cases. But in 2005, the number of cases rose again to 1,831 from an epidemic that originated in northern Nigeria and spread to 21 previously polio-free countries.

Here in the United States in 2005, the Minnesota Department of Health identified four cases of poliovirus infections in unvaccinated children who were members of an Amish community. The index case, a 7-month-old girl who was confirmed to have severe combined immune deficiency following admission for failure to thrive and pneumonia, was found to have poliovirus in her stool culture, which was confirmed to be vaccine derived. Neither the index patient nor her family had any history of international travel. The CDC determined that the source of the virus was most likely a person who had received the oral poliovirus vaccine (OPV) in another country.

This report was the first identification of a vaccine-derived poliovirus in the United States and the first occurrence of transmission in a community since OPV vaccinations were discontinued in 2000 (MMWR 2005;54:1053-5). None of those children developed paralytic disease, but the CDC issued a warning nonetheless, pointing out that the virus is considered to have potential for wider transmission and for causing paralytic disease.

The risk has not disappeared. On the contrary, it's just a plane ride away. Families travel to all parts of the world with their children. And of course, people from all over the world visit the United States.

Since 2005, while cases have been reported elsewhere in the world, we've not heard about any in the United States. I fear that with many parents now requesting that some vaccinations be delayed or skipped entirely, it will be tempting for clinicians to select out the polio vaccine simply because they haven't seen polio and therefore perceive it as less of a threat.

But it isn't. Families travel to all parts of the world with their children. Teenagers travel on educational and charitable missions. And of course, people from all over the world visit the United States. Polio could easily return here if we become complacent about vaccinating.

We must continue providing the inactivated polio vaccine (IPV) to children at ages 2 months, 4 months, 6-18 months, and 4-6 years. Travelers who have incomplete or unknown immunization status should also receive three doses of IPV (two doses at 4- to 8-week intervals).

We succeeded in eradicating smallpox, and now polio is slated to be next on the list. This is no time to let our guard down. ■

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Rotavirus Vaccine Coverage Rate Rose to 72% Nationwide

VITALS

Major Finding: Nearly three-quarters of infants aged 5 months (72%) are receiving at least one dose of rotavirus vaccine.

Data Source: Analysis of data from 23,532 infants enrolled at one of eight Immunization Information System sentinel sites.

Disclosures: Immunization Information System sentinel sites receive support from the Centers for Disease Control and Prevention.

BY DOUG BRUNK

FROM THE MORBIDITY AND MORTALITY WEEKLY REPORT

Rotavirus vaccination coverage among infants aged 5 months is averaging 72% nationwide, results from a recent analysis of eight Immunization Information System sites demonstrated.

However, vaccination rates varied widely between sites, and site-specific rotavirus vaccine coverage remained an average of 13 percentage points lower than that of diphtheria, tetanus, and acellular pertussis (DTaP) vaccine and 7-valent pneumococcal conjugate vaccine (PCV7) in June 2009.

"[Rotavirus vaccine] is unique among vaccines recommended during infancy in having a maximum age for beginning the series," researchers led by Diana L. Bartlett of the Immunization Services Division at the National Center for Immunization and Respiratory Diseases, Atlanta, reported. "This age restriction could account, in part, for the lower RV coverage because an infant aged 15 weeks–5 months could still receive a first dose of DTaP or PCV7 (but not RV), according to ACIP recommendations."

Ms. Bartlett and her associates analyzed data from eight Immunization Information System (IIS) sentinel sites to assess trends in coverage with one or more doses of rotavirus vaccine between June 2006 and June 2009 among infants aged 5 months and to compare RV coverage in the second quarter of 2009 with that of DTaP and PCV7 (MMWR 2010:59:521-4).

Supported by the Centers for Disease Control and Prevention, IIS sentinel sites are population based and cover more than 1.8 million children younger than age 6. The sites are unique for their high health care provider participation (greater than 85%), child enrollment (more than 85% are younger than age 19), and timely capture of administered vaccines (more than 70% of doses are reported to the IIS within 30 days of vaccination). Sites included in the analysis since 2008 were located in Arizona, Colorado, Michigan, Minnesota, New York City, North Dakota, Oregon, and Wisconsin. Four of these sites have continuously served as IIS sentinel sites since 2004 (Arizona, Michigan, Minnesota, and Oregon).

As of June 30, 2009, 23,532 infants aged 5 months were enrolled at the eight IIS sites. After introduction of the RV vaccine, coverage among infants enrolled at the four continuously serving IIS sentinel sites rose to 50%-60% within the first year, and steadily thereafter, to 74% by the second quarter of 2009. As of June 20, 2009, RV coverage at all eight IIS sentinel sites averaged 72%. Colorado had the lowest rate of coverage (48%) while North Dakota had the highest (86%).

At the same time, coverage for one or more doses of DTaP or PCV7 vaccines at all eight IIS sentinel sites was 85%, or 13% higher than RV coverage. New York had the lowest coverage rates for DTaP and PCV7 (71% and 72%, respectively), while North Dakota had the highest coverage rate for DTaP (93%) and Michigan had the highest coverage rate for PCV7 (91%).

The researchers acknowledged certain limitations of the study, including the fact that coverage rates of DTaP and PCV7 at some IIS sites "were lower than expected based on 2008 [National Immunization Survey] data. These lower rates could result from persons who left the IIS sentinel site area before receipt of their vaccination, but who were still counted as enrolled and unvaccinated. Second, although IIS sentinel sites data are monitored for accuracy and completeness, RV might be less reliably entered into IIS than other infant vaccines because it is a relatively new vaccine. This could result in an underestimate of RV coverage levels."

They concluded by noting that continued monitoring of RV coverage "will be crucial to provide information useful to policy makers and help focus efforts to achieve RV rates at least as high as other routinely recommended vaccines for U.S. infants." ■