

Hib Vaccine Lacking

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Of the five infants infected with Hib, three had not been vaccinated at all because of either parental deferral or refusal, said Dr. Ruth Lynfield, an epidemiologist with the state of Minnesota. One infant died as a result of the infection; the infant had not been vaccinated.

The two other children had received at least some vaccine. One was 5 months old and had received two of the three primary doses of the vaccine—and thus was only partially immunized. The last child was a 15-month-old who had received all three doses of the primary series vaccine. This child developed meningitis and was subsequently diagnosed with an immunodeficiency and was therefore at increased risk of infection.

Of the five infants, three developed meningitis, one developed pneumonia, and one developed supraglottitis. None of the infants attended child care, and all cases occurred in different counties. “There were no epidemiological links,” Dr. Lynfield said.

When epidemiologists checked the Minnesota Hib vaccination registry, they found that some infants were not getting the complete primary series in the first year.

Among 7-month-old infants in the registry, 18% fewer had achieved full immunization with the Hib vaccine, compared with pneumococcal vaccine or the diphtheria tetanus whole-cell pertussis vaccine, Dr. Lynfield said.

Merck & Co. and Sanofi-Aventis are the only licensed manufacturers of the Hib vaccine. Last year, because of the shortages in the Hib vaccine available from Merck, the CDC recommended that the booster vaccination—

typically given at 12-15 months—be deferred until the vaccine shortage could be resolved. Most providers are currently using the Sanofi vaccine.

Infants are scheduled to receive the Merck vaccine twice for primary coverage of Hib. Primary vaccination with the Sanofi vaccine is scheduled in three doses—at 2, 4, and 6 months. Before the introduction of the Hib vaccines, roughly 20,000 children developed Hib infections each year. Since the Hib vaccines were introduced in the early 1990s, there’s been a 99% drop in cases, said Dr. Schuchat.

Parents need to know that “the disease is still around, it’s a very severe disease, and we have safe and effective vaccines that can protect their children,” she said. “We are very optimistic that the supply of Hib vaccine will be greatly increased by next summer and at that time we’ll be able reinstate the booster dose and call children back in for that.” ■

AAP Updates Guidelines for Infectious Disease Exclusions

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Conjunctivitis: It’s red, it’s itchy, it’s crusty, but it is not—repeat NOT—cause for automatic exclusion from day care or school, according to the latest edition of the American Academy of Pediatrics’ “Managing Infectious Diseases in Child Care and Schools.”

The rationale behind this seemingly revolutionary recommendation is the fact that neither treatment nor exclusion of children with conjunctivitis from group settings reduces the spread of infection, Dr. Laura A. Jana discussed at the annual meeting of the American Academy of Pediatrics.

The same goes for many of the common childhood infections that incite knee-jerk reactions among schools, day care providers, and parents.

“Multiple studies have shown that most viruses are spread by children who seem well, which means that exposure happens before the school or day care facility can make the first phone call for the child to be picked up,” said Dr. Jana, a pediatrician and owner of a child care facility in Omaha, Neb.

So while conventional wisdom says that automatically excluding kids with conjunctivitis, fever, and stomachaches will prevent the spread of these infections, “the evidence doesn’t back this up,” she said, noting that “hand and surface hygiene continue to be the best way to reduce infections in group care.”

The confusion regarding exclusion is understandable, said Dr. Jana. Unlike the best-practice guidelines issued in 2002 by the AAP, American Public Health Association, and others, state guidelines for exclusion from child care or school lack detail, are not based on medical evidence, and vary considerably by state.

“Most states do not require center and school policies to follow national guidelines, and individual exclusion policies must only comply with state licensing, which means children are often excluded for harmless conditions,” she said. The consequences of inappropriate exclusion policies and practices, she added, include excess health care visits, antibiotic-seeking behavior, and lost work and school time.

The one exclusion criterion from the

national guidelines that is excluded most frequently, according to Dr. Jana, is the directive that a child should be excluded if the illness prevents him or her from participating comfortably in activities. “This child should really be at home,” she said. “Additionally, a child should be excluded from school or day care if the illness results in greater care than the staff can provide,” she noted, or if the illness poses a risk of spreading a harmful disease to others. (See box below.)

The common cold, for example, does not warrant exclusion, “unless the child is too uncomfortable to participate in routine daily activities,” Dr. Jana said. “The virus itself can be spread before, during, and well after the time of symptoms, so preventing a child’s attendance won’t significantly reduce the chance of spread.”

The updated “Managing Infectious Diseases in Child Care and Schools” (Elk Grove Village, Ill.: American Academy of Pediatrics, 2008), also recommends against exclusion for the following conditions that often incite red flags, according to Dr. Jana:

► **Hand, foot, and mouth disease.** “Children should not be excluded unless they have sores in their mouth with drooling or if the rash is associated with fever or behavior change,” Dr. Jana explained. “Good hygiene is the best way to minimize the opportunity for the spread of this common virus.”

► **Fifth disease.** Because there is little virus present when the telltale rash appears, exclusion has no preventive benefit.

► **Draining skin infection, including methicillin-resistant *Staphylococcus aureus* (MRSA) infection.** “Because of the media attention surrounding MRSA, there’s a lot of anxiety about this, but the reality is, these children should be excluded only if the infection is accompanied by fever, pain, or behavior change,” said Dr. Jana. “There is no need for the caregiver to request a culture, because it won’t affect how the infection will be handled. Some kids without symptoms have MRSA, and there is no good way to eradicate the germ yet from individuals, families, or classrooms.”

► **Diarrhea.** According to the revised guidelines, diapered children with diarrhea may remain in care if the diarrhea is contained in the diaper and the child

has no more than two stools above normal baseline. “This is a departure from the previous recommendation that all diapered children be excluded until the diarrhea resolves or is deemed noninfectious,” said Dr. Jana. Children who are able to use the toilet may remain in care with good hand washing, as long as they don’t have accidents. “Exclusion is appropriate for children with blood in their stool not explained by medication, hard stool, or diet,” she said.

► **Vomiting.** Exclusion is recommended for a child who has had two or more episodes of vomiting in the previous 24 hours and continuing exclusion until the vomiting resolves or a health care provider determines the cause is not contagious.

► **Fever.** “Children with fever should not be excluded automatically, unless the fever is accompanied by behavior change or other signs or symptoms of illness,” explained Dr. Jana. The exception to this is children younger than 4 months old

with unexplained fever.

► **Respiratory illness.** Most respiratory illnesses do not require exclusion; however, a child with persistent coughing or trouble breathing should be evaluated for pneumonia, asthma, or serious respiratory infection, such as whooping cough.

► **Earache, no fever.** “This child should be excluded if he or she requires more care than the staff can reasonably provide,” said Dr. Jana. “Often, these kids are in a lot of pain and cannot participate in routine activities.”

► **Lice.** “Lice are a nuisance, but they’re not a health hazard,” said Dr. Jana. “Children with lice should be excluded, but they don’t have to be sent home right away. It can wait until the end of the day, and they can return once treatment occurs,” she said.

“Of course, all of these are recommendations, and while they are based in evidence, they are not binding,” Dr. Jana concluded. ■

Revised ‘When to Exclude’ Criteria

With the exception of the noted updates, most of the exclusion criteria outlined in the revised “Managing Infectious Diseases in Child Care and Schools” are consistent with the national illness exclusion guidelines published jointly in 2002 by the AAP, APHA, the Maternal and Child Health Bureau, and the National Resource Center for Health and Safety in Child Care. These include:

- Tuberculosis, until an appropriate health care provider or health official certifies that the child is in appropriate therapy and can attend care.
- Impetigo, until 24 hours after treatment has been initiated.
- Chickenpox until all sores have dried and crusted (usually 6 days).
- Mumps, until 9 days after an onset of parotid gland swelling.
- Hepatitis A virus, until 1 week after an onset of illness or jaundice or as directed by the health department.
- Measles, until 4 days after an onset of rash.
- Rubella, until 6 days after an onset of rash.

- Fever, when accompanied by behavior changes or other symptoms such as a sore throat, rash, vomiting, diarrhea, earache, etc.
- Diarrhea (frequent, runny, watery stools).
- Blood in the stool not explained by dietary change, medication, or hard stool.
- Vomiting two or more times in a 24-hour period.
- Body rash with fever.
- Sore throat with fever and swollen glands or mouth sores with drooling.
- Severe coughing with the child getting red or blue in the face or making a high-pitched whooping sound after coughing.
- Persistent abdominal pain (more than 2 hours) or intermittent pain with other signs and symptoms.
- Signs of possible severe illness such as irritability, unusual tiredness, or neediness that compromises caregivers’ ability to care for others.
- Uncontrolled coughing or wheezing, continuous crying, or difficulty breathing.