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PEDIATRIC CARE

Pertussis (Whooping Cough)

Pertussis, also known as whooping cough, is a highly contagious respiratory infection caused by the bacterium Bordetella pertussis. The bacteria attach to the cilia, which are tiny, hair-like extensions, that line the upper respiratory system and release toxins that damage the cilia and cause the airway to swell. Initially, symptoms resemble those of a common cold, such as sneezing, runny nose, low-grade fever, and a mild cough. Within two weeks, coughing becomes more severe, leading to

coughing fits that cause a high-pitched whooping noise as the individual inhales.

Pertussis can cause serious illness in people of all ages, but it is most dangerous for infants because their immune systems are not fully developed. Infants do not receive their first scheduled immunization for pertussis until they are 2 months of age; therefore, they have a greater risk for severe complications, which may include pneumonia, slowed or stopped breathing, seizures, brain damage, and dehydration or weight loss due to feeding difficulties. Complications can be life-threatening for infants younger than 6 months old.

According to the Centers for Disease Control and Prevention (CDC), cases of whooping cough are on the rise. In 2023, Ohio led the nation with more than 630 cases of whooping cough, a 400 percent increase from the previous year. Experts believe one reason for the rise in cases is that people are not receiving the vaccine for pertussis.

The first vaccine for pertussis, DTaP, is given as part of the childhood immunization schedule to children at 2 months of age. DTaP is a combination vaccine that protects against three serious bacterial infections: diphtheria, tetanus,

and pertussis.

Additional doses of the vaccine are administered at 4 months, 6 months, between 15 and 18 months, and between 4 and 6 years of age.

The DTaP vaccine received as a child eventually wears off, leaving teenagers and adults susceptible to pertussis during an outbreak. Whooping cough spreads easily from person to person. Some people have mild symptoms and are unaware that they have whooping cough, but they can still spread the bacteria to others. Many babies who contract whooping cough are infected by older siblings, parents, or caregivers who are unaware they have the illness.

When an infected person sneezes or coughs, small particles containing the bacteria are released into the air, which others nearby can inhale. Pertussis can also be spread by touching fluid from an infected person's nose or mouth and then touching their own eyes, nose, or mouth.

Vaccination is the best prevention for pertussis and is especially crucial for anyone who cares for or is in close contact with infants on a regular basis. The CDC recommends the Tdap (Tetanus, Diphtheria, Pertussis) vaccine for children 7 years and older, adolescents, pregnant women, and adults. While the Tdap vaccine contains a lower dose of the pertussis component compared to DTaP, it serves as a booster shot to maintain immunity. Adults should receive a booster dose every 10 years.



Patient Story – Connor and Parker Beaird

Allison, known as Allie, and Justin Beaird were born and raised in the area and very familiar with the quality healthcare provided by Licking Memorial Health Systems. The couple chose Licking Memorial Hospital (LMH) when it was time to give birth to both of their sons, Connor and Parker. For regular well-baby check-ups and illnesses, both boys visit Licking Memorial Pediatrics – Tamarack for care.

Connor, now 4-years-old, began experiencing frequent ear infections as a toddler. When Connor would contract an illness such as a cold or other respiratory infection, he would begin running a fever and the discomfort in his ears was evident. Allie would take Connor to visit Teressa M. Blanchard, APRN-CNP, a registered nurse practitioner who works with Richard A. Baltisberger, M.D. After numerous visits with the same diagnosis of an ear infection, Teressa referred Connor to Kenneth C. Parker, M.D., at Licking Memorial Otolaryngology (ENT).

"I knew Connor was miserable," Allie shared. "He was sad and upset. It is really difficult to witness such pain in your child. Teressa was wonderful with him, and neither she nor Dr. Baltisberger ever made me feel as though I were overreacting. They took my concerns seriously and listened intently to the details of Connor's ongoing issues with his ears. Dr. Parker treated us the same way, with respect and kindness."

An ear infection, also known as otitis media, is an inflammation of the middle ear, the air-filled space behind the

eardrum that contains the tiny vibrating bones of the ear. Eustachian tubes are canals that connect the middle ear to the back of the throat, regulate air pressure in the ear, and prevent fluid from accumulating in the middle ear space. If a eustachian tube is not functioning well, fluid does not drain from the middle ear space and can cause muffled hearing. Viruses and bacteria may also lead to excess middle ear fluid. In these cases, the middle ear fluid is infected and often causes discomfort in addition to muffled hearing.

Middle ear infections are the most common childhood illness other than colds. Ear infections occur most often in children between 6 months and 2 years, and can be a common occurrence until the age of 8. Young children are more susceptible to ear infections because the eustachian tubes do not function as well as adults which encourages the fluid to gather behind the eardrum. A child's immune system, the body's infectionfighting system, is also still developing meaning children may not have the antibodies needed to fight the infection. Finally, children are more likely to contract illnesses from other children.

Typically, an ear infection will resolve without treatment within 3 to 5 days. However, for children who suffer chronic ear infections, a physician or otolarygologist may suggest that the child receive ear tube surgery. Ear tubes are tiny, hollow tubes made from plastic or metal, that surgeons place into the eardrums during surgery. An ear tube allows air into the middle ear to prevent fluid from building up behind the eardrums. Most ear tubes are made to fall out of the ear within 8 to 16 months as the hole created during surgery heals.

Dr. Parker recommended ear tube surgery for Connor. During the procedure, Dr. Parker created a tiny hole in the eardrum with a small scalpel, suctioned out fluids from the middle ear, and placed the tube in the opening in the eardrum. The procedure was performed at LMH and did not take long. In addition to ear tubes, Dr. Parker also removed Connor's adenoids. Adenoids are a patch of lymphoid tissue located at the back of the nasal passage that works to trap harmful bacteria and viruses that may be inhaled. Connor's adenoids had become enlarged and Dr. Parker believed the swelling was also contributing to the ear infections. Since the surgery, Connor has had no more issues with ear infections.

Unfortunately, Parker, who is 18-months old, has been experiencing the same issues with his ears. He has endured 6 ear infections in the past few months. Knowing that Connor needed surgery to alleviate his symptoms, Allie quickly recognized the need to visit Dr. Parker. Dr. Parker agreed that Parker would be a good candidate for ear tube surgery as well.

"I have learned to always trust my intuition about my child's health and when something is wrong. I did not expect to have both my children undergo surgery within months of each other, but it has been for the best," Allie shared. "I am so grateful that Teressa, Dr. Baltisberger, Dr. Parker, and the other staff members at the Pediatrics office take time to truly listen to their patients. We are always treated like family. My children know the providers and feel comfortable in their care."

Connor received surgery in April while Parker was scheduled for August. Both procedures were successful and the boys have recovered well. Ear tube surgery carries a low risk of serious issues and is typically recommended for patients with repeated, long-lasting ear infections. Talk to a pediatrician if your child experiences frequent ear pain or trouble hearing.

Pediatric Care - How do we compare?

At Licking Memorial Health Systems (LMHS), we take pride in the care we provide. To monitor the quality of that care, we track specific quality measures and compare to benchmark measures. Then, we publish the information so you can draw your own conclusions regarding your healthcare choices.

- Immunizations are one of the safest and most effective methods to protect children from potentially serious childhood diseases. Licking Memorial Health Professionals (LMHP) monitor the percentage of children, aged 19 months to 35 months, who receive the individual and complete set of recommended immunizations. The series is frequently referred to as the 4:3:1:3:3:1 series. It consists of the following vaccines:
 - 4 doses of diphtheria, tetanus (lockjaw), and pertussis (whooping cough)
 - 3 doses of polio
 - 1 dose of measles, mumps, and rubella

- 3 doses of Haemophilus influenzae B (influenza type B)
- 3 doses of hepatitis B
- 1 dose of varicella (chicken pox)

	LMHP 2021	LMHP 2022	LMHP 2023	National
Childhood immunization rate (4:3:1:3:3:1 series)	77%	72%	77%	70% ⁽¹⁾

LMHP providers follow Advisory Committee on Immunization Practices (ACIP) recommended vaccinations to prevent cervical cancer, varicella (chicken pox), and meningitis among adolescents. In 2019, the parameters for the HPV vaccination series were changed from females, aged 13 to 17, to persons, aged 11 through 26. The vaccine can be administered to both females and males starting at age 9, and those who have not been adequately vaccinated may still receive the vaccination series until age 26.

Persons aged 13 through 17 completing HPV vaccination series	LMHP 2021 61%	LMHP 2022 50%	LMHP 2023 52%	National 62.6% ⁽²⁾
Adolescent children receiving varicella vaccination	91%	91%	94%	90% ⁽²⁾
Adolescent children receiving meningococcal vaccination	83%	83%	84%	88.6% ⁽²⁾

Pharyngitis (sore throat) is a common illness in children. Most children's sore throats are caused by viral illnesses. While antibiotics are needed to treat bacterial pharyngitis, such are not useful in treating viral pharyngitis. Before antibiotics are prescribed, a simple diagnostic test needs to be performed to confirm the presence of a bacterial infection. Inappropriate use of antibiotics for viral pharyngitis is costly, ineffective, and contributes to the development of drug-resistant bacterial strains. LMHP monitors and reports how many children with sore throats, aged 2 to 18 years of age, received a Group A streptococcus test before they were given a prescription for antibiotics.

	LMHP 2021	LMHP 2022	LMHP 2023	LMHP Goal
Children with pharyngitis receiving test before antibiotics	87%	88%	91%	60%

Kids' Place is an accredited child advocacy center that provides a comprehensive, multi-disciplinary evaluation of children who are suspected victims of sexual and/or physical abuse and/or neglect. Services are provided in a comfortable and confidential environment. Case management and victim advocate services are also available.

	LMH 2021	LMH 2022	LMH 2023	LMH Goal
Total number of children served	178	165	185	N/A

Data Footnotes:

 ⁽¹⁾ Centers for Disease Control and Prevention, National Immunization Survey, Vaccination Coverage Among Children Aged 19-35 Months – United States, 2017. Published October 12, 2018.
 (2) Estimated Vaccination Coverage with Selected Vaccines and Doses Among Adolescents Aged 13-17, by age at interview; National Immunization Survey-Teen (NIS-Teen), United States, 2022.

Monitoring Your Child's Online Activity

Children today have unprecedented access to a vast amount of information and entertainment at their fingertips. Social media apps, online gaming, and educational platforms are utilized by children more than ever. While these platforms can be a valuable resource for children, the usage also exposes them to potential dangers, such as cyberbullying, online predators, and inappropriate content. The following tips can help parents to monitor their child's online behavior while maintaining trust and setting boundaries.

- Create an environment where children feel comfortable sharing online activities with their parents.
- Parental control apps, such as Bark, Aura, and Gabb allow parents to monitor activity, set screen time limits, and filter content.
- Check browsing history regularly to keep track of websites children visit.
- Perform a device check by occasionally reviewing social media profiles and messaging apps.
- Show interest in and learn about the platforms and games that children are using.
- Teach children about online safety, responsible internet use, and the risks of sharing personal information.





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Visit us at LMHealth.org.

Please take a few minutes to read this month's report on **Pediatric Care.** You will soon discover why Licking Memorial Health Systems is measurably different ... for your health!

The Quality Report Card is a publication of the LMHS Public Relations Department. Please contact the Public Relations Department at (220) 564-1572 to receive future mailings.

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