

Discharge Policy Issued for Newborns, Mothers

BY JEFF EVANS

Healthy term infants and their mothers should receive individualized care during their hospital stay, but pediatricians, obstetricians, nurses, and other health care providers should work together to determine the optimal time for hospital discharge for each mother-infant dyad, according to a policy statement issued by the American Academy of Pediatrics.

"There have been new studies since [the previous policy statement was published in 2004] to find out if there are better ways to assess the readiness for discharge of a healthy term infant, and these studies have shown that perceptions of readiness or unreadiness at the time of discharge often differ among pediatricians, obstetricians, and mothers," said lead author Dr. Praveen Kumar, a neonatologist at Northwestern University, Chicago.

The new statement recommends that "the hospital stay of the mother and her healthy term newborn infant should be long enough to allow identification of early problems and to ensure that the family is able and prepared to care for the infant at home."

Dr. Kumar and eight other members of the AAP's Committee on Fetus and Newborn wrote the statement, which recommends following a set of 16 minimum criteria before discharging a term newborn (*Pediatrics* 2010;125:405-9).

"It is our recommendation that all hospitals should develop guidelines in collaboration with appropriate community agencies and third-party payers, to establish hospital-stay and follow-up pro-

grams for healthy term infants that implement these recommendations," Dr. Kumar said in an interview.

The statement also recommends that physicians use the AAP's Safe and Healthy Beginnings toolkit, which contains a discharge readiness checklist (http://practice.aap.org/public/Newborn_Discharge_SAMPLE.pdf).

In making discharge assessments, the committee advises determining that the clinical course and physical examination of the newborn reveal no abnormalities that require additional hospitalization, vital signs are within normal ranges, and there is a history of successful feedings, urinations, and bowel movements and a lack of significant circumcisional bleeding. Other examinations should assess for the clinical risk of hyperbilirubinemia, and for sepsis based on maternal risk factors and in accord with guidelines for preventing perinatal group B streptococcal disease.

Testing of newborns' blood type as well as their cord blood should be performed as clinically indicated. Hospital protocols and state regulations may call for other metabolic and hearing screenings. The newborn should receive the initial hepatitis B vaccine according to the current immunization schedule.

Mothers should have certain blood tests performed, including screening tests for syphilis and hepatitis B surface antigen and other tests required by state regulations, such as HIV testing. Other assessments should consider the mother's knowledge, ability, and confidence to provide adequate care for her infant—including barriers to adequate follow-up

Caring for the Mother-Infant Dyad

MY TAKE

The recommendations in the American Academy of Pediatrics policy statement should be considered in the discharge management of any healthy term infant. Hopefully, many of the guidelines are being implemented already in most nurseries.

Pediatric hospitalists are in a unique position to be advocates in the care of the mother-infant dyad. Pediatric hospitalists can assess the medical needs of the infant and observe how the mother interacts with the infant. In their administrative role, pediatric hospitalists also can support quality improvement efforts related to the nursery and to the care of the mother-infant dyad.



We also need to recognize the importance of establishing the medical home for meeting the ongoing medical and social needs of the newborn and mother, and for eliminating potential barriers to adequate follow-up care.

Implementing these minimum requirements for quality care in the newborn nursery may appear challenging, but it's well worth the effort and not as arduous as it may appear. The AAP's Safe and Healthy Beginnings toolkit is a good place to start.

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care for the newborn—as well as family, environmental, and social risk factors.

"The length of stay should accommodate the unique characteristics of each mother-infant dyad, including the health of the mother, the health and stability of the infant, the ability and confidence of the mother to care for her infant, the adequacy of support systems at home, and access to appropriate follow-up care," Dr. Kumar said. The decision to discharge a newborn should be made jointly with input from the mother, her obstetrician, and nursing staff, social workers, and other

health care providers involved in the care of the mother and her infant.

Once a medical home for the newborn has been identified and a plan for timely communication of clinical information to the medical home is in place, the committee recommends making a follow-up appointment for the infant within 48 hours of discharge, but no later than 72 hours, if the infant was discharged less than 48 hours after delivery. ■

Disclosures: Dr. Kumar said he had no relevant disclosures to report.

More Children Now Hospitalized With *C. difficile* Infections

BY SHARON WORCESTER

Pediatric hospitalizations associated with *Clostridium difficile* infections increased dramatically from 1997 through 2006, according to data from the Health Care Cost and Utilization Project and the National Hospital Discharge Survey.

The overall rate of such hospitalizations increased from 7.24 to 12.80 per 10,000 hospitalizations, with the highest rates occurring in children aged 1-4 years (rate of 44.87/10,000), 5-9 years (35.27/10,000), and less than 1 year, except newborns (32.01/10,000). The lowest rates were seen in newborns, defined as infants whose related hospitalizations originated at their birth (0.5/10,000), Dr. Marya D.

Zilberberg of the University of Massachusetts, Amherst, and her colleagues reported.

Most of the increase in *C. difficile* infection (CDI)-related hos-

pitalizations, the authors noted (*Emerg. Infect. Dis.* 2010;16:604-9).

Evidence suggests that CDI is an increasingly prevalent diarrheal pathogen in children, and that a large proportion of pediatric CDI cases are community acquired. Many cases appear to be occurring without the exposure to antimicrobial drugs that has typically been a risk factor for CDI, they said, noting that the BI/NAP1/027 strain likely is related to these changes in pediatric CDI epidemiology; at least two reports show it has a prevalence of up to 38% in pediatric CDI populations, and it is associated with a fourfold increase in complication rates, compared with other strains.

To better characterize the epidemiology, the investigators performed a time-series analysis us-

ing information from the Kids' Inpatient Database (KID) of the Agency for Healthcare Research and Quality's Healthcare Cost and Utilization Project, which includes data from more than 3,700 hospitals in 38 states, and from the Centers for Disease Control and Prevention's National Hospital Discharge Survey, which includes information from about 500 noninstitutional, nonfederal, short-stay hospitals in the United States.

The findings are consistent with those from other recent studies, which also showed increases in CDI-related hospitalizations and community-onset infections. In one study of children who presented to an emergency department with diarrheal illnesses, stool specimens were positive for *C. difficile* in 6.7%, but were positive for viral pathogens in 33% of cases.

Additional study is urgently needed to help better define the epidemiology of CDI, the investigators said, noting a partic-

ular need for more information about its role in the pathogenesis of disease in those under age 1 year who are not newborns. Laboratory testing for CDI is not routinely performed in those under age 1 year, because of their typically low rate of clinical disease and high rate of *C. difficile* carriage, and it remains unclear whether the relatively high rate of CDI-related hospitalizations in this group is a reflection of true disease or colonization, Dr. Zilberberg and her associates said.

"The detection of [*C. difficile*] free toxins A, B, or both in the stool of a symptomatic infant does not ensure a pathogenic role for *C. difficile*, especially if another cause for diarrhea can be identified," they wrote, adding that non-CDI causes of diarrhea may have led to a reporting bias. This would explain the observed increase in CDI rates and, as shown in this study, an increasing cause of pediatric hospitalizations. ■

VITALS

Major Finding: The overall rate of pediatric hospitalizations due to *C. difficile* infections increased from 7.24 to 12.80 per 10,000 hospitalizations, with the highest rates occurring in children aged 1-4 years (rate of 44.87/10,000), 5-9 years (35.27/10,000), and less than 1 year, except newborns (32.01/10,000).

Data Source: Data from 3,739 hospitals from the Health Care Cost and Utilization Project and the National Hospital Discharge Survey.

Disclosures: Dr. Zilberberg reported receiving grant support for this study from ViroPharma.

pitalizations identified in this study occurred between 2000 and 2006, and this may reflect the spread of a new hypervirulent bacterial strain of *C. difficile* known as BI/NAP1/027. An increase in detection of the strain has coincided with reports of increasing CDI-related hospitaliza-