NICU Is Ideal Setting for Giving Parents Flu Vaccine

BY ERIK GOLDMAN
Contributing Writer

OLD GREENWICH, CONN. — The neonatal intensive care unit is an ideal setting for delivering the trivalent influenza vaccine to parents of high-risk infants, Dr. Shetal Shah said at a meeting of the Eastern Society for Pediatric Research.

Flu vaccination rates among U.S. adults remain very low. Even among high-risk adult populations, such as the elderly or health care workers, full immunization rates run between 25% and 33%. Influenza is a very common and growing problem among infants in the NICU setting; the babies pick up the virus from adult caretakers. There has been a 10% increase in flu-related hospitalizations among vulnerable infants, said Dr. Shah of the Neonatal Intensive Care Unit at New York University, New York.

"If adults need to be immunized in order to protect their children, but they're not getting the vaccines, we need to look at the reasons why," he said. Although vaccine shortages have played a role, by far the most common reason for failure to receive the shots is inconvenience. Busy parents are preoccupied with so many other concerns that obtaining flu shots tends to fall to the bottom of the priority pile.

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"Last year, we surveyed the parents of our NICU patients, and the flu vaccine rate was only around 33%. More than half who were not immunized cited inconvenience as the main reason." This prompted Dr. Shah and his colleagues to consider making the shots available right in the NICU.

"It really is an ideal setting for this type of intervention. For one, we're dealing with the highest risk babies with the greatest need for protection. Most NICUs, like ours, are adopting a family-centered care model that actively engages the parents in the care of their babies. We have very liberal visiting hours at NYU: Parents can be in the NICU with their children for 22 out of every 24 hours. And we're open at times when other clinics or care delivery settings are closed," he said.

In addition, the NICU may be one of the few places to reach fathers. In general, men are far less likely than women to get regular medical checkups, and they tend to avoid physicians, hospitals, and clinics. "The ob.gyn. community is doing a much better job of getting the flu shots to women than the pediatric or family practice communities," Dr. Shah said at the meeting, cosponsored by the Children's Hospital of Philadelphia. In part, this has to do with the success of prenatal care programs, which seldom reach the fathers.

The NYU NICU team undertook a pilot project to provide trivalent flu vaccines for all NICU parents from November 2005 to March 2006. As part of the admission process, staff told parents that it was possible to get the flu vaccine, free of charge, right there in the NICU, and tried to get the parents to consent prior to delivery or soon thereafter. In addition, they also posted signs right on the babies' warmers, stating that the hospital strongly recommended that parents obtain the shot. They also posted reminders in common areas and breast-feeding rooms.

During the 4-month period, the NYU staff admitted 273 parents of 158 babies. They were able to counsel 220 about the importance of immunization and actually gave shots to 157 (71%). Fifty-two (24%) of the parents counseled had already been immunized, and 11 (5%) refused.

Of those vaccinated in the NICU, 61% got their shots within 2 days after their babies were admitted. "We got to most of them within 72 hours, and after that, it tended to drop off."

They also were most successful with parents of babies who were less than 28-32 weeks' gestational age at delivery. Dr. Shah attributed this to the much longer lengths of stay for this extremely premature subgroup.

Most of the parents accepted the importance of getting the shots, and Dr. Shah noted something of a peer-pressure effect. "People bond in the NICU with other people going through the same ordeal. So if one couple went for the shots, the others

they had connected with often followed."

Despite the usually frantic pace of activity in the NICU, the staff took the flu shot endeavor quite seriously and managed to find the time to talk often with the parents. "We kept track of who was and who was not getting the shots, and we would talk to the ones who had not—to see if they had any questions or concerns that we could address."

Among the 11 who refused the vaccine, 5 stated that they simply did not believe in immunization, and 2 said they feared that the shots might induce autism. Others cited religious objections or a reluctance to add anything else to whatever medical care they were already receiving. One cited an allergy to eggs, which is a legitimate concern because the vaccine contains some egg proteins.

Overall, the NYU NICU-based flu shot program was highly successful. Dr. Shah and colleagues hope to do a follow-up to see if the program had any impact on the rate of influenza among the neonates. He cautioned, however, that the sample size may be too small to support any definitive conclusion.

This pilot program did, however, prove that flu shots can be effectively distributed in the NICU setting to parents, who for a variety of reasons, had not previously gotten immunized. The program created very little additional strain on NICU physicians or nursing staff.

"Administration of the trivalent vaccine is very possible in a busy NICU, and implementation markedly increased compliance with recommendations aimed at protecting high-risk neonates," Dr. Shah told conference participants. "There will always be a small subset of parents who will refuse, no matter what. But we can get to many parents who are willing to take the shots." He added that this type of program is highly replicable and could be quickly implemented in any family-centered NICU. ■

Multidrug Resistance Stalls TB Drop

BY MIRIAM E. TUCKER
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Tuberculosis cases reached an all-time low in the United States in 2005, but progress toward elimination of the disease has slowed, according to the Centers for Disease Control and Prevention.

Moreover, the number of multidrug-resistant (MDR) TB cases increased 13.3% from 2003 to 2004, marking the largest 1-year increase in such cases since 1993. A greater proportion of foreign-born patients than U.S.-born patients had MDR TB, the CDC said (MMWR 2006;55:305-8).

In 2005, a total of 14,093 TB cases was reported in the United States, representing a decline of 3.8% from 2004 and the lowest recorded rate (4.8 per 100,000 population) since national reporting began in 1953. However, the decline has slowed from an average of 7.1% per year during 1993-2000 to 3.8% per year during 2001-2005.

More than half of the 7,656 foreign-born TB patients in 2005 were from Mexico, the Philippines, Vietnam, India, and China, the CDC said.

In 2005, the TB rate in foreign-born persons in the United States was 8.7 times that of U.S.-born persons. Although the total foreign-born population in the United States has increased 61.6% since 1993, the number of TB cases reported in this population hasn't changed substantially, resulting in a 36.0% decline in the TB rate among foreign-born persons. More than half of the 7,656 foreign-born TB patients in 2005 were from Mexico, the Philippines, Vietnam, India, and China, the CDC said.

Race/ethnicity data showed that TB rates in 2005 were increased 19.6 times among Asian Americans, 8.3-fold among blacks, and 7.3 times among Hispanics, compared with whites. But rates declined in almost all racial and ethnic populations from 2003 to 2005, with the most decline among American Indians/Alaska Natives (14.4%) and Asian Americans (14.1%).

The number of MDR TB cases increased from 113 cases in 2003 to 128 in 2004, the most recent year for which complete drug-susceptibility data are available. In 2004, 0.6% of U.S.-born and 1.6% of foreign-born TB patients had MDR TB. Approximately half of the foreign-born patients with MDR TB in 2004 were from Mexico, the Philippines, and Vietnam, the CDC said.

Also reported in the same MMWR issue, the first-ever data from the CDC and the WHO on rates of TB resistant to both first- and second-line antibiotics indicate that "extensively drug-resistant" TB accounted for 2% of all the MDR strains worldwide during the 2000-2004 period (MMWR 2006;55:301-5). ■