On-Time HPV Vaccines: Text Message Reminders

Major Finding: Girls whose parents signed up for text message reminders were twice as likely to get their first dose of HPV vaccine within a month of the due date, compared with girls whose parents did not sign up.

Data Source: A comparative study among 124 girls whose parents signed up for text message reminders, 308 girls whose parents opted not to sign up, and 1,080 girls from the preintervention period within a month of the due date, compared with girls whose parents did not sign up.

Disclosures: Dr. Kharbanda reported that Vaughn I. Rickert, Psy.D., one of the study investigators, received research funding from and sits on the advisory board of Merck.

SUSAN LONDON
FROM THE ANNUAL MEETING OF THE SOCIETY FOR ADOLESCENT HEALTH AND MEDICINE

SEATTLE — Text message reminders improve timely receipt of the human papillomavirus vaccines according to results of a study of more than 1,500 girls who had started the three-dose series. In the study reported at the meeting by the third of parents offered the reminders signed up for them. Girls whose parents signed up were twice as likely to receive their next dose of vaccine within a month of when it was due, compared with their counterparts whose parents did not sign up.

“We found that text messaging can increase on-time receipt of HPV vaccines,” said Dr. Elyse O. Kharbanda, a pediatrician who was with Columbia University Medical Center, New York, at the time of the study and is now with...
the Health Partners Research Foundation in Minneapolis.

“We recommend these findings should be replicated in a larger and more diverse sample of women, and future studies should really make us wonder if any real reassurance was given to those women who choose to not think about whether their child could have a chance at an improved future.”

Although the Food and Drug Administration approved the quadrivalent human papillomavirus (HPV) vaccine (Gardasil, Merck), in 2006, the rate of uptake of three doses among girls remains low, and receipt of doses on time is also problematic, according to Dr. Kharbanda. Several factors may explain this poor adherence.

“Unlike routine vaccines that we give to infants, this three-dose vaccine series is not aligned with routine adolescent health services, and barriers and provider factors also may explain some of the adherence problem.

“But what actually I think is the most important barrier is the parents and teenagers themselves,” Dr. Kharbanda commented.

“It’s not that (the parents) explicitly oppose the vaccine because they are busy – they have busy lives with competing priorities, and getting their child or their teen in three visits to get shots over a 6-month period is just not high on their ‘To-Do’ list.”

There is good reason to believe that use of text messaging to send reminders could solve this problem. “We theorize that cell- technological power may provide an advantage because of its penetrance: Over 96% of U.S. adults now own a cell phone,” she explained.

“And especially in low-income populations, cell phone numbers may be even more stable than land-line numbers.” Additionally, “these reminders serve as cues to action,” she said. “So the idea is the parent would get a text message and it may sort of push getting that vaccine up on their priority list.”

The study, part of the Text4Health study exploring use of this technology among underserved, low-income populations, was funded by the Hatch Act of 2009 and conducted in New York. It was open to English- or Spanish-speaking parents with a cell phone who brought daughters aged 10-18 years in for the first or second dose of the quadrivalent HPV vaccine between January and June 2009. The parents were randomized to receive text messages in English and Spanish on how to sign-up for text message reminders for the next HPV vaccine dose. Signing-up required simply calling a dedicated number, selecting a language, confirming interest, and entering a personal identification number from the recruitment card, used to link the caller to the daughter’s medical record. The parent’s cell phone number was automatically captured.

Parents who signed up received up to three automated text messages reminding them that their daughter had an upcoming due date for her next HPV vaccine dose, Dr. Kharbanda said. The messages included the name and phone number of the clinic where their daughter received care, and an option to cancel the text reminders (although none used this option).

In all, 3,233 recruitment cards were given to the parents of 434 girls, 29% of whom signed up. The 124 who entered a valid personal identification number text were sent reminder text messages. The comparison groups consisted of 308 girls whose parents did not sign up for the reminders and 1,080 girls who had received a first or second dose of HPV vaccine in the same clinics in the 6 months before the intervention and served as historic controls.

The girls were 14 years old on average, and nearly three-quarters had Medicaid or SCHIP health insurance. Most (84%) received their care in an academic clinic, and a sizable minority (40%) spoke Spanish.

Study results showed that the percentage of girls who received their next HPV vaccine dose within 1 month of the due date, the primary end point, was 52% among those whose parents signed up for reminders, 35% among those whose parents did not sign up, and 39% among those who served as historic controls, a significant difference.

The percentages were better in all three groups when it came to receipt of the vaccine dose within 4 months of the due date. But the value was still higher among the parents who signed up for reminders, at 65%, than among those whose parents did not sign up, at 51%, and the historic controls, at 53%.

In logistic regression analyses that controlled for type of insurance and type of clinic, and other factors, receipt of reminders was 2.9 times more likely that the parents whose daughters did not sign up and 1.83 times more likely than the parents whose daughters did not sign up, at 51%, and the historic controls, at 53%.

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