

Text Message Reminders Boost Teen Vaccination

They generally reach the intended person, whereas a phone call might be answered by someone else.

BY SUSAN LONDON

FROM THE ANNUAL MEETING OF THE PEDIATRIC ACADEMIC SOCIETIES

VANCOUVER, B.C. — Text messages reminding parents that their adolescents need vaccines are an effective and efficient means of improving immunization rates in this population, according to findings of a randomized trial conducted in New York City.

Adolescents whose parents were sent automated, personalized text message reminders that included walk-in times for vaccination were 2.5 times more likely to receive the

meningococcal conjugate (MCV4) vaccine, the tetanus-diphtheria-pertussis (Tdap) vaccine, or both.

They were also more likely to receive other vaccines for which they were not up to date.

The observed gains in immunization rates are greater than are those seen previously with reminder and recall strategies, lead investigator Dr. Melissa S. Stockwell said.

In fact, this strategy works so well that busy clinics with many competing

priorities will need to be prepared to meet the increased demand for vaccines.

“The actual texting is instantaneous and fast, but you have the repercussions of bringing all those kids in,” she explained. One option is to stagger the messages to control the numbers of adolescents who might show up at one time.

The trial was conducted in six networked primary care practices in New York City among parents who had a child

aged 11-18 years needing the MCV4 vaccine, the Tdap vaccine, or both, and had a cell phone number in the system. The practices were randomized to a control (usual-care) group or

an intervention (Text4Health) group.

In intervention practices, parents were sent text message reminders that were automatically generated using data from a linked immunization registry. The reminders were sent up to five times over a 7-week period until the adolescent had received the two target vaccines.

“Based on our focus group [of parents], they really wanted the messages to be personal,” commented Dr. Stockwell, a pediatrician at Columbia University in New York. So the mes-

sages included their child’s name, their clinic’s name, and walk-in times for vaccination, plus offered the option of switching between English and Spanish.

Study results reported in a poster were based on 195 adolescents in the intervention group and 166 in the control group. The adolescents were 16 years old on average, 55% were Hispanic, and 80% had public health insurance.

In the intervention group, 821 text messages were sent, only 7 of which bounced. Merely 6% of parents in this group were found to have wrong numbers, and just 3% opted out of receiving the messages.

At 24 weeks, adolescents in the intervention group had a higher rate of receipt of the MCV4 vaccine, Tdap vaccine, or both, compared with their peers in the control group (35% vs. 17%)—for a difference between groups of 18% (*P* less than .001). After adjustment for potential confounders, the intervention was associated with a 2.5-fold higher odds of receiving these vaccines.

Adolescents in the intervention group also had a higher rate of receipt of any other needed vaccines, such as the human papillomavirus vaccine and the hepatitis A vaccine (42% vs. 29.5%), with a difference between groups of 12.5% (*P* less than .05).

The estimated cost of the interven-

tion, assuming that it were sustained for 2 years in a hypothetical cohort of 100,000 adolescents, was \$1.71 per adolescent immunized and \$0.42 per additional vaccine delivered.

There are several possible reasons why

VITALS

Major Finding: Adolescents whose parents were sent personalized text messages reminding them that their children needed vaccines were 2.5 times more likely to receive the MCV4 vaccine, the Tdap vaccine, or both.

Data Source: A randomized trial among 361 low-income urban adolescents and their parents.

Disclosures: Dr. Stockwell reported that she had no conflicts, but that one of the study’s investigators is on an advisory board for, and has received research funding from, Merck.

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a text message might work when a reminder phone call does not, according to Dr. Stockwell.

“One, it always reaches the right recipient, the intended person,” she said, whereas a phone call might be answered by someone else or go to voicemail that is picked up by someone else. “Also, it stays on the phone, so it might sort of be a constant reminder, or the information—especially the walk-in times—is right there so they can send their child at that time.”

Finally, focus groups suggest that parents in their study population perceive information sent by text messages to be more important than that conveyed by more commonplace phone calls, although she said that might change as the novelty of texting wears off. ■

Recommendations Up Teen Vaccination Rates

BY SUSAN LONDON

FROM THE ANNUAL MEETING OF THE PEDIATRIC ACADEMIC SOCIETIES

VANCOUVER, B.C. — Your recommendation may be the deciding factor in whether adolescents get vaccinated, and this appears to be especially true in adolescent girls, according to Dr. Paul M. Darden.

“The girls who got recommended HPV [human papillomavirus vaccine] had much higher rates of every vaccine than those who did not and in fact did much better than boys just in general,” Dr. Darden said at the meeting.

This was the finding in a nationwide, cross-sectional study that assessed predictors of immunization among 36,284 adolescents 12-17 years old. The 2007

National Survey of Children’s Health used random-digit dialing to contact and poll parents by telephone about their children’s immunization status, especially the tetanus-diphtheria (Td) vaccine, the tetanus-diphtheria-pertussis (Tdap) vaccine, the meningococcal conjugate vaccine (MCV4), and HPV vaccine.

Specifically, relative to girls whose physicians had not recommended the HPV vaccine, those whose physicians had were more likely to have received that vaccine (49% vs 4%, *P* less than .01), but also more likely to have received the Td or Tdap vaccine (91% vs 77%, *P* less than .01) and the MCV4 vaccine (52% vs 30%, *P* less than .01).

“I think this just points out that a physician’s or health care provider’s recommendation has a huge influence on who gets a vaccine,” he commented. “They usually

come to you because they trust you, and if you recommend something, they are much more likely to do it.”

An analysis of the independent predictors of up-to-date status showed the predictors “were actually the opposite of what we typically see for childhood immunizations,” said Dr. Darden, professor of pediatrics at the University of Oklahoma in Oklahoma City.

VITALS

Major Finding: Adolescent girls whose physicians had recommended they get the HPV vaccine were more likely to do so than were girls whose physicians had not made such a recommendation (49% vs. 4%).

Data Source: A cross-sectional study among 36,284 adolescents aged 12-17 years from the National Survey of Children’s Health.

Disclosures: None was reported.

The proportion of adolescents current on both Td/Tdap and MCV4 was highest among those with Medicaid insurance, at 38%, vs. 33% among those with no insurance and 31% among those with private insurance (*P* less than .01).

In addition, the proportion up to date on both vaccines was highest among adolescents whose mothers had not completed high school, at 39%, vs. 33% among those whose mothers had schooling beyond this level and 31% among those whose mothers had stopped at high school (*P* = .02).

Speculating on the reasons for these findings, Dr. Darden noted that the costs of vaccines are covered for adolescents with Medicaid, whereas adolescents with other types of insurance or none may face substantial out-of-pocket costs.

As for the influence of maternal education, higher education has been linked with greater reluctance to vaccinate. Dr. Darden proposed that there are likely additional factors at play. “A 6-percentage point difference seems too big for just vaccine reluctance.” ■