Text message quality improvement intervention to improve the influenza vaccination rate among pediatric patients with asthma

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Background
• Providers at the Children’s Medical Practice (CMP) at Bayview did not have a systematized, reliable way to ensure patients were receiving the influenza vaccine.
• Patients with asthma are at increased risk for the influenza virus as well as its complications1. However, the vaccination rate for this population is only 63 percent2.
• Caregivers reported lack of recommendation from a provider and a lack of knowledge about their child’s vulnerability as barriers to vaccinating their children against the flu3.
• Text messaging is a promising strategy to improve patient-provider communication and improve vaccination rates4.

Objectives
• Analyze existing data and current system related to the influenza vaccination for patients with asthma.
• Revise and implement text message reminders about influenza vaccination to better meet patient and family needs.

Methods
Year 1 (2015-2016):
• We collected baseline data on flu vaccination rates for patients with asthma, by querying the Electronic Health Record (EHR) to generate a list of patients with a diagnosis of asthma and their telephone numbers. Patients under 6 months of age were excluded from the list due to their ineligibility for the vaccine.
• We used the software program EZ texting to send a three-part text message in English or Spanish to families reminding them to get the flu vaccine and asking for a response indicating if a child had received the vaccine.
• Family members who replied “no” were called for follow-up emphasizing the importance of the vaccine and offering assistance scheduling an appointment.

Results

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<th>% English speakers vaccinated</th>
<th>% Spanish speakers vaccinated</th>
<th>Total % vaccinated</th>
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<td>53</td>
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Conclusions
• Vaccination coverage for this vulnerable population decreased from baseline (2014-2015) during the three-year intervention period.
• Throughout the intervention, vaccination rate was higher for patients from Spanish-speaking families than those from English-speaking families.
• Trends in flu vaccination coverage for this population mirrored national trends, with a slightly decreased vaccination rate each year. Because this is a quality improvement project, we are not able to isolate the effect of the intervention on vaccination rate from other variables.
• EZ text messaging provided a low-cost, minimally labor-intensive way to engage families.
• More exploration is needed to determine the drop in coverage and barriers to vaccination in this vulnerable population.

Future Directions
• Consult parent advisory councils at CMP to provide input on barriers to flu vaccination and text message content6.
• Send follow-up text three weeks after first text during fall.
• Use image upload feature of EZ texting software to send messages with Spanish characters and more dynamic content.
• Create operations guide and CMP account for EZ texting to ensure sustainability from year to year.

References

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