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

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1 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 complications[1]. However, the vaccination rate for this population is only 63 percent[2].

•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 flu[3].

•Text messaging is a promising strategy to improve patient-provider communication and improve vaccination rates[4].

2 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.

3 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.

4 Results

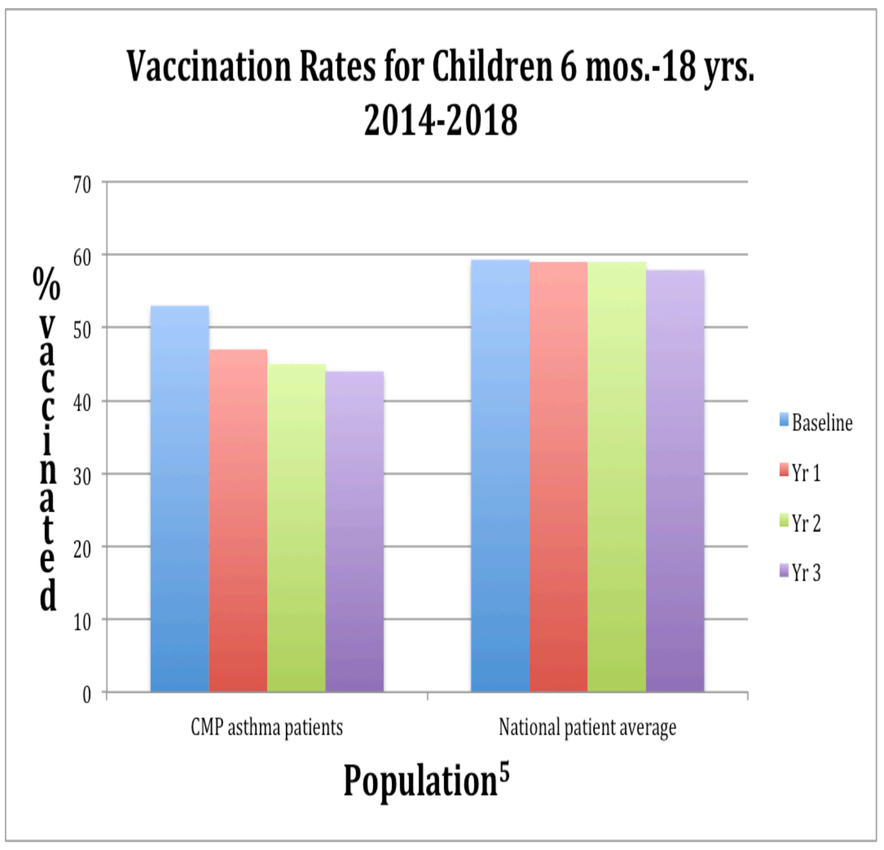
Improvements

Yr 2:
- Queried preferred language
- Decreased reading level of text message

Yr 3:
- Sent original text in November and follow-up in February
- Used EZ-texting software to collect data on text message engagement rates

CMP vaccination rates

	Baseline	Yr 1	Yr 2	Yr 3
% English speakers vaccinated	53	46	42	41
% Spanish speakers vaccinated	53	50	51	48
Total % vaccinated	53	47	45	44



5 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 texting software 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.

6 Future Directions

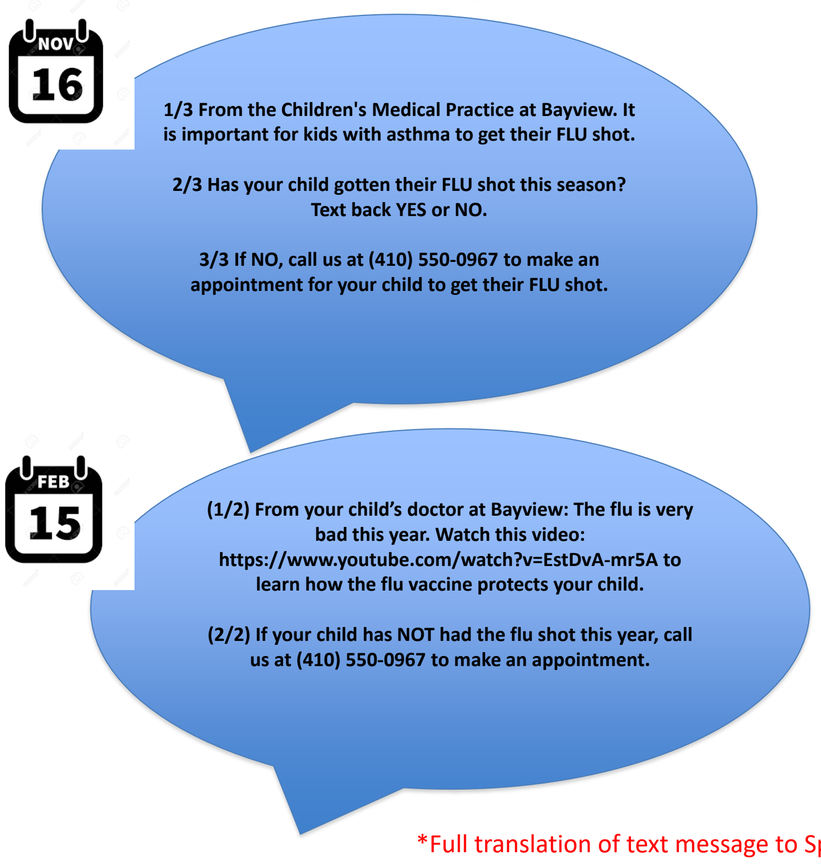
•Consult parent advisory councils at CMP to provide input on barriers to flu vaccination and text message content[6].

•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.

Text messages



*Full translation of text message to Spanish available

7 References

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