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Final Manuscript

AudioCOMMUNICATOR™ Reminder Phone Calls to Increase Attendance of Well Child Visits

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Abstract

Background: The American Academy of Pediatrics recommends six well child checks (WCC) between 2 to 15 months. A large pediatric clinic in Southern California has an attendance rate of 86% and a very mobile population. Reminder phone calls have been shown to improve WCC attendance.

Aims of Service Change: Improve WCC attendance to $\geq 90\%$. As an interim step, we implemented a pilot project and measured responses to AudioCOMMUNICATOR™ reminder calls.

Outcome: In two months 148 calls were made, the majority, 74%, went unanswered, 26% were able to schedule an appointment or discharge from the clinic.

Discussion: Reminder calls provide a simple way to schedule visits or update information. This technology could be used for other health promotion activities including immunizations, school/sports physicals, developmental screenings, and ADHD follow ups. A system with e-mail and text message capabilities would provide patients and families with other options for reminders, visit scheduling, and updating information.

Background

The American Academy of Pediatrics recommends six Well Child Checks (WCC) between 2 to 15 months old for health promotion and screening (2019). Well child visits are designed to keep children healthy, provide families with education and resources, and detect early signs of potential health problems (National Association of Pediatric Nurse Practitioners, 2013). Prior to this project, Health Care Effectiveness and Data Information Set (HEDIS) statistics from a southern California pediatric clinic showed WCC attendance at 86% for children 2 to 15 months old. This clinic has a highly mobile population and often demographic data is not updated when families relocate out of the area. Incorrect demographics are a potential reason for lower HEDIS statistics compared to similar clinics. This clinic has AudioCOMMUNICATOR™ technology with the ability to send out reminder phone calls to schedule appointments.

The ultimate goal of this project was to improve WCC attendance to 90% or greater based on HEDIS measures. As an interim step toward this goal, we implemented a pilot project to measure responses to AudioCOMMUNICATOR™ reminder phone calls. The family practice clinic at this facility had already implemented AudioCOMMUNICATOR™ WCC reminder calls successfully. The literature shows reminder phone calls are a cost effective option and improve both the number of WCC scheduled and attended (Bar-Shain, Stager, Runkle, Leon, & Kaelber, 2015; Franzini et al., 2000; Harvey, Reissland, & Mason, 2015; Szilagyi et al., 2013). AudioCOMMUNICATOR™ technology was already in use in this clinic, simplifying the implementation of reminder phone calls to parents or guardians of children with WCC due in 30-60 days or overdue.

Methods

Design

The model for this evidenced based practice (EBP) project is the revised model originally developed by Rosswurm and Larrabee in 1999 (Figure #1). This revised version of the model uses quality improvement principals such as teamwork tools and evidenced based translation strategies to encourage others to buy into and believe in the new process change (Melnyk & Fineout-Overholt, 2015). This model has a simple, six step approach to an evidence-based process change. Rosswurm and Larrabee's model includes a final step to ensure integration and provide the resources needed to guarantee the practice change will remain in place. This final step is essential in a setting with high staff turnover. This model will provide resources and tools to empower nurses and other foundational support staff at this pediatric clinic to take pride and ownership in a process change.

Setting and Population

This EBP project was implemented in a large pediatric clinic in southern California. Each provider empanelment was between 800-1000 patients, sometimes more. This clinic is part of a large nationwide hospital system and is hospital based. The clinic provides care to children ages 0-18. The families this clinic serves are a highly mobile population. This project was specifically targeted to children 2 to 15 months old.

Process and Intervention

This project received institutional review board (IRB) approval from the IRB associated with the pediatric clinic and the University of San Diego. This process improvement initiative was a pilot project implemented over a two-month period. Each month a list of patients 2 to 15 months old who were due or overdue for a WCC was compiled. The complied list of patients

was input into AudioCOMMUNICATOR™, an automated phone technology designed to send announcements and surveys to patients. A script for the reminder phone calls was created and input into AudioCOMMUNICATOR™. The script provided two options: press 1 to choose to schedule a WCC or press 2 to update demographics/discharge from the practice. The scripted reminder phone calls went out once a month for a period of two days. Phone call response data was gathered and recorded monthly.

Results

EBP project data was gathered in October (Month One) and November (Month Two). In month one 99 reminder calls were made and 73 patients were not reached. In month two 49 calls were placed and 36 were not reached. In the first month of those who were reached: 17 parents/guardians chose option 1 and 9 chose option 2. In the second month 12 parents/guardians chose option 1 and 1 chose option 2. In October the patients called were 46% male and 54% female. November calls were 51% male and 49% female. Figure 1 shows the number of AudioCOMMUNICATOR™ responses for option 1 and option 2. Figure 2 shows the distribution of the calls not reaching a person: answering machine, no response, hang up, and busy.

Reported HEDIS measures are three months behind the current month. At the end of data collection, the HEDIS statistics for 2 to 15-month-old WCCs was at 89.7%. No correlation can be made between the increase in WCC attendance HEDIS measures and reminder phone calls based on only two months of data. The increase in WCC attendance from 86% to 89.7% could be due to a variety of reasons.

Discussion

Facilitators and Barriers

There were several barriers to gaining full approval for this EBP project implementation because of the organizational structure of this clinical setting. Due to time limited access to this clinic, we were only able to gather and record data for two months. The data had to be processed through AudioCOMMUNICATOR™ and could not be sent directly to the investigator. All response data had to be retrieved from the clinic manager when she was available.

The foundational, permanent staff in the pediatric clinic were facilitators to implementation of this project. This clinic has several staff who remain in the clinic despite most of the staff rotating out on a regular basis. Foundational employees are very passionate about what they do and who they serve, making them an important asset when implementing a new idea or project. Two foundational employees will continue to send out reminder phone calls using AudioCOMMUNICATOR™ after the end of this project. The clinic manager and the AudioCOMMUNICATOR™ clinical Administrator will continue to send reminder phone calls for WCCs monthly.

Limitations

Despite the process change efforts, most calls were not answered. We were unable to link appointment attendance to the AudioCOMMUNICATOR™ reminder calls. Data was only able to be gathered for two months and no correlation can be drawn between WCC attendance and reminder phone call implementation. This technology does not allow for text or e-mail reminders. One study showed text reminders to increase attendance at vaccination visits (Bar-Shain et al., 2015).

Implications for Practice

This technology could be used for other pediatric and adult health promotion activities including immunizations, well child visits from birth to 18 years old, school and sports physicals, developmental screenings, ADHD follow ups, flu shot reminders, well woman visits, pap smears, mammograms, colonoscopies, and sexually transmitted infection screenings. A similar system with e-mail and text message capabilities would be beneficial and provide patients and families with other options for reminder messages, visit scheduling, and updating information.

Conclusion

Using AudioCOMMUNICATOR™ for WCC reminder phone calls is a specific EPB project. The technology was already in use, making it a cost-effective option. This clinic prides itself on being proactive, up to date, evidence based, and a leader in health care improvement. The constant moves of this population present unique health care challenges when addressing core measures like HEDIS scores.

AudioCOMMUNICATOR™ offers this highly mobile population an easier way to schedule appointments, update information, and improve access to care.

Figure 1

Rosswurm and Larrabee Model (1999)

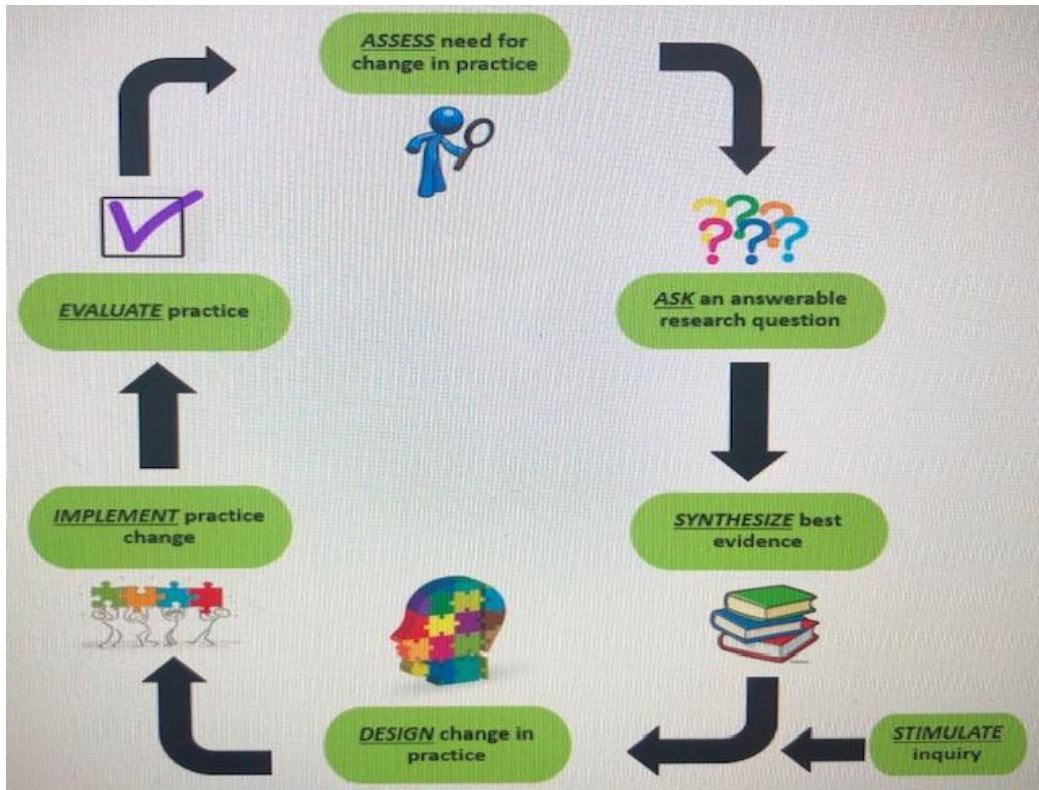


Figure 2

AudioCOMMUNICATOR™ Responses

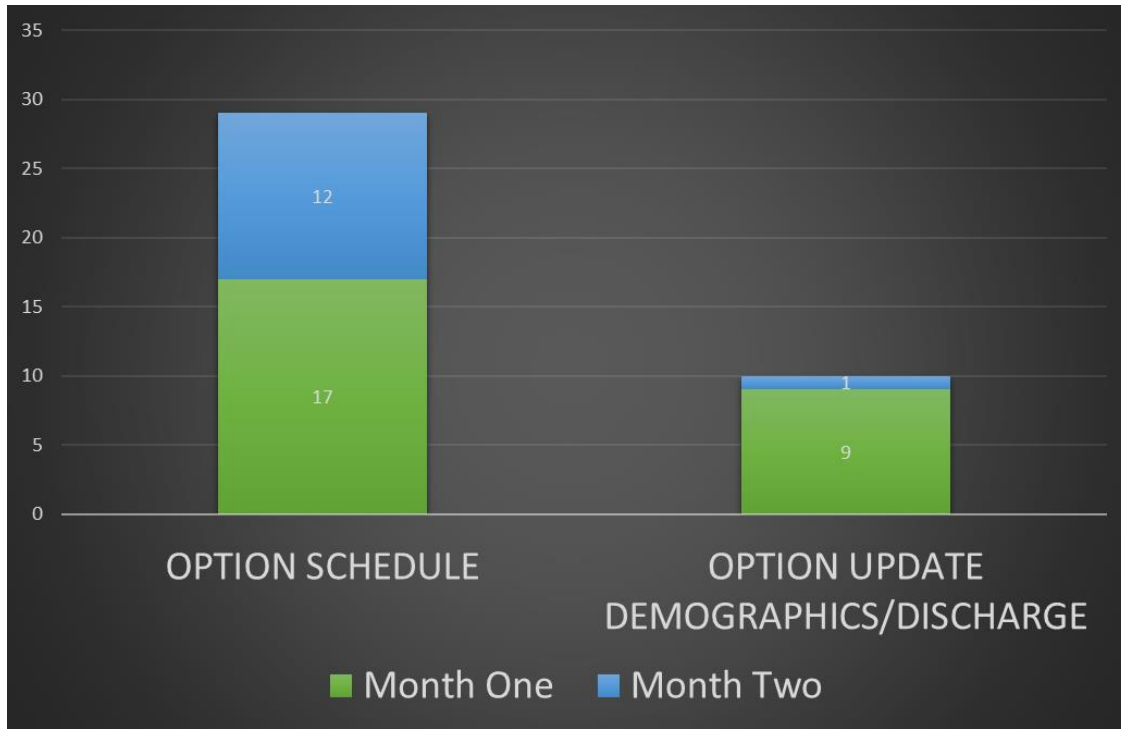
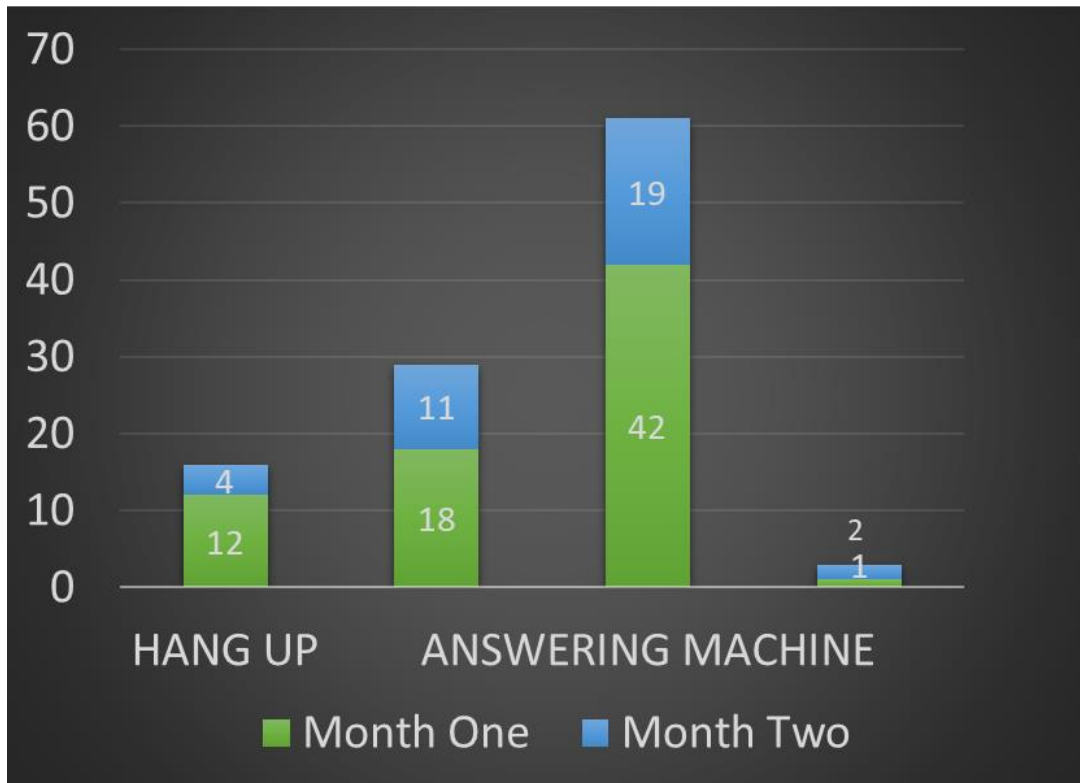


Figure 3

AudioCOMMUNICATOR™ Unable to Reach



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