



Interactive Text Notification of Arrival Times for Pediatric Surgery Patients

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Abstract

Background: Parents of pediatric patients admitted from home for surgery historically were directed to call for their arrival time between 3:30-6:00 p.m. the last business day prior to surgery. Calls are automatically directed to a 3 minute recorded review of need to know information prior to speaking with an agent to receive their arrival time and respond to any questions.

Identification of the problem: Press Ganey comments and verbal feedback from families revealed dissatisfaction and frustration with the call system due to prolonged wait times in calling queue and/or being disconnected after listening to the recorded message if the calling queue was full.

Objective:

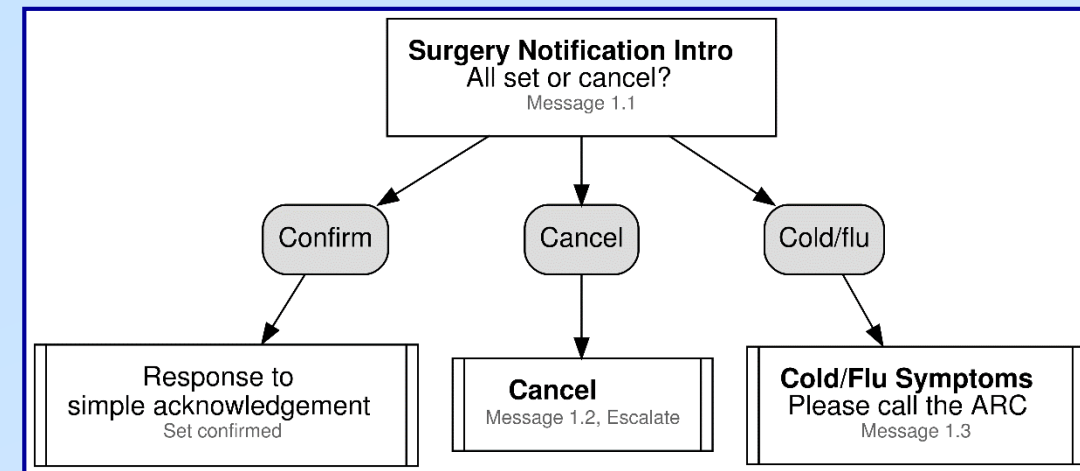
- Implement an interactive text notification system for surgical arrival times
- Improve the efficiency of the arrival time call
- Improve patient satisfaction
- Provide accurate and consistent pre-procedure instructions

Methods

The Perioperative Patient/Family-Centered Care Committee, a multidisciplinary team consisting of representatives from Nursing, Family Experience, Family Partners, Child Life, Administration, Anesthesia, and Surgery, partnered with Information Systems and Patiently to use Artificial Intelligence to implement an interactive texting notification system to replace the arrival time call for families who opt into texting.

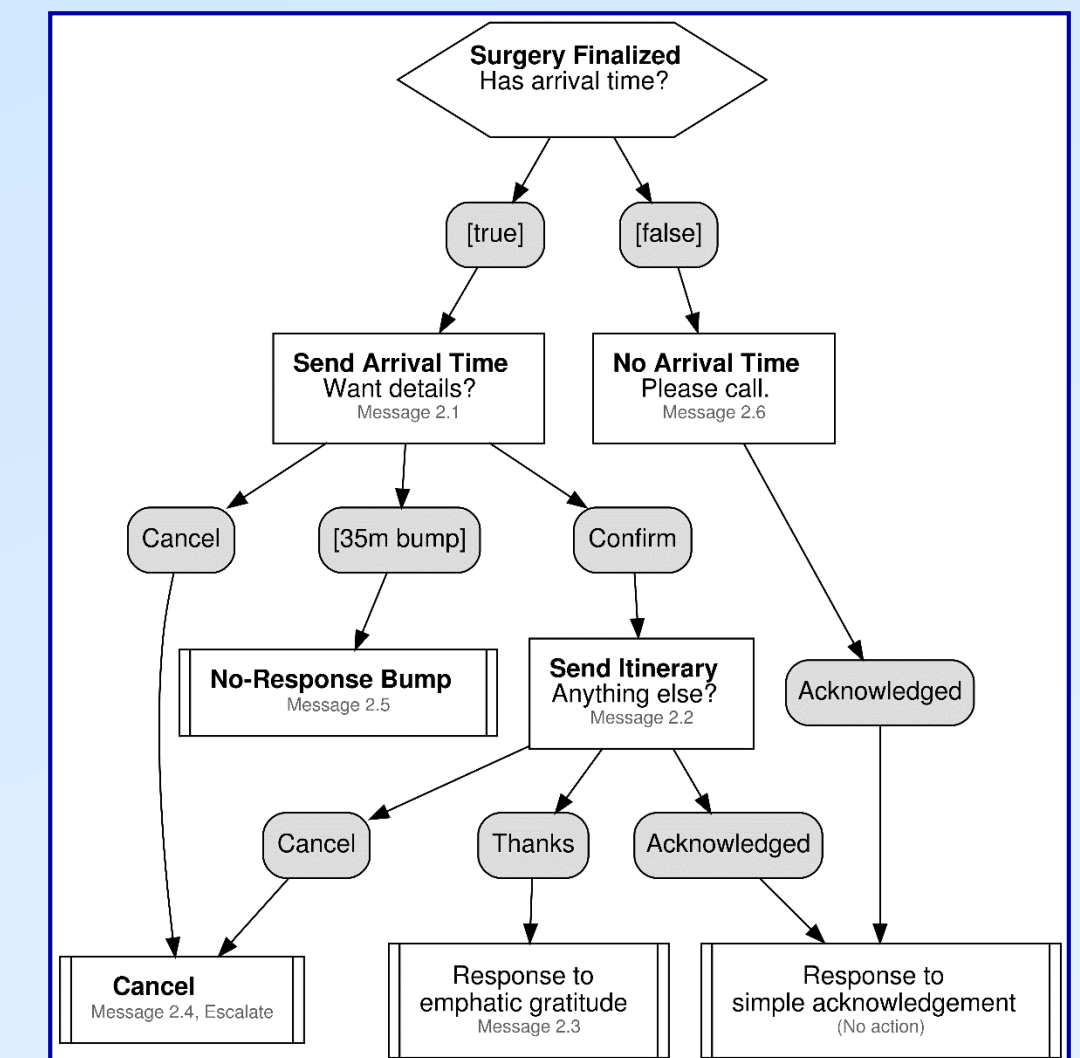
- A CareBot blueprint and data base were developed to automatically provide surgery arrival times, review pre-procedure information and respond to frequently asked questions.
- Parent enrollment to opt in for text messaging was facilitated by surgical schedulers and Anesthesia Resource Center (ARC) staff.

Surgery Notification 9 a.m. day before surgery



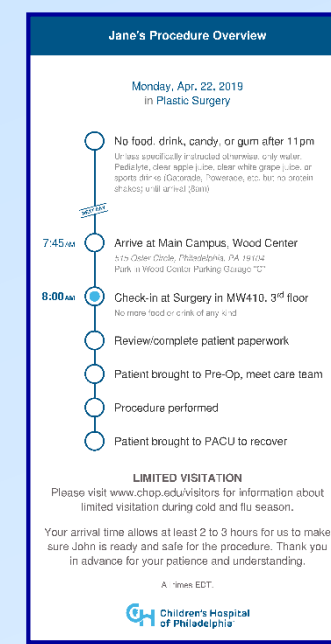
Hi, this is Charley from CHOP here. We are finalizing the time of Jane's procedure on April 22, 2019. If you need to cancel or she has any cold or flu symptom, let me know. Otherwise I'll text you around 4 p.m. today with the time.

Schedule Finalized by Pre-Op Charge Nurse and entered into electronic medical record by 3 p.m. day before surgery; parent receives text by 4 p.m.



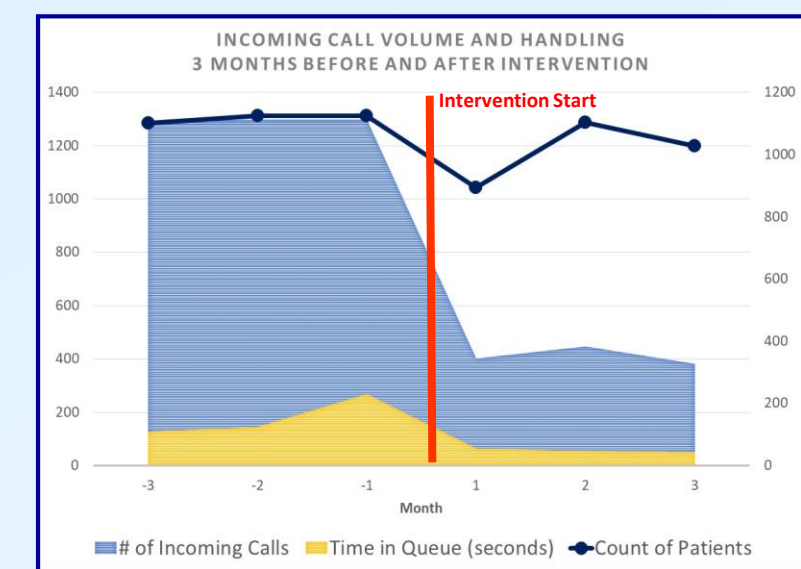
Jane's surgery time is now set. Please arrive at CHOP Main Campus at 8:00 am April 22, 2019. If anything changes with the arrival time, I'll send you a text later today. Can I confirm and send you details on what to expect?

We ask that you arrive at 8:00 am April 22, 2019 at the front desk to check-in and complete any forms. CHOP Main Campus, Wood Center is located at 515 Osler Circle, Philadelphia, PA 19104. I'm including an itinerary. Please review again the pre-procedure directions that you were given: <http://media.chop.edu/data/files/pdfs/pfe/pfe-periop-info-main.pdf>. Do you need help with directions, parking, feeding instructions, or anything else?



Results

- Patiently text notification successfully implemented July 2018.
- Team automatically notified of arrival time and scheduled surgery time discrepancy (too short or too long).
- Report automatically generates at 5 p.m. to identify parents who have not confirmed via text.
- Texts are delegated to team members as needed.
- Designated arrival time call-in line is available for those who are not opted in or to respond to texts/calls delegated to an agent.
- Increased satisfaction as evidenced in real-time check-in and Press Ganey survey comments.
- Confirming receipt of arrival time via text eliminates need to call.
 - ~74% patients opted in for text messaging
 - ~87% of enrolled patients confirm via text
- **The average number of incoming calls decreased by ~1000 per month which represents a 76% decrease in call volume.**
- **The average wait in calling queue decreased by 73%, from 2 minutes 37 seconds to 43 seconds.**



Lessons Learned

- Screen for cold/flu with morning text to triage appropriately and avoid late cancellations due to illness.
- Parents ask questions outside of normal business hours; need to be able to respond 24/7 and/or direct parent to call.
- Additional FAQs identified and automatic answers developed in response to parent's texted questions (e.g. parents requesting an earlier arrival time, child becomes sick, etc.).
- Development of phone tree to triage calls 24/7
- Automatic reminder text to parents who do not confirm initial arrival time text

Implications for Practice

- Text messaging is widely used and is a simple and effective way to communicate surgery arrival times.
- Use of technology to provide arrival times via interactive text notification promotes patient/family-centered care and patient satisfaction while providing consistent and easy access to information in a convenient and user-friendly way.

Conclusion:

- Interactive text notification is a superior modality to communicate surgical arrival times, reinforce pre-procedure instructions and answer questions.

Acknowledgement

We gratefully acknowledge Erin Bracey, Phil Grabner, Jesse Argon, Lauren Tanzer, Brett Burn, Tymika Henderson, and the multidisciplinary representatives of the Perioperative Patient/Family-Centered Care Committee for their collaborative efforts to customize and implement this initiative.

CareBot graphics used with permission from Patiently (www.patient.ly).