Leveraging on SMS Technology to Confirm Surgery Date

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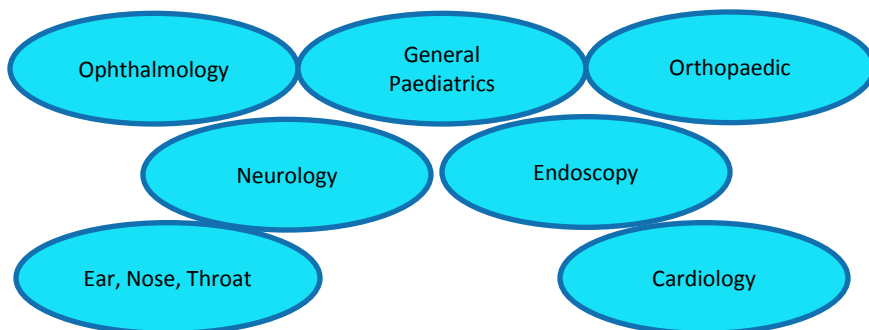Pang Siew Yin

Background & Objectives

In the past, a week before each surgery, nurses from Paediatric clinics would call parents to remind them of the surgery date and to ensure that the child was medically fit for surgery. However, some parents were difficult to contact during office hours, resulting in wasting the nurses' time.

By leveraging on SMS technology, an automated reminder was set up to address these three issues:
1. To remind parents of surgery date
2. To release surgery slot if the child is unwell for other patients
3. To reduce the time spent by the nurses in making phone calls

Methodology

Piloted at Paediatric clinics, the SMS reminder was targeted at patients listed under these categories:

- Ophthalmology
- General Paediatrics
- Orthopaedic
- Neurology
- Endoscopy
- Ear, Nose, Throat
- Cardiology

The requirements include:
1. SMS is sent to all types of surgery cases:
   - Day Surgery
   - Inpatient
   - Same-Day Admission
2. SMS is sent 5 calendar days prior to surgery date
3. SMS is sent at 8 a.m.
4. SMS can be sent to both local and international numbers

First SMS reminder was sent on Wednesday, 29 May 2013 using the following template:

"KKH reminds [patient's name] of surgery on [date]. If child has fever/cough/cold, pls call the no. in the surgery leaflet."

Feedback from parents were gathered directly through phone calls during the first two weeks of launch. In addition, quantitative study was carried out by collecting total scheduled surgery data & total cancellation data. Moreover, to provide a broader picture on the impact of the SMS reminder, the surgery cancellation dates and reasons were also taken into consideration.

For trend comparison, data was extracted between February to October 2013 – 4 months prior to implementation & 4 months after implementation.
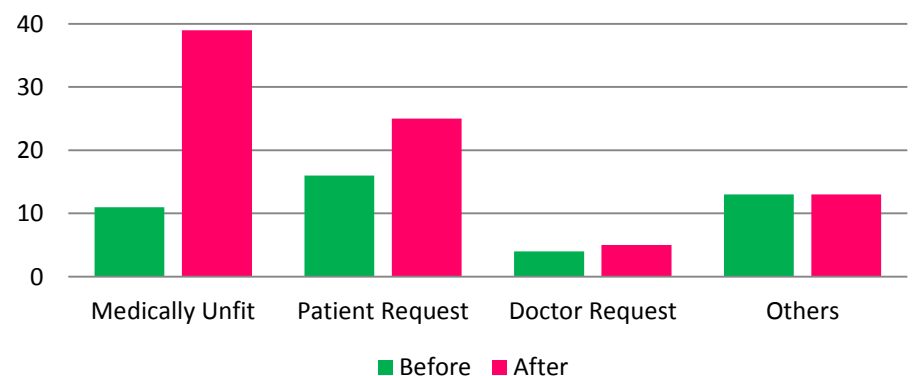
Result

After the introduction of SMS reminder, timely cancellations increased from 3.0% to 4.2% of the total number of surgery.

Overall Scheduled Surgery & Cancelled Surgery

Legend: Scheduled Surgery · Cancelled Surgery (Feb-13 through Sep-13)
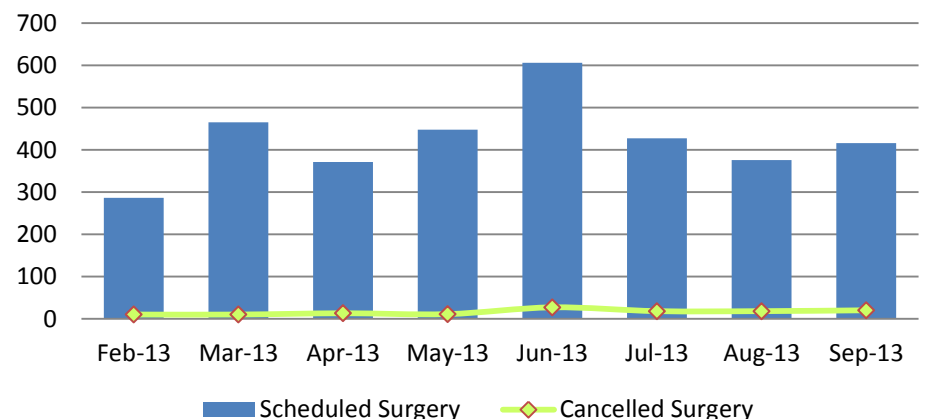
Although the percentage improvement looks small, the raw numbers were almost doubled. Moreover, cancellations due to the child being medically unfit saw a tremendous improvement.

Total Cancelled Surgery based on Reasons

Legend: Before · After (Medically Unfit, Patient Request, Doctor Request, Others)

In addition, there is an average daily time saving of 20 minutes in each clinic through this automation. As a result, the nurses can dedicate more time to deliver better service for the patients in the clinics.

Conclusion

From the feedback, parents are very pleased to receive such a concise reminder. On top of that, it has significantly raised parent's awareness and initiative to inform the hospital timely on their child's medical condition.

With these timely updates, nurses are now able to release the surgery slot and schedule the next patient in the waiting list, thus optimising the resources.

In conclusion, this project has successfully met the main objectives that were set out at the beginning.