STUDY ON “NO-SHOW” BEHAVIOR and PREDICTING APPOINTMENT OUTCOME in Specialist Outpatient Clinics (SOCs)

This study was conducted in Specialist Outpatient Clinics (SOCs) in Tan Tock Seng Hospital (TTSH), one of Singapore’s largest multi-disciplinary hospitals, with over 2,500 outpatients seen every day at 27 specialist centres. It was a collaborative study with National University of Singapore (NUS) and Nanyang Technological University (NTU). It involved doctors, nurses, clinic managers and finance personnel.

High “No-Show” Rate

- A problem of High “No-Show” Rate has been observed
- Higher and increasing trend of “No-Show” Rate in First Visit SOC cases
- Orthopedic Surgery had higher “No-Show” Rate than the overall TTSH “No-Show” Rate for all SOCs
- “No-Show” leads to wastage of clinical resources
- It affects the accessibility of other patients to the specialist care they really need

SOC No-Show Rate – Overall (Year 2011 – 2014) vs. SOC No-Show Rate – (Year 2014)

Understanding of Problem

Model Development

Decision Tree (CHAID) – First Visit as an example

Model Demonstration

Key Findings

- “Mode of Reminder” is found to be a key predicting factor for “No-Show” behavior
- Short Message Services (SMS) reminders are more effective than Letter reminders, e-mails or Fax
- First visit without any reminder contributed significantly to “No-Show”
- Subsidised patients were more likely to have “No-Show” than Non-Subsidised patients

Key Findings

- Among available reminder options, encourage patients to choose SMS as their preferred mode of reminders
- For patient with high probability of “No-Show”, propose a call to be made one day before the appointment

Recommendations

Results and Impacts

- The pilot implementation for Orthopedic patients who chose SMS as their preferred mode of reminders shows the following:
- Estimated of 3.3 FTEs can be used for better value added patient care in SOCs
- Potential annual savings of S$82,800

Lessons Learnt

To also consider including the clinical risk score (i.e. deterioration measurement impact of health condition if the SOC appointment is missed) in refining the model to predict probability of “No-Show”

References


* Orthopaedic Dept (TTSH), * Office of Clinical Governance (TTSH), * Management Information Dept (TTSH), * NUS, * NTU