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STRATEGIES TO REDUCE BED CRUNCH IN SURGERY UNITS, ESPECIALLY DURING COVID

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Introduction

Hospital crowding is a perennial problem worldwide. Sengkang General Hospital, Singapore serves close to a million residents and general surgery sees an average of 3-5 cases of emergency abscesses daily.

The long wait begins in the emergency department (ED), then for an inpatient bed and emergency operating theatre space. These patients spend 2-3 days in the hospital for what is a simple 15-minute procedure and occupy beds better used for those requiring requisite inpatient care.

It adversely affects patient satisfaction and prevents efficient and timely treatment. This problem is transformed into a full-blown crisis during the COVID-19 pandemic.

Methods and Procedures

We created a fast track to surgery workflow for healthy patients with abscesses to reduce wait times and obviate the need for inpatient beds.

A pilot study was conducted in November 2019. Straightforward abscesses in those who are healthy were included. (Table 1). ED physicians identified suitable patients, followed by an expeditious review by the Surgery team. Those suitable were discharged from the ED and returned the following day, where they underwent surgery during a fixed timeslot from 9am and 12pm (when the manpower for operating theatre was flush). Post-operatively they are monitored in the day surgery unit, eliminating the wait for a hospital bed and operating slot.

Methods and Procedures

Table 1: Pilot Study Clinical Criteria

Inclusion	Exclusion
➢ **Age 18 – 60** ➢ **ASA 1** ➢ **No cardiopulmonary conditions** ➢ **Incision and drainage of simple abscesses smaller than 5cm** ✓ Chest wall, Abdominal wall, Posterior neck, Back, Gluteal	➢ Obstructive sleep apnea ➢ Complex abscesses larger than 5cm, extending beyond muscle ➢ Perianal

After positive results we expanded the inclusion criteria to benefit more patients. (Table 2).

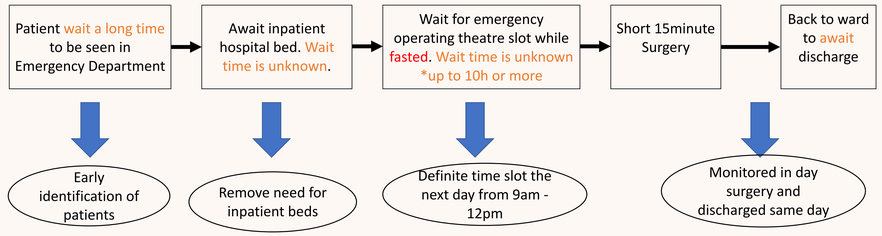
Table 2: Revised Clinical Criteria

Inclusion	Exclusion
➢ Age 18 – 60 ➢ ASA 1-**2** ✓ **Well-controlled Hypertension, Asthma, smoker without chronic obstructive lung disease** ✓ **Well-controlled Diabetes on oral hypoglycemic agents excluding *SGLT2 inhibitors (risk of euglycemic ketoacidosis if not stopped prior to general anesthesia)** ➢ Incision and drainage of simple abscesses smaller than 5cm ✓ Chest wall, Abdominal wall, Posterior neck, Back, Gluteal	➢ Obstructive sleep apnea ➢ Complex abscesses larger than 5cm, extending beyond muscle ➢ Perianal

*SGLT2 inhibitors: Sodium glucose co-transporter 2 inhibitors

Results

Figure 1: Improvements to the patient journey



19 patients were recruited into the pilot study in November 2019. Those in the workflow waited only an average of 1h 48min to surgery, while others waited 6h 30min. They were discharged same day after surgery. They paid S$290 for day surgery, a significant reduction from S$975 for who had to be admitted to the wards. In 150 patients, there have been improved patient satisfaction, and significant healthcare cost reduction with annual cost savings coming to S$33 976 per year.

Conclusion

The pilot study was a success. Patient satisfaction was high with the much shorter wait and reduced fasting time. This has been particularly useful during COVID-19 pandemic. Given the safety and efficacy of this pilot study with significant reduction in healthcare costs, we have rapidly extended to other specialties and institutions. Collaboration with ED physicians and anaesthesiologists is integral for the success of this initiative.