

National Quality Improvement Conference

Improving patients' health outcomes through Medical Early Supported Discharge (mESD)

Ms Chen Siyun, Cassandra
Dr Valliammai D/O Nallakaruppan
Dr Gan Sheng Song
Dr Lai Yong Chang
Dr Alethea Chew Qiping
Ms Liliam Lam Lai Ying
Ms Liu Dan
Ms Lydia Liu Huan

Chen.cassandra.s@ktph.com.sg



Problem Statement

According to MOH's published data, the highest median wait time for a bed at Khoo Teck Puat Hospital (KTPH) in 2023 is up to 40 hours

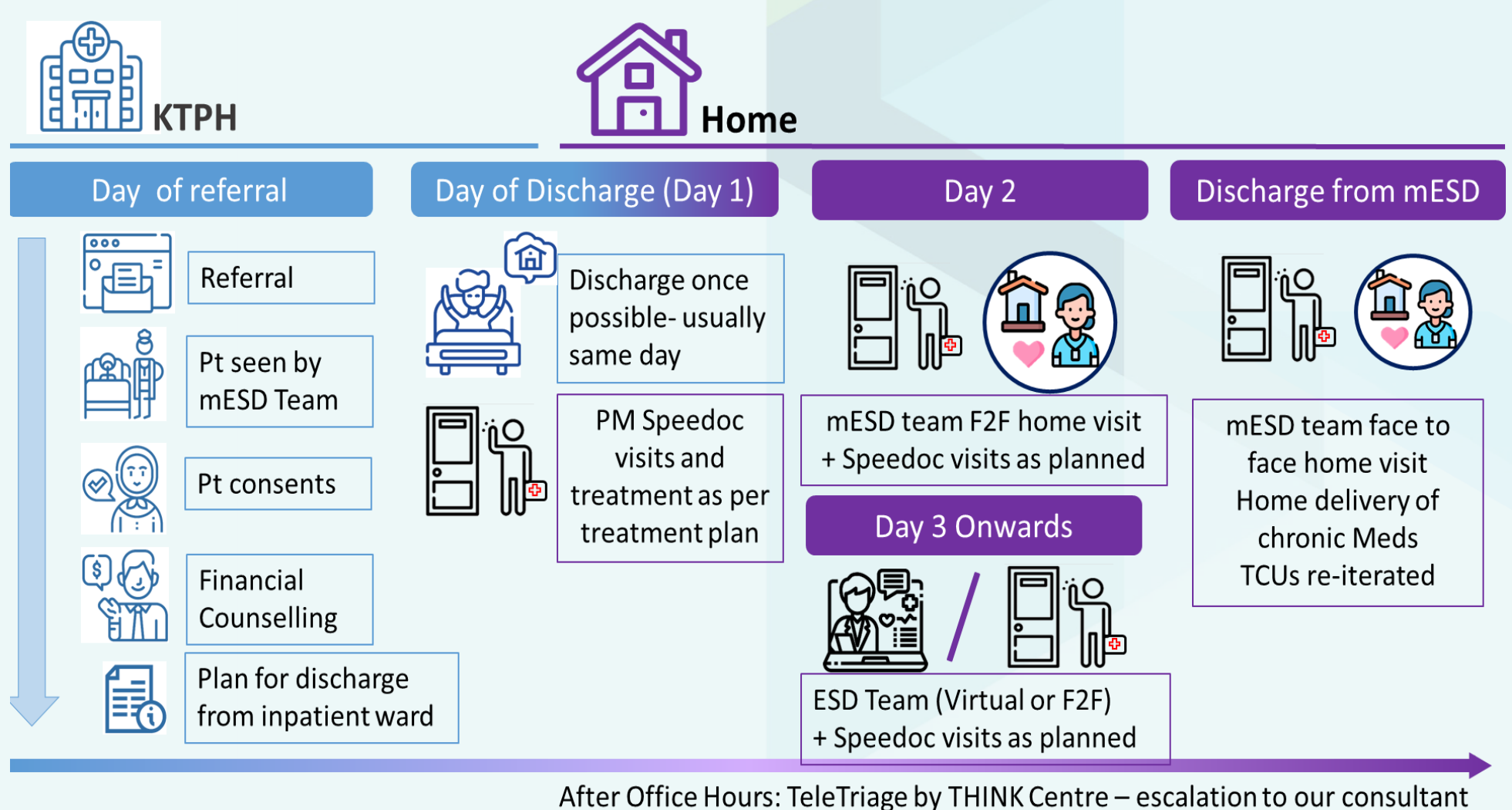
Studies have shown that delays to inpatient admission >5 hours from time of arrival is associated with poorer outcomes

mESD was started in July 2023 to free up acute inpatient beds by shifting the care of suitable patients to their own place of residence (mobile inpatient care at home)

Potential Solutions

Medical Early Supported Discharge (mESD)

- Started in July 2023, General Medicine (GM) department collaborated with Population Health Community Team (PHCT) to start mESD.
- Haemodynamically stable patients with cellulitis completed medical treatment at home (E.g. IV antibiotics, IV fluids) after initial stabilisation inpatient.
- This is a pilot program; Cellulitis is one of the diagnoses managed.



Project Aim

- Reduce inpatient bed-days for patients with cellulitis by **3 days/person**
- Reduce overall cost by **10%** for patients with cellulitis
- Reduce number of investigations required by **50%** without affecting quality of care of patients with cellulitis

Lessons Learnt

New model of care: Paradigm shift in how we treat patients

Screening and referral rates are still generally low

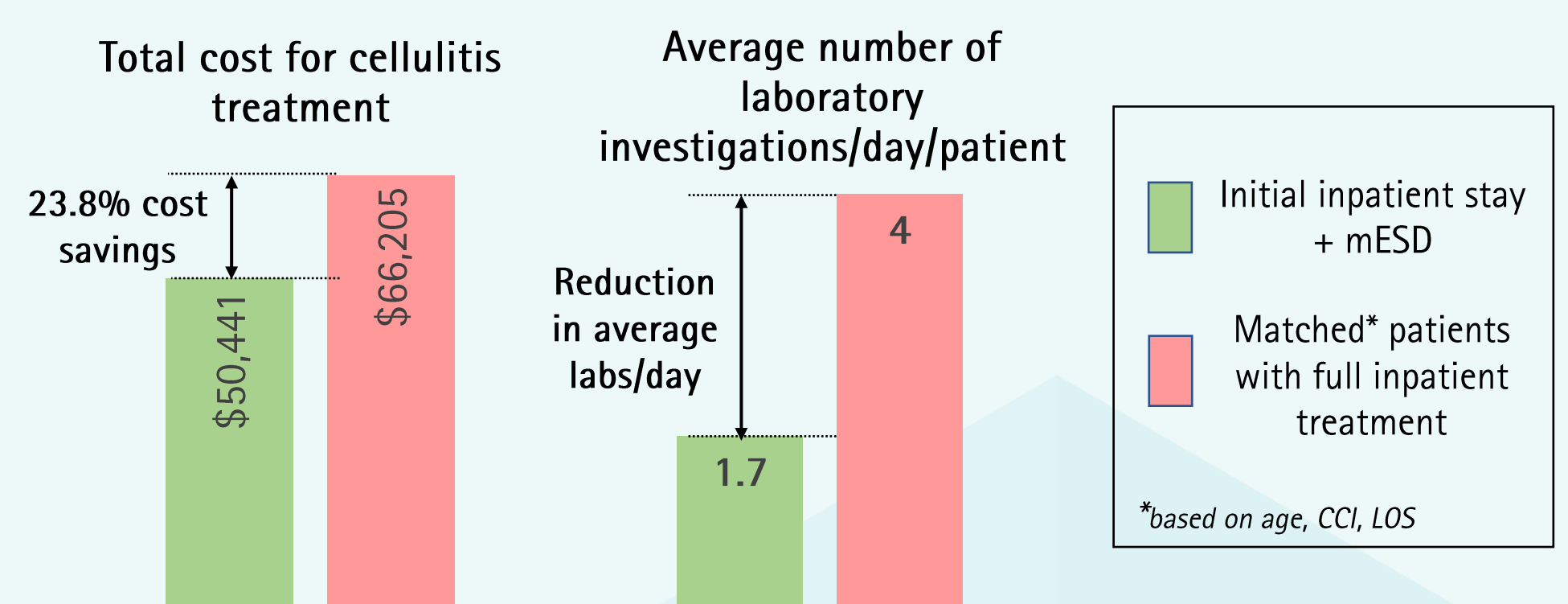
Multiple briefings to increase program uptake

Consideration for auto-referrals for eligible patients for mESD

Introducing service to patient as it is different from the traditional model of care

Outcomes & Impacts

A pilot analysis on 9 patients with cellulitis over 3 months showed a **23.8% cost savings** and a reduction of laboratory investigations by **>50%**. The median LOS was similar to a matched population. Hence, it can be derived that mESD saved **5.8 inpatient bed-days** per patient treated.



Additional outcomes

- ✓ No 30-day readmissions
- ✓ No patient mortality
- ✓ No conversion back to inpatient
- ✓ Patients expressed satisfaction with service

Sustain and spread

- ❖ Possible collaboration with GPs/Nursing homes
- ❖ Plans to scale up by increasing range of diagnoses, extend referrals to weekends
- ❖ Auto-referral of patients with included diagnoses
- ❖ More consultants and junior doctors to support mESD