

National Quality Improvement Conference

C.H.O.P. – Faster Intervention and Reduced Mortality in Major Trauma

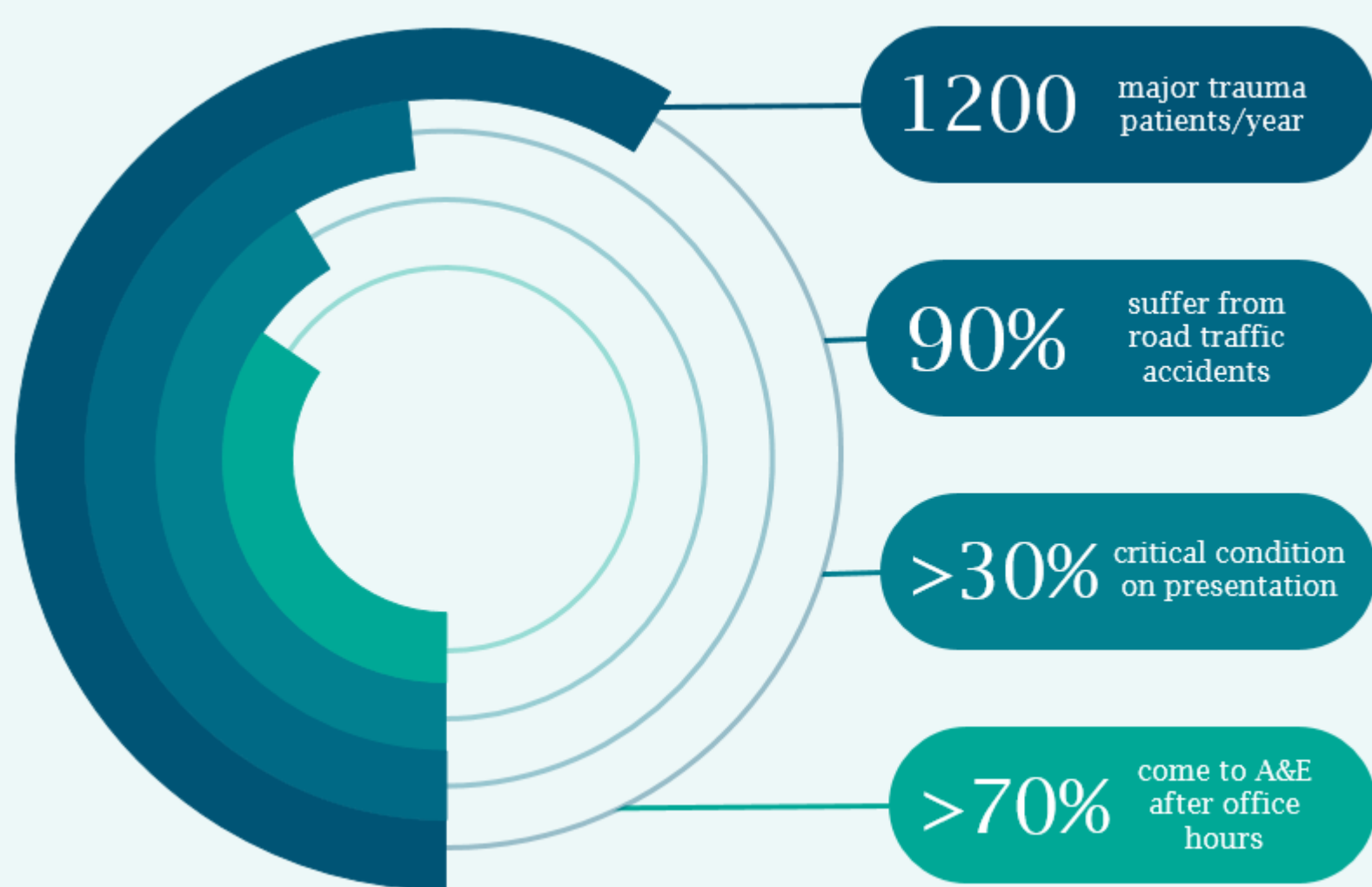
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Problem Statement

KTPH has the second highest major trauma load in Singapore.



Potential Solutions

C.H.O.P. Criteria

(Critical **H**aemorrhage to **O**peration room **P**rotocol)

- ≥ 2 criteria
- Systolic blood pressure ≤ 90mmHg
- Heart rate ≥ 120bpm
- Penetrating trauma
- FAST positive

CRITICALLY INJURED PATIENT IDENTIFIED

| | | |
|---|--|---|
| Automated communication <ul style="list-style-type: none"> Switchboard calls multidisciplinary specialist team: <ul style="list-style-type: none"> General Surgery Anaesthesia Interventional Radiology | Priority Access to Resources <ul style="list-style-type: none"> Operating theatre (EOT) Blood bank Radiology | Standardization of Resuscitation Protocols <ul style="list-style-type: none"> Warmed blood Massive Transfusion Protocol (MTP) Tranexamic acid (TXA) ROTEM guided |
|---|--|---|

Project Aim

Definitive intervention for all critically injured trauma patients to be initiated within 90 minutes from activation.

The Golden Hour

The time following a traumatic injury when prompt medical treatment has the highest likelihood to prevent death

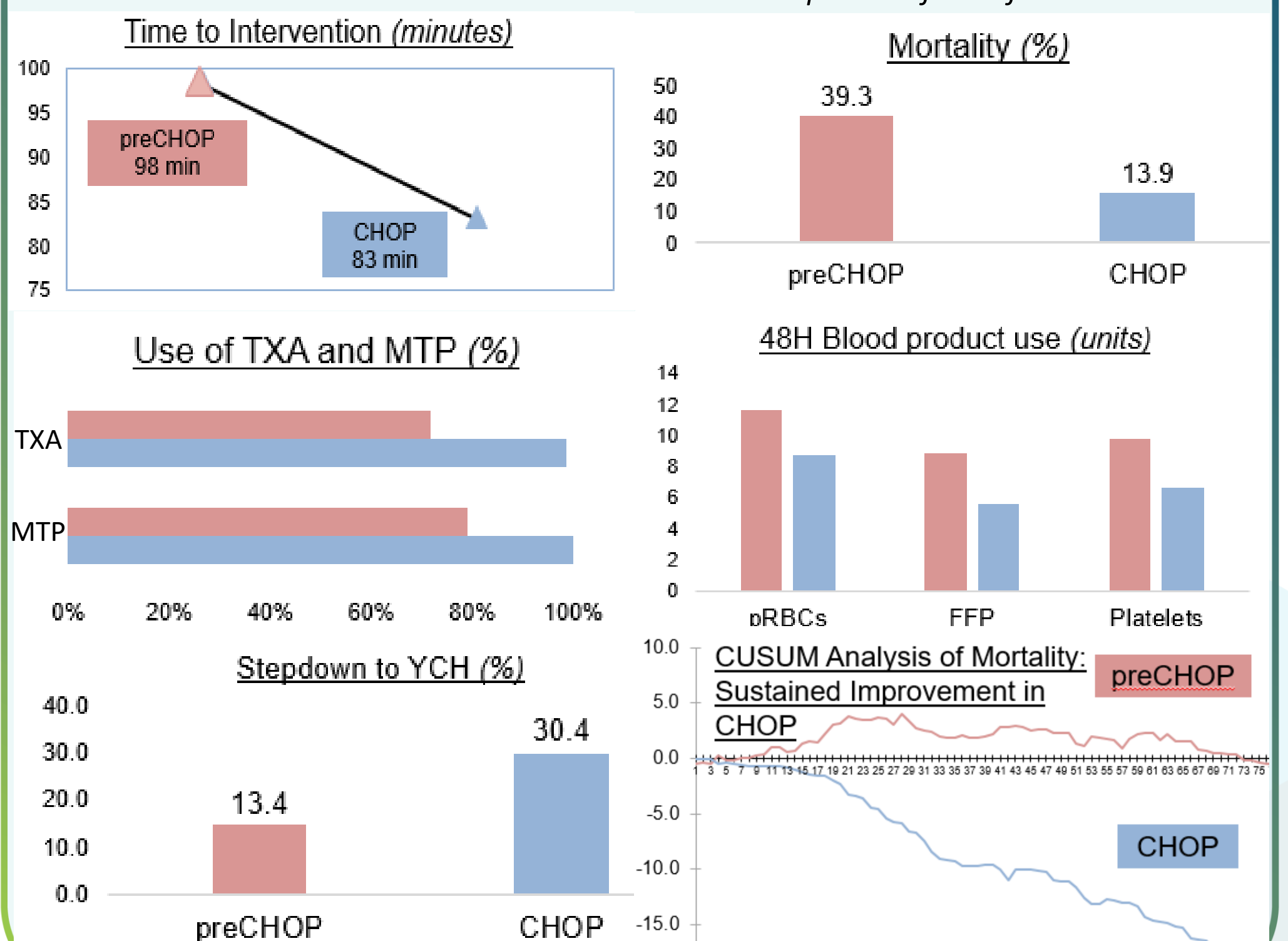
Outcomes & Impacts

Outcome comparison for pre-CHOP and CHOP patients

preCHOP patients: April 2012-December 2017 (N = 89)

CHOP patients: March 2018-September 2023 (N =79)

NB: p < 0.05 for all featured results.



Lessons Learnt

CHALLENGES

- Delay in recognition of severe polytrauma
- Worsening haemorrhage and onset of lethal triad
- Belated escalation to specialists after office hours

SOLUTIONS

- Simplify criteria for immediate CHOP activation at A&E
- Evidence-based resuscitation bundle initiated in A&E
- Automatic callback of multidisciplinary specialist team for intervention