



**Trauma Code Crimson:**  
**Auckland City Hospital**

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**18 May 2018**

**5<sup>th</sup> Central Region Trauma Symposium**

# Overview



- What is **Trauma Code Crimson (TCC)**
- How do we attempt to identify these patients
- What do we actually do in **TCC**
- What has happened at ACH since **TCC** introduced

# What is **Trauma Code Crimson** at **ACH**?



- System to identify those trauma patients who are at high risk of exsanguination
- Ensuring Senior Decision Makers to bedside
- Rapid access to urgent surgical or radiological intervention
  
- No Red blanket

# Collaboration



- Auckland HEMS
- Emergency Medicine
- Trauma Service
- General Surgery
- Anesthesia
- Blood Bank
- Radiology and Interventional Radiology

# How do we attempt identify these patients

- Assessment of Blood Consumption score (ABC)
  - Score to try and predict those patients who are most likely going to require MTP following trauma

## Early Prediction of Massive Transfusion in Trauma: Simple as ABC (Assessment of Blood Consumption)?

*Timothy C. Nunez, MD, Igor V. Voskresensky, MD, Lesly A. Dosssett, MD, MPH, Ricky Shinall, BS, William D. Dutton, MD, and Bryan A. Cotton, MD*

*J Trauma. 2009;66:346-352.*

## Multicenter Validation of a Simplified Score to Predict Massive Transfusion in Trauma

*Bryan A. Cotton, MD, MPH, Lesly A. Dosssett, MD, MPH, Elliott R. Haut, MD, Shahid Shafiq, MD, MPH, Timothy C. Nunez, MD, Brigham K. Au, MD, Victor Zaydfudim, MD, MPH, Marla Johnston, RN, MSN, Patrick Arbogast, PhD, and Pampee P. Young, MD, PhD (J Trauma. 2010;69: 533-539)*

# What do we actually do in **TCC**



Trauma Code Crimson

Trauma Call Criteria met on R40

Penetrating mechanism (1)  
Systolic BP <90mmHg (1)  
Pulse rate >120 (1)  
+ 've Trauma E-FAST Ultrasound (1)  
Score

Score 2,3 or 4

- Emergency Department (ED) Charge Nurse or Specialist organize:
  - 1.777 Trauma Code Crimson with expected time of arrival (ETA) and Adult ED
- ED Charge Nurse to ensure the following teams are contacted with, **Trauma Code Crimson and ETA** :
  - 1.Anaesthetist 021496374
  - 2.Level 8 Nursing coordinator 021492086
  - 3.Blood bank 24015
  - 4.Radiology Registrar 021412581
- Surgical Registrar to contact on call Surgical Consultant
- If Emergency Department Specialist not in hospital to be contacted by Charge Nurse

Score 0 or 1

If Trauma call Criteria met:  
777 Trauma Call with ETA and  
Adult ED

## ADHB Adult Code Crimson MTP

### Team Leader Responsibilities

- Team leader should be a trauma team member
- Notify Coag Lab and send Coag requests on the Labplus Urgent form (orange border)
- Activate protocol by ringing Blood Bank (ext 24015) and say "I am activating the "Code Crimson MTP"
- Call for each box as required
- Make a decision to cease MTP and contact Blood Bank

### Blood Bank Responsibilities

- Ensure X-match sample processed ASAP after O-neg release
- Notify NZRS Medical Officer after issuing MTP Box Four
- Throw next box in advance and await request
- Ensure supply of platelets

### Contacts

- Blood Bank - Ext 24015
- Coagulation Lab - Ext 22069
- Level 8 Anaesthetist - 021 496 374



Additional treatment thresholds



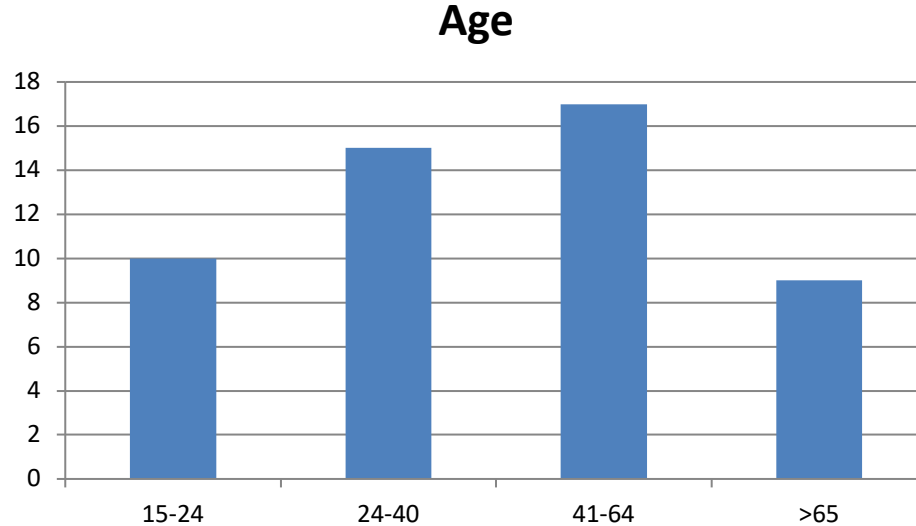
# What has happened since introduction?



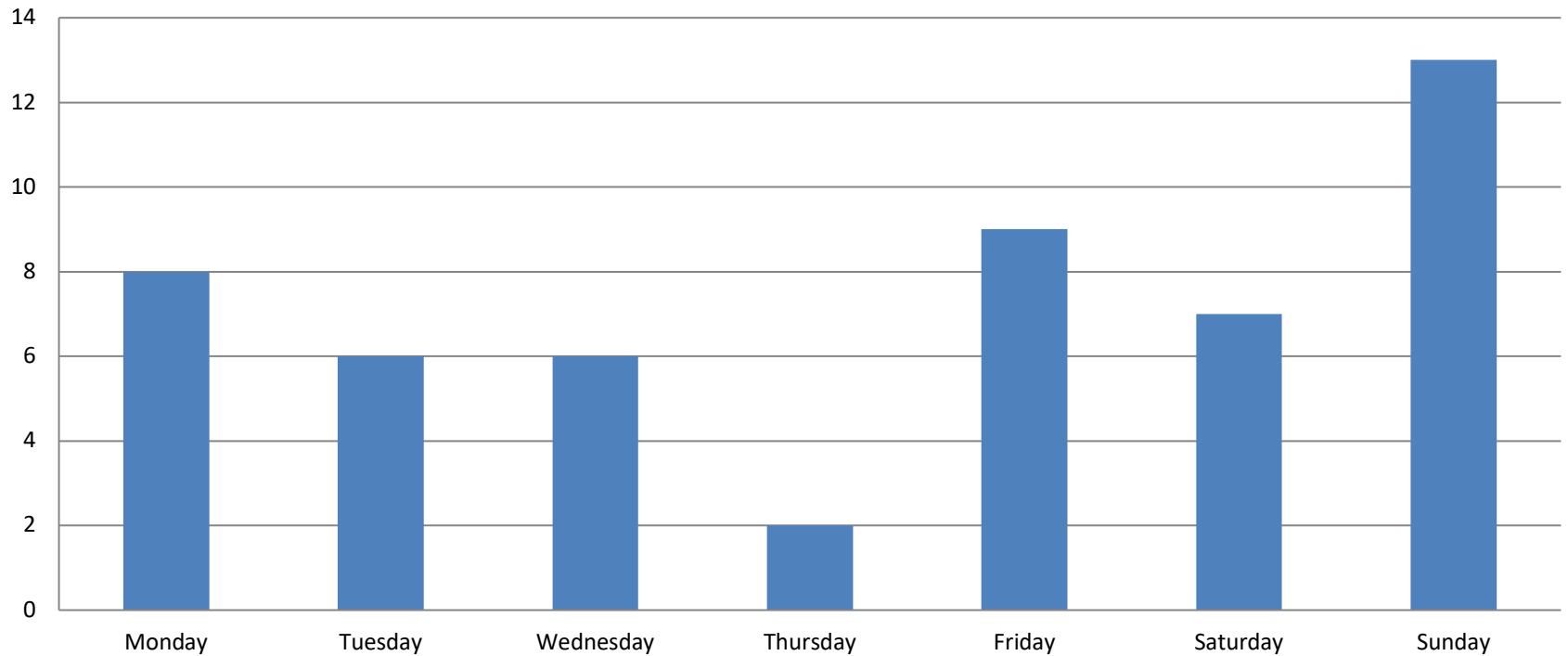
- 26 August 2015 – 31 December 2018
- 51 patients
- Total Trauma calls 1643
- 3% of all Trauma calls

# Demographics

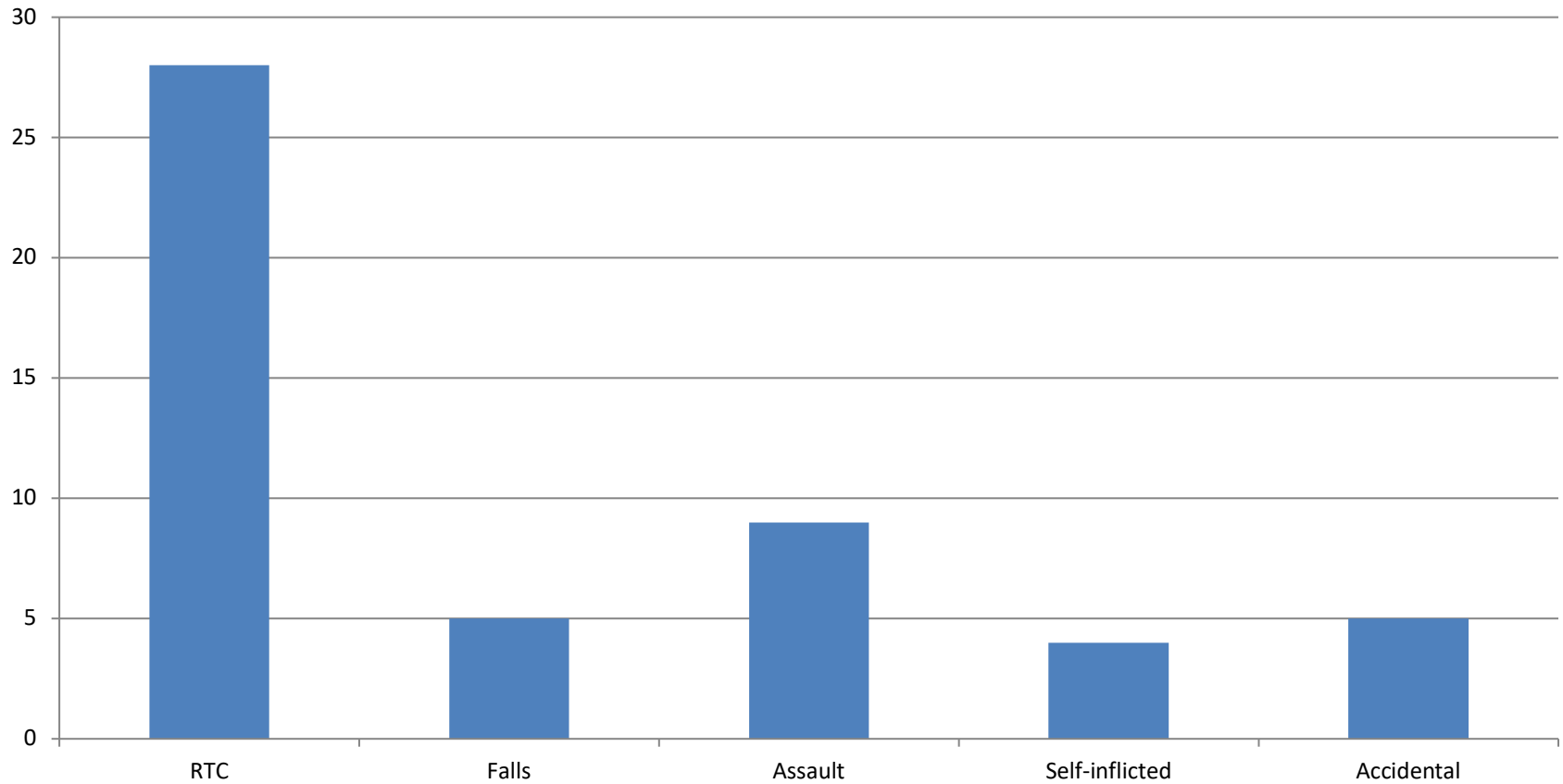
- Male 37 (74%): Female 14 (27%)
- Age range 15-83



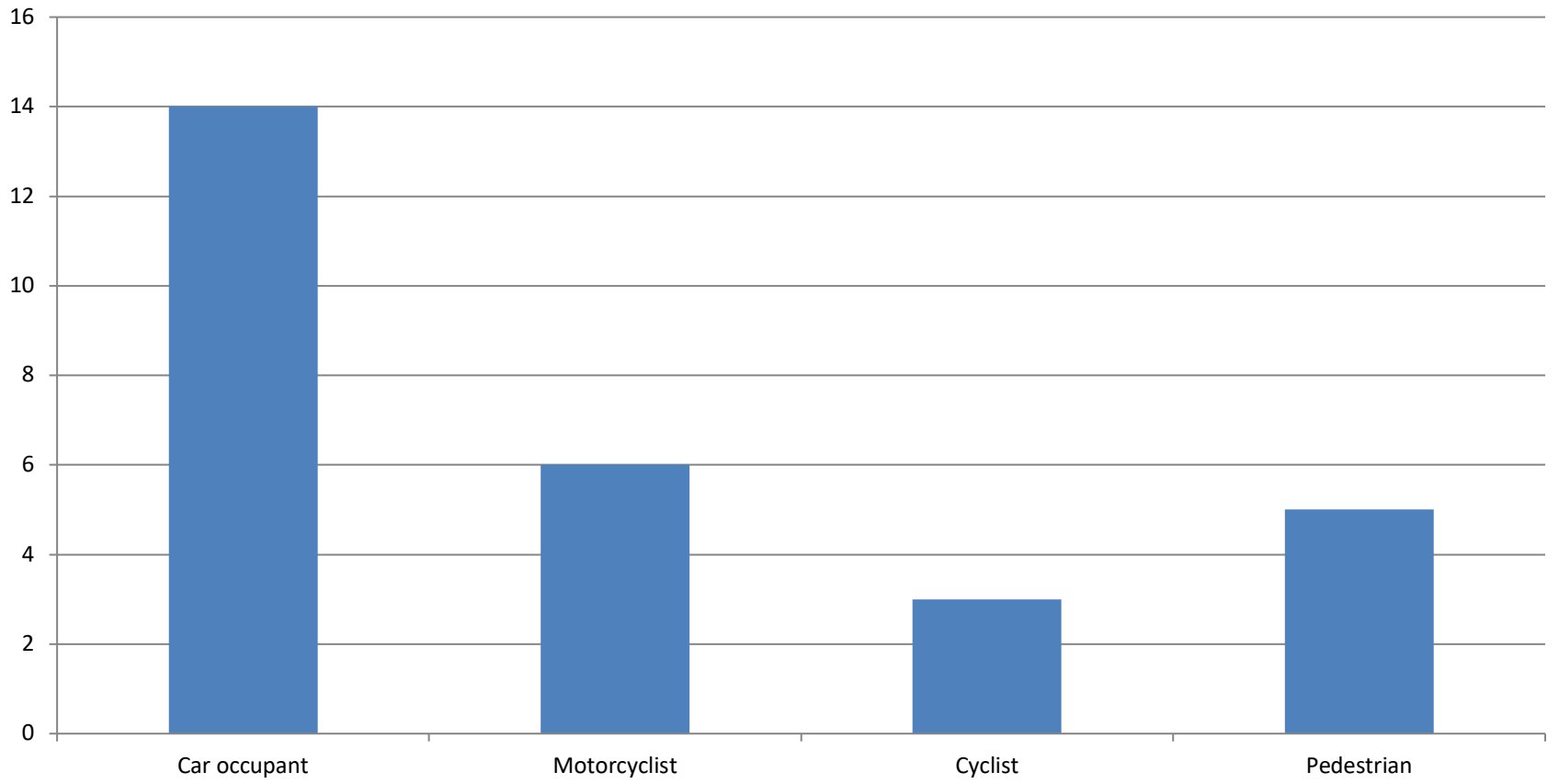
# When have these patients arrived in ED



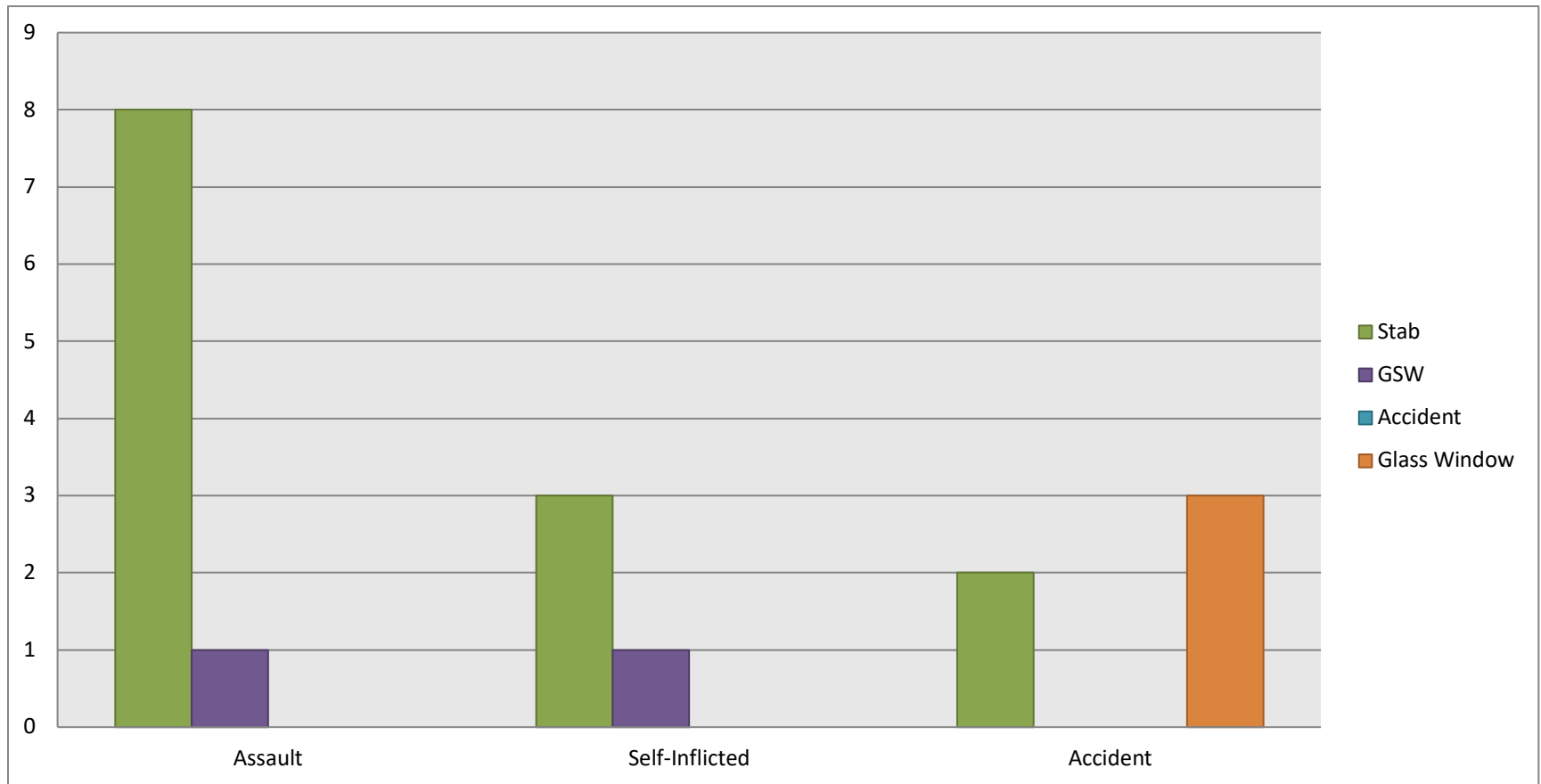
# Mechanism of Injury



# RTC



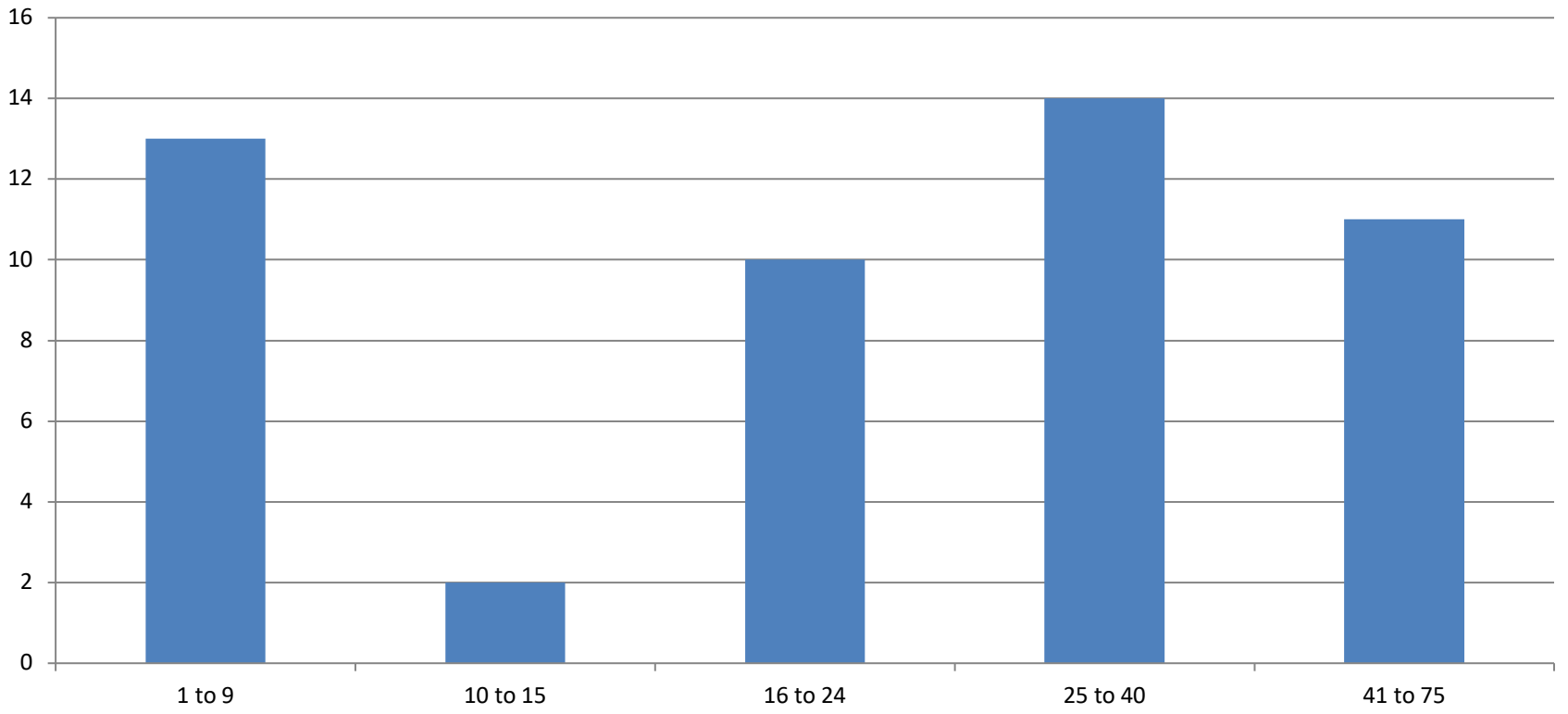
# Penetrating



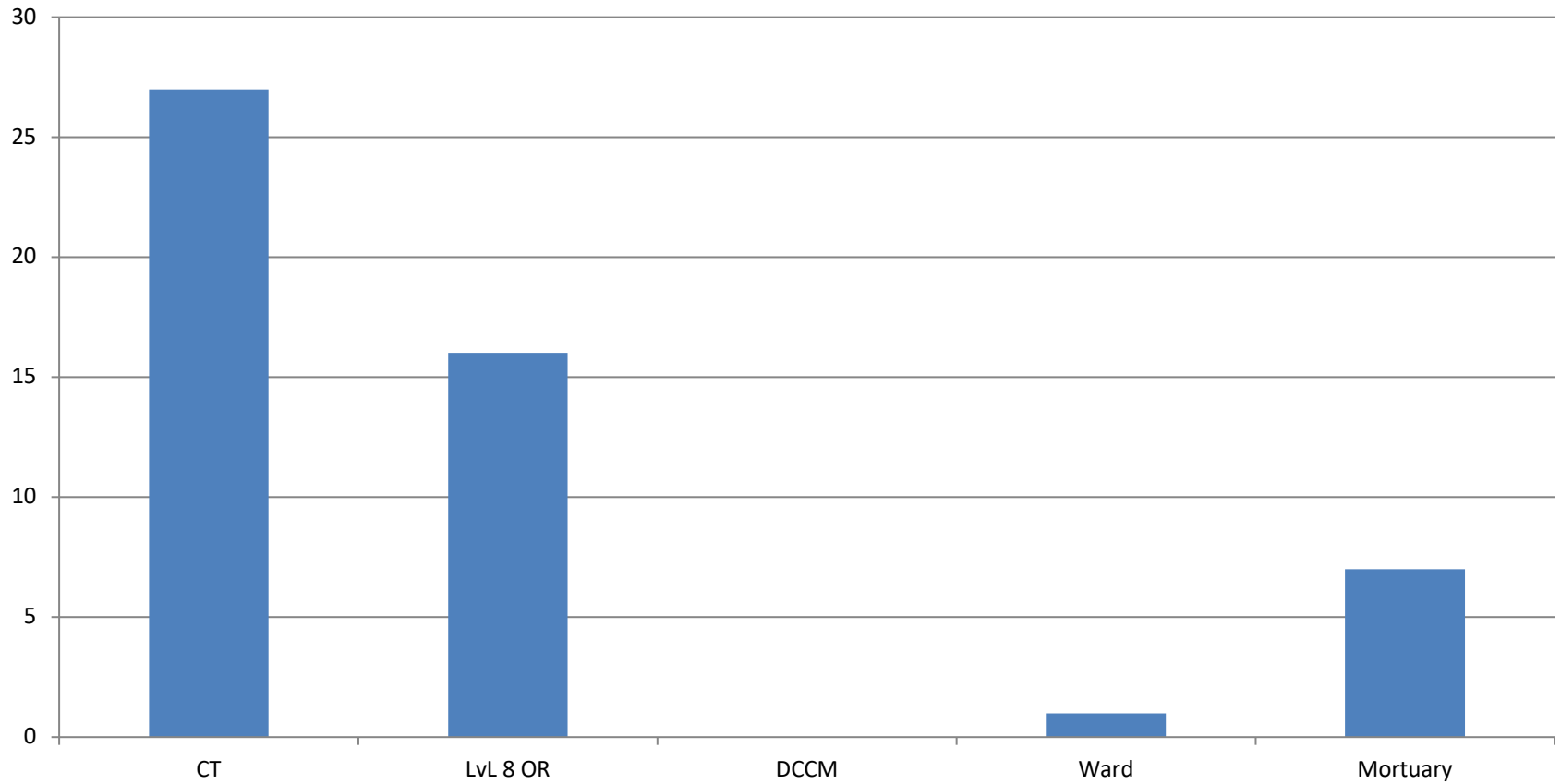
# ISS



## ISS

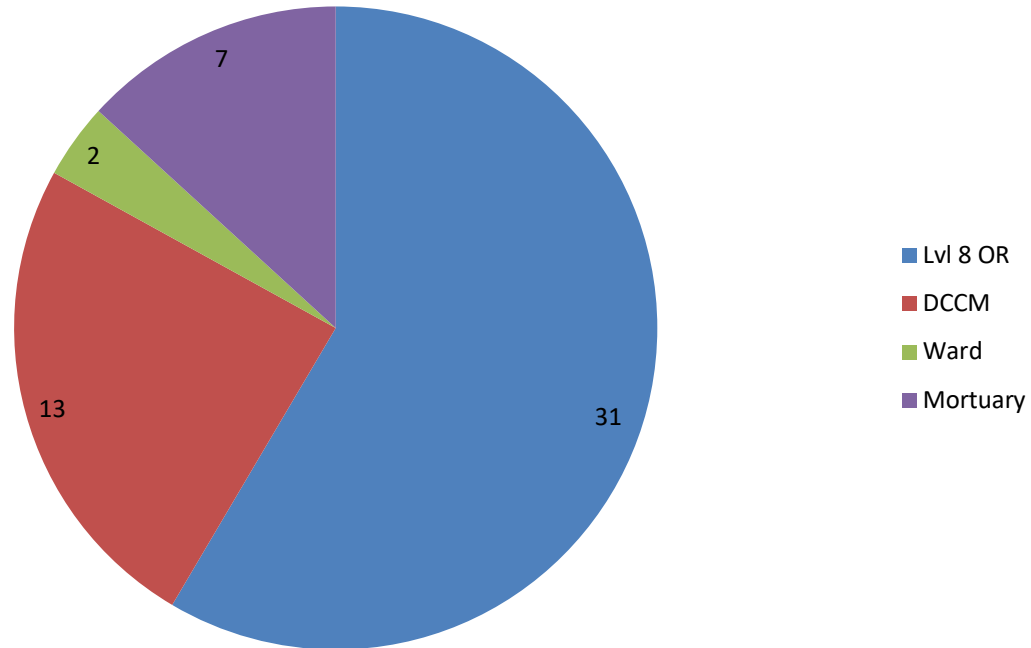


# First Destination post Resus Room



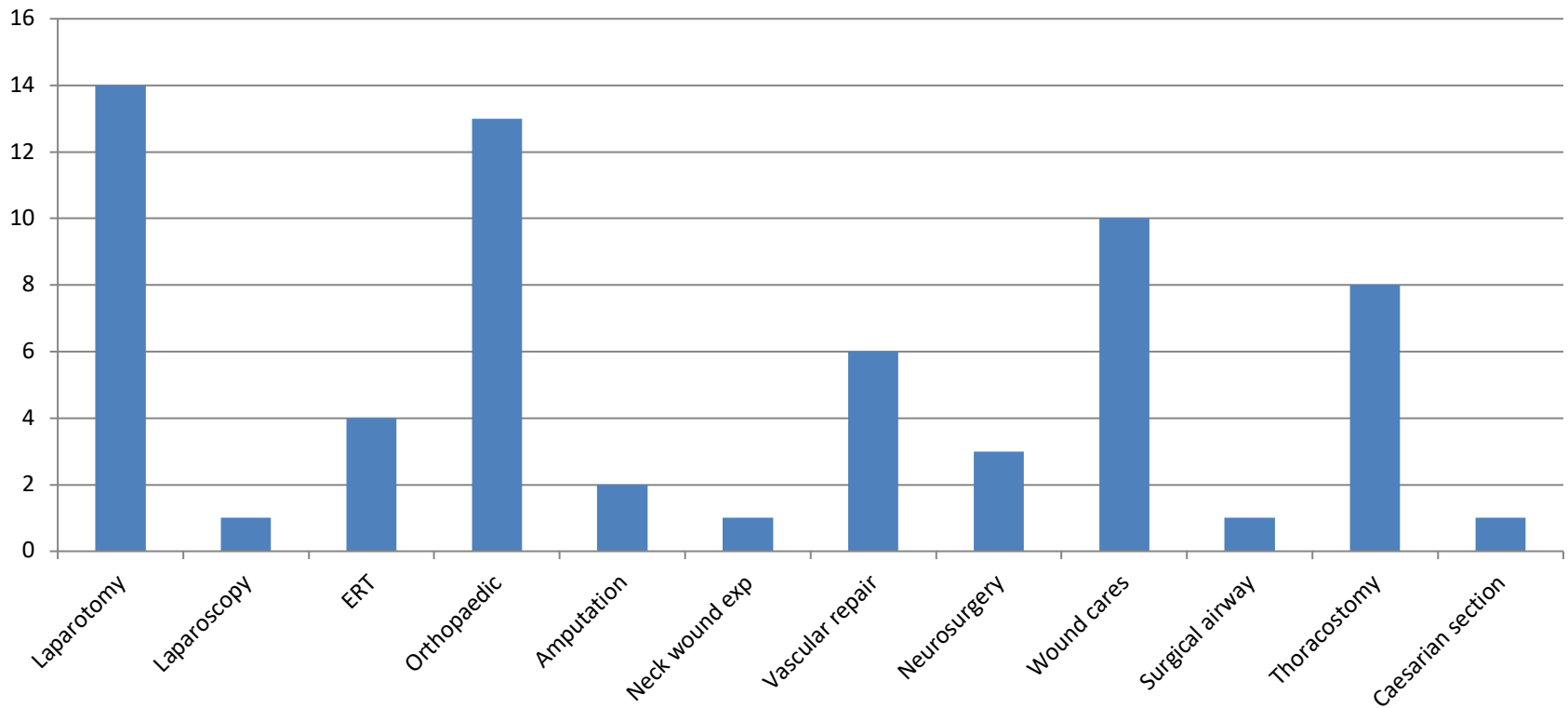


# Post ED/ Level 2 destination

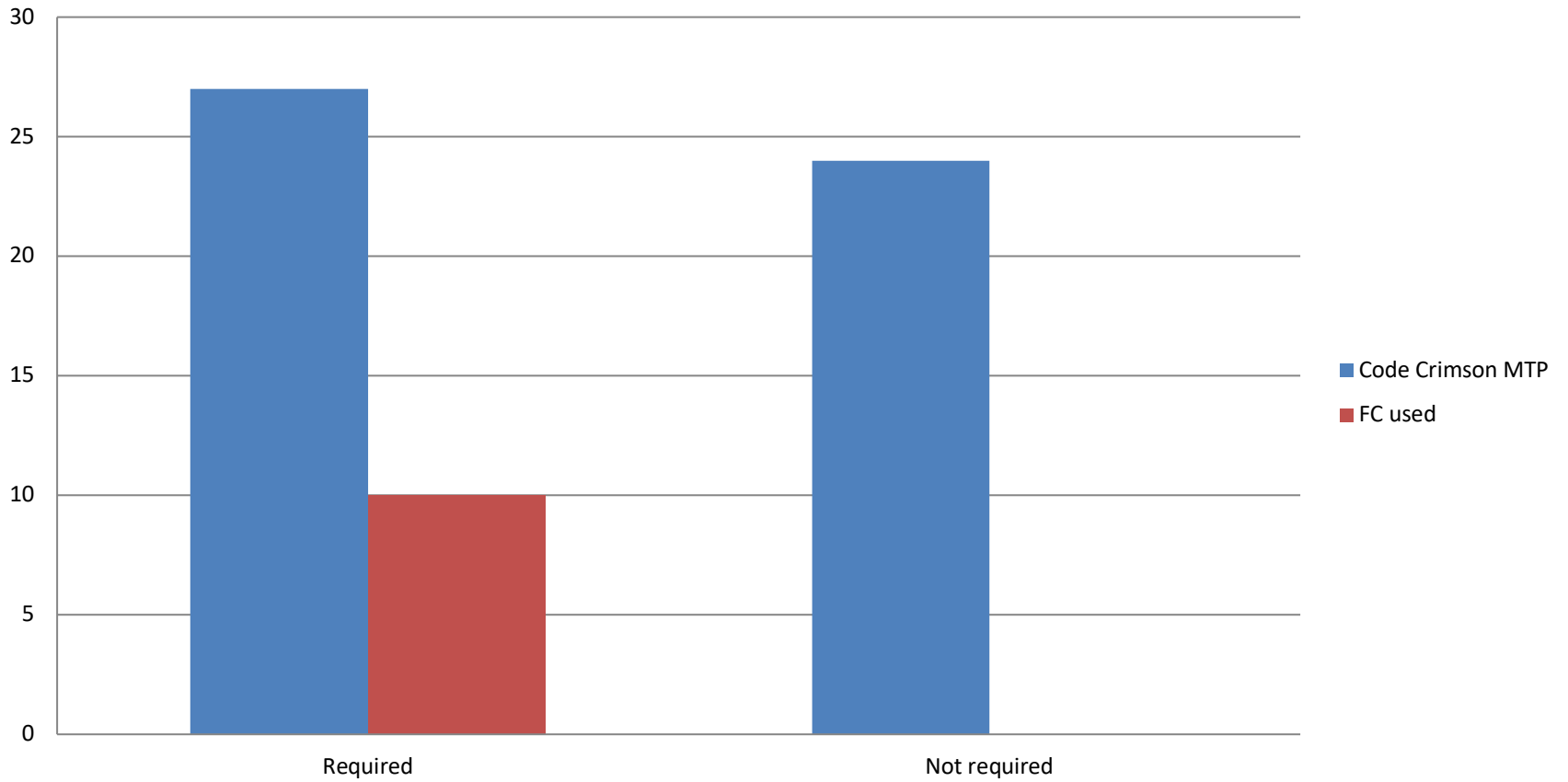


# Procedures within 6 hours

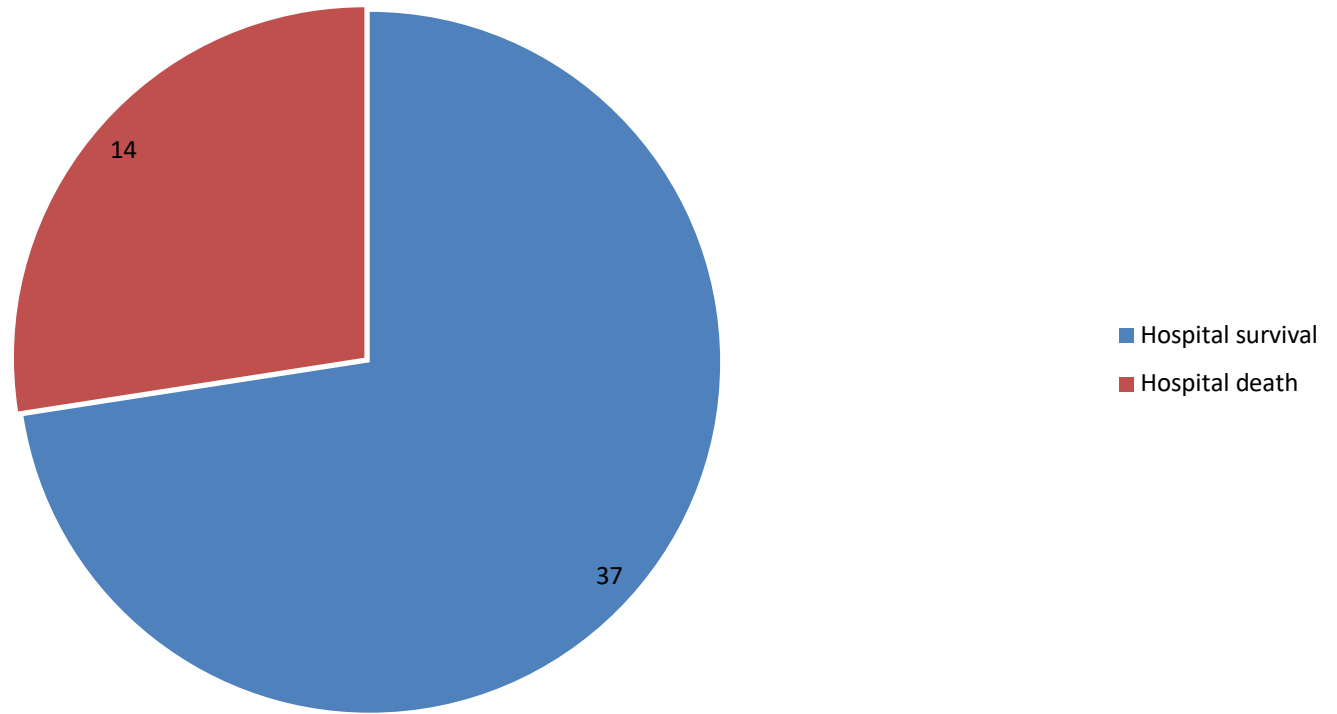
Operations and procedure



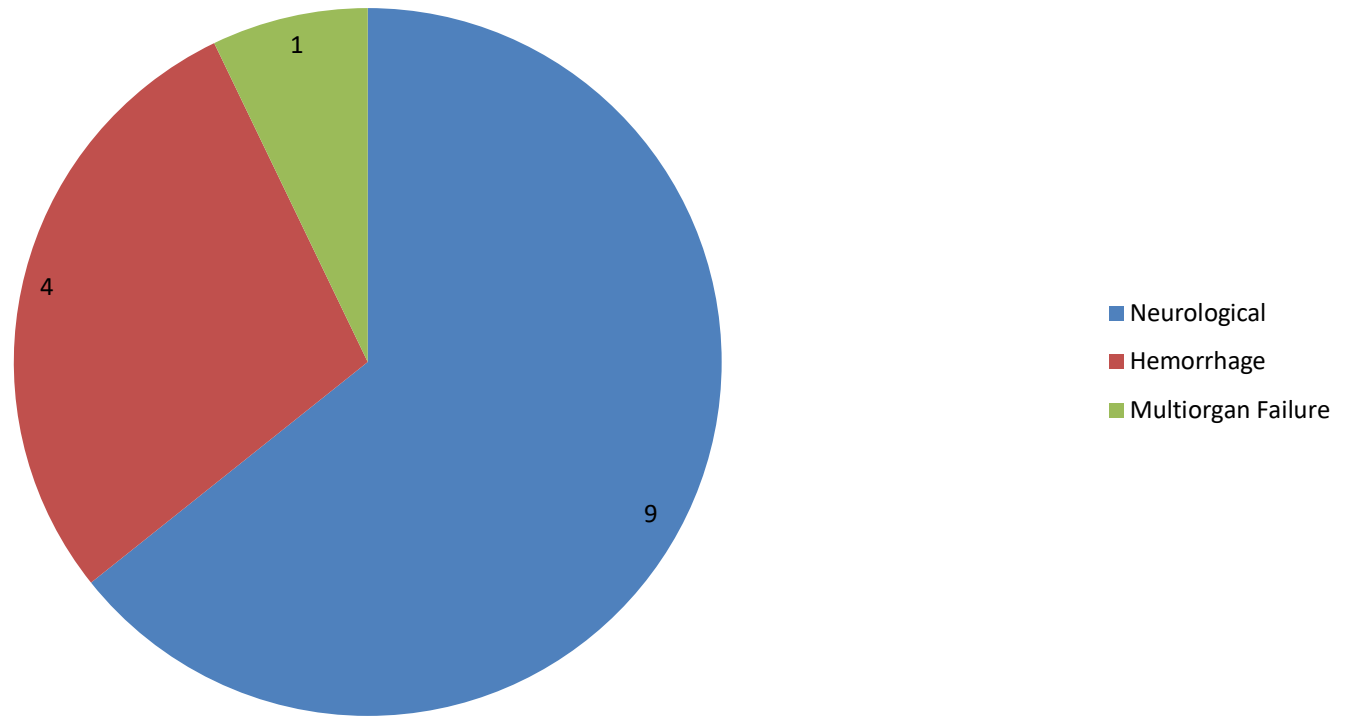
# Trauma Code Crimson MTP



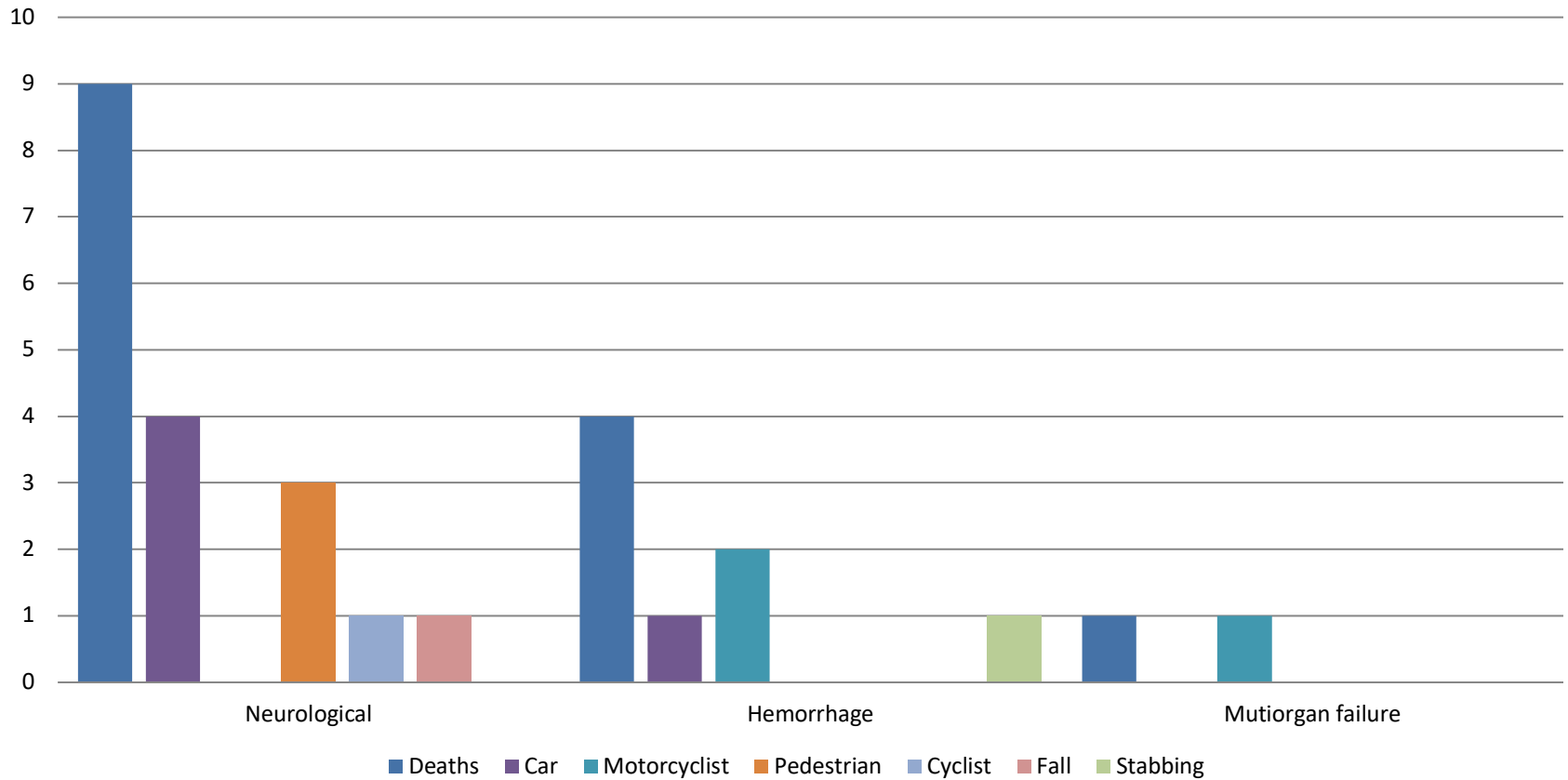
# Hospital Mortality



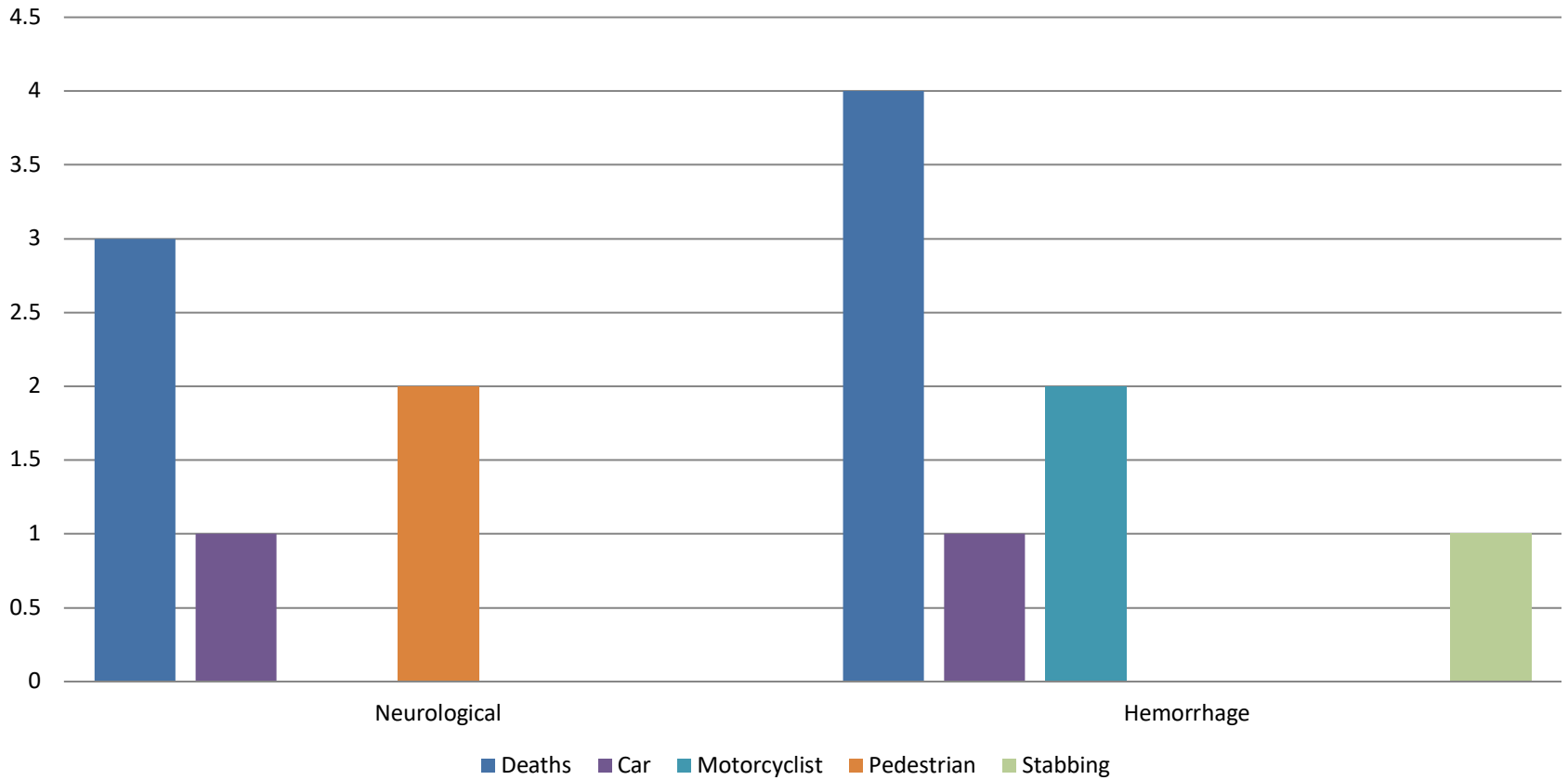
# Type of Death



# Hospital Deaths



# ED Deaths



# Systems Issues highlighted



- Activation phone calls
- Crowd control
  - Roles
- Nurse task saturation
- No orderly available to go to blood bank
  - Placement of products
- Use of unfamiliar products and equipment
- No access to priority lifts to level 8
- Deactivation of TCC



# Recommendation if considering a change



- Identify what your need is
- Inter-departmental communication and collaboration
  - Buy in
- Simulation- In situ
- Allow system to mature
- Open to review and re-review
- Team



**Thank you**

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