



Trauma Code Crimson at Auckland City Hospital

WHAT IS IT AND HAS IT MADE A DIFFERENCE?

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INJURY 2016



■ No conflicts of interest

Prior to Trauma Code Crimson at ACH



- Standardized Trauma call Criteria- 777
 - Trauma Fellow and Consultants
 - General Surgical Registrar
 - DCCM Registrar
 - ED Consultant and Registrar

What is Trauma Code Crimson?



What is Trauma Code Crimson at ACH?



- System to identify those trauma patients who are at high risk of exsanguination, and getting them rapid access urgent surgical or radiological intervention to control bleeding
- Improve the chain of survival

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. Dossett, 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. Dossett, MD, MPH, Elliott R. Haut, MD, Shahid Shafi, 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: S33–S39)

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

1. Attend the Trauma patient in the Resuscitation room
2. Along with the ED Charge Nurse ensure that all additional teams have been contacted
3. If you are the Trauma Team Leader follow the action card for Trauma Team Leader and ED Charge Nurse
4. If you have come in from home and are not the Trauma Team Leader
 - a. Introduce yourself to the Trauma Team leader
 - b. Help with ongoing resuscitation and decision making for this patient
 - c. Liaise closely with the Trauma Team Leader, Surgical and Anaesthetic Consultants to facilitate optimal management of the patient
5. Key to optimal patient care and outcome is optimal Team Work

Emphasis on

- a. Team work**
- b. Early Surgical and radiological intervention**
- c. Early use of blood and blood products**
- d. Avoid hypothermia, acidosis and coagulopathy**

ADHB Adult Code Crimson MTP

Team Leader Responsibilities

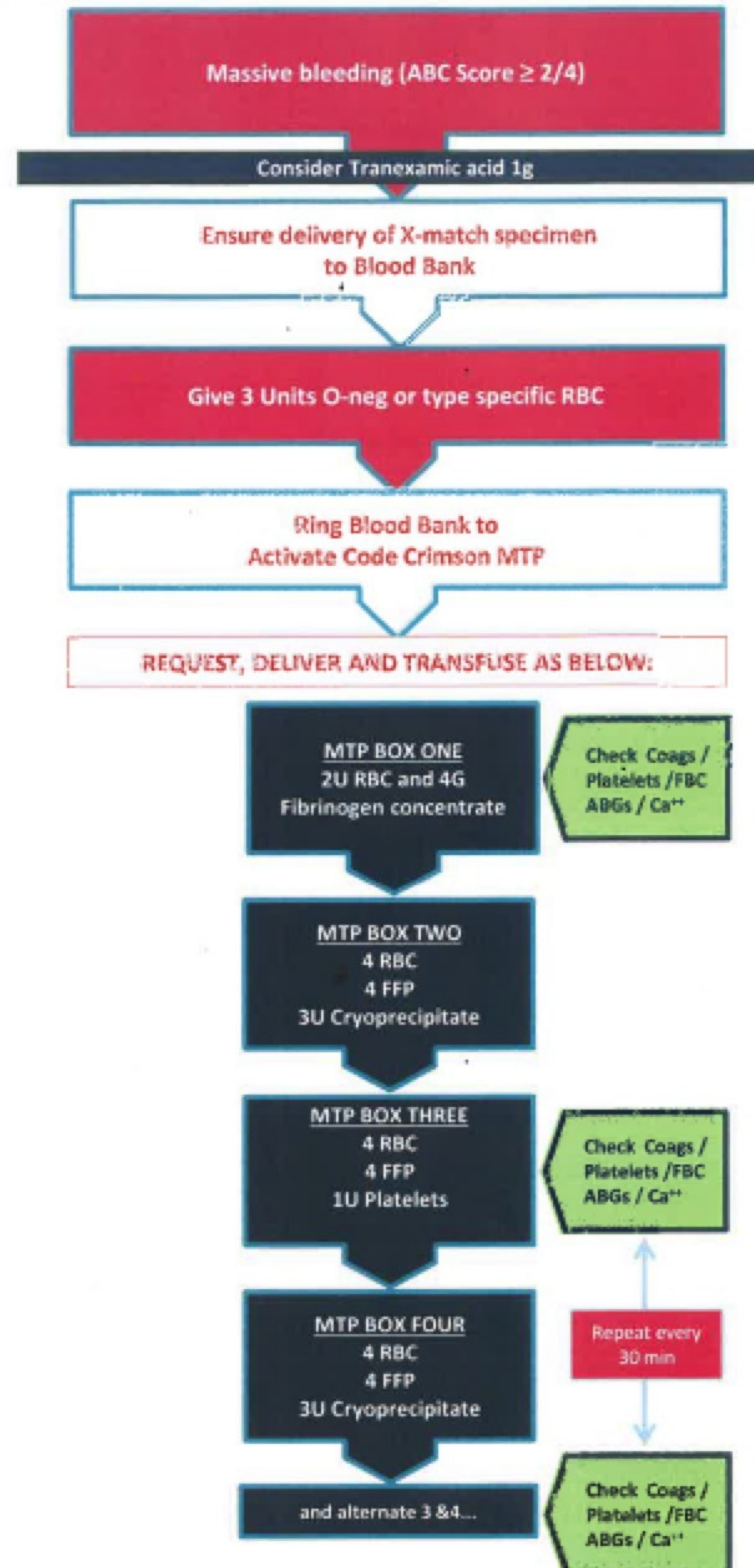
- Team leader should be a trauma team member
- Notify Coag Lab and send Coag requests on the Labplus Urgent form (orange border)
- Activate protocol by ringing Blood Bank (ext 24015) and say "I am activating the "Code Crimson MTP"
- Call for each box as required
- Make a decision to cease MTP and contact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

Blood Bank Responsibilities

- Ensure X-match sample processed ASAP after O-neg release
- Notify NZBS Medical Officer after issuing MTP Box Four
- Thaw 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

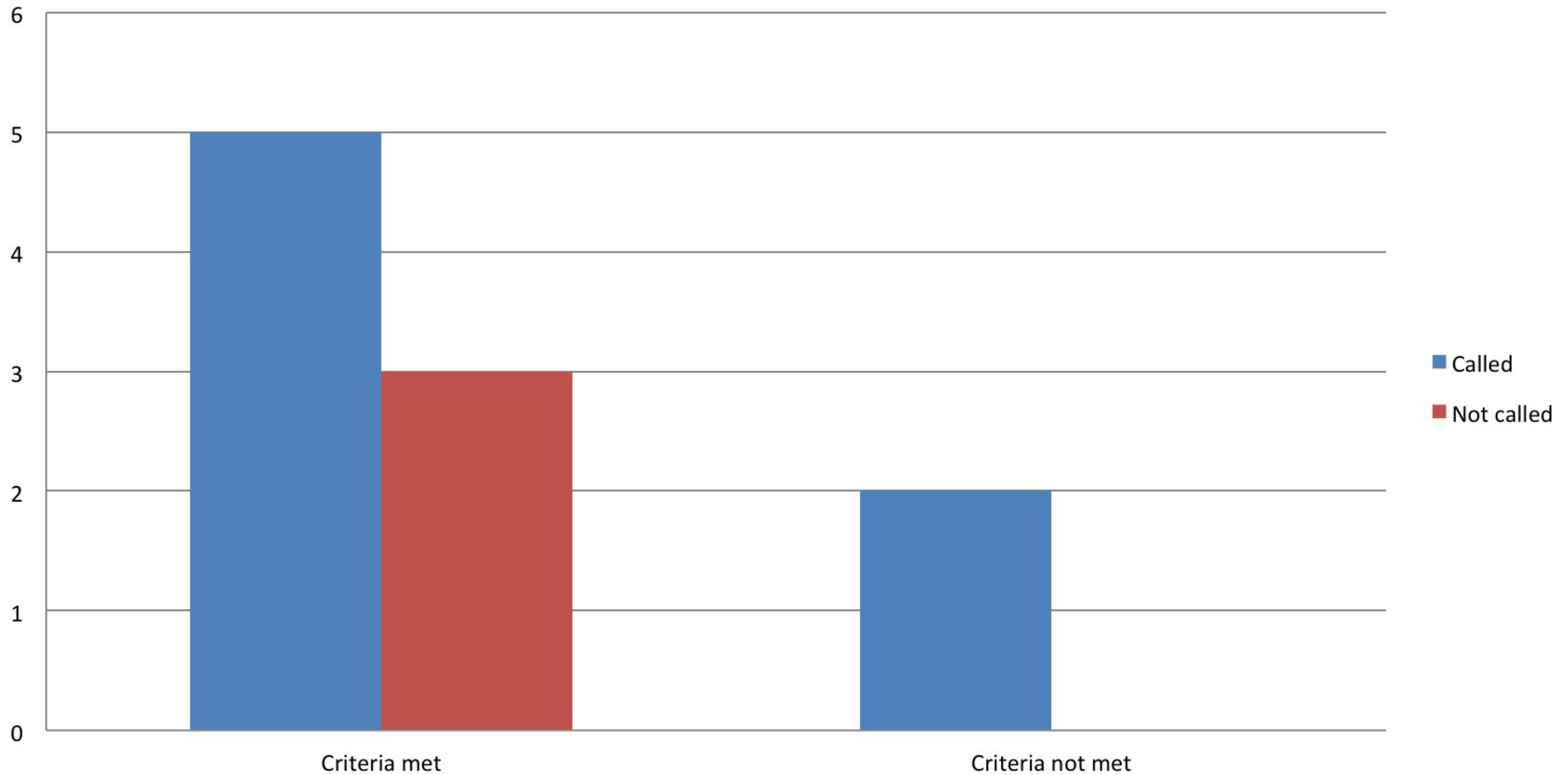


What has happened since introduction?

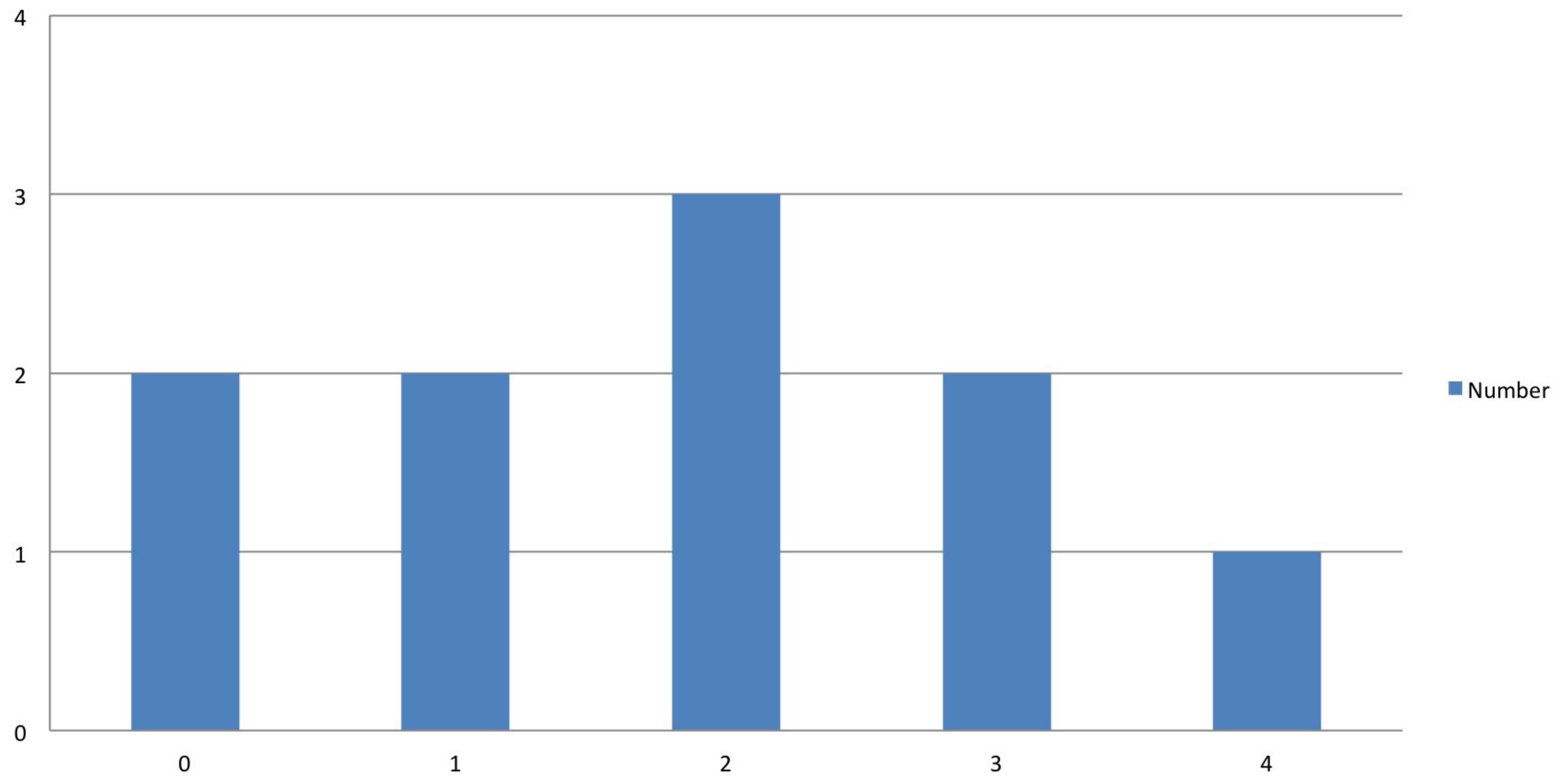


- 26 August 2015 – currently
- 13 patients
 - 10 patients complete data
- 9 Survivors vs 4 deaths

Have we activated CC appropriately?

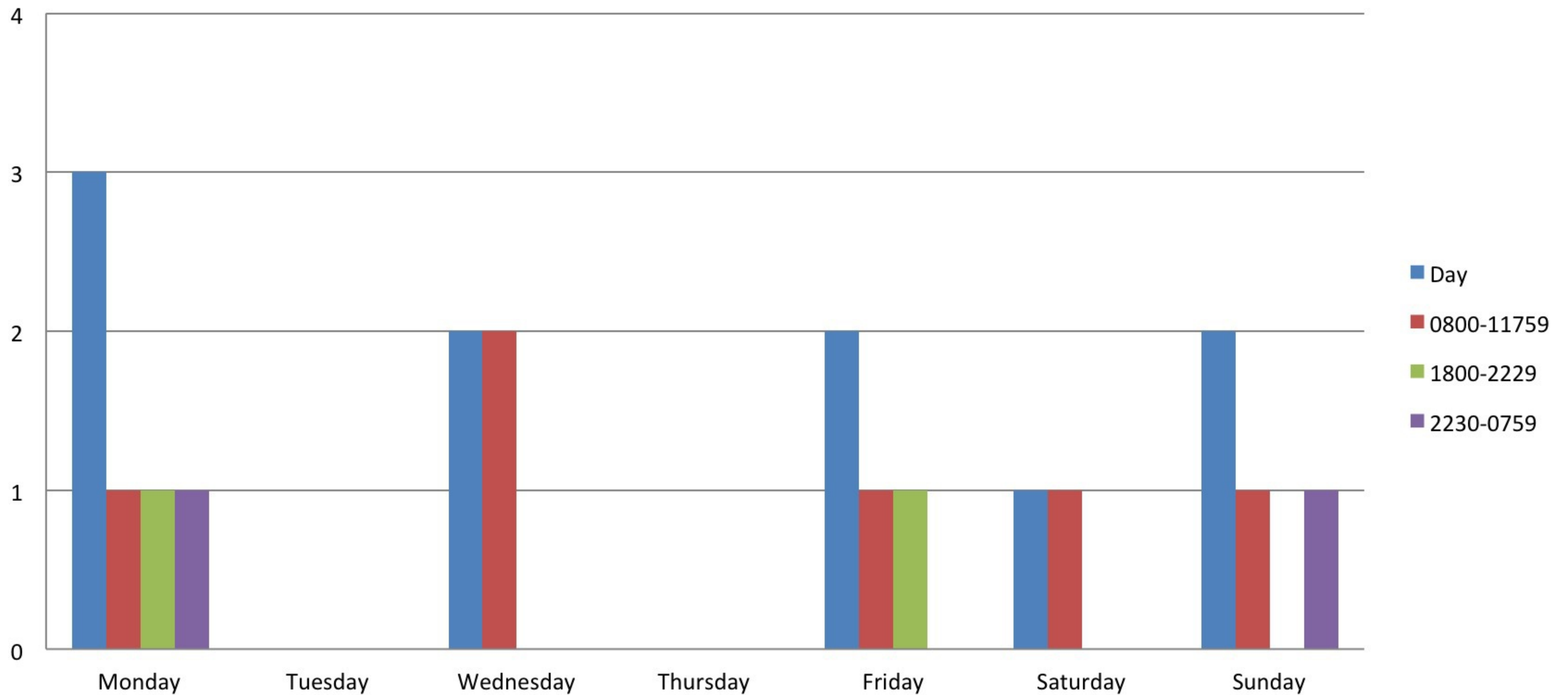


ABC scores

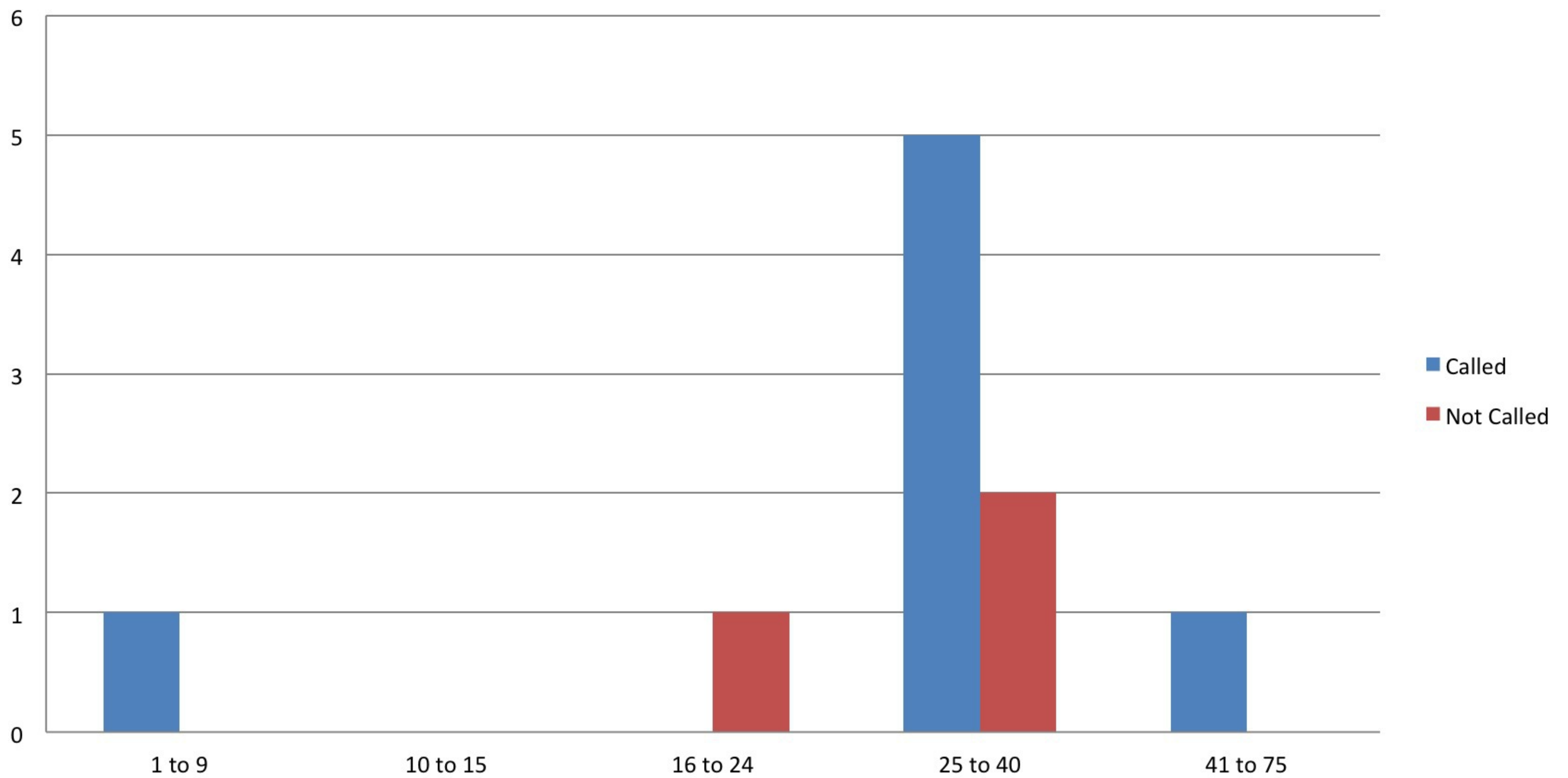


When have these patients arrived in ED

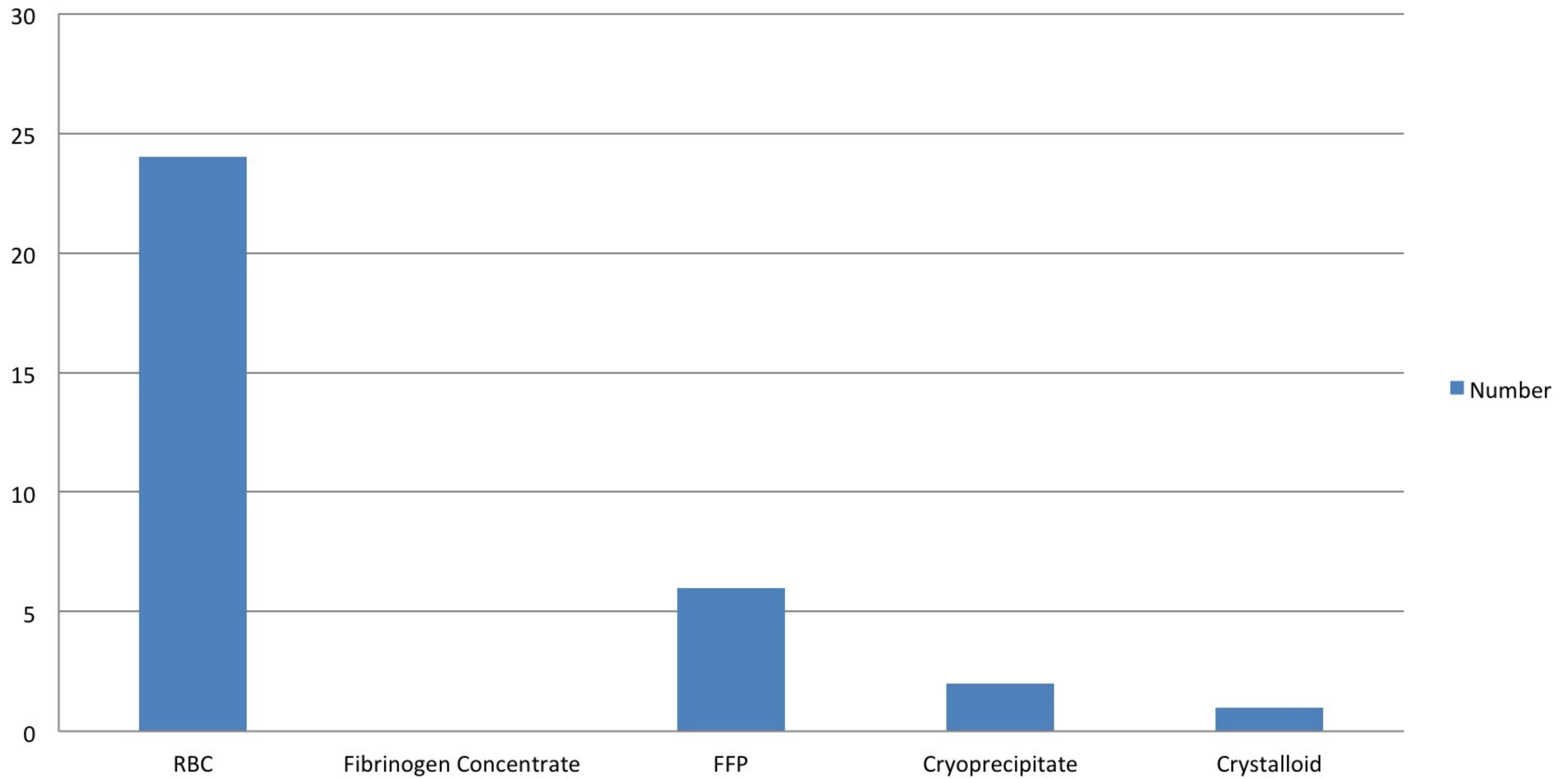
Day and Time



ISS

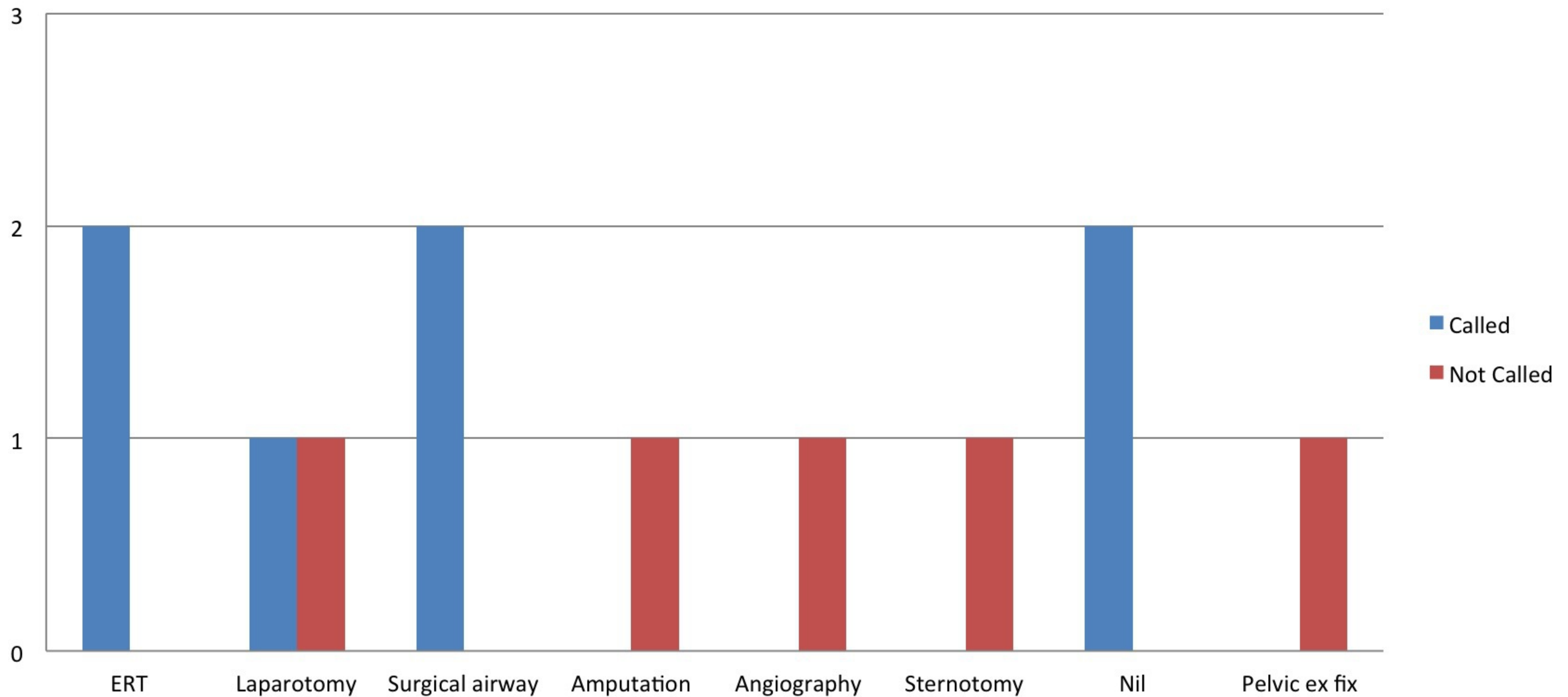


Fluids in ED



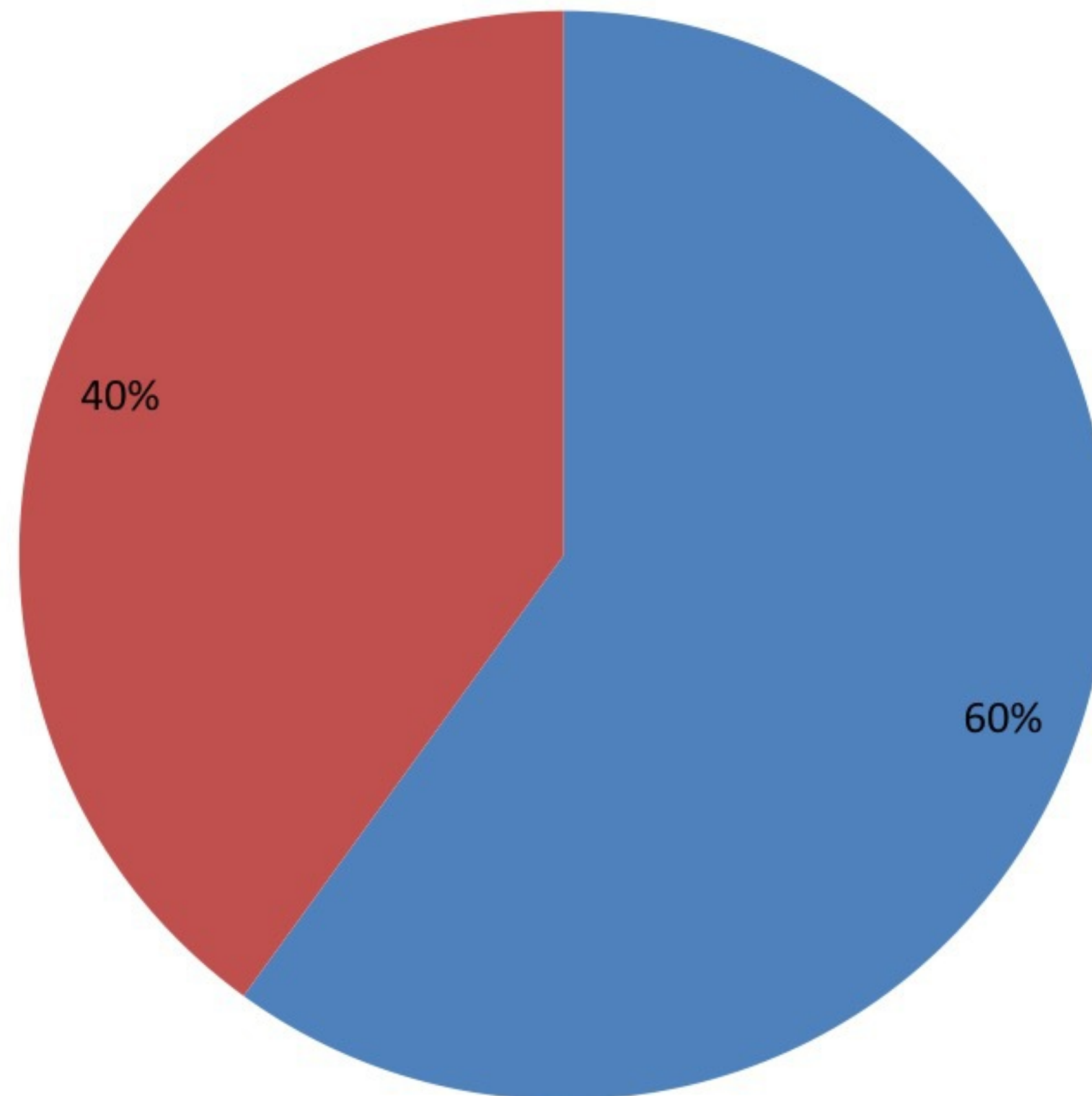
Procedures within 6 hours

Procedure within 6 hours



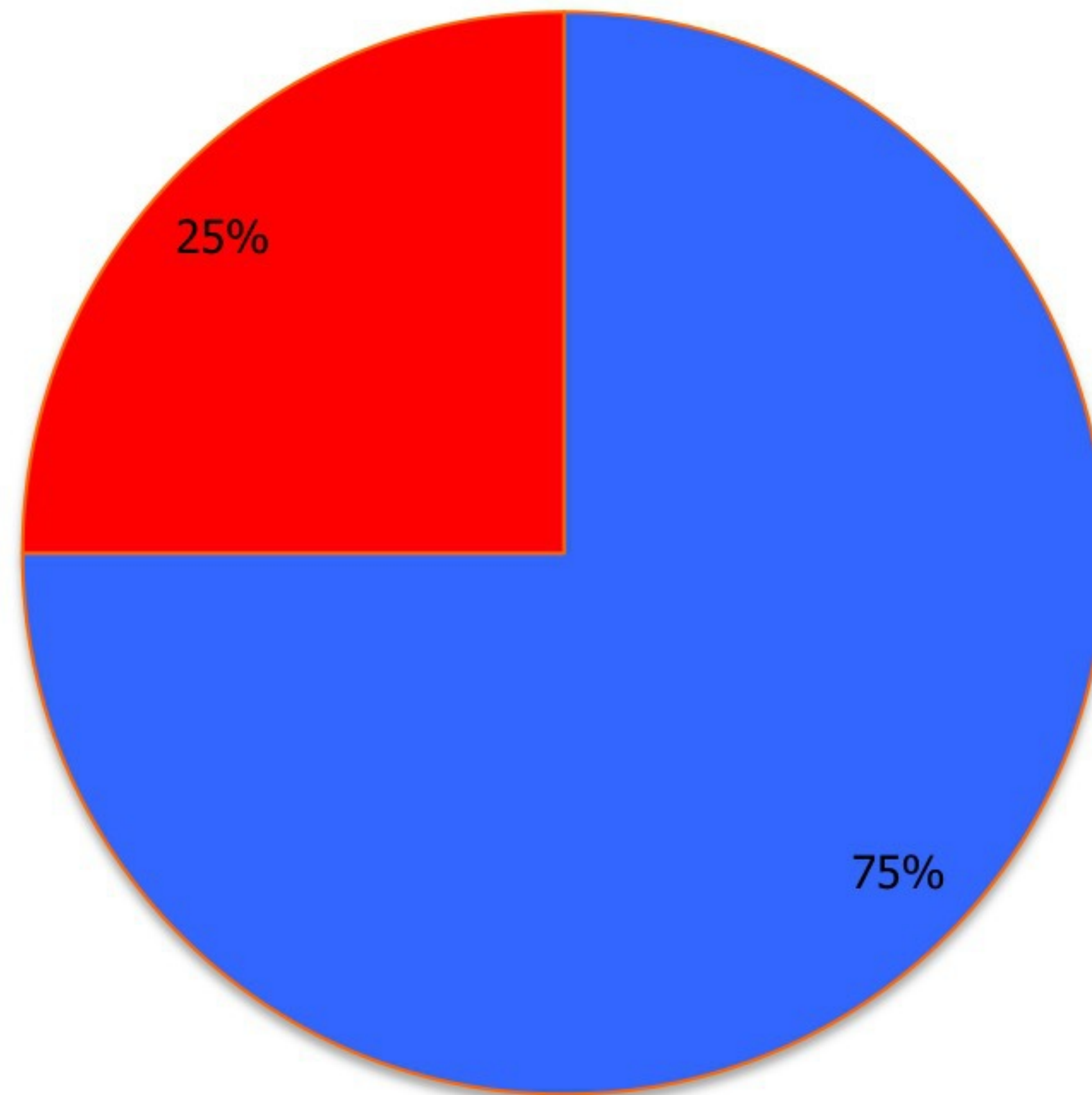
Outcomes

■ Hospital Survivors ■ Deaths



Cause of Death

■ Neurological ■ Exangination



Systems Issues highlighted



- Crowd control
- Nurse task saturation
- No orderly available to go to blood bank
- Activating too early
- No access to priority lifts to level 8
- Still too many questions on phone calls
- Use of unfamiliar products
- Deactivation of TCC

**Has Trauma Code Crimson
made a difference?**



YES

YES



Questions?

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