



Waitaha | Canterbury
HOSPITAL

Interdepartmental Simulation: Code Crimson and Massive Haemorrhage Pathway (MHP)

LEONA ROBERTSON ED NURSE EDUCATOR
LYN PUGH ED CONSULTANT
EMERGENCY DEPARTMENT WAITAHA, CANTERBURY, TE WHATU ORA

Background

- ❑ Christchurch ED -Interdepartmental sim programme since 2017
- ❑ 6-7 interdepartmental in-situ sims/year
- ❑ Specialties involved :
 - Ambulance
 - ED medical, nursing, radiology,
 - Social work
 - Anaesthetics, ICU ,
 - Surgery and Trauma
 - Paediatrics
 - O + G, Maternity, Neonatal
 - Blood Bank
 - Operators + Orderlies



Aim:

To test systems, processes
and environment
and make improvements

Sim process

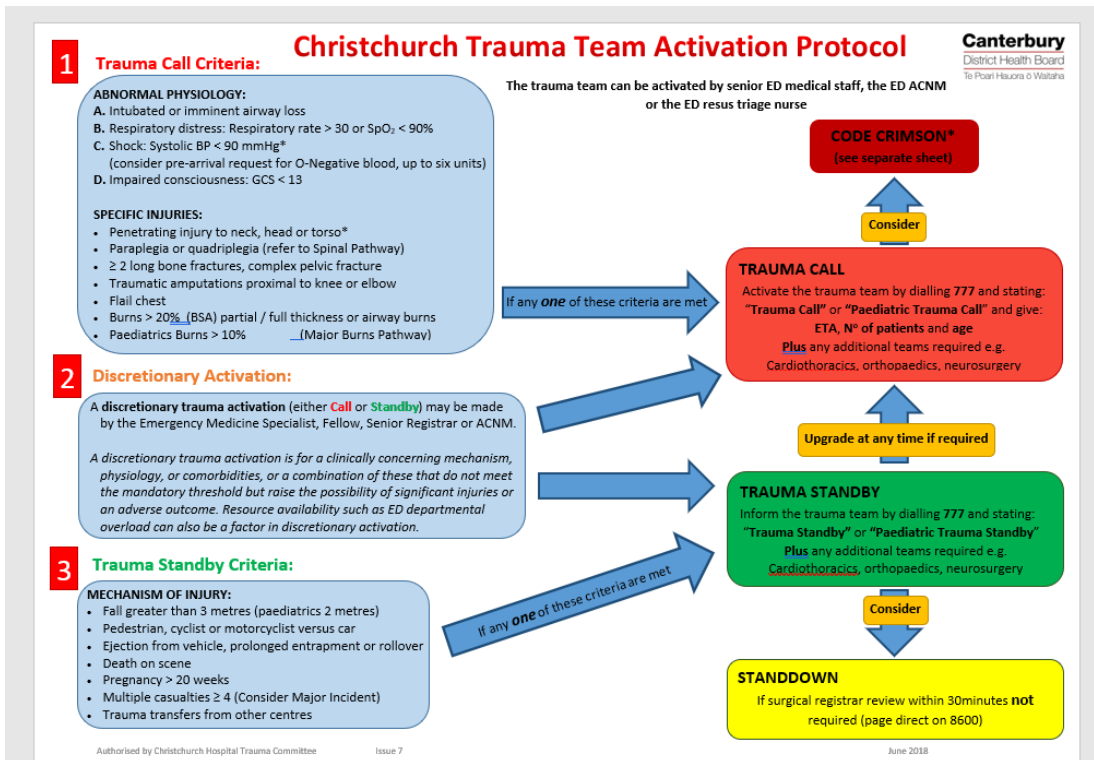
- ☐ Pre -sim meeting with sim team
- ☐ Sim pre-brief emailed to participants
ED staff briefed also on day
- ☐ Scenario high fidelity with Hartwell Simulator
use all our normal monitors
use equipment, consumables, drugs
- ☐ Debrief – facilitated
- ☐ Evaluation + Report



[Hartwell Simulation - YouTube](#)

Background

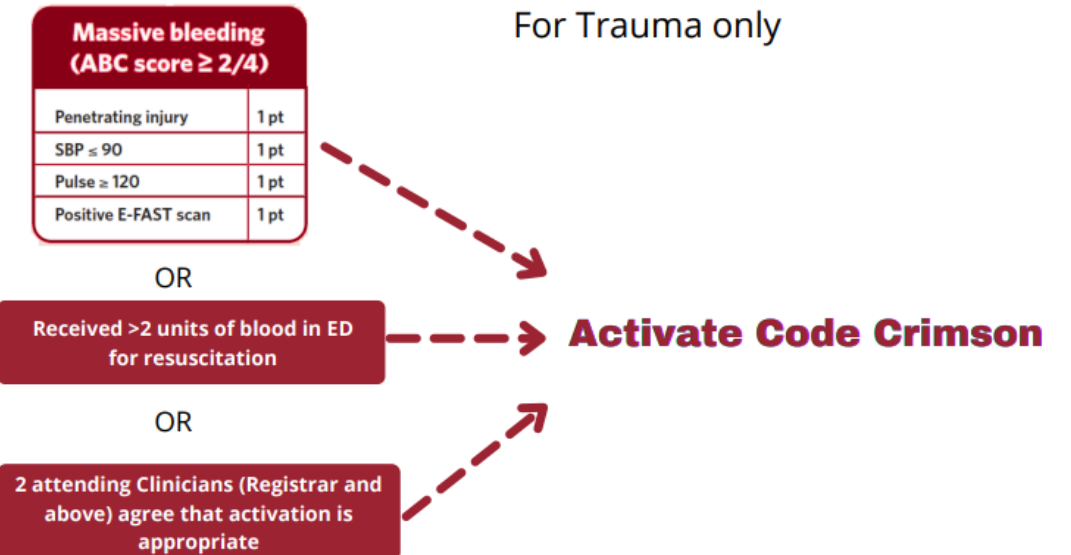
March 2022 Code Crimson launched Waipapa ED Christchurch



Canterbury
District Health Board
Te Poari Hauora o Waitaha

Emergency Department Adult Code Crimson Activation Criteria

For Trauma only



Code Crimson Sim

Learning outcomes

1. Test the system and process for CODE Crimson.
2. Demonstrate a structured approach to managing the trauma patient.
3. Identify life threatening injuries and treat promptly
4. Initiate and follow the process for MTP (now MHP)
5. Demonstrate clear communication and team work.



Scenario: Code Crimson

Bradley Jackson 35 yrs

DOB 03.04.87 NHI BJJ3535

Scenario Description:

MOI: cyclist v car

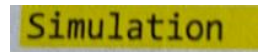
Injuries – Rigid abdomen, # Femur

Vitals BP 70/50 HR 130 RR 30 Sats 95

on O2 GCS 13 3,4,6

TX –O2 No IV access

ETA given as 2 minutes radio call
0845



Scenario Progression Part 1

08.45 Radio call

08.48 Code Crimson call to operator

08.55 Patient arrives

Emergency O neg -ED Blood Fridge x 3 units

09.03 MTP (now MHP) activated

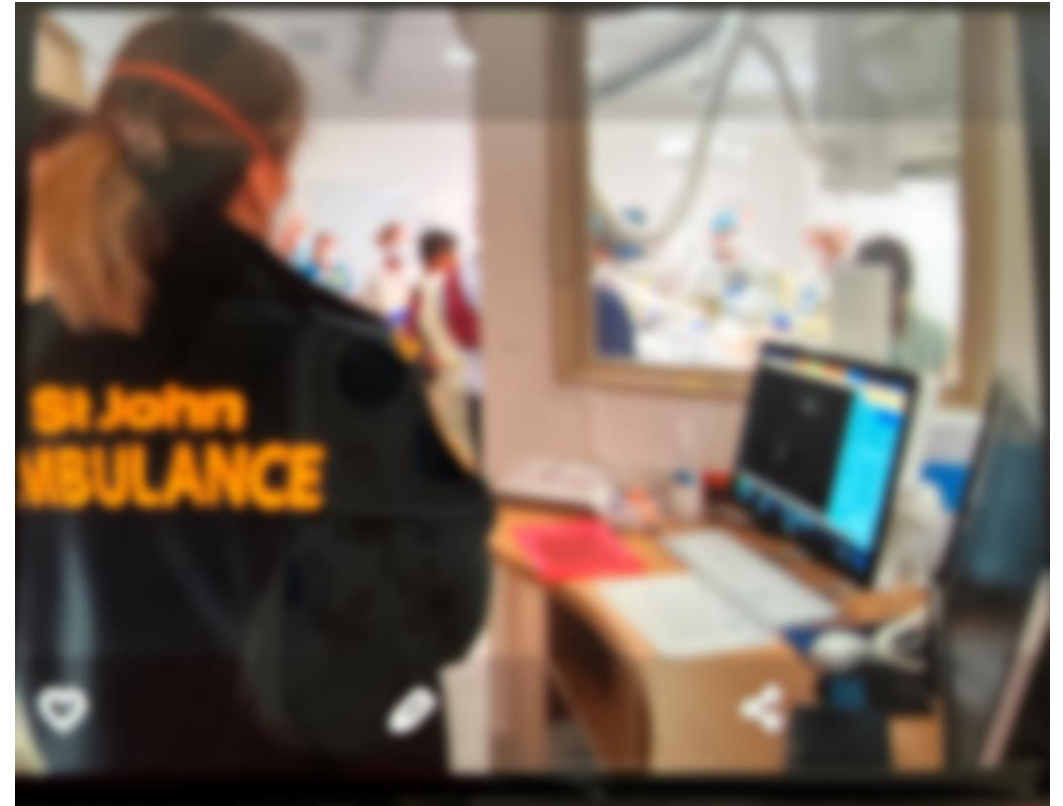
09.17 MTP Box 1 arrives
Decision to go to OT

09.20 Scenario ended at OT lift

09.25 MTP Box 2 left Blood Bank

09.30 MTP Box 2 arrives in OT

Scenario part 2 commenced at ED OT Lift next day – same time





- Different room
- Facilitated - Lead debriefer
 - Co-debriefers
- Structured approach
- Advocacy + inquiry

REACTIONS	Reactions Phase
DESCRIPTION	Description Phase
ANALYSIS	Select strategy based on learning objectives and time available
SUMMARY	Application / Summary



Results – Discovery moments
What did we learn?



Calls and Communication



Results – Discovery moments what did we learn?

Preparation



Canterbury District Health Board Whānau Ora		EMERGENCY DEPARTMENT ADULT CODE CRIMSON CHECKLIST
<ul style="list-style-type: none">o Ensure Code Crimson has been activated (ideally 15 mins before arrival)o If after hours – ED ACMN/Reg to contact ED SMOo Check Covid status		
Staff <ul style="list-style-type: none">o PPE: - Lead aprons, protective gowns, goggles, maskso Role Labelso Team member introductionso Trauma team leader ensure shared mental model and allocates roleso Team members registered on trauma sheet		
Equipment <ul style="list-style-type: none">o EtCO2 monitor checked and workingo Suction checked and workingo PEEP valve and BVM workingo Airway equipment readyo CICO kit readyo Rapid infuser/hot line primed and ready to use.o 2 x Pressure bags with blood giving sets readyo 1 saline with anti-reflux line as drug lineo 2x Large bore IV / IO readyo 2 syringe drivers plus appropriate syringes and tubing.o Pelvic binder on trauma bedo Ultrasound machine with probe cover, charged and switched on.o Self-heating warming blanket opened and primed.o 2x Chest drain kit opened if anticipated to be requiredo ED Thoracotomy kit opened if anticipated to be required		
Drugs <ul style="list-style-type: none">o Tranexamic acid 2g IVo RSI medications readyo Appropriate IV analgesia readyo IV Antiemetics	Fluids <ul style="list-style-type: none">o Consider early use of ED Emergency Bloodo Minimise Crystalloid administration	



Results – Discovery moments What did we learn?



Equipment



anaesthetic IV lines not in trolley
Similarity in packaging –not easy to identify
Reported as possible hospital wide issue /requires clear labelling

Results – Discovery moments

What did we learn?

Equipment



Level 1 Rapid Infuser



Belmont Rapid Infuser

Level 1 Rapid Infuser vs Belmont

ED use Level 1

No battery for transfer so need to stop and use pressure bags

OT staff not familiar with Level 1 now

OT use Belmont

review and discussion re standardisation of equipment

Results – Discovery moments
What did we learn?

Blood

impacted decision making in regards
to keep Emergency Blood in ED

Emergency
Blood Fridge



Canterbury
Canterbury Health System
Canterbury District Health Board

Emergency Blood Fridge: O Negative Tracking Log
Remove and log all blood

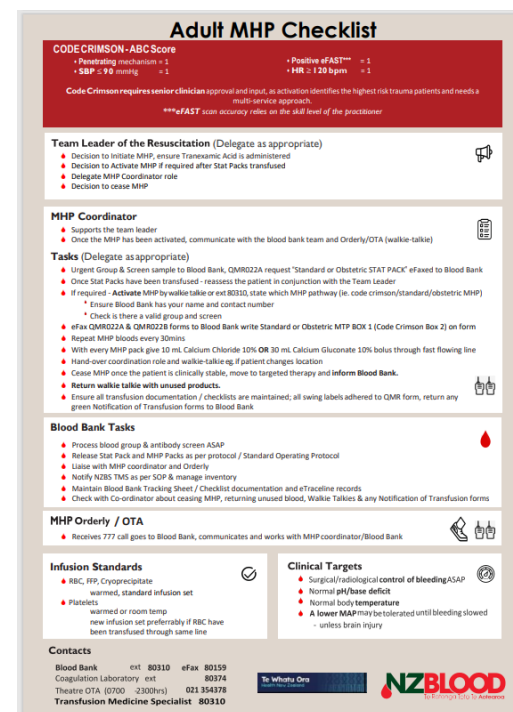
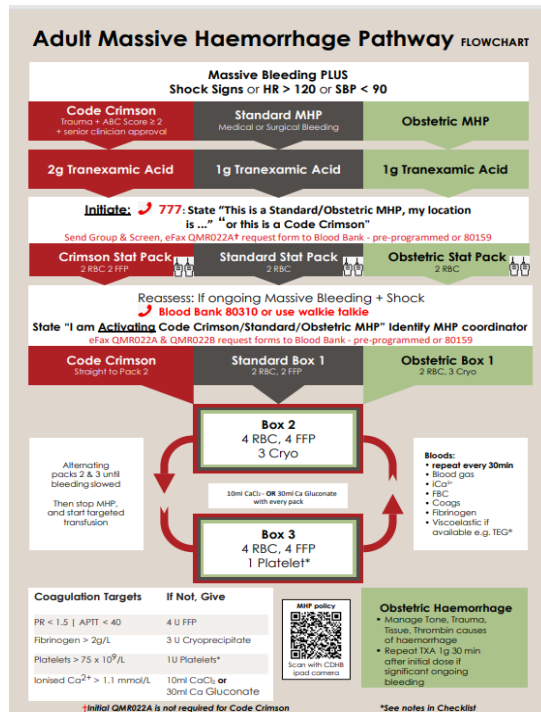
Removals of O Negative Blood from the Emergency Blood Fridge must be recorded on this form to assist with tracking of blood usage

Date	Time	Patient Details - after patient name (if record NHI as a minimum)	Blood Unit Number (log unit #)	Print name of person collecting the blood	Signature
		Other label text or comments (date)			
		Other label text or comments (date)			
		Other label text or comments (date)			
		Other label text or comments (date)			
		Other label text or comments (date)			
		Other label text or comments (date)			
		Other label text or comments (date)			

Version: 1.0
Author: Clinical Governance
Reviewer: Clinical Governance
Date: 10/2022
Page 1 of 2

Results – Discovery moments What did we learn?

MTP → MHP



1st Code Crimson sim –MTP

2nd + 3rd Code Crimson sim:
– able to test the new MHP pathway

Understand language
and fine tune processes

Results – Discovery moments

What did we learn?



OT Resources

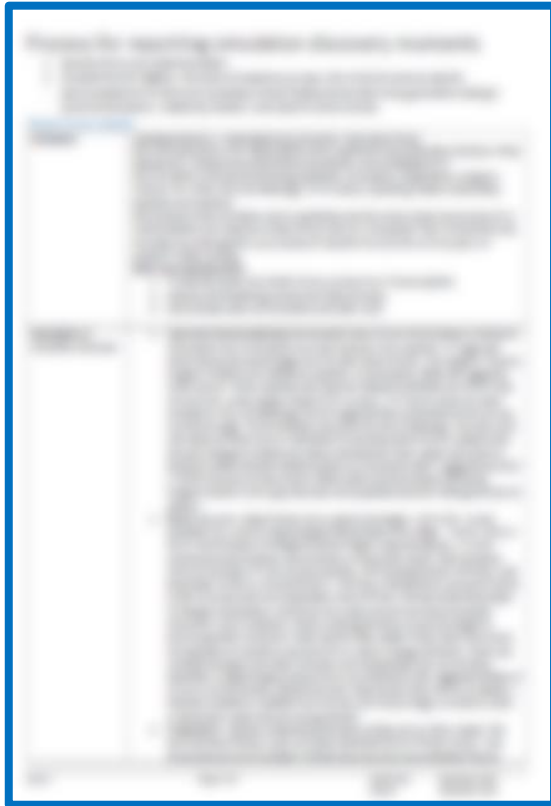
Resources differ out of normal hours
Same staff attend ED then need to set
up in OT



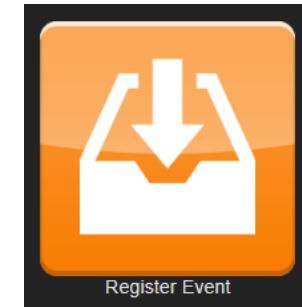
Discussion part 2 of scenario (OT staff)

Follow up and reporting

Discovery report -detailed

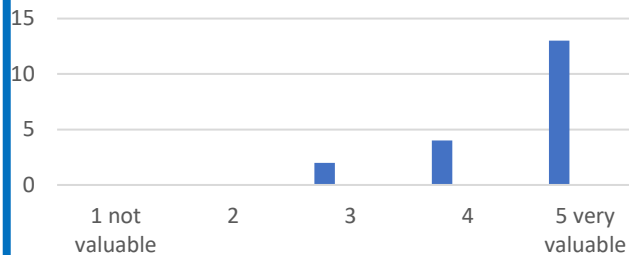


Register sim event-safety first – for potential high risk

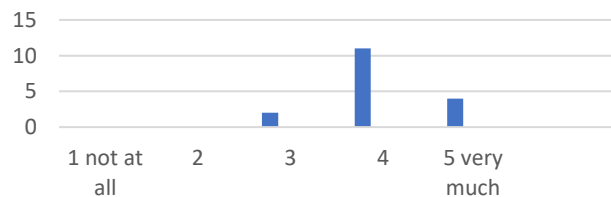


Send to sim leads involved
Each department liaise with own HOD

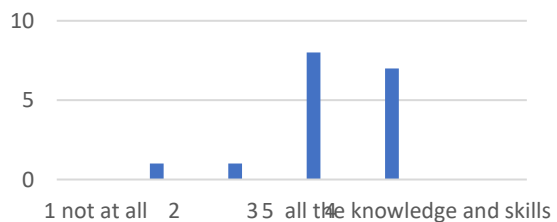
How valuable has this session been for you?



The Resuscitation and Management skills learnt today will improve my practice

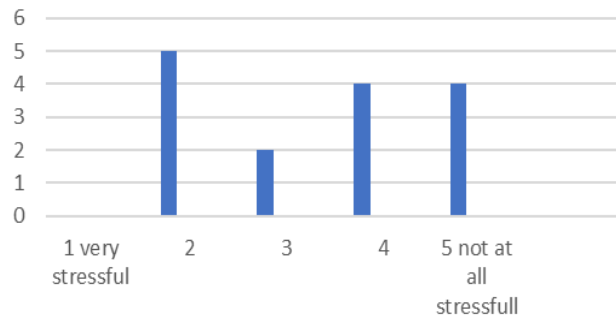


Do you feel you had the knowledge and skills to manage this type of patient?

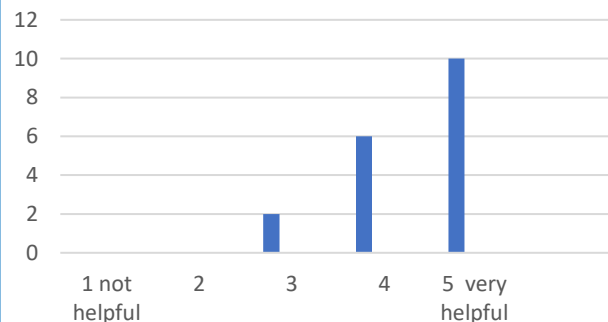


Evaluations

I found participating in this scenario today



How did you find the debrief following the scenario?



READY TO RESPOND
KIA MATAARA

CENNZ CONFERENCE 2023
19-20 October 2023 | Christchurch



ED Interdepartmental Simulation Feedback Evaluation Form

* Required

1. How valuable do you feel this session has been for you? *

1 2 3 4 5

Not valuable at all Extremely valuable

2. The resuscitation and management skills learnt today will improve my clinical practice: *

1 2 3 4 5

Not at all Very much

3. I found participating in this scenario today: *

1 2 3 4 5

Very stressful Not at all stressful

4. Do you feel that you had the knowledge and skills to manage this type of patient? *

1 2 3 4 5

Not at all Yes, I had all the knowledge/skills

5. How did you find the debrief session following the scenario? *

1 2 3 4 5

Not helpful Very helpful

6. What are the 3 most important skills/messages you will take home from this training session? *

Enter your answer

7. How did you find this in-situ simulation compared to the simulation centre? *

Enter your answer

We use QR code - evaluations automatically collated

What are the 3
most important
skills/messages
you will take
home from this
training ?

involved mtp systems noise product collaborative
infuser room lead **communication** closed calm
process preparation test code-crimson quiet senior speak care equipment loop trauma institutional
code-crimson perspective **blood** multiple gowns 777 hours decisions travel
transfer knowledge consultant rapid **clear** activation logistics
decision resources specialties disciplines
approach review

Conclusion/take home messages



Interdepartmental simulations enable us to test our systems, processes and environment.

They enable us to work collaboratively with the specialties who are part of the wider team caring for trauma patients.

This allows us to improve safety and quality of care .



Acknowledgements

Michael Sheedy+ Bruce Carey-Smith,
Biomedical Engineering

Dylan Hill + Manawa Sim Centre

Jude Gimblett + Frank Haggerty,
St John Ambulance

Ronelle Van Dongen, SCN, ED

Polly Grainger, Clinical Projects ,ED

Dan Hartwell, Anaesthetics

James McKay, Surgery + Trauma

Rachel Lauchlan, Trauma Coordinator

Susan Mercer, CNS Transfusion Medicine

Paul McFarlin, Radiology

Tylie Cridge, Radiology

Participants- Ambulance, ED, Radiology

Anaesthetics/ICU

Trauma + Surgery

Blood Bank /Orderlies

Operators

ED Medical Director and Nurse Manager
– for support of programme

Ngā mihi nui