

# LIVEX18

## Lessons from LIVEX for Transfusion Services in Responding to Mass Casualty Incidents

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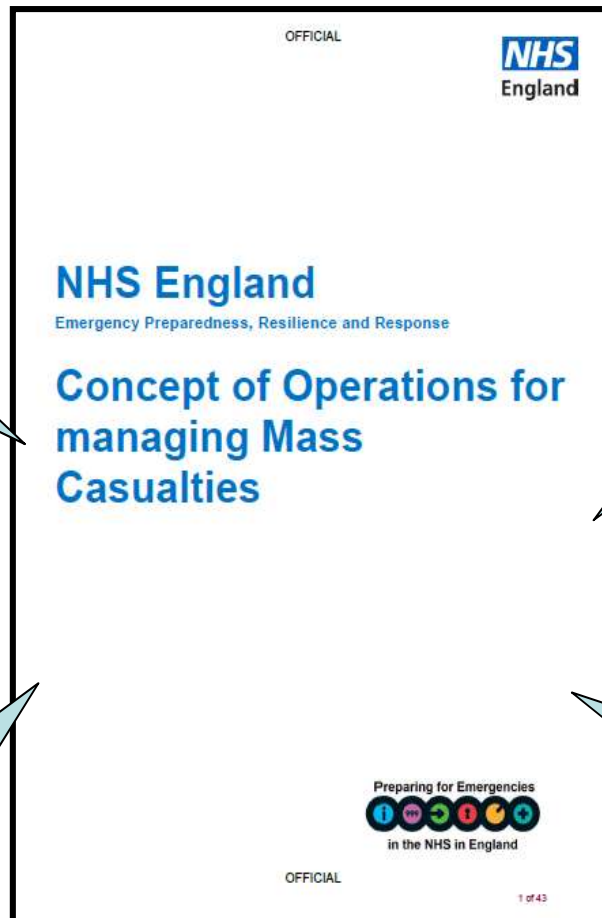
3. How it  
Worked

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# National Guidance

## Concept of Operations for managing Mass Casualties

**Predetermine  
number of patients  
each hospital can  
take during initial  
distribution from  
scene**



**Trauma Units to  
treat patients  
normally  
transferred to a  
Major Trauma  
Centre**

**Double ICU capacity  
for 96 hours**

**Run a trauma MDT**

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# Aims & Objectives of LIVEX

York Teaching Hospital NHS  
NHS Foundation Trust

## Incident Response Plan

IF A MAJOR INCIDENT HAS BEEN DECLARED AND YOU HAVE NOT READ THIS DOCUMENT BEFOREHAND DO NOT ATTEMPT TO DO SO NOW.

**FIND YOUR ACTION CARD AND DO WHAT IT SAYS**

Card: 1.0

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### MAJOR INCIDENT ACTION CARD

Operational – York & Scarborough Hospitals

**GOLD COMMANDER – STRATEGIC**

This action card should be followed in the event of a critical or major incident being declared by the 2<sup>nd</sup> on-call manager/director or other executive as nominated by the Chief Executive.

No	On declaration of an incident	Notes
1	<p>Assess the nature and extent of the incident. This will include asking questions such as:</p> <ul style="list-style-type: none"><li>What has happened?</li><li>Where is the incident?</li><li>What time did it begin?</li><li>Who has been informed already? Get their contact details</li><li>What are the immediate consequences (including number and type of casualties)?</li><li>What is being done to mitigate / resolve the emergency?</li><li>Outstanding problems or hazards?</li><li>Additional resources required (including mutual aid requests and any access and egress issues to the emergency)?</li></ul>	

Card: 2.0

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### MAJOR INCIDENT ACTION CARD

Scarborough Hospital

**SILVER COMMANDER - TACTICAL**

If an incident having been declared this action card should be followed by the 1<sup>st</sup> on-call manager/director or other executive as nominated by the Chief Executive. If an incident is declared out of hours, the lead will be the Bed Manager until the 1<sup>st</sup> on-call manager/director or other executive as nominated by the Chief Executive.

need to ensure:

- Have their Trust Identification Badge with them
- Staff in all areas are reported to them

Declaration of an incident	Notes
Recording the incident on the Trust Incident Log and ensure it is continuously kept up to date. Ensure that key information and actions that are made are recorded by the loggist in this document.	
METHANE approach (see reverse of card) to gather the pertinent information about the incident that will be used in subsequent briefings.	
Establish an Incident Control Team (silver cell). The team should be led by:	
Senior Medical Representative – Deputy Medical Director or Clinical Director level	
Senior Nursing Lead – Associate Director of Nursing or Matron level	

## Test the Trust Incident Response Plan

Includes all action cards at Gold, Silver and Bronze levels

# 2<sup>nd</sup> Medical Brigade



## 3 x Field Hospitals

Currently: South Sudan  
& Somalia

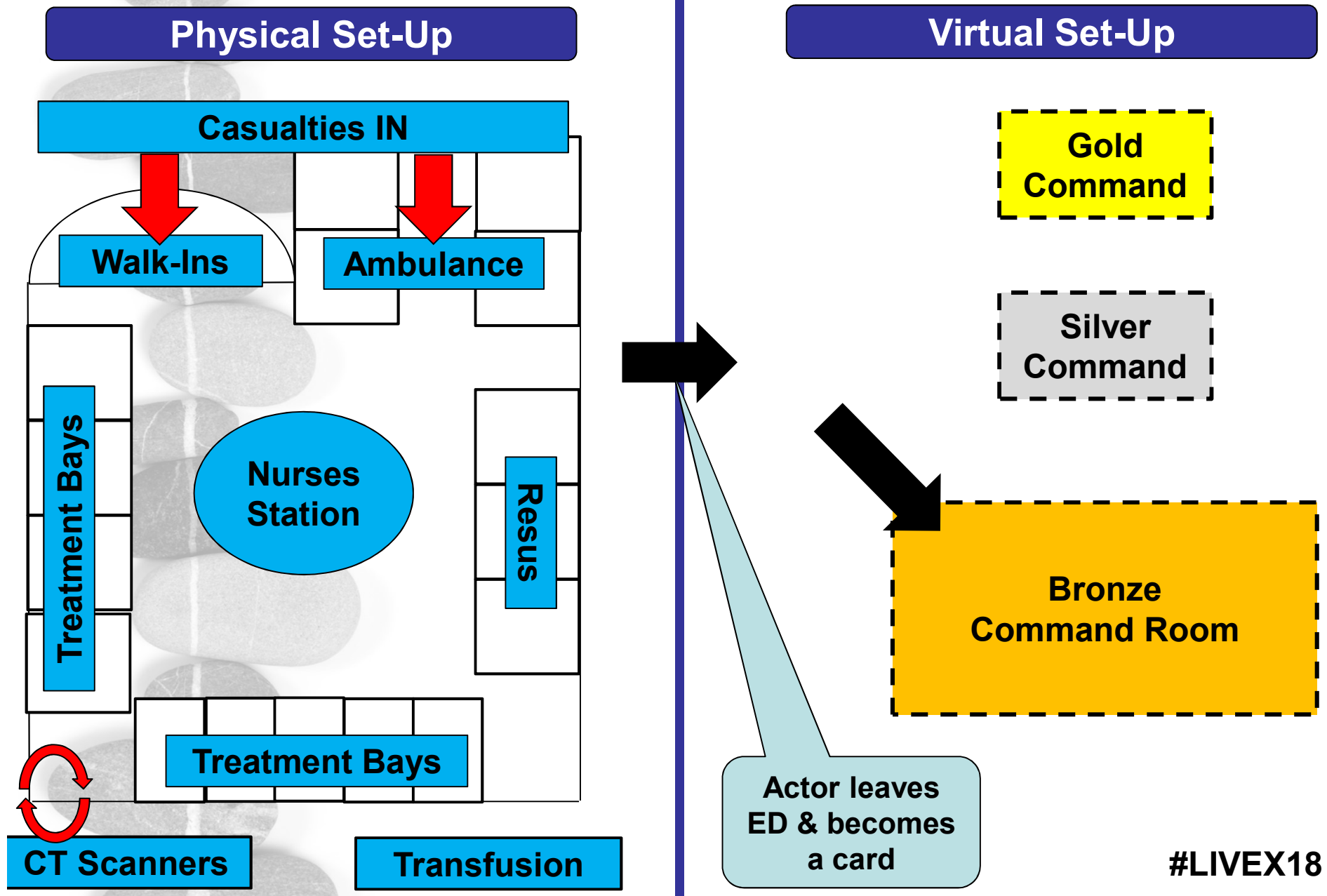
## 10 x Reserve Field Hospitals

## Army Medical Services Training Centre (AMSTC)

*AMSTC is to deliver individual and collective **training** to 2nd Medical Brigade personnel and it's deployable attached force elements in order to **maximise operational hospital capability** in support of enduring operations...*



# How LIVEX worked



# How LIVEX Worked

## Physical Set-Up

### The ED & Transfusion



## Virtual Set-Up

### Command Rooms



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# LIVEX – In Situ Simulation

- Hoped that staff could immerse themselves in the live exercise.
- Realistic as possible
- ED started as usual day with ‘typical’ ED patients including patients admitted with cardiac events, anaphylaxis, RTA’s etc.
- Need to be able to cope with usual activity as well as major incident activity.
- Support systems set up to keep it realistic, including booking in patients to ED, CPD system, radiology department.



# Casualties

- Mix of P1, P2 and P3 casualties.
- Live casualties and high fidelity manikins, including paediatric manikins and those which could undergo thoracotomy.
- Most of the P1 and P2 casualties had a subject matter expert present.

# Transfusion Action Card

- Transfusion Action Card Info – what was the plan we were testing?

## Team leader in Transfusion

### • On declaration of major incident:

- Check stock levels- Ring NHSBT to place an order particularly for platelets (if required).
- Issue emergency O neg/O pos and label ready for transfer down to issue fridge.
- Start to defrost AB FFP and AB Octaplas; when ready label and transfer to issue fridge with red cells.

### • During major incident:

- See grab sheet 4
- Sample processing- once ABO group known see if massive blood loss protocol requires activation for each Majax person.
- Liaise with THESCOM (theatre surgical commander)
- Liaise with ESCOM (emergency department surgical commander).

### • At end of Incident:

- Ensure log is completed
- Stand down team
- Match up all samples and results, enter transfused units onto system and reconcile stock
- Complete after action review for debrief

Directorate of Laboratory Medicine  
Department of Haematology  
Filename: SHA-SOP-MAJAX  
Version: 03  
Date of Issue: May 2018  
Title: Major Incident Response Procedure.

York Teaching Hospital NHS Foundation Trust

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## Major Incident Response Procedure. Scarborough Hospital

Document Author	Jacky Davy
Document Owner	Gemma Maxwell
Approved By	Jenny Fullthorpe
Review Interval	2 Years
Location of Hardcopies	Blood Transfusion department SGH Haematology Department SGH Major incident response notice board, ground floor Laboratory Medicine SGH

## Issue Fridge Lead TP/BMS/ATP

### • On declaration of major incident:

- Attend Transfusion Lab to obtain and transport stocks down to issue fridge in theatre reception
- Issue O neg to females 4 months to 50 years of age.
- Issue O Pos to all other patients.
- Record Majax number of patient and component number for stock reconciliation.
- Issue FFP to all patients over the age of 30
- Issue SDFFP (Octaplas) to all patients under the age of 30.
- (? Have supply of Anti D at issue fridge)

### • During major incident:

Ask clinical staff to attach a photocopy of the wristband to a plastic bag and put all used blood bags into the bag

Raises with Lab via theatre fridge phone regarding stock movement, grouping of patients, activation of further blood loss packs.

Ensure subsequent transfusions recorded, blood stocks available for ongoing surgery.

Think about cell salvage if suitable

### • At end of Incident:

Ensure log is completed, reconcile all stocks

Quick debrief of team and stand down when able

Complete after action review for debrief

# Distances

**SCARBOROUGH  
– LEEDS**  
47 miles  
1.75 hours

**SCARBOROUGH  
– SOUTH TEEES**  
47 miles  
1.5 hours

**SCARBOROUGH  
- YORK**  
41 miles  
1 hour

**YORK – LEEDS**  
30 miles  
1 hour

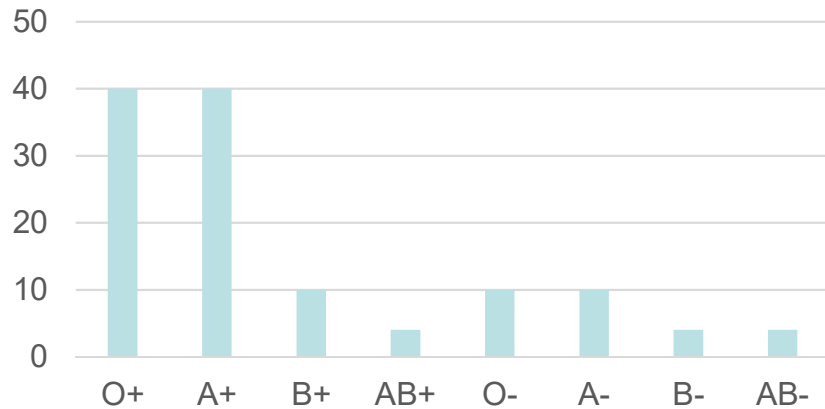
**SCARBOROUGH  
- HULL**  
45 miles  
1.25 hours



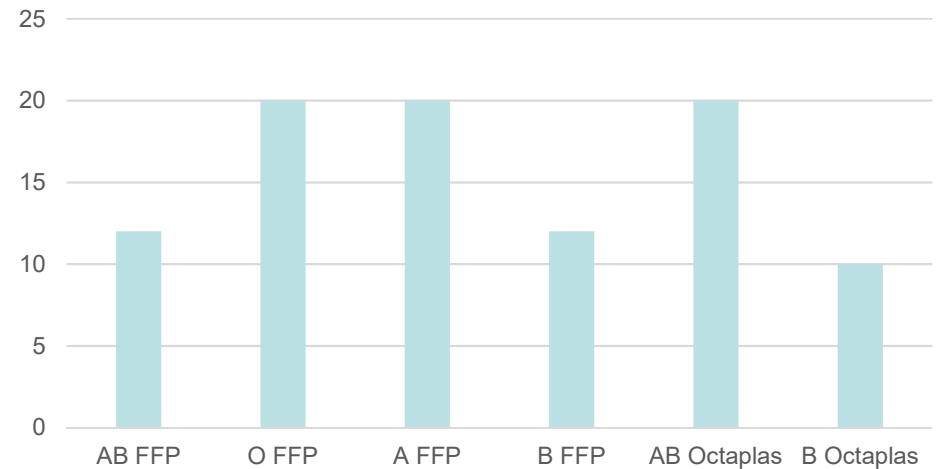
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# Transfusion Statistics from LIVEX

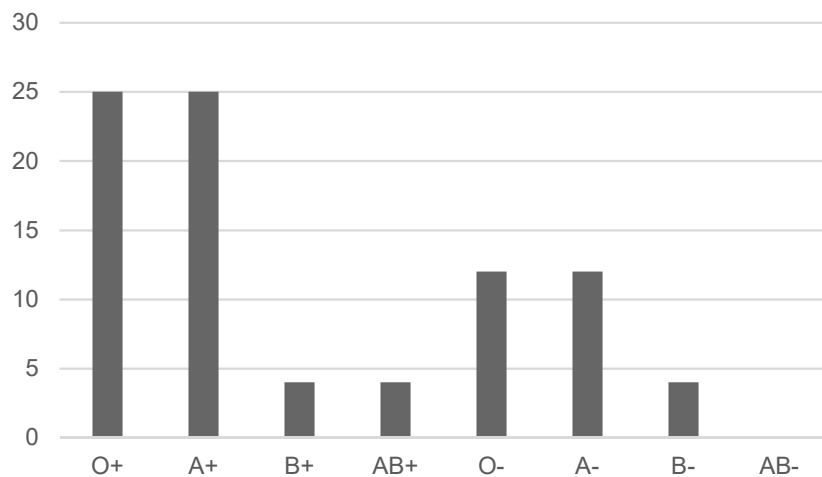
## Optimal Red Cell stock levels YH



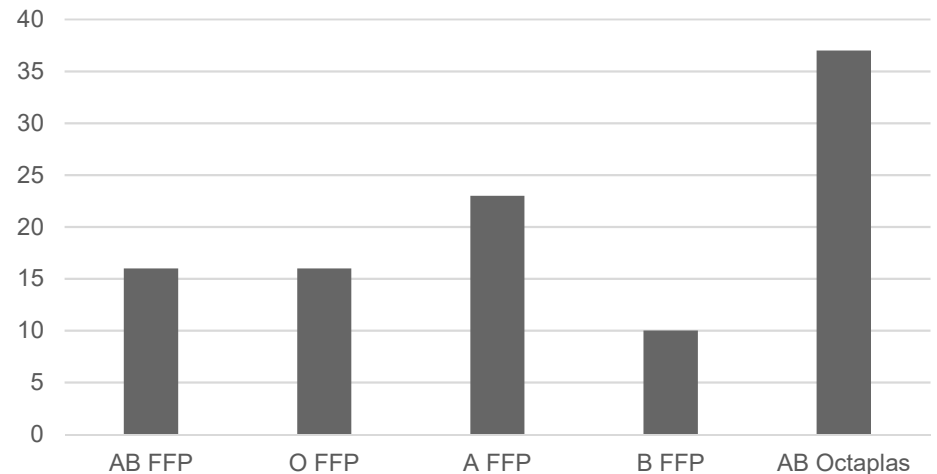
## Optimal Plasma stock levels YH



## Optimal Red Cell stock levels SGH



## Optimal Plasma stock levels SGH



# Transfusion Photos

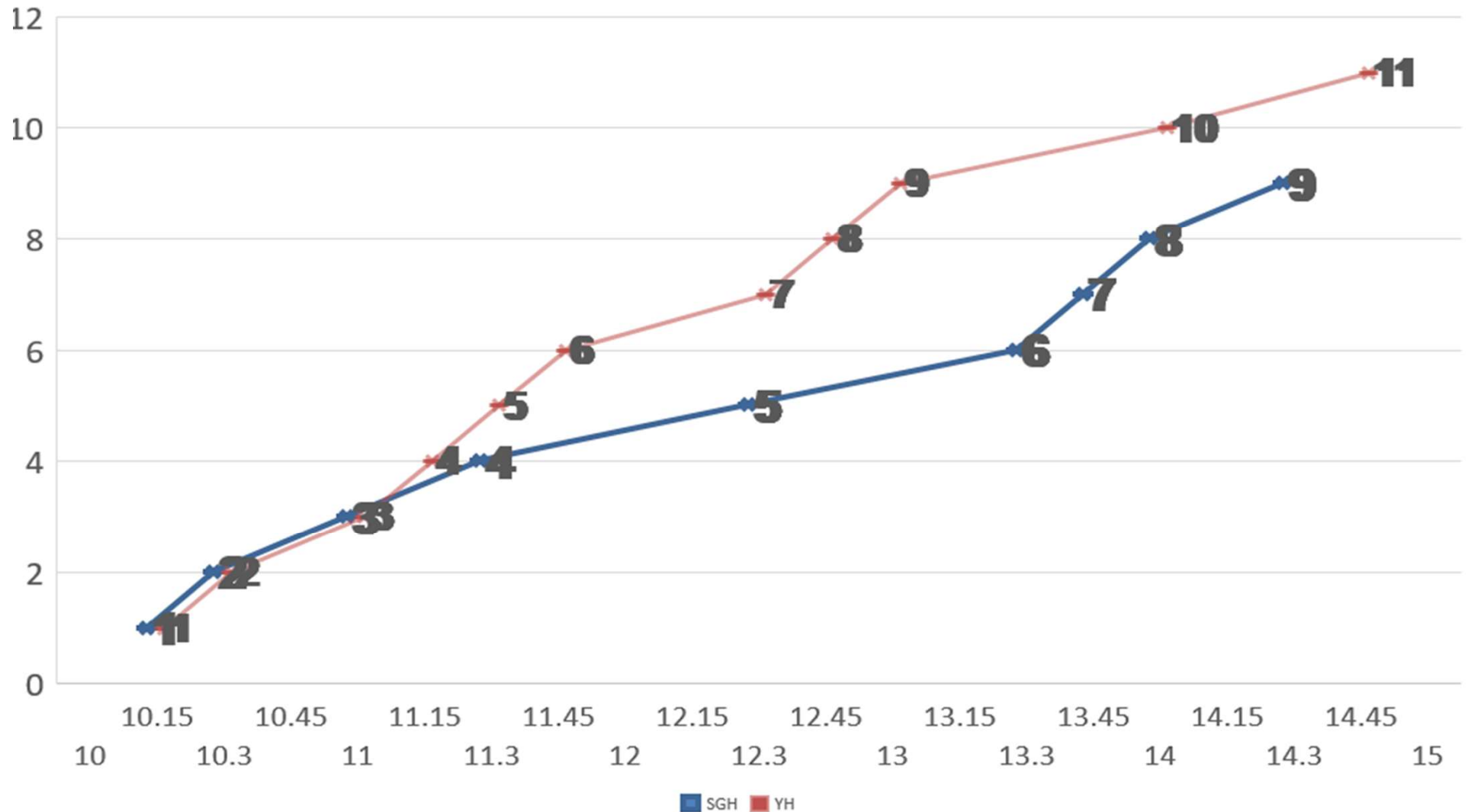


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# Transfusion Statistics from LIVEX

Activation of massive blood loss v Time line For YH and SGH



# Transfusion Statistics from LIVEX

**York** Incident happened at 09.43  
Transfusion Lab informed at 10.00.

## **10.05 1<sup>st</sup> Order to NHSBT**

20 units A+ RBC  
40 units O+ RBC  
10 units O - RBC  
10 units A - RBC  
4 units A+ platelets  
20 units AB FFP .

Arrived hypothetically at 11.15.

## **12.55 2<sup>nd</sup> Order**

20 units AB FFP  
10 units O- RBC  
10 units O +RBC  
10 units A+ RBC

Arrived hypothetically at 14.00

## **16.00 3<sup>rd</sup> Order (as incident called to an end)**

4 units A+ platelets and renewal of  
cryo levels

# Transfusion Statistics from LIVEX

**SGH** Incident happened at 09.50:  
Transfusion Lab informed at 10.12.

## **10.19 1<sup>st</sup> Order to NHSBT**

25 units A+ RBC  
25 units O+ RBC  
10 units O - RBC  
10 units A - RBC  
4 units A+ platelets

Arrived hypothetically at 12.01.

10.30 Call to request internal transport to bring stock from Bridlington hospital  
6 O - RBC  
6 A+ RBC.

## **12.30 2<sup>nd</sup> Order to NHSBT**

30 units AB FFP.  
Arrived hypothetically at 14.00

## **13.40 3<sup>rd</sup> Order to NHSBT**

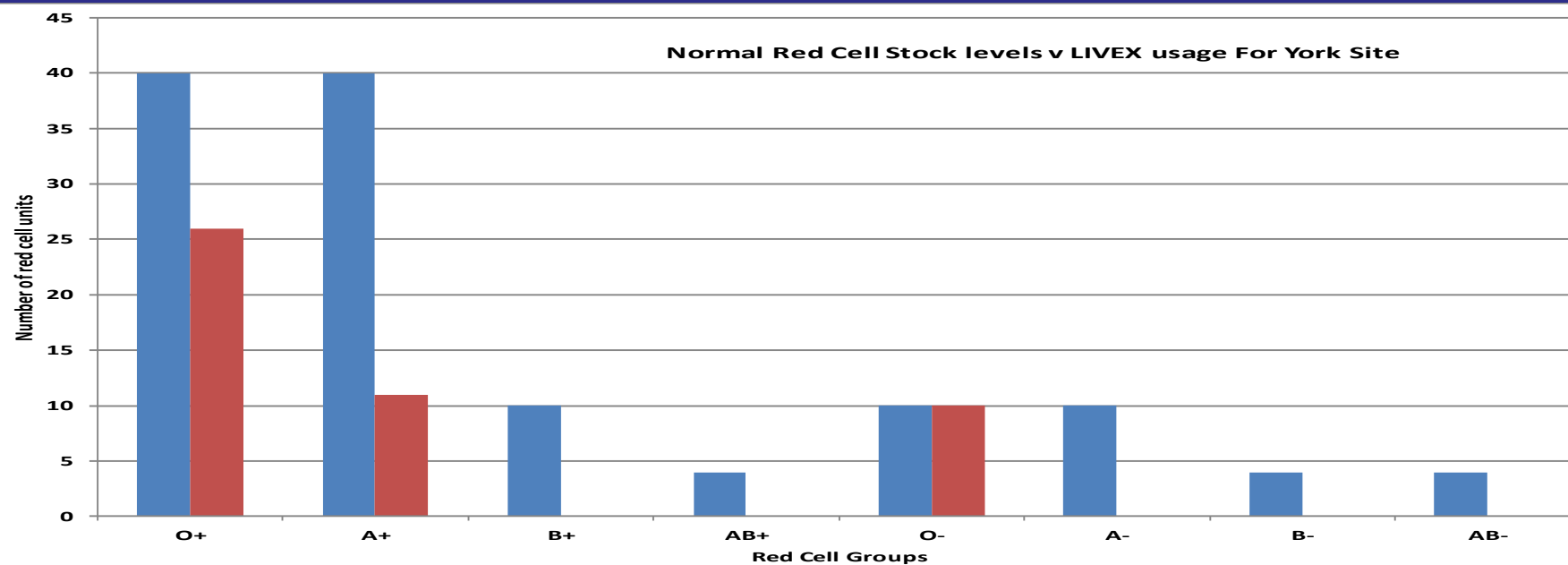
30 units O+  
Target delivery time 15.40

## **14.10 4<sup>th</sup> Order**

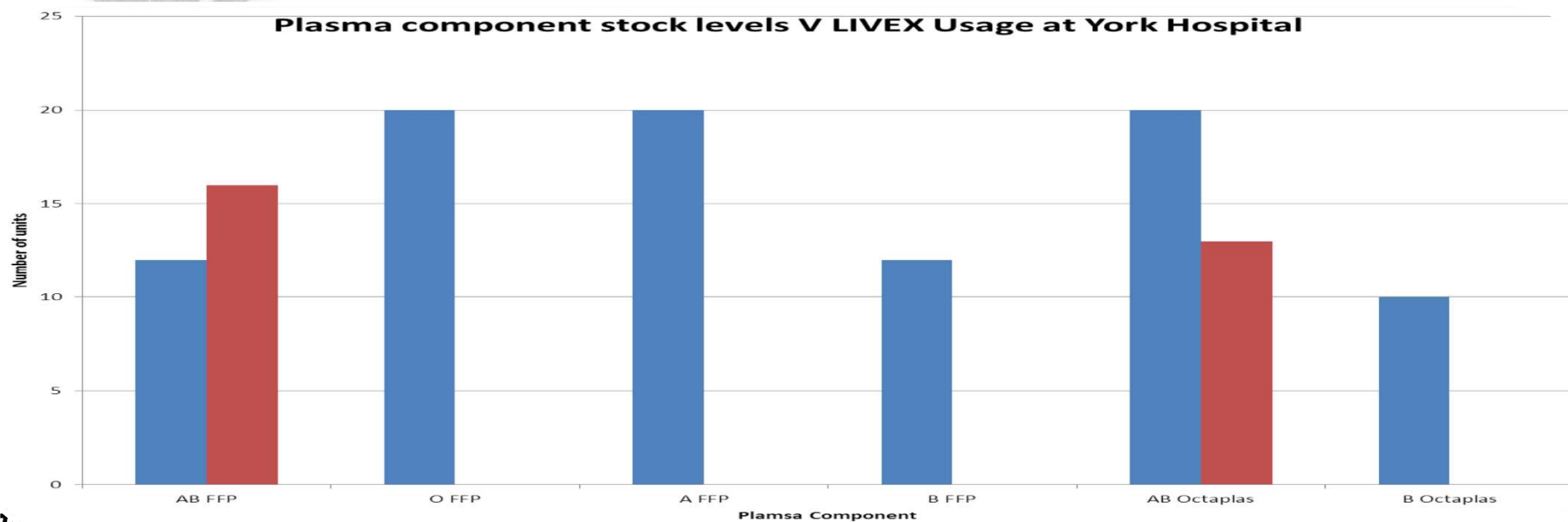
4 units A+ platelets and renewing cryo stock

# Transfusion Statistics from LIVEX

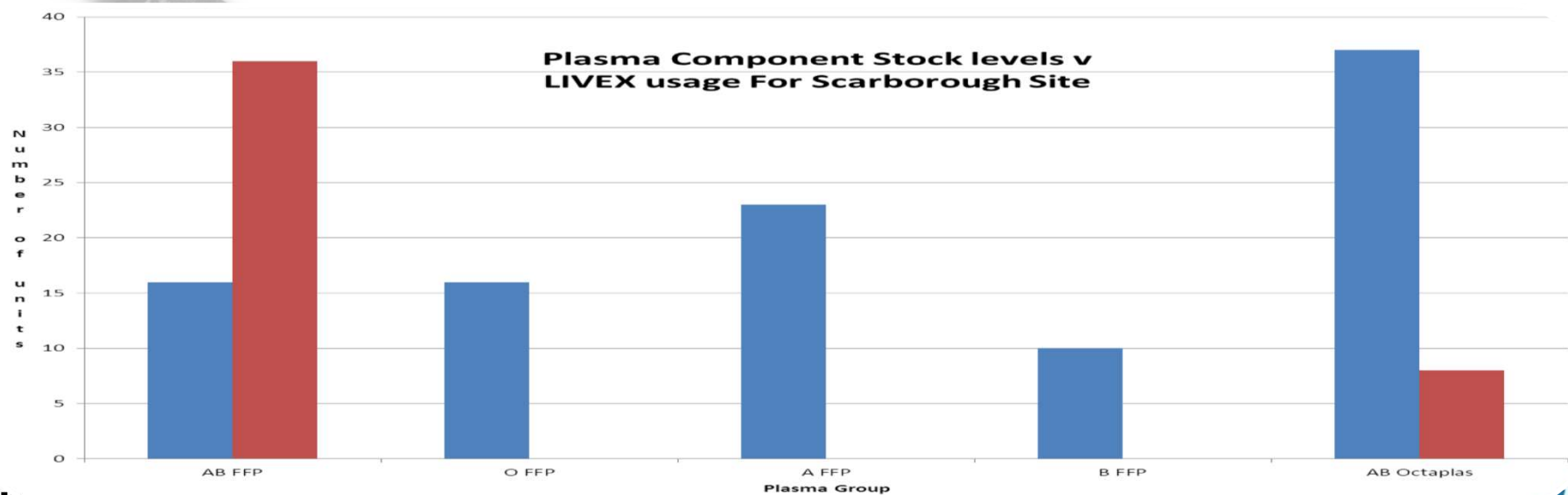
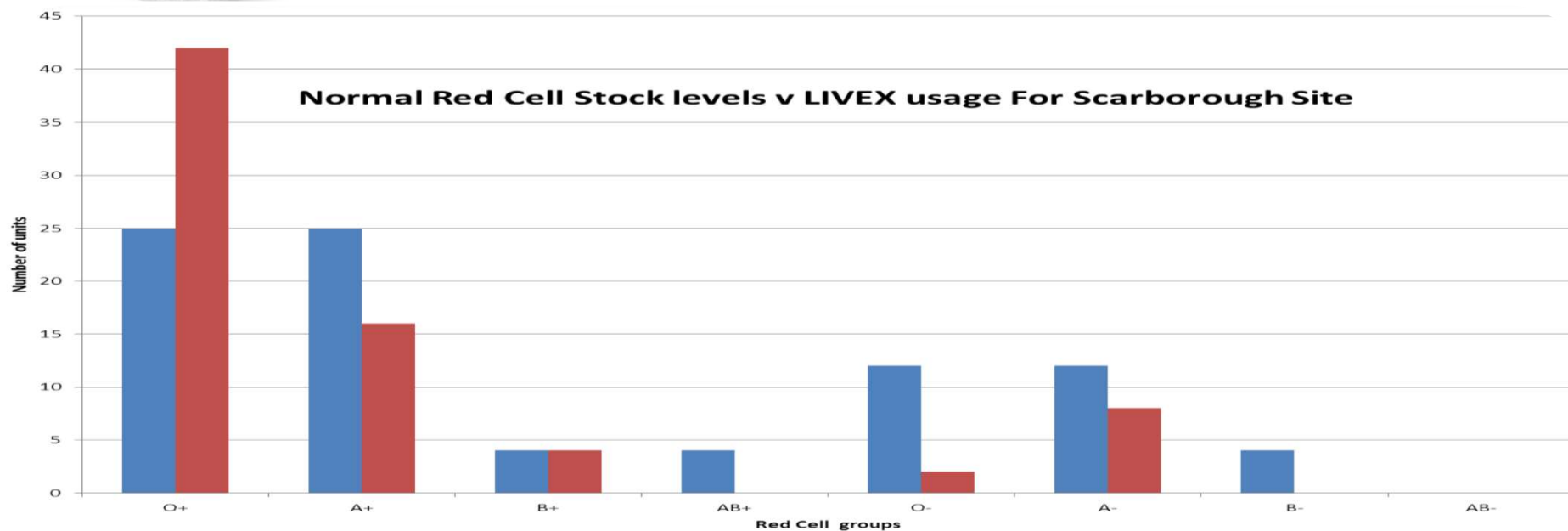
Normal Red Cell Stock levels v LIVEX usage For York Site



Plasma component stock levels V LIVEX Usage at York Hospital



# Transfusion Statistics from LIVEX





# Transfusion Lessons Learnt

- What were the top lessons for transfusion from LIVEX?

**No consistent patient ID numbering system across the organisation for use in Major Incident**

**Needed to update SOP to reflect use of O positive in females over 50 (and males)**

**Decided to adjust FFP SOP to match national guidelines as previously had a local agreement in place**

**To defrost AB Octaplas as 1<sup>st</sup> line option and ensure there is a specific job sheet available for junior members of staff**

# Feedback - Participants

## Collated York Hospital LIVEX Participant Feedback

Before LIVEX, how confident were you about your role in a major incident?

Not/Limited Confidence

66

Confident/Very/Extremely 34

Not/Under Prepared

3

Prepared /Very/Extremely 97

Having completed LIVEX, how well prepared do you feel?

## Collated Scarborough Hospital LIVEX Participant Feedback

Before LIVEX, how confident were you about your role in a major incident?

Not/Limited Confidence

56

Confident/Very/Extremely

44

Not/Under Prepared

8

Prepared /Very/Extremely

92

Having completed LIVEX, how well prepared do you feel?