

# From Bastion to Blairgowrie: How the Scottish Trauma Network can Learn from Military Experience



PREVENTION



PRE-HOSPITAL



ACUTE

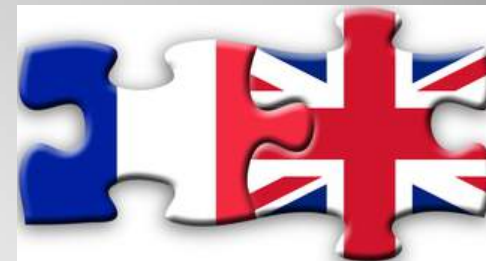


REHABILITATION



MAJOR INCIDENT PLANNING





# Surgeon Commander Simon Leigh-Smith

MBCChB MRCGP FRCS(Ed) MSc DipIMC FCEM

**Emergency Medicine Consultant**  
**Pre-Hospital Emergency Medicine Specialist**  
**Royal Infirmary Edinburgh**

**Defence Medical Liaison Officer (France)**  
**Defence Medical Services**

# High readiness deployable medical capabilities in the Royal Air Force

Sqn Ldr Becky Woolley  
RAF Medical Officer

# Scope



Operational Patient Care Pathway

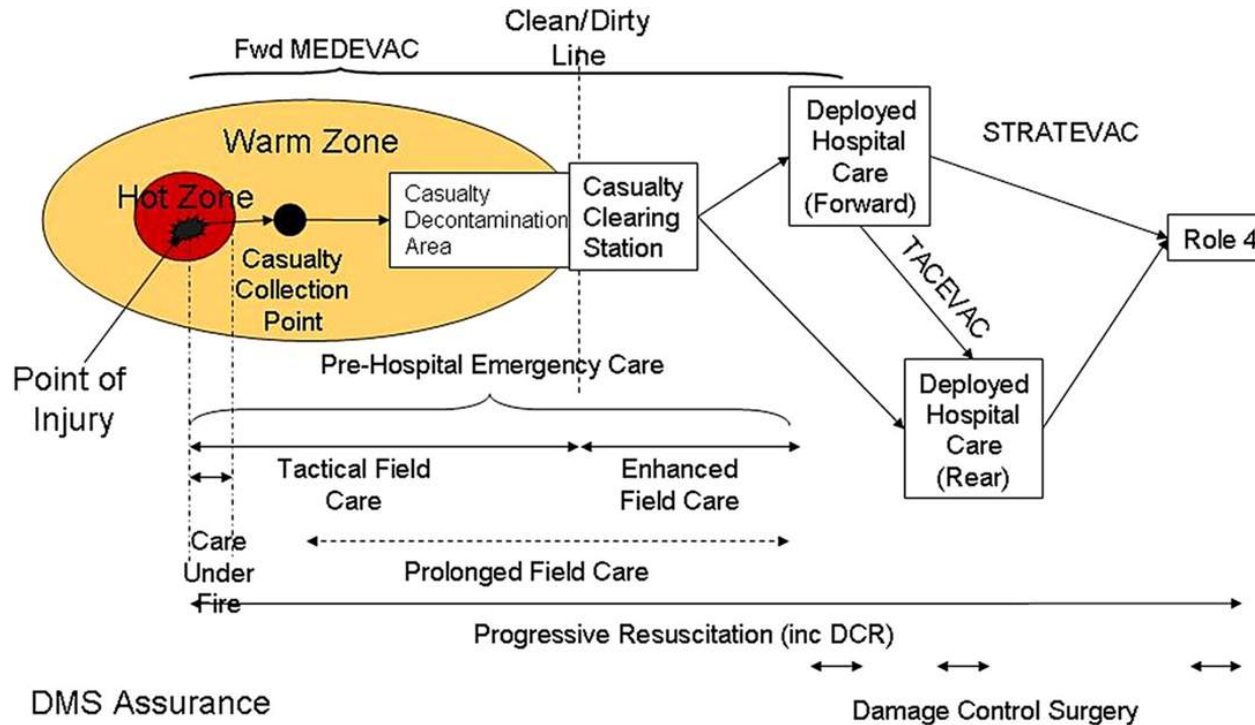
RAF capabilities

- Forward Aeromedical Evacuation
- Role 1(L)
- Aeromedical Evacuation
- Critical Care Air Support Team

Real life experience



# Operational Patient Care Pathway



<https://jramc.bmj.com/content/160/1/64> accessed 20 Mar 19

*“A unified approach for clinical care to all operational patients arising from the Defence PAR, exposed to the ‘all-hazards environment’, deployed on military operations”*

# Forward Aeromedical Evacuation

- *“Fwd AE provides Pre-hospital Emergency Care from the Point of Injury or illness to the initial Medical Treatment Facility as expeditiously as possible: contributing to the promotion, maintenance and restoration of health of the deployed force situated within complex mission space”*

RAFMS Fwd AE CONUSE, May 2015

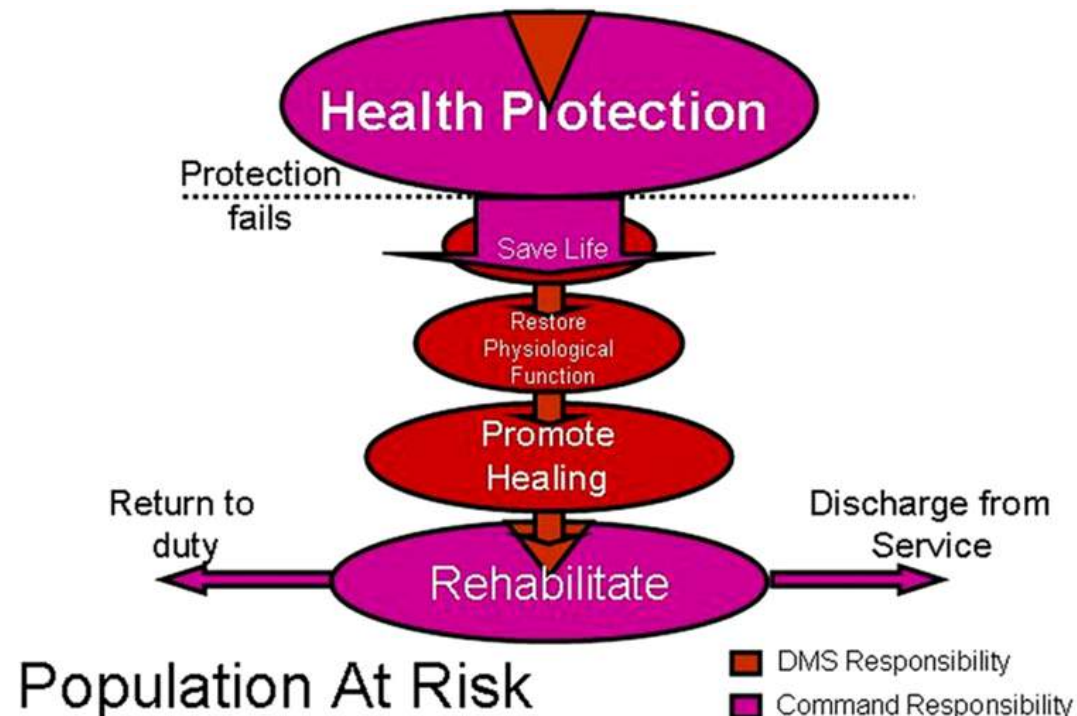
# Role 1 (Lead)

- PHC up to 500 PAR
- Occupational medicine
- Fwd AE/AE
- Environmental Health and Force Health Protection
- Dispensary
- Battle Field Ambulance with driver
- 5 bed resus bay



# Aeromedical Evacuation

- Tactical and strategic
- Essential for safety of patient in air as well as moving through the chain of care



# Critical Care Aeromedical Support Team



- Strategic moves
- Con Anaes/ICM
- ITU nurse
- Flt medic
- MDSS Technician



# RAF capabilities in action

## Humanitarian and Disaster Relief

- Advance party
- Role 1(L) team and facility
- FWD AE
- CCAST in Theatre



# What was delivered?

- Primary Health Care
- Force Health Protection
- Aviation medicine
- Aeromedical capability
- Command and Control
- Critical care in the air
- Medicine to remote regions
- Reassurance to troops



# Summary



- Air-minded capabilities at readiness
- Relevant to deployed environment
- Tried and tested





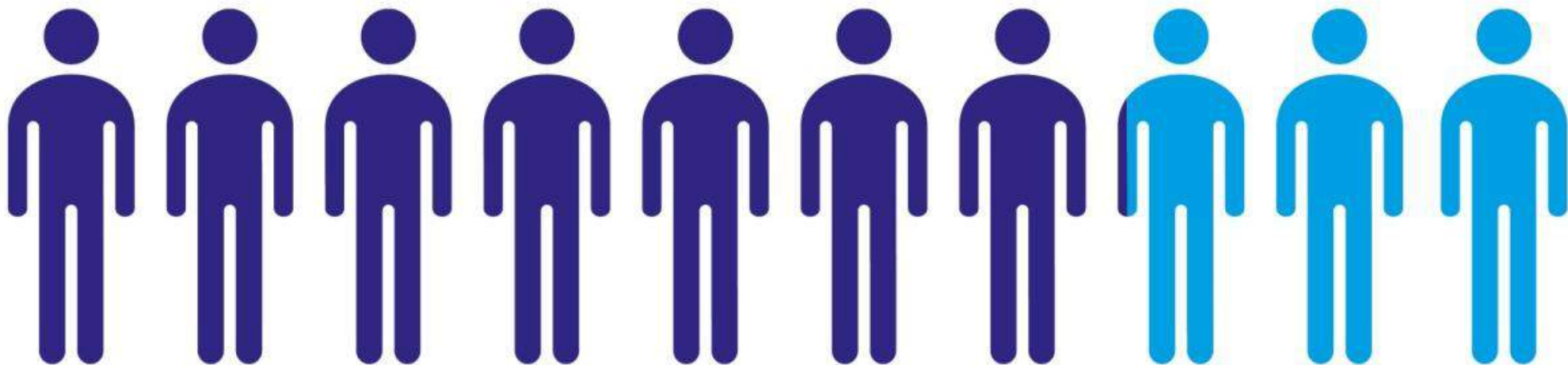
# Pre-hospital

Peter Lindle

Consultant Paramedic, Major Trauma

Scottish Ambulance Service





72% male

28% female

**45%**  
caused by  
low and  
high falls



**34%** caused  
by moving  
vehicle accidents



**32%** aged between 40-59





84% by ambulance



10% by air ambulance



6% by themselves





**SCOTTISH  
TRAUMA  
NETWORK**



*“He who would become a surgeon should  
join an army and follow it.”*

Hippocrates

*“Medicine is the only victor in war.”*

William Mayo













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SK06 AVB

(C) ABC

















Gama Aviation

G-SASD

NHS

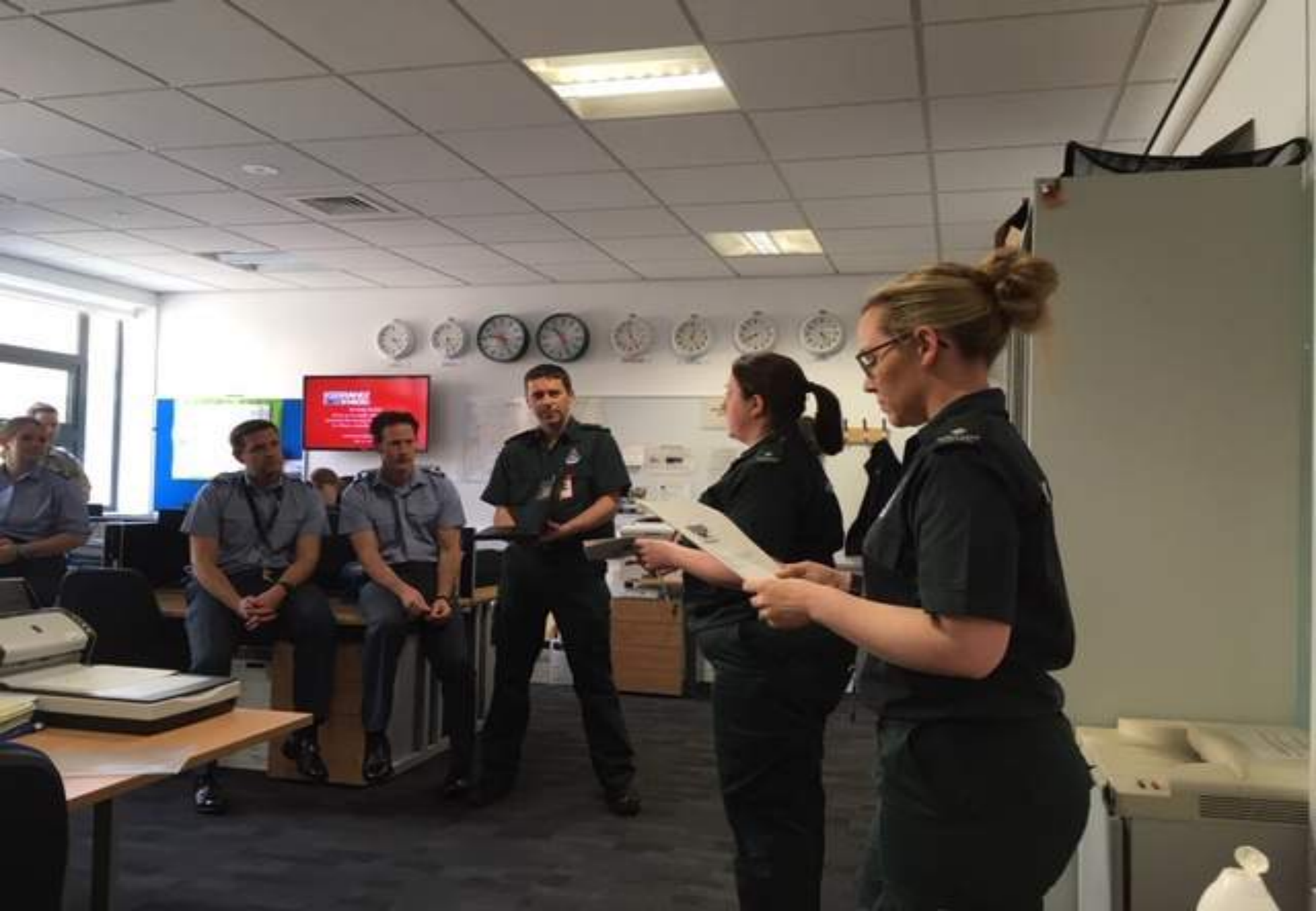
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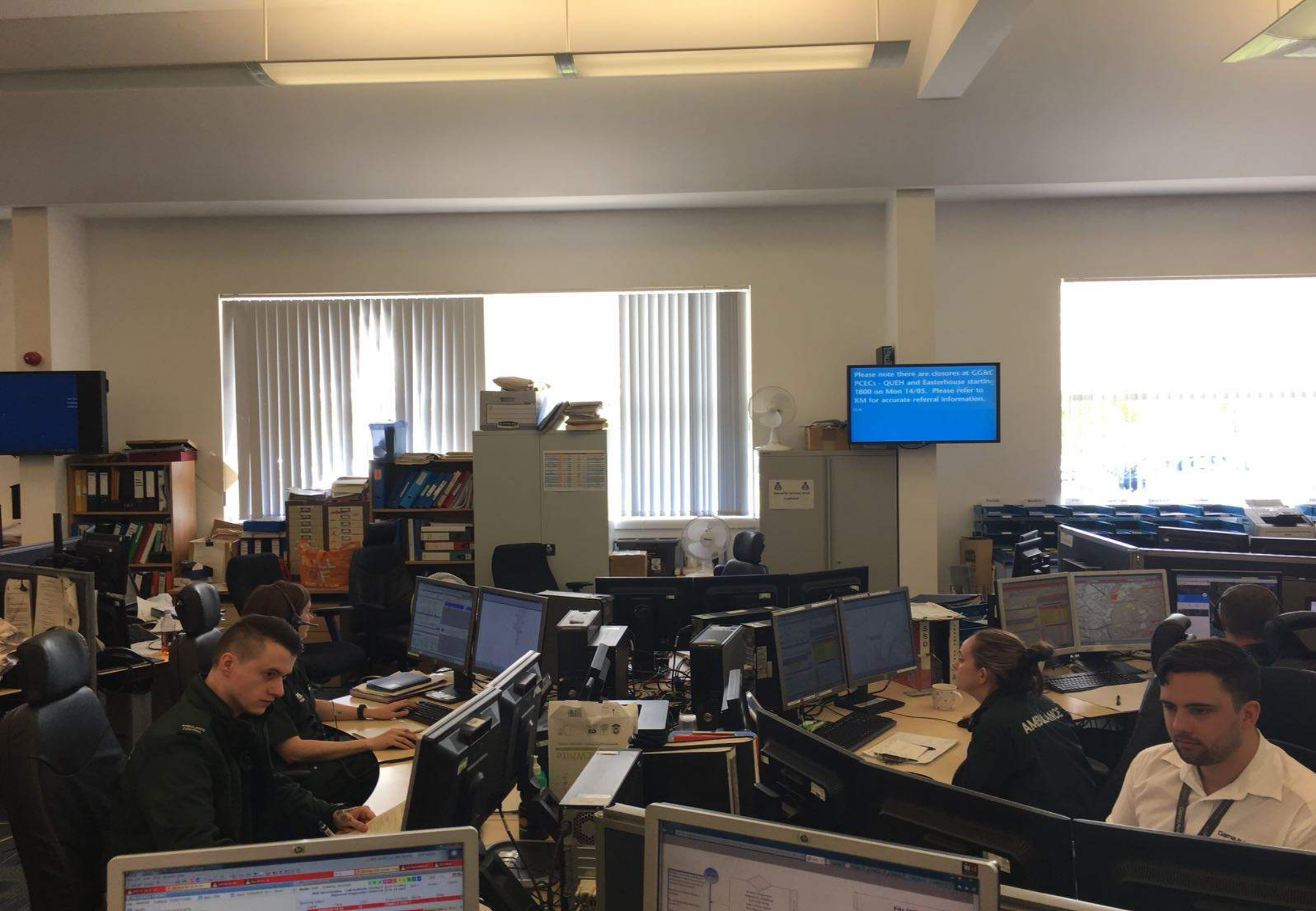












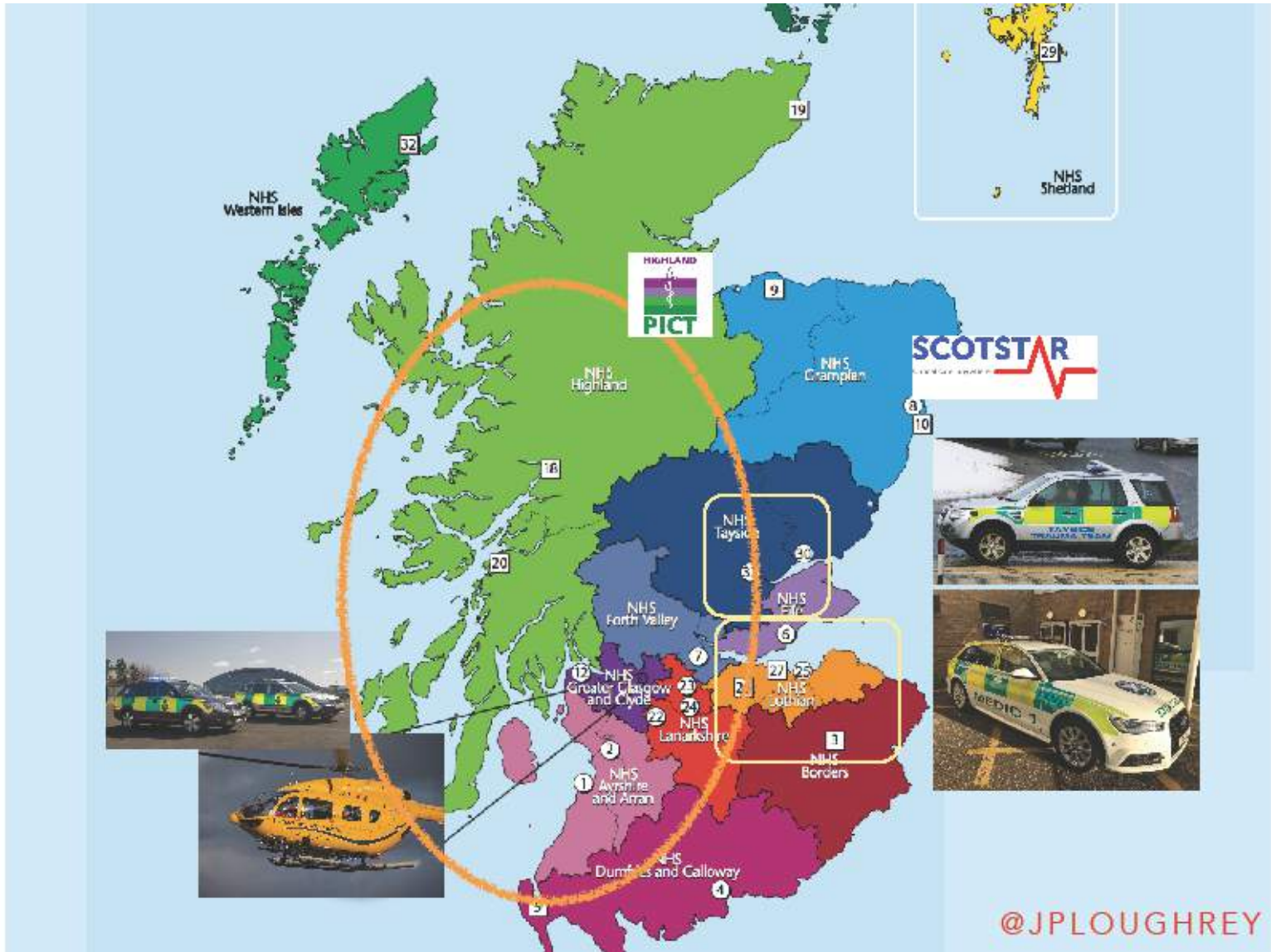
Please note there are closures at GGB/C  
PCECS - QUEH and Easterhouse starting  
1800 on Mon 14/05. Please refer to  
KM for accurate referral information.

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@JPLOUGHREY





# Thank You

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STN scoping exercise – what more can we learn from the armed forces in major trauma? What matters to patients?

Claire Tester

MSc DipCot PG DIP. PG Cert. HCPC reg. MRCOT

# Scottish Major Trauma Centres

**SAVING LIVES.  
GIVING LIFE  
BACK.**



**SCOTTISH  
TRAUMA  
NETWORK**

Scoping key objectives were outlined as an opportunity to explore;

- What more can be learned from the armed forces intensive rehabilitation model which can inform the NHS and MTCs in rehabilitation?
- To identify any potential for collaborative working which might involve staff and / or patients;
- And to identify the experience of rehabilitation and needs of patients through interviews



# Methodology

- Project initiation document (PID)
- 2 meetings with Major Semakula, and Surgeon Captain Mark Henry at Redford Barracks, Scotland's Regional Rehabilitation Unit for the armed forces.
- 3 former NHS patients consented to share their experience of rehabilitation after major trauma injury

# Army Model - is a hub & spoke model

- A. Pre admission; The initial acute medical treatment is at the site of the trauma incident which may be in a different country.***
  
- B. Major Trauma Medical Centre; Army personnel injured in line of duty are flown to Birmingham to the Queen Elizabeth II hospital where all major trauma injured army personnel are treated acutely. This is identified as the Centre for Defence Medicine***
  
- C. Rehabilitation; When medically stable the person is transferred to the Defence Medical Rehabilitation Centre (DMRC) at Stanford Hall***

# Army Model continued

- Focus - on rehabilitation and re-ablement.
- Rehabilitation centre is for all army personnel in need of intensive rehabilitation, regardless of their own geographical army base.
- Complex trauma patients will remain at Stanford Hall (DRMC) for, 'as long as they need' up to a year. There are 3 key clinical groups at DRMC – Centre for Complex trauma; Centre for Neuro rehabilitation; and Force Generation Groups with Centres for; Spinal Injuries; Lower Limb Injuries and Centre for Specialist Rehabilitation.
- 14 Regional Rehabilitation Units (RRU) are the spokes

# Feedback from NHS patients

- Attitude - *focussed*
- Returning Home – *ready?*
- Ongoing support – *home, work, community*
- Strengthening and conditioning - *programme*
- Understanding own injuries
- Frustrations – *navigating*
- Time – *need more*



# Findings for improved outcomes

- The Army model of rehabilitation for major trauma / poly trauma patients is a hub and spoke model with significant coordination and iteration between DMR and RRU.
- There is a longer available time for rehabilitation provided by the Army.
- Expectation raised high, focus on ambition, discipline and achievement – to return to army duties.
- Staff and patients share the clinical expectations of what the patient can achieve – with higher expectations of patients than NHS.
- Army patients tend to be; ambitious, disciplined and focussed.
- There is a full daily programme for every patient with a contract (commitment) and an intensity of rehabilitation
- Psychological environment – group work/ peers/ camaraderie/ responsibility
- Strengthening and conditioning programme for ongoing fitness & stamina.

# Contact me

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GIVING LIFE  
BACK.**



[Claire.tester1@nhs.net](mailto:Claire.tester1@nhs.net)

Claire Tester

Integrated Manager – Independent Living (West) & Professional Occupational  
Therapy Lead – Dundee Health & Social Care Partnership

Formerly AHP Improvement Advisor for Major Trauma – EAST MTC

# Mass Casualty, Major/Specialist Incident Care

Jim Dickie

Head of Strategic Operations and Resilience  
Scottish Ambulance Service

**EXCLUSIVE**

# Paramedics primed to deal with disaster



Scottish paramedics are trained to use specialist chemical and ballistic protection equipment to cope with terror attacks  
Pictures: Mark Gibson

**PAGES 4-5**

# SPECIAL OPS





# Learning outcomes

- Provide an overview of Legislative and Scottish Government requirements for Major Incidents
- Outline organisational Major/Mass/Specialist Incident training
- Briefly describe Special Operations capabilities
- Provide an overview of operational learning into practice

# Major Incident

“Any event which, due to its perceived potential or actual severity, complexity, location, or the number or type of patients it produces, or requires special arrangements to be implemented by the Service“

*Major Incident Plan V5*  
*Scottish Ambulance Service*  
*Sept 2018*

# Mass Casualty Incident

“A disastrous single or simultaneous event(s) or other circumstances where the normal major incident response of several NHS organisations must be augmented by extraordinary measures in order to maintain an effective, suitable and sustainable response”

*Mass Casualty Incident Plan  
NHS Scotland, February 2015*

# Legislation and Scottish Government Requirements



- Civil Contingencies Act 2004 (CCA) and the Civil Contingencies Act 2004 (Contingency Planning) (Scotland) Regulations 2005
- The Scottish Government Health and Social Care Directorates (SGHSCD) and Scottish Ambulance Service (SAS) agreement regarding national specialist operational response capability to provide patient care in hazardous environments on behalf of the NHS in Scotland.





# Major/Specialist Incident training

## Scottish Ambulance Service

- Community First Responders
- Initial Clinical training
- JESIP/MI e-learning for all
- Leadership and Management
- Operational and Tactical Command
  - Including Joint On Scene Incident Command (JOSIC)
- Event Command
- Specialist Operational (SORT)
- Emergo training and exercising
- Specialist Command – CBRN and MTA
- Scottish Multi-Agency Training & Exercising Unit (SMARTEU) cses
- Scottish Resilience Development Service (ScoRDS) cses
- Strategic Command development

## Military

- Initial entrant training – Officer and other ranks
  - Inc Battlefield First Aid
- Initial Officer Development – Leadership and Command
- Command courses
  - Commissioned Officer and Non Commissioned Officers
- MIMMS
- BATLS
- Specialist – CBRN and CT
- Medical Humanitarian and Stabilisation Operations (MHSO)
- Joint Medical Operations Planning Course (JMOP)
- Plethora of Strategic Command courses

# Specialist Operations – capabilities and taking care to the patient



# Examples of Learning into Practice

## Scottish Ambulance Service

- IED, CBRN, MTA threat, risk and operations – regular operations with Police Scotland/EOD etc.
- Infectious Diseases – VHF e.g. Ebola – only UK case managed by SAS SORT. Numerous false alarms.
- Major/Multiple/Mass Casualty – various
  - Tactics/Training
  - Equipment (PPE, Clinical kit etc)
  - Techniques
  - Procedures

## Military

- IED, CBRN, MTA threat, risk and operations – Iraq, Afghanistan, UK (Salisbury)
- Ebola outbreak - West Africa
  - UK Ambulance Services supported pre-deployment training for UK military contingent
- Mass Casualty - various





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Scottish Ambulance Service



NHS  
SCOTLAND

NATIONAL RISK AND  
RESILIENCE DEPARTMENT



# Summary

- Scottish Ambulance Service is a key part of a wider response mechanism during Major/Mass/Specialist Incidents
- Although different focus in terms of overall roles – comparisons can be drawn and lessons learnt from both NHS and Military practice to support patient care
- Opportunity to continue this good work through ongoing engagement with our Regular and Reserve Forces

# Any questions?



Thank you



# Emergency: From Battlefield to Barts

Source: British Army. 2015. *Battlefield approach saving civilian lives*. AirMedandRescue. <https://www.airmedandrescue.com/story1059>