

## FOCUS ON . . . HOSPEX

### HOSPEX 2008

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#### Introduction

The mission of Commander 2nd Medical Brigade is "To...prepare and deliver Role 3 and 2(E) medical force elements at readiness in order to contribute to the deployable Joint medical capability" [1]. He provides assurance that these force elements are fit for role through the medium of HOSPEX, which thus serves two fundamental purposes. Firstly it minimises the risks to patient safety within Deployed Health Care (DHC) and secondly it provides assurance to both supported commanders (of the brigade or division for example) and supporting functional commanders (for example the Surgeon General and DGAMS) that their DHC capability is fit for purpose, that residual risk that will be carried into the Operational Theatre have been identified and mitigation proposed.

It follows therefore that HOSPEX is the 'means' rather than the 'end' (of patient safety and assurance) and that lectures, directed training, simulation and scenario rehearsal are all 'ways' within that 'means' to achieve the 'end'. This paper describes the construct and conduct of HOSPEX in 2008 and demonstrates its utility in informing and rehearsing clinicians and medical commanders in approved clinical innovation and changes to practice and the tactical situation.

- **Adaptive Foundation (Exercise ROSEDALE ABLE):**

Based on a generic scenario, it is designed for units to practice their core medical and logistic functions and, for units nominated for contingent commitments; training for a war.

- **Pre-Pre Deployment Training (PDT) (Exercise ROSEDALE WALK):**

This is Theatre-specific training for the war (currently) in Iraq or Afghanistan and held 4 to 6 months before units deploy. It is very much the deploying CO's exercise and is held to assist in identifying areas of strength and weakness, so that further pre-deployment training may be configured to exploit the strengths and mitigate the weaknesses.

- **PDT (Exercise ROSEDALE READY):**

Theatre-specific, providing a 'dress rehearsal' and a formal assessment of performance after which units immediately deploy.

*Box 1. The three stages of HOSPEX*

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#### Construct

HOSPEX has three formats dependent on the proximity of the medical formation to deployment (Box 1).

The exercise construct is standardised, intentionally simple and will exercise one or two Player levels. A single Player would be a field hospital or a squadron whereas two players would be a hospital squadron and the HQ of its 'parent' medical group. A generic higher control (HICON) representing the next functional level up sits above the player levels; discrete 'flanks' and side control (SIDECON) are not established, but their function is provided by HICON as well as co-ordinating the insertion of non-clinical serials and the more complex clinical serials. It also monitors and assesses the performance of the unit throughout the exercise. HICON has the ability to vary the tempo of exercise play. An increase will provide greater levels of activity or complexity, exposing the unit to greater challenge and providing greater assurance; alternatively, tempo may be reduced if the pace and complexity is too challenging and causing training and educational value to be impeded or lost. The aim is to develop, support and validate; not to overload the training audience.

HICON personnel are predominantly drawn from Reservists from the Staff and Watchkeepers Pool of 2nd Medical Brigade, augmented with specialist Regular staff from the Brigade and Tactical Medical Wing (TMW). This latter group provide the expertise to assess both the delivery of aeromedical retrievals and transfers and the management interfaces between the Land and Air clinical environments.

HICON activity during HOSPEX is co-ordinated and synchronised with that of the second essential enabler, namely Casualty Control (CASCON). CASCON is responsible for preparing, inserting and facilitating the moulage of simulated casualties and other clinical serials in accordance with the overall exercise design and construct. CASCON consists of contracted amputee casualty and foreign actors, military personnel assigned as casualties, contracted make-up staff and the 2nd Medical Brigade Faculty (Figure 1).

#### Conduct

HOSPEX is based upon the management of a number of simulated casualties during their DHC pathway. The clinical history and presentation of these casualties is written by the faculty, which predominantly comprises of Reservist Consultant Grade staff and senior nurses. In line with the vision stated by Cox and Roberts [2] for the transformation of HOSPEX, the faculty is being increasingly augmented by Regular Consultants and Specialist Nursing Advisers and supported and advised by the Defence Professors and Consultant Advisors (DCAs). Casualties' histories are designed and selected to be relevant to the specific Theatre, providing examples of the contemporary injury and disease profiles. In some cases anonymised operational case histories are modified. Each history is regularly reviewed against operational lessons to ensure its ongoing relevance. Cases are designed to have a 'background' that meets the required training



Figure 1. Casualty simulation team preparing a patient for insertion into the hospital complex.

objective and will have appropriate imagery, blood results, and ECG available when requested by the training audience. The clinical and administrative management of these cases provides a realistic environment for the newly formed clinical teams to bond and rehearse, or revise team skills, clinical paradigms and procedures. The role of the Faculty is to facilitate the continuing management of the case throughout the hospital complex; feedback on the overall performance of the team is usually left to senior team members. This is considered the process that best enables the development of the team and for the clinical leaders to develop their leadership and management in a benign environment.

### The Use of Simulation

A variety of media is used to provide this simulated clinical activity ranging from medium fidelity electronic patient simulators through to low fidelity simulation using actors, high quality casualty make-up, animal tissue, and purpose designed administrative and management paperwork. Foreign nationals are used to simulate the challenges that hospital staff may encounter when dealing with non-UK patients including religious and cultural issues, and the delay in assessing a patient's symptoms caused by having to work through an interpreter. Amputee actors are widely used and after the application of specialist theatrical make-up, provide an unparalleled level of realism, much of which is because they can remember and provide their actual responses to their original injury rather than the visceral nature of their simulated injury.

Whilst simulated clinical activity is a crucial vehicle for clinical team development, there are other activities associated with DHC that also justify simulation. For example, the military uses a unique system for the ordering, storage and supply of drugs and medical materiel. This system is not intuitive to clinical staff that may spend the majority of their working lives in the NHS. A simulated supply chain has been

designed in order that the command and logistic elements and clinical teams can familiarise themselves with the processes needed to ensure sound medical logistic provision. In order to demonstrate familiarity with Healthcare Governance (HCG) processes, HOSPEX includes serials requiring HCG analysis, action and reporting. These may be as sophisticated as having to provide input to a ministerial question through to mitigating the effects of a total power failure in the hospital. As with casualty histories, these 'challenges' are selected from real life and are chosen to ensure relevance.

### Assurance

The 'assurance' function of HOSPEX is provided through a formal assessment of 6 Collective Training Objective (CTO) functions shown in Table 1.

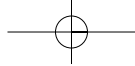
Command Manoeuvre Clinical Information and Intelligence Protection Combat Service Support
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Table 1. Collective Training Objective Functions

Each CTO comprises a number of Operational Performance Statements (OPS), of which there are 68 in total, and against which the unit's performance is assessed. Assessment is made using a 'traffic light' system of Green (full achievement of the OPS), Amber (partial achievement) and Red (not achieved). On conclusion of the HOSPEX, the unit's command team including its Deployed Medical Director (DMD) conducts an After Action Review together with the Exercise Directing Staff. At the Review, performance can be assessed from both perspectives and graded appropriately. Where performance falls short of full achievement of the OPS, a plan of mitigation or further training is devised. The completed scalar then becomes the key component of Commander 2nd Medical Brigade's letter of assessment and assurance to the Command and Functional chains.

### Responsiveness

HOSPEX also provides the means by which the latest changes to clinical practice and operational clinical lessons may be demonstrated and rehearsed and clinical staff can gather situational awareness. To facilitate this, the Brigade HQ Command staff, Exercise Planning Staff (EPS) and the Brigade's Faculty conduct horizon scanning and maintain close links with DMSD, AMD and the academic departments within RCDM. In addition to the direction provided through routine, established means, e.g., Surgeon General's Operational Policy Letters (SOGPL), new and innovative fora, such as the weekly Joint Theatre Clinical Case Conference (JTCCC), provide timely direction and influence the design of HOSPEX. Deploying units can be alerted to good practice and if necessary, briefed on issues that require their especial attention. Accuracy and timeliness of Trauma Audit Forms (TAF), hypothermia mitigation, changes to the practice of tagging micro-structures in penetrating hand injury, accurate siting of sternal intraosseous devices and inappropriate use of the T4 triage category are all issues that have arisen during JTCCC and have been subsequently addressed during HOSPEX. Furthermore clinicians recently returned from operations frequently attend HOSPEX to brief their peers on workload, cases of particular interest and to provide an overall view of the practice of their particular speciality within the specific operational Theatre.



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## **Summary**

The deployed clinical environment is complex. Hospex provides a vehicle to model this complexity and provide deploying hospitals the opportunity to rehearse in a realistic but controlled environment.

## **References**

1. Headquarters 2nd Medical Brigade Training and Operations Plan 2008.
2. Cox CWFM, Roberts P. HOSPEX: a historical background and the need to change. *J R Army Med Corps* 2008; 154(3): 193-4

