Clinical

OP Deference – Libyan Crisis 2011
Non Combatant Evacuation Operations (NEO)
– Role One Medical Experience

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Introduction
A Role 1 centred medical response to natural disasters is not a new experience for the RN but disaster relief operations usually focus on augmenting the civilian and international response in a relatively low threat environment. Disaster relief contrasts with a NEO where the medical effort is entirely focused on medically screening and managing people during transit to a place of safety, often in an uncertain environment.

On the evening of the 21st of February HMS CUMBERLAND was tasked to evacuate entitled persons from the city of Benghazi in Eastern Libya to Malta. There was very limited information available regarding the level of threat or the number, age, injuries or special medical needs of evacuees. The medical team formed a flexible medical plan to cover a full spectrum of eventualities utilising prior experience and training. Two large scale NEOs were successfully performed over 96 hours evacuating 419 people from Benghazi.

Several lessons were identified which allowed for adjustments of the initial medical plan. These lessons were applied to the second NEO and were passed to HMS YORK ahead of her mission to Benghazi on the 2nd of March and via ship to ship e-mail to other units. With few exceptions the medical team were able to medically screen all evacuees and were involved in the further medical management of 25. 4 people required medical attention on arrival in Malta.

A general overview of a Non Combatant Evacuation Operation recording the experience of HMS YORK in Benghazi was recently published (1) however there is scope to expand on this article by considering the significant medical aspects of larger scale NEOs.

Background
On the 21st of February 2011 HMS CUMBERLAND had recently completed a northbound transit of the Suez Canal following tasking in support of OPERATION TELIC and OPERATION CALASH in the Middle East. As a result of the deteriorating security situation in Libya CUMBERLAND was tasked with NEO contingency planning.

For Operation DEFERENCE, HMS CUMBERLAND fielded a Role 1 medical team consisting of a Battlefield Advance Trauma Life Support (BATLS) trained General Duties Medical Officer (GDMO), a Petty Officer Medical Assistant (POMA) and a non BATLS trained Part IV MA. Faced with a potentially high threat environment it was felt necessary to place a BATLS trained medic on the ground with the embarked Royal Marines. Augmentation by a RM (MA) was requested through the Officer Commanding Royal Marines (ORCM) in CUMBERLAND and joined the ship in Souda Bay.

The medical planning process began immediately, informed by prior experience - the POMA had previous experience of planning for NEO in HMS OCEAN and both the Logistics Officer and CO had experience from Lebanon in 2006. In this situation it was crucial that the medical team had appropriate support from the chain of command both afloat, ashore and in the UK, and that at all levels there is an understanding of the scope of Role 1 support.

An executive temporary memorandum for NEO had been formulated during CUMBERLAND’s Basic Operational Sea Training in 2010 (although a NEO scenario had not been rehearsed). We were also able to draw on the existing standard operating procedure for boarding/reconnaissance operations, this was then adjusted by the medical team to form CUMBERLAND’s medical plan.

Build up and initial preparations
HMS CUMBERLAND proceeded directly to Souda Bay in Crete, arriving on the evening of the 22nd of February to embark an Operational Reconnaissance and Liaison Team (ORLT) from Joint Forces Headquarters (JFHQ) and a detachment from the Fleet Protection Group Royal Marines. Here the ship was also joined by 2 members of the Red Cross, 2 members of the UK Border Control Agency (UKBA) and 7 members of the Foreign and Commonwealth Office (FCO).

At this point no information was known regarding the security situation nor the number, ages, injuries or special medical requirements of evacuees. The medical team
provided the Port Agent with a list of required supplies, anticipating that elderly, infirm and children would be amongst the evacuees. The sea state was forecast to be between 4 and 7 with high winds until the end of February. Extra sea sickness tablets were ordered for delivery in Souda bay, including tablets for children - unfortunately these did not arrive.

CUMBERLAND sailed on the morning of the 23rd. Shortly afterwards a ship led table top tactics NEO exercise was held prior to the ship going to Action Stations in the afternoon of the 23rd in order to achieve an appropriate posture for Defence Watches.

Based on available intelligence it was decided to plan for 500 evacuees; this required establishing appropriate accommodation areas; predominantly the junior rates mess squares and senior rates mess areas combined with the junior rates and senior rates dining hall.

A concern for the medical team was the absence of an effective casualty evacuation chain, which was further complicated by the ship’s helicopter being unserviceable. In an effort to offset this risk, the MO established the position of allied assets in the region with potential to provide aero medical evacuation assistance, advising these to the command and JFHQ through the ORLT.

Following JFHQs forward deployment to Malta further information became available regarding a Role 3 facility and casevac assets. Malta based Chinook helicopters were identified as a potential asset for casevac, although it was uncertain whether they would have the ability to winch a casualty off the ship if required.

The formal medical plan for OP DEFERENCE was not received from JFHQ until 6 days after the start of the operation and after CUMBERLAND had completed both NEOs, illustrating the need for Role 1 medical teams to be able to plan for emergent situations in isolation.

**The Plan**

The NEO was planned in 5 phases.

1. Deploy to secure the evacuation point.
2. Establish the Evacuee Handling Centre (EHC) and embark Entitled Personnel (EP)
3. Sail.
4. Disembark evacuees.
5. Recover for further NEO tasking.

Following JFHQs forward planning, the medical team had planned for phases 1 and 2 extensively. In an effort to offset this risk, the MO established the position of allied assets in the region with potential to provide aero medical evacuation assistance, advising these to the command and JFHQ through the ORLT.

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The command focus was getting the evacuees on board as rapidly as possible. As CUMBERLAND would spend a minimum period alongside an abbreviated medical questionnaire was developed focusing on infectious disease risk and underlying medical conditions and medications.

**Figure 1 – Evacuee flow through the Handling Centre and ship registration process**
that could cause problems at sea.

The EHC plan had a high degree of flexibility ensuring that if the situation ashore deteriorated the medical screening process could be withdrawn inside the ship, minimising force protection requirements for ship’s company on the ground. In the event of injured non-entitled persons arriving at the EHC with limited other medical options available it was decided that all life, limb or eyesight threatening injuries would be treated and the patient evacuated onto CUMBERLAND. Injuries not falling into these categories were to be treated and placed back into the Libyan medical system. On reflection there were significant issues with this plan, these will be discussed in lessons learnt.

The medical team spent the remainder of the 23rd preparing equipment, finalising the medical plan, establishing the level of medical training amongst newly embarked Royal Marines and briefing the Standing Sea First Aid Party. The Royal Marines had arrived with limited medical equipment which had to be augmented from ships stores. Morphine was issued to the Royal Marine detachment. On the morning of the 24th February, with gunfire ashore audible, the situation in Benghazi appeared to have stabilised. HMS CUMBERLAND went alongside at Action Stations at 13:41 local time.

The NEOS
Both NEOS were undertaken in high sea states. NEO 1 in sea state 5 – 7 with gale force winds and NEO 2 on February 27 in sea state 4-5.

The first NEO was a learning experience, the EHC was set up on a quay side surrounded by containers and fully exposed to the weather. For the second NEO the EHC was positioned in a large warehouse opposite the ship that offered significantly increased protection from the weather and resulted in improved evacuee processing.

The screening questionnaire was effective with evacuees responding positively to questions and being forwarded to the medical officer as planned. The MO was positioned in a side office 10 metres back from the main registration centre on board ship. However occasional surges in numbers of evacuees also required the MO to assist with the medical screening process ashore. It is emphasised that in a non-permissive environment the medical screening should not prevent evacuees embarking.

Management of infection risks
An isolation area had been identified for prolonged care of potentially infectious cases. The sick bay heads/toilet would have been used by the infectious patient only and the medical team would have used barrier nursing procedures. The area identified was deep cleanable and was not in an accommodation area – ensuring sustainability.

The medical team identified one potentially infectious patient during the second NEO. This patient had a suspected fever and was isolated onboard pending further assessment. It transpired that whilst he had blood in his stools on one occasion, this was probably due to piles as the patient was constipated after a week in transit. As the patient had no significant history of foreign travel he was assessed as a low infection risk and placed in normal accommodation.
Sea Sickness

Sea sickness proved to be main worry for the medical team adding an extra dimension of difficulty whilst managing patients with complex health needs.

During the first NEO the cinnarizine sea sickness tablets were not distributed until all entitled personnel were embarked. This delay contributed to a high number of people becoming sea sick although the sea state was sufficiently severe to question whether earlier dispensing of sea sickness tablets would have made a difference. Those arriving immediately prior to sailing would not obtain the full benefit of the medication.

Shortage of cinnarizine was a significant issue. During the first NEO four (15mg) tablets were issued per person. This was reduced this to 3 tablets per person as stocks ran out. This gave cover for 16 hours while the actual transit took 32 hours. To address this issue 6000 cinnarizine tablets were ordered and received in Malta. These were 25mg tablets. For the second NEO, all evacuees were dispensed five 25mg cinnarizine tablets and encouraged to take these at medical screening and subsequently every 6 hours.

Despite obtaining Kwell's child sea sickness tablets on arrival in Malta, they were not for use for children under the age of 4. As a number of children under this age were significantly sea sick this is an aspect that may require consideration for future NEOs.

Evacuees were admitted to sick bay only if severely sea sick or if assessed as being of sufficiently high medical risk that their allocated accommodation area was unsuitable.

The medical team found a prochlorperazine 12.5mg intra muscular injection was effective for severe nausea although during the first NEO intravenous fluids were also required for 4 patients who developed severe dehydration through vomiting. Once stabilised, patients were rapidly discharged back to accommodation areas.

Other Lessons

Mitigating medical risk during potential high risk operations could be improved by providing a 'direct hot line' to a duty trauma surgeon/ ED doctor. This would provide extra reassurance for the Role 1 team and avoid delay in obtaining an expert opinion in a life threatening medical crisis.

Clear guidance for the processing of injured non-entitled personnel at the Evacuee Handling Centre needs to be provided. Benghazi had functioning hospitals although the security situation was unpredictable. Would it have been clinically beneficial to take severely injured non entitled personnel to sea for 32 hours as occurred in the first NEO? The risk is high that they would not have survived with only Role 1 medical care.

The screening procedure identified several patients with potentially serious medical condition. Examples included people with histories of multiple MI's, unstable angina, cardiac stenting and diabetes. There were also a number of pregnant ladies and children.

The medical team aimed to keep those assessed as high medical risk in standard accommodation areas. However appropriate kit for specific patient medical conditions was
assembled ready for a rapid medical team response. A casualty state board was maintained to keep track of high medical risk evacuees. Evacuee specific accommodation locations were obtained from the Writers who had registered them onboard.

Female evacuees who spoke little or no English could cause issues as male relatives would often answer medical screening questions on their behalf, potentially increasing the risk that a medical condition would be missed. Cultural awareness in these situations is essential and a ship wide brief prior to going alongside in Libya would have proved beneficial.

For NEO 1 the Sickbay was manned 24 hours a day by a medic occasionally augmented by a first aider depending on patients admitted. All potentially serious patients were accommodated in the sickbay either on beds or on improvised bedding on the floor. There was not enough organic medical staff to monitor serious patients in their dispersed accommodation locations and the medical team were unable to use the first aid posts due to sheer volume of evacuees onboard.

A bedding down area was assembled outside of sickbay on gym mats for the second NEO and a well defined shift system was instigated enabling a greater degree of sustainability for medics and first aiders. This meant the team could monitor numerous sea sick patients without admitting them to sick bay.

Whole ship care of evacuees
During the first NEO, the MO liaised extensively with the embarked members of the British Red Cross. The Red Cross were focussed on providing emotional support for evacuees and had received training in this area. They proved to be very effective, operating independently but raising potential issues with the medical team.

In some situations it was necessary to separate mothers from their children in order to let the mother rest and recover from severe sea sickness. CUMBERLAND’s female mess deck proved excellent at looking after the children. Once the mothers were stabilised the children were allowed to visit them for short periods.

The Captain was very considerate of the needs of the evacuees and slowed the ship’s transits to Malta to minimise the chance of injury and sea sickness. If this decision had not been taken it is likely that there would have been more sickness. Evacuees were also encouraged to remain in their allocated accommodation and were escorted by members of the ships company at all times. This made a difference for the medical team as the ships company acted as an early warning system for evacuees requiring medical attention. Hourly rounds by the medical team of the evacuee’s accommodation reinforced the early warning system and provided reassurance to the evacuees and ships company.

The first 3-4 hours of both transits were very busy with medical call outs but as the evacuees began to fall asleep calls declined. Sailors monitoring the accommodation areas were advised to encourage sea sick evacuees to lie down and take small sips of water. This was effective in reducing sea sickness related call outs.

During the first transit to Malta several patients collapsed triggering casualty calls. All evacuees had been given a high calorie snack bar and water on arrival. Some evacuees hadn’t eaten for 24 hours or more and collapsed as they tried to adjust to an unpredictable and moving environment whilst their bodies dealt with a sudden spike in blood sugar with a subsequent trough. This issue was addressed by placing further food in the accommodation to supplement the regular meals provided.

Hand over of patients
On arrival in Malta the level of medical and medical logistic support was excellent with experienced doctors from the Mater Dei Hospital (the identified Role 3 facility) taking a full hand over onboard CUMBERLAND. The hospital was also instrumental in replenishing items of medical equipment including giving sets, glucometer batteries and oxygen cylinders.

Summary
It is the author’s belief that Role 1 GDMO led medical care continues to be a potent and adaptable force, capable of operating efficiently and with a high degree of autonomy in potentially high threat environments. The medical team was able to adapt to the operational demand and retained the full confidence of the command chain, however the MO felt acutely aware of gaps in his New Entry Medical Officer clinical training.

Short duration courses such as Advanced Paediatric Life Support, Basic Surgical Skills and MIMMS provide excellent added value for medical officers and increase self confidence. NEMO training in the future may benefit from the inclusion of these.

Despite the challenges faced during the NEOs the Role 1 medical team in CUMBERLAND found the experience very rewarding and an example of what they joined the Royal Navy to do.

Acknowledgements
The authors would like to thank Surgeon Commander A Nelstrop for his input and guidance in preparing this paper for publication.

Reference