A UK Royal Navy ship with a 100-bed medical facility, helicopters, landing craft, emergency supplies and around 400 personnel is heading for Sierra Leone to help tackle the Ebola crisis.

The 28,000-tonne Royal Fleet Auxiliary (RFA) Argus, will act as a forward base for army medics, engineers, soldiers and aid experts who will build and operate medical centres, train local doctors and nurses and transport vital supplies. About 80 medical staff will be on board, including surgeons, consultants, radiographers, anaesthetists and nurses. Some will be deployed onshore to help with the training; others will remain on RFA Argus.

While the ship will provide medical cover to British military and civilian personnel for injuries or illness while working in Sierra Leone, it will not treat anyone who contracts Ebola. Any suspected UK victims of Ebola will be evacuated to a British-run facility onshore. The aim is to keep the ship a safe, sterile environment from which the UK’s efforts can be coordinated locally.

In an earlier article I discussed the suggestion that Ebola positive patients be transferred from West Africa to suitable isolation hospitals in well-resourced countries for treatment. The article also explored whether NATO might have a role in such an initiative. The idea of setting up emergency systems in NATO member states does appear to have merit and deserves wider debate. But such a debate needs to be calm and rational, unlike the near hysteria surrounding media coverage of the small numbers of infections in the United States and Spain. Given the political and logistical challenges of transfer to the West, another possible way forward, therefore, might involve the setting up of offshore Ebola Treatment Centres (ETCs), either by utilising existing hospital ships or in converting other vessels for that purpose.

Hospital ships are predominantly run by the military. (The most notable exception, MV Africa Mercy, the world’s largest non-governmental floating hospital, is a former ferry that was converted to a hospital ship in 2007 for Mercy Ships). But there are significant capability shortfalls in this respect, especially within Europe.

The numerous and long-standing debates about ‘capability gaps’ within NATO have focused on traditional military concerns including insufficient air and sea transport to deploy European forces with their equipment; inadequate air-to-air refuelling; a lack of precision-strike, all-weather-offensive fighter capability and precision-guided munitions; insufficient reconnaissance and intelligence capabilities at both the strategic and tactical level; inadequate deployable command and control; inadequate capacity to suppress enemy air defence; and shortfalls in secure, interoperable communications. No one has suggested a shortfall in hospital ships - until now.

Similarly, despite claiming a strong commitment to ‘soft’ security solutions and humanitarian approaches, the EU has nothing to offer in this regard. An EU Capability Action Plan (produced on the back of two Capabilities Commitment Conferences to assess what capabilities it has, and which it must work to develop), does not include hospital ships in any of the 25 broad areas identified for improvement.

Among EU member states there is only one purpose-built state-owned hospital ship: the Esperanza del Mar, commissioned in 2001 by the Ministry of Employment and Social Security in Madrid to provide medical services to the Spanish industrial fishing fleet. The US military, in contrast, boasts two such vessels: USNS Mercy (T-AH-19) and USNS Comfort (T-AH-20), both with 12 fully equipped operating rooms, a 1,000-bed hospital facility, digital radiological services, a

Comment:
NATO's Ebola 'capability gap': where are the hospital ships?
By Dr Ian Davis, Director, NATO Watch
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medical laboratory, a pharmacy, an optometry lab, an intensive care ward, dental services, a CT scanner, a morgue, and two oxygen-producing plants. The primary mission of both ships is to provide emergency on-site care for US combatant forces deployed in war or other operations; their secondary mission is to provide full hospital services to support US disaster relief and humanitarian operations worldwide.

Other countries with purpose built hospital ships in their navies include Brazil (mainly for use on the Amazon river), China (including two Nankang class hospital ships and Daishandao, also known as Peace Ark in peacetime, a converted cruise ship with 300 hospital beds, 20 intensive care units and 8 operating theatres), Indonesia (KRI Dr Soeharso, a former landing ship was converted to a hospital ship in 2007) and Russia (three Ob' class ships built between 1981 and 1990, each with 7 operating rooms, 100 hospital beds and a helipad).

It is also common for naval ships, especially large ships such as aircraft carriers and amphibious assault ships to have on-board hospitals. However, they are only one small part of the vessel's overall capability, and are used primarily for the ship's crew and its amphibious forces (and occasionally for relief missions). They do not qualify as 'hospital ships', as they are not marked and designated as such, and as armed vessels they are disqualified from protection as a hospital ship under international law. Nonetheless, a few European NATO members include examples of these ships in their navies, including: France (the Mistral class Amphibious assault ship contains an on board hospital with 69 beds, 7 ICU beds, and an additional 50 beds if needed); Spain (the ESPS Juan Carlos I has a 40-bed hospital on board); and the UK (the aforementioned RFA Argus).

Again, however, it is the US that has the main supplementary on-board hospital capacity among its huge fleet of warships. Several classes of US naval ships are equipped with on-board hospitals, including: the Nimitz class aircraft carrier (each with a 53-bed hospital ward and a three bed ICU); the Wasp class amphibious assault ship (each with 6 operating rooms, 14 ICU beds, 46 hospital beds, 4 battle dressing stations, a fully functional laboratory and a blood bank - the ship can also expand its medical compliment to 600 beds, making it the second largest hospital at sea, second only to actual hospital ships); Tarawa class amphibious assault ship (each have 17 ICU beds, 4 operating rooms and up to 300 hospital beds); and America class amphibious assault ship (each with 2 operating rooms and 24 beds).

So where does this discussion of existing hospital ship capacity leave us in terms of formulating a response to the current Ebola crisis? First, it is clear that the US has the capacity to go it alone and forward deploy an offshore ETC capability anchored off the coast of West Africa with immediate effect.

Second, the US could also mount such an operation alongside a 'coalition of the willing', which might include both China and Russia, under the possible coordination of NATO. Russia and China have previously cooperated with NATO on its counter-piracy mission, Operation Ocean Shield, off the coast of Somalia. It would certainly seem feasible for NATO to mount a maritime Ebola containment strategy, even if it meant commandeering and converting existing civil or military vessels. However, many of the ships identified above are already adequately equipped for this purpose and could cope with the necessary scale. They would also be much safer to work in for international volunteers than ETCs in the affected countries and most importantly, much more effective to treat Ebola-infected patients.

Ironically, the UK's contribution to Sierra Leone, RFA Argus, first saw action during the 1982 Falklands conflict in a combat role. And the 32-year old Falklands War does provide a working example of the rapid conversion and deployment of a hospital ship.

The main hospital ship used by the British was SS Uganda (a converted cruise ship) and was supported by three converted RN survey ships, HMS Hecla, HMS Herald and HMS Hydra. Initially Uganda operated as a passenger/cargo liner from 1952-1968 and was then converted to an educational cruise ship. In 1982 the ship was called up for military duty while on cruise and discharged her 315 cabin passengers and 940 school children, who were on an educational cruise, in Naples. Uganda had a three-day refit in Gibraltar where she had helicopter platform, fittings for replenishment at sea, satellite communications and her wards and operating theatres kitted out. In accordance with the Geneva Convention the ship was painted white
and eight red crosses were added. A team of 135 medical staff, including 12 doctors, operating theatre staff and 40 members of the Queen Alexandra's Royal Naval Nursing Service, left Portsmouth to join the ship taking large quantities of medical supplies with them.

The pattern of casualty evacuation involved the three converted survey ships taking casualties from the main hospital ship Uganda, operating in the declared "Red Cross Box", to Montevideo, Uruguay, where they were disembarked by a fleet of Uruguayan ambulances and flown by RAF VC10 aircraft to the UK for transfer to the Princess Alexandra Royal Air Force Hospital at RAF Wroughton, near Swindon. HMS Hydra made four such passages from the waters off the Falkland Islands to Montevideo, carrying a total of 251 British military casualties, many of them burns victims after the air attacks on landing ships at Bluff Cove. Uganda co-ordinated the movements of the four British and three Argentine hospital ships Almirante Irízar, Bahía Paraiso and Puerto Deseado and treated 730 casualties, 150 of them Argentine.

In conclusion, there are two main points to note. First, the main hospital ship used in the Falklands War was converted from a cruise liner in only three days. This suggests that something similar could be done today to convert an older cruise liner into an offshore ETC.

Second, this may not even be necessary given the availability of existing hospital ships and ship borne hospital facilities within several navy fleets, as described above. Without doubt, there could be no better use of these ships right now than to have them as floating ETCs anchored off the coast of West Africa. All that is lacking is the necessary political will. But political leaders will have to move fast if the international community has any hope of controlling this devastating outbreak.

Finally, in the earlier article, I mentioned that one of the departments within NATO's Centre of Excellence for Military Medicine, the Deployment Health Surveillance Capability (DHSC), in cooperation with the German Medical Intelligence, had recently published a risk assessment of the Ebola outbreak in West Africa. The authors concluded that it "makes sense to apply the principles of 'collective response' and the doctrine of 'smart defence' to combat the outbreak of Ebola". It would also seem appropriate to apply those principles to the procurement of a NATO hospital ship capability. Indeed, such a capability could be a jointly-funded, integrated, multi-national programme, like the AWACS, for use in future disaster relief and disease prevention missions.