The view from the Ebola Treatment Centre, Makeni, central Sierra Leone

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It is hot, busy and potentially dangerous. Our deployment to the International Medical Corps’ Ebola Treatment Centre (ETC), near the town of Makeni, started busily enough with a steady trickle of suspect cases but only two confirmed Ebola cases remained in the unit, both survivors who were well and awaiting discharge. Then, a sick man was smuggled out of Freetown in the boot of a car and taken back to his village just outside Makeni.1,2 He consulted a traditional healer, was cared for by his family, died and had a traditional funeral where the family washed the body at a time when the patient is most infectious. His brother was the first admission of a wave of patients with confirmed Ebola, followed by his mother, father, nephews, nieces and neighbours. Other facilities in the district had closed so our ETC was the sole referral point for cases from the outbreak (figure 1). This spike in admissions included a number of children and three pregnant patients who delivered, one with congenital abnormalities.

So who is in Green team? There are eight staff from Sierra Leone and four NHS volunteers. We work very much as a team with Solomon, Nageena and Jim providing the medical input and Julia leading a very able nursing team. Vicki uses her paramedical communications skills to act as the coordinator and link with the community, holding centres and quarantine teams. There are three shifts each day with fixed nursing and medical rounds each shift. The rest of the shift is spent dealing with admissions, discharges and blood rounds.

The aims of the ETC are to protect the healthcare workers and the community, and to provide clinical care to confirmed or suspected Ebola cases. Over 700 healthcare workers have contracted Ebola in the region during this outbreak and, of those cases, half have died.4 Those working in the high-risk zone must wear full personal protective equipment (PPE). This inevitably means the whole clinical process takes so much longer. Clinical examination is very limited: the only lab tests available are Ebola PCR and for malaria, no full blood count, urea and electrolytes or even blood glucose. As there is no way of knowing if the fever is due to bacterial sepsis, all patients receive antibiotics as well as antimalarial medication, and appropriate fluids, either orally or intravenously. At the height of the outbreak, we had up to 26 patients on intravenous therapy without any urea/electrolytes or blood glucose measurements.

Everyone will have seen pictures of PPE, plastic suits, aprons, hoods, goggles, face mask and double gloves. The average daytime temperature is about 35°C and after an hour you get extremely hot, scrubs are drenched in sweat and you lose 2–3 kg. However mobility is good and there is enough dexterity for cannulation and other medical tasks. How does our team view our work?

SOLOMON

Solomon Barnes was born in Sierra Leone and has been working throughout the Ebola crisis as senior Community Health Officer (CHO). CHOs are an integral component of the healthcare system in Sierra Leone, where there are only 200 doctors for a population of nearly six million (about the same population as Scotland). CHO training consists of 3 years of theory and practice and then 6–12 months of supervised practice.

Before the ETC was opened there was a lot of pressure on the holding centres in and around the District of Bombali. Patients were often transported from all over the northern and the eastern parts

Figure 1 Total number of patients (top line) and numbers of confirmed Ebola cases (bottom line) in Makeni Treatment Centre, December 2014–March 2015. Reproduced with permission from Dr Matt Newport, International Medical Corps.

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of the country. Journeys were often over a hundred miles with very bad roads. Many of the patients died before getting to a health facility. Some died in the holding centres while awaiting laboratory results which might take 24 hours to 48 hours due to the heavy work load. The work was difficult, dangerous and often unrewarding before the advent of the ETCs.

The International Medical Corps’ response has done, and is still doing, a great job in the fight against this epidemic. The ETC is able to provide better healthcare to patients in a less crowded and healthier environment. There is adequate and fit for purpose PPE and protocols with much improved staff safety. The PSS teams provide maximum encouragement for patients, survivors and their families. Laboratory facilities on site allow for the timely production of accurate results, reducing the risk of non-Ebola patients becoming infected. Ebola survivors are employed in the ETC to augment the efforts of the clinical and PSS teams. They are living proof that surviving Ebola is possible and they provide support and bring hope to patients and their families.

In the future, I feel the international community needs to continue to provide a flexible approach that allows screening for viral haemorrhagic fevers with the required facilities for treatment and isolation if required.

The Ebola epidemic has broken the healthcare system of Sierra Leone. We need help to rebuild. The healthcare workers of Sierra Leone are skilled and ready for this task but we have seen the benefits brought by structured support and supervision by the international bodies. Together, I feel we can create a better healthcare system for my country.

NAGEENA

Nageena is an anaesthetist, soon to start a consultant post in Worcester.

Life in Sierra Leone is beautiful and brutal.

People here smile broadly, live happily and are resilient in the face of persistent adversity. The beautiful face of the local people contrasts harshly with their tough lives.

Ebola most commonly claims the weakest: the old and the young are most at risk. Knowing that the newborn baby born to a mother who has died of Ebola will inevitably die is hard. Watching the children daily for signs of deterioration, ready to step in early to fight a fight that will likely be lost, is hard.

Ebola seems to have plunged into the heart of the close communities and torn them apart. It is the cruellest of conditions: killing those who care for the sick. Ebola is spread through contact with bodily fluids of those who are symptomatic or have recently died from Ebola. In a society where you care for your own sick and dead, Ebola has thrived. In order to contain Ebola, the sick need to be quarantined. Therefore, mothers are unable to care for their dying offspring and children are unable to bury their dead parents. A cruel blow for a caring society.

Working in an ETC is a million miles away from the NHS.

There is so much poverty here but community and family bonds are strong. Western medicine generally costs more money than the average person has access to and the resources are poor, therefore the first point of call for most people is the traditional healer.

The care at the ETC is free for the patients and relatively well resourced. We work hard to give our patients the best chance against an often fatal disease. But the hardest thing has been to watch patients die who, in the UK, we would never allow to pass away without an intensive care, numerous senior staff, complex investigations and multiple interventions. Here, we offer good nursing care, limited medications and investigations and generous fluids. If, despite this, patients do not improve, our options are limited.

However, it’s not all hard. The day a survivor leaves our ETC is the happiest of all. It fuels hope in the patients, the staff and the wider community. Working with the local staff has been a pleasure and very humbling. Their bravery is inspiring. My time here has been a privilege.

JULIA

Julia is a senior nurse working in the community in Burnley.

As a nurse, the least that one can hope to offer in these circumstances is compassionate care but this can be extremely hard to achieve. Our eyes are the only part of our body that patients can see when we are working on the ward. In training we practised ‘smiling with our eyes’ but in truth I have forgotten how to do this. When fully ‘donned’ (protected in our PPE) the best we can do is to use a reassuring tone of voice and a touch of the hand. The wards are brightly lit, stark and very basic. But they are kept meticulously clean by the WASH team. There is no opportunity to monitor patients on anything but an infrequent basis as the teams only go in every few hours—in between times, if a patient dies they must lay until someone routinely calls on the patients, to confirm the death, a task that takes a minimum of 20 minutes.

Safety of the staff is the utmost priority and supersedes all other considerations. It is gratifying then when patients are well enough to be ambulant; to be able to see and talk to them over the fence that separates the high risk zone from the staff. Sometimes they sit outside on incongruous plastic patio chairs and we can talk to them without our PPE and this feels a welcome humanising experience in the face of this terrible disease.

VICKI

Vicki is a paramedic working with the South East Coast Ambulance Service.

I have felt so privileged to be involved in the NHS response to the Ebola outbreak in West Africa. It has been an amazing experience clinically and personally. Many of my paramedical clinical skills have been useful to the team,
including cannulation, blood taking, intraosseous needle placement and fluid replacement. You never know what you will find in the high-risk zone and the paramedic’s ability to assess and deal with anything from childbirth to pronouncing life extinct has been invaluable.

In addition to using my clinical skills, I have used my communications skills in liaising with the community case finding and quarantine teams as a District Ebola Response Coordinator role.

The main duties involved are coordinating admissions, discharges and deaths. At our peak, we have had in a day, approximately: 17 admissions, 12 discharges and 8 deaths. This involves a mass of coordinating and liaising between all teams on site, WASH, PSS, labs, warehouse, pharmacy and ambulances, as well as making sure our statistics were reported, along with liaising with surveillance teams, contact tracers, quarantine teams and community holding centre.

Being here has been challenging on so many different levels. Working for the ambulance service, I get called to scenes where the medical emergency or traumatic accident has already taken place. We do our best to treat what we can and then we transfer patients for further care, it’s such a small snapshot into their lives. Here someone arrives relatively well, we talk, I hear their story. Then their relatives arrive, we talk. Now I know their parents, children, brothers and sisters. I then watch them get sicker and sicker, then some recover slowly and some die. But I know them, I’m emotionally invested and that’s hard.

How is the epidemic progressing? Clearly the doomsday scenario of thousands of cases per week has been averted. All but three districts have been Ebola-free for 42 days and in the past week only two cases have been reported.

So how has the epidemic been brought under control? Perhaps the major factor has been the use of quarantine and emergency measures such as closing schools and public gatherings along with good disease surveillance, contact tracing and prompt referral of cases to ETCs. The ‘Western Area Surge’ in the Freetown area was a major initiative implemented in consultation with community leaders that started with distribution of antimalarial drugs and then house-to-house searches.

Safe burial practice has been another huge factor. The WASH teams are real heroes as they deal with the dead bodies that constitute the greatest risk.

The laboratory services, such as those provided by Public Health England, have been vital. They are testing all deaths by mouth swabs as well as the blood PCRs on suspected cases. This has allowed clear case definition, contact tracing and targeted quarantining.

The last links in containment of the epidemic are the ETCs to quarantine and treat suspect and confirmed cases. It does seem the aggressive treatment with intravenous fluids, antimalarials and broad spectrum antibiotics is saving some lives.

The UK response has, in our view, been highly professional. The logistical, engineering and medical support from the army and navy has been excellent. Large numbers of NHS laboratory and clinical staff have put themselves at the front line. However, the real heroes are those clinicians and burial teams who were here at the height of the epidemic; without their selflessness, the epidemic would have been much worse. As we honour and remember those who died, we also send our upmost respect to those who survive.

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