Proceedings of the Bentiu International Health Symposium

Tim J Bonner[a], Giel Y Thidor[b], Chipo Takawira[c], Igama Innocent[d], Charles Lekson[d], Pouk Ngueny[d],Andrew Williams[a], Simon Chan[c], Thomas W James[a], Frank Abebrese[e], Peter J Taylor[a], Rungano Bakasa[f], Chandrakala Jaiswal[g], Stephen E Lewis[a], Simon Turner[a] and Rory F Rickard[a]

a Defence Medical Services, United Kingdom.
b Bentiu Hospital, South Sudan.
c World Health Organization (WHO), South Sudan.
d International Organization for Migration (IOM), South Sudan.
e Formed Police Unit, Bentiu, Ghana Police Service.
f Nonviolent Peaceforce, South Sudan.
g United Nations Children's Fund (UNICEF), South Sudan.

Correspondence: Rory Rickard Rory.Rickard755@mod.gov.uk

INTRODUCTION

Healthcare workers from across the spectrum of health provision in Bentiu, South Sudan participated in a symposium on 28th June 2018. The purpose of the meeting was to discuss problems and share knowledge amongst health organisations and professionals providing care in Unity State. Nearly fifty professionals, including doctors and nurses from South Sudan, Ghana, Zimbabwe, Mongolia, Japan, India and the United Kingdom (UK) participated in the symposium. The meeting was organised and hosted by the UK-provided UN Level 2 Hospital staff, in conjunction with the UN humanitarian Health Cluster and Bentiu Hospital staff. Hiroko Hirahira, the Head of Field Office for the UN in Bentiu, welcomed the local and international experts to the symposium, and further explained that bringing the participants together was an essential element to improve the health of the people in Unity State. She described how building a health community was a core objective of her mission and of the symposium.

The people of Unity State have experienced a protracted humanitarian emergency, including famine, conflict, economic crisis and disease outbreaks. Access to health services across the state is low with many people living several days by foot from the nearest medical office. The situation is exacerbated by the mass displacement of people who have fled their own homes for safety. The UN estimates that there are over 500,000 internally displaced people (IDPs) in Unity State alone [1]. The international community has responded to this crisis in Rubkona County, by establishing the Bentiu Protection of Civilians (PoC) site to ensure the security of at least 120,000 IDPs at any one time. Clean water, sanitation and hygiene are significant challenges within the PoC site, contributing to outbreaks of vector borne diseases, acute watery diarrhoea and hepatitis. The displaced people are also at significant risk of malnutrition, rabies and endemic diseases, such as TB and HIV/AIDS. Furthermore, many adults and children are in psychological distress due to the direct and indirect effects of conflict, disruption in family life and loss of normal education.

Figure 1. The symposium was an interactive forum to share knowledge and exchange ideas about health in Unity State (credit: Rory Rickard, 2018).

The Bentiu Health Symposium was an interactive forum to share knowledge; stimulate and exchange ideas, and identify what efforts are needed to address the crisis (Figure 1). The symposium highlighted the importance of collective experience in a situation where published health surveillance data are scarce or incomplete. The participants agreed that it was necessary to understand the local situation, constraints and difficulties in order to identify what can be done next. The following sections provide an overview of the topics presented and the issues that were discussed.

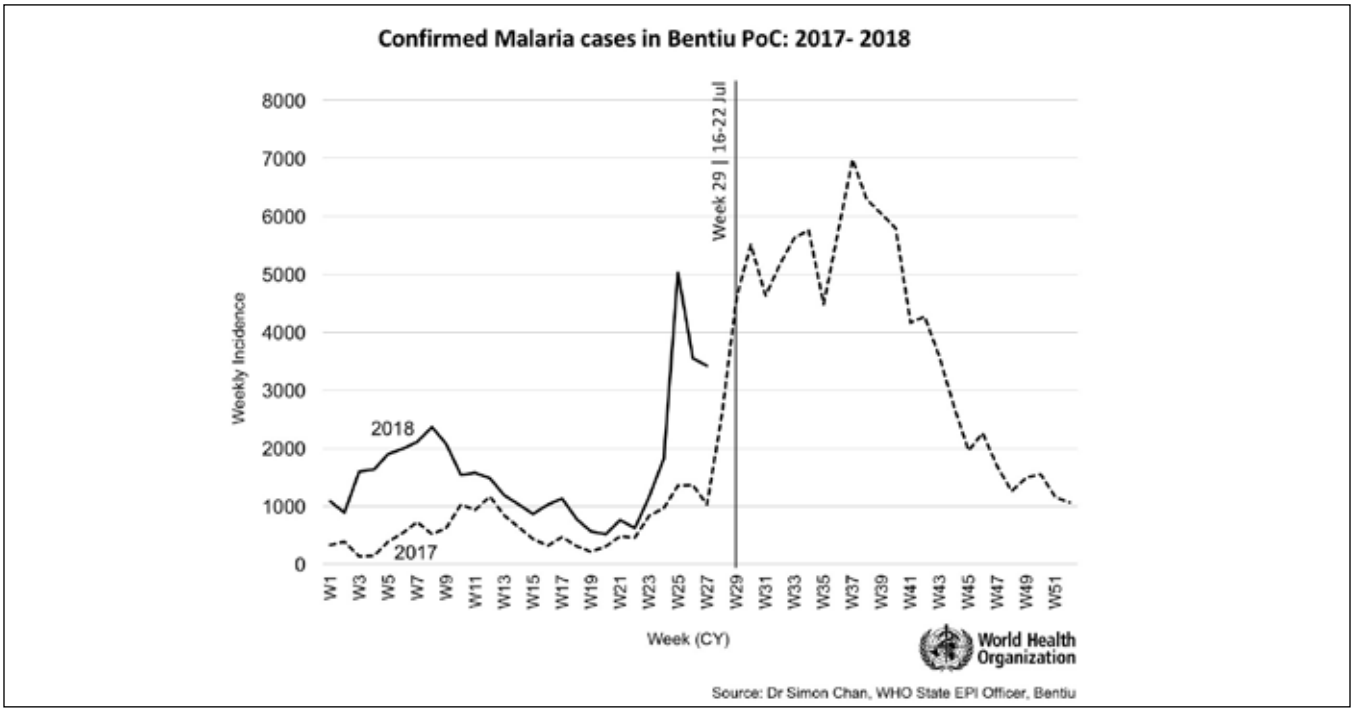

Figure 2. Trends in confirmed Malaria cases in Bentiu PoC: 2017 - 2018

THE FIGHT AGAINST DISEASE IN UNITY STATE

The first session was dedicated to tuberculosis (TB) and was opened by Igama Innocent, Charles Lekson and Pouk Ngueny from the International Organisation for Migration. Igama Innocent explained what determines the TB case definitions used in South Sudan – the site of the disease; sputum or culture status; and the patient's history of previous treatment. This allows proper case registration and notification, which then determines the required treatment. Charles Lekson, an experienced TB/HIV nurse, explained how a TB treatment card simplified the disease management into a workable protocol for a health care system where access to doctors is low. The card records disease site - pulmonary/extra-pulmonary; type of patient (age and weight); sputum smear result; HIV status; and drug treatment. Pouk Ngueny, a community health worker, summarised the key messages. Dr Andrew Williams, Consultant Physician from the UK, gave an update on advances in the diagnostic testing for TB. This focused on Whole Genome Testing, a novel technique that can rapidly determine the exact mycobacterium type and drug resistance against all first and second-line anti-tuberculous drugs. Once this becomes available in a portable platform, it will mean patients can be treated with the right medication from the time of diagnosis. This makes drug susceptibility testing obsolete, in turn reducing the spread of disease and boosting the fight against drug resistance [2].

Malaria remains one of the biggest health challenges in Unity State, associated with long-term morbidity, significant economic consequences and the leading preventable cause of death. Dr Simon Chan reported the WHO data showing the prevalence of active malaria within the Bentiu PoC site could rise to 7,000 cases per week during the rainy season (Figure 2). Eradication remains the goal with prevention, rapid diagnosis and effective treatment the mainstays of control, with effective co-ordination and monitoring critical to the success of these programmes. WHO guidelines are followed in the PoC site, with diagnosis using rapid diagnostic tests (RDT); and thick and thin blood films. Treatment follows with oral artemisinin-based combination therapy (ACT) for the majority of patients and intravenous artesunate or quinine for complicated or severe cases. Dr Thomas James, Consultant Emergency Physician from the UK, updated us on current research about malaria. This included initiatives to accelerate the development of drugs that will combat resistance, improve compliance and realise the ambition of a single medication which will both treat malaria and provide ongoing prophylaxis. One recent clinical trial has reported promising results with an oral insecticide administered to patients with malaria, which kills the biting mosquitos without significant harm to humans [3].

SEXUAL AND GENDER BASED VIOLENCE

Miss Rungano Bakasa of the Nonviolent Peaceforce gave a presentation on the barriers that survivors of Sexual and

Figure 3. The participants of the Bentiu International Health Symposium outside the new UN Level 2 Hospital (credit: Simon Turner, 2018).

Gender Based Violence (SGBV) face in accessing health services within Bentiu PoC site. SGBV refers to non-consensual penetration of the vagina, anus or mouth with any body part. The majority of SGBV survivors are women, who are often at greatest risk of assault when leaving the PoC to collect firewood. The consequences of SGBV to the survivor can be far-reaching. Sexually transmitted infections (STIs) and psychological trauma are common. Assaults resulting in pregnancy may lead to abuse by family members, forced marriage and abandonment of newborn children. Health services within the PoC can provide emergency contraception, post-exposure prophylaxis against HIV, STI treatment and psychological support. However, many SGBV survivors feel ashamed and fear stigmatisation by their family and community if they seek help. Mistrust of PoC health agencies and a lack of literacy also constitute barriers to accessing medical care. Health workers should promote accessibility by ensuring that they are both non-discriminatory and confidential. The Nonviolent Peaceforce support and advise SGBV survivors to ensure they receive the treatment they require.

WOMEN AND CHILDREN'S HEALTH

The symposium discussed the two biggest contributors to maternal mortality in South Sudan. Dr Frank Abebrese presented on Postpartum Haemorrhage (PPH) and Dr Giel Thidor discussed Hypertensive Disorders of Pregnancy. Common to both is the need for clear guidelines for management and referral between community clinics and hospital. The importance of Active Management of the Third Stage of Labour (AMTSL) to help reduce PPH was stressed and the way in which this is promoted at the community level. A number of available low-resource techniques for more severe cases, such as an intrauterine balloon tamponade device fashioned from a sterile glove and Foley urinary catheter were described. We also discussed the management of Vesicovaginal Fistula (VVF) and its prevention. It was felt that improvements in overall obstetric and midwifery care at every level should be a priority across all sections of society if this terrible condition is to be avoided in the future. Furthermore, the local doctors proposed that they could benefit from expert training in the management of VVF, either in South Sudan or by visiting international centres of excellence.

The afternoon featured a session by Dr Chandrakala Jaiswal, who presented the aims and research behind UNICEF's programme to improve early child development in Unity State [4]. The first 1,000 days programme, from conception to the child's second birthday, addresses this critical period when there is maximal neural development during life. The programme addresses both nutrition and the psychosocial well-being of children during this period, as one cannot work without the other. Good nutrition during pregnancy is essential to development of the foetus and child. Breast milk only is the preferred option for the first six-months of life, then complemented by nutritious foods whilst continuing to breast feed until the second birthday. Proper nutrition in the PoC site is supported with antenatal care, vaccinations, health screening, counselling and support to parents. Psychosocial well-being is also critical because there are high rates of distress amongst adults and children who have been exposed to conflict and internal displacement. Interventions are targeted to support parents, advocate children's rights, and secure good education for children by parents and teachers. For example, emotional and intellectual child development is promoted by UNICEF programmes by encouraging play, and promoting positive experiences with at least one parent or principal adult. Children born within the PoC site are vital to the future, which was appropriately guided by the quotation, "if we change the beginning of the story, we change the whole story" (Raffi Cavoukian, 2016).

NEW HOSPITAL IN BENTIU

The Clinical Director of the UK-provided UN Level 2 Hospital in Bentiu, Professor Rory Rickard and the UK's senior Engineering Officer, Major Ben Sinclair provided an update and tour of the new UN Level 2 Hospital site. The new hospital has been built during 2017-2018 by a task force of Royal Engineers on behalf of the UK Government for the UN, with a completion date expected in October 2018. The medical facility will have an in-patient capacity of 20 beds and two intensive care beds with specialists in emergency care, medicine and trauma surgery. The hospital will also offer a primary care treatment centre, physiotherapy services, radiology and dentistry. Whilst the hospital's principal mission will be to provide care to the staff and organisations working on behalf of the UN, it will be a significant piece of infrastructure to assist the relief of the humanitarian crisis and is expected to last for many years with the right care and attention. Figure 3 shows a photograph of the symposium participants outside the new hospital.

SUMMARY

The symposium, for the first time, brought together all healthcare groups, from South Sudanese government-provided healthcare facilities, national and international NGOs and UN medical staff. It highlighted the health risks in Unity State related to disease, SGBV, obstetric care and nutrition. Common to each of these challenges, the presentations identified that systems of care relevant to the situation in Unity State are required. Guidelines for care need to be robust and sufficiently straight-forward, such that care workers with limited training can provide evidence-based healthcare to large populations. Work and engagement is needed to produce these systems of care and to integrate them into the current practices in Unity State and the Ministry of Health, South Sudan. The discussion about midwifery and obstetric care illustrated how guidelines and training might help to reduce maternal and neonatal morbidity and mortality. For example, approved systems for transferring patients to facilities with higher levels of surgical, medical and obstetric services will help to achieve time-critical emergency care. These improvements can only occur if the health community has reliable communications, good transportation and security to transfer patients safely. These are goals that remain a priority for the government and international community.

Many of the participants observed that the optimal allocation of limited health resources is hindered by the scarcity of reliable surveillance information. The response to any humanitarian crisis could be helped with further data on nutrition, child growth, disease incidence, resistance to antimicrobial agents, obstetric problems and mental health. For example, reliable data could justify the case for investment in the most appropriate novel future technologies, such as genotyping for TB and other diseases, or novel medicines to prevent and treat malaria. The information can also be used to drive the training requirement for doctors, nurses and care workers in the region.

The symposium covered a broad range of topics and built new relationships between the different health organisations. We recommended that a regular forum to discuss difficult patient cases or complex health concerns in the Bentiu PoC site and across Unity State would be a worthwhile project. All the participants valued the meeting, departed with new friendships, and a sense of purpose and hope for the future.

References

1. UN Office for the Coordination of Humanitarian Affairs. Humanitarian Needs Overview – South 2018. Published Nov 2017. Available from: https://reliefweb.int/report/south-sudan/2018-south-sudan-humanitarian-needs-overview. [Accessed 2nd July 2018].
2. Papaventsis D, Casali N, Kontsevaya I, Drobniewski F, Cirillo DM, Nikolayevskyy V. Whole genome sequencing of Mycobacterium tuberculosis for detection of drug resistance: a systematic review. Clinical Microbiology and Infection. 2017; 23(2):61-8.
3. Smit MR, Ochomo EO, Aljayyoussi G, Kwambai TK, et al. Safety and mosquitocidal efficacy of high-dose ivermectin when co-administered with dihydroartemisinin-piperaquine in Kenyan adults with uncomplicated malaria (IVERMAL): a randomised, double-blind, placebo-controlled trial. Lancet Infect Dis. 2018; 18(6):615-626. DOI: https://doi.org/10.1016/S1473-3099(18)30163-4
4. United Nations Children's Fund (UNICEF) Country Programme Document – South Sudan. Published Jun 2018. Available at https://www.unicef.org/about/execboard/files/2018-PL12-South_Sudan_draft_CPD-EN-2018.06.19.pdf. [Accessed 2nd July 2018].