



EBOLA LESSONS LEARNED

CONFERENCE ON THE EBOLA RESPONSE
IN WEST AFRICA IN 2014-2015

CONFERENCE REPORT

GOAL

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Introduction by Barry Andrews

Following the largest recorded outbreak of Ebola in 2014 - 2015 in West Africa, the humanitarian community, including donors, agencies, and health teams across the world, stand together in a watershed moment. We have a choice: we can dust ourselves down, and move on, wait for the next and newest crisis, or we can reflect, review and reconsider. This conference report seeks to capture the dynamic discussion at GOAL's Ebola Lesson Learning conference and propose the next steps to ensure the humanitarian community leverages these lessons with practical action towards higher standards and stronger, more effective epidemic responses.

While the outbreak was and continues to be a tragedy for thousands of people - the unprecedented exposure of so many responders to treating the disease provides an opportunity to use a far higher level of collective knowledge and experience to forge ahead in our efforts to defeat Ebola. We were particularly pleased to welcome representatives from the Ministries of Health in Sierre Leone, Liberia and Guinea to the conference. The healthworkers of the affected countries suffered greatly in the response and our sympathies extend to the friends, families and colleagues on the loss of so many. The citizens of these countries also gave and lost so much, and we remember them best by reflecting, reconsidering and and strengthening our contribution.

We're immensely grateful to all our conference speakers for their candid, informed and stimulating inputs. The strength of the conference owes much to the collaborative support from the World Health Organisation (WHO) and Médecines sans Frontières in shaping the agenda, and speaker list. I thank also, both DfID and the WHO for their generous support for this gathering.

We've had generous praise for the quality of the inputs at the conference across each of the dimensions with excellent key speakers and thought provoking respondents. Each session was complimented by a workshop which sought to identify the necessary steps to strengthen future epidemic responses. Our goal now is to ensure that the energy, vitality and constructive thinking at the conference is turned into action. This document includes clear, practical next steps to ensure that the conference was not just another talking shop. The recommendations from these discussions and workshops are set out in Appendix 1, along with our proposals on the leadership and collaborations which can realise these ambitions. Some of these recommendations are familiar, others are bold, all are vital. GOAL's new Global Health Team will be engaging with the international leadership, in particular the World Health Organisation, to monitor the uptake of these challenges. You can follow this progress on our website at www.goalglobal.org.

I hope you find the report stimulating reading and that each of us will step up, and take our place in the global effort to improve preparedness, strengthen responses and support communities in recovery more effectively.



Barry Andrews, GOAL

Executive Summary

GOAL hosted the April 2016 Ebola Lessons Learning Conference because we believe more lives will be saved, and fewer families and communities will be devastated only if we learn from the Ebola Response of 2014/15 to strengthen preparedness, responsiveness and recovery. The conference was planned with colleagues from the World Health Organisation and MSF with financial support from the WHO and the UK Department for International Development.

Keynote Speakers at the conference were Dr Sylvie Briand of the World Health Organisation, and Prof David Heymann of the London School of Hygiene and Tropical Medicine. Dr Briand presented an overview of the outbreak and response and outlined reforms at the World Health Organisation and recent initiatives to strengthen future responses. Prof Heymann placed the recent outbreak in its historical context and proposed key elements in a balanced approach to prevent and contain future outbreaks.

Over 120 technical experts from International NGOS, academia and public health institutions attended the two day conference reflecting on lessons learned across eight core dimensions of the response, including what we learned about treatment protocols, new standards for Ebola Treatment Centres and equipment, how to better engage communities in the response, support survivors more effectively, and perhaps most importantly, how to strengthen preparedness with more robust health information and surveillance systems.

Eight workshops were held and recommendations from these are set out in Appendix One.

Key recommendations from the Conference include:

1. Convene working groups comprised of appropriate experts to identify challenges and/or practical solutions in the areas of:
 - ETC Design and Construction
 - Clinical Protocols (including survivors)
 - PPE and Equipment
 - IPC
 - Data Management
 - Surveillance and Contact Tracing
 - Social Mobilization.
2. Support healthcare and public health systems strengthening through the implementation of IDSR/CBS, and improvements in the workforce in terms of surveillance, IPC, etc.
3. Continue efforts to define risks associated with survivor transmission and required services, to reduce the risk of survivor reintroduction.
4. Address barriers to identifying a research agenda, addressing new research questions, and develop a robust and comprehensive EVD information management system to improve response, surveillance and research activities before and during any further outbreaks.

GOAL's Global Health Unit in London will engage the international leaders in these areas to ensure follow up.

Opening Speech - Day One

Dr Sylvie. Briand, WHO
What lessons can we learn about Centre and Community Based interventions from West Africa 2014/15, and how can we embed these in new practices?

Dr Sylvie. Briand, WHO



Dr. Briand presented an overview of the outbreak and response to the Ebola Virus Disease in West Africa (2014-2015) which had an unprecedented health impact (28,646 cases, 11,323 deaths), geographical spread (including 3 countries with intense transmission: Guinea, Liberia, Sierra Leone) and international response.

The key objective for the WHO was how to stop transmission and reduce mortality.

The 3 pillars for containment were:

- contract tracing
- establishment of an Ebola Treatment Centre
- supervised burial

Key challenges included community resistance to the treatment of EVD and partners involvement. The question of isolation in relation to the quality of care of people in quarantine and issues regarding movement of people were also highlighted.

In terms of adaptation, Community Care Centres proved to be an innovative approach which demonstrated efficiency in reducing transmission while reductions in mortality rates from 70% to 30% were achieved through adequate care.

Looking forward, WHO is currently restructuring to be fit for purpose. There are still significant challenges in terms of controlling epidemics through contract tracing; seen in South Korea with the spread of the MERS virus. WHO have developed a timeline of major infectious threats and collaborative efforts to fight against them.

Session 1

Clinical protocols, clinical governance, clinical supervision: reflection on best practice and unresolved challenges

Session Overview

Nikki Shindo of the World Health Organization (WHO) provided the key input for the session. Her main points were that we must put as much effort into the care of the individual patient as we do into contact tracing as part of the strategy to bring an Ebola virus disease (EVD) outbreak under control. The concept of an Ebola treatment centre's (ETC) main purpose being to isolate patients is outdated. Rather the purpose of an ETC is to treat and isolate patients and protect healthcare workers. The quality of care in an ETC has a direct effect on the willingness of the community to attend the ETC and therefore the transmission of disease. WHO's main role in improving clinical care in ETCs involved: clinical governance, clinical guidance, training and clinical research.

Armand Sprecher from Médecins Sans Frontières (MSF) highlighted the point that the clinical care of patients with EVD is a holistic process and that there are many aspects of treatment aside from just interventions focused on reducing mortality. This is especially the case with regards to vulnerable patients (e.g. children).

Alex Salam from GOAL highlighted the differences in care between developed countries and resource limited countries, and that delivering similar care in resource limited settings on a large scale is unrealistic. The focus of care should be therefore on what can make the biggest difference to mortality, namely fluid and electrolyte replacement and nutrition. The delivery of this care in a resource limited setting is incredibly difficult however, and ultimately rests on improvements in ETC and Personal Protective Equipment (PPE) design and staffing.

Dr. Umar Ahmed from Emergency described his experience in Sierra Leone providing high level care to EVD patients, including mechanical ventilation and renal replacement therapy. Whilst he described this as feasible, it required large numbers of trained staff.

Session Workshop - Key Findings

Recommendations

The workshop group agreed on the following key recommendations for strengthening preparedness and recovery, improving the response, and scaling-up.

Addressing gaps in our knowledge about the disease through research is an integral component of ultimately improving the care that we deliver to patients. These gaps in our knowledge are particularly relevant with regards to special and vulnerable populations, such as pregnant women, children, and HIV infected individuals. These gaps extend beyond the immediate disease into the recovery phase of the disease, for example survivor syndromes and immunity. For example, it is currently unclear whether survivors are immune to re-infection and whether they can be used as care givers.

Clinical protocols are vital in a large scale outbreak, especially in a resource limited setting. Protocols should exist pre-outbreak, and be based on evidence where possible. In the absence of evidence they should reflect the known pathophysiology of the disease or the pathophysiology of similar diseases. Protocols should be simple and easy to implement for a large number of patients, keeping in mind the limitations of PPE and ETC design. Protocols however need to be revised real time based on new disease features, research findings and experience. For example, previous experience with EVD had not described the large volume fluid losses that were a feature in this outbreak. Thus as clinicians became aware of this, this should have informed clinical

protocols. Therefore, there needs to be good communication between healthcare workers within and between countries and discussions around the evolving features of the disease. Given that many clinical aspects of an emerging infection are unknown, research agendas and protocols should be designed in advance of an outbreak, be generalizable to an extent, and be imbedded in the outbreak response.

Given that EVD patients can be broadly classified into 3 groups - mild disease, moderate/severe disease and fulminant disease - the wards in treatment facilities should be classified accordingly to help direct and focus clinical efforts. A robust and objective grading mechanism and predictors of disease progression is needed for this to be effective and reliable.

Given the similarity with which many infectious diseases present, sensitive yet specific alert and triage systems are a significant challenge. With regards to EVD, there is a wealth of data from the recent outbreak that can inform improved triage tools and case definitions. As for clinical protocols, triage tools should be updated during an outbreak based on real time analysis of patient data. There needs to be improved communication between surveillance officers and clinicians as part of this process. There is a need for in country laboratory expertise to enable rapid identification of potential outbreak microorganisms. Part of the research agenda during peacetime however should be the development of point of care tests for potential outbreak pathogens. Point of care tests enable rapid and easy diagnosis and thus have a significant impact on quality of care.

There is a need to more generally improve the health infrastructures in resource limited countries that are at risk of outbreaks. Part of this process involves the training of clinical staff in the recognition and care of patients with potential outbreak pathogens.



Nikki Shindo, WHO



Armand Sprecher, MSF



Alex Salam, GOAL



Dr. Umar Ahmed, Emergency

Session 2

Building Better Ebola Treatment Centres (ETC): Strengthening Standards for ETCS (design and construction for centres, patient flow, WASH, CCCs, holding Centres and Treatment Centres), ETC Design

Session Overview

The speakers in this session were drawn from organisations that have gained significant experience in designing, building, using and maintaining Ebola Treatment Centres (ETCs) in the recent and past outbreaks.

Keynote speakers, Francis Cathelain and Rosa Crestani from MSF reminded the conference of the purpose of ETCs which were to: prevent risks of transmission in communities and health structures, limit the impact of the outbreak and ensure the best possible patient care.

They also highlighted the challenges faced in the recent West Africa Ebola response and the differences between this and previous outbreaks. This was an extraordinary occurrence in terms of:

- Geographic scale and numbers of people affected,
- Effects on urban, peri-urban areas as well as rural,
- Requirement of more ETCs and larger ETCs than ever previously constructed,
- Lack of trained staff in sufficient numbers,
- Time lag in construction of ETCs,
- The duration of the outbreak meant ETCs had to be maintained and have some measure of durability - not a consideration in previous out breaks,
- Difficulties of acceptance when constructing near or within a community and how these might be mitigated.

However, despite the differences in this outbreak, there remains fundamental principles in the design and construction of ETCs.

Ammar Fawzi of GOAL, Pranav Shetty of International Medical Corps (IMC), and Nick Francis of Eadon Consulting highlighted the importance of basic considerations, such as:

- The area used for building in terms of type of ground and gradient,
- The importance of understanding patient throughput,
- The scale of water infrastructure required and the intensive chlorinated water usage that degraded pipes, tanks and filters,
- The size and importance of incinerators,
- The scale of the doffing area required to ensure staff waiting times were minimised,
- The difficulties inherent in maintaining infrastructure inside the red zone,
- The experience of ensuring visitors had safe access to relatives,
- The challenges of picking safe sites for burial, waste management and sewage.

Session Workshop - Key Findings

The workshop group agreed on the following key recommendations for strengthening preparedness and recovery, improving the response, and scaling-up.

Challenges

The workshop acknowledged that during the recent West Africa Ebola outbreak a number of different Ebola Treatment Centre (ETC) designs were used with varying degrees of success. It was also noted that there is no universally accepted design or construction method and that in some cases this led to less than optimal ETC facilities.

Without commonly agreed understandings of a design and construction method, the building of an ETC can be subject to numerous considerations including context, location, cost, local politics and community dynamics.

There is a short window of opportunity to harvest the expertise of those involved in the recent Ebola response before staff turnover and capacity dwindles.

There were a number of issues that made the agreement of a standard template ETC design highly challenging.

- A number of organisations were working on internal designs. Each organisation had slightly different timelines and methods for this
- Contextual differences made developing a standard ETC design very challenging
- The phasing of a response also made standard designs a challenge to develop:
 - phase 1 - assessment of context and emergency set up
 - phase 2 - stabilise, train staff & develop centre
 - phase 3 - quality, expand centre if necessary or add on modules.
- Any standard design required credibility and some kind of legitimacy or institutional weight behind it

Recommendations

It was agreed that the sector should leverage the available expertise and combined work to compile the best knowledge and experience from various agencies to define the underlying principles of design, establish basic guidelines for design, layout and construction, and outline key dos and don'ts for ETCs. This would require a working group of key responders, a credible lead agency to provide the institutional weight, a coordinating team, and some funding to enable the development, appropriate discussion, and meetings.

The objective would be the development and provision of a resource that defines and sets out clear principles, guidelines and considerations for designing and building ETCs available to implementing agencies, international donors, coordinating agencies and host Governments.



Francis Cathelain
Rosa Crestani, MSF



Ammar Fawzi, GOAL
Nick Francis, Eadon Consulting



Pranav Shetty, IMC

These guidelines would be predicated on the understanding that differing contexts, geography, populations, resources, caseloads and other practical considerations may affect how any individual ETC is designed and built, but that:

- there are certain underlying fundamental factors that have to be taken into account to ensure a basic level of safety and quality
- there are general practical considerations of location and construction that remain constant irrespective of the context
- there are layouts/designs that will prove useful as a starting point from which to develop a facility fully appropriate to the context
- there is a requirement to arrive at a basic agreement on broad guidelines of design for the purposes of training, common terminology, budgeting, procurement standards and stakeholder understanding.

Building the development group would begin by inviting a number of key responding agencies and a credible agency to lead to take part. It was agreed that the lead agency should be World Health Organisation (WHO) and that the agencies that would advise on the guideline development should include MSF. Other members of the group would be IMC, GOAL, Save the Children, and Aspen, among others. A series of meetings/working groups would take place to gain a shared understanding and develop clear guidelines for use.

The roll out of the group would involve printing, translation, dissemination and training plan and implementation and the estimated duration would be 9 months.

Estimated budget for working group:

Item	# of items	Months	Cost	Total
Project Coordinator	1	9	7,000€	63,000€
Project officer	0.25	9	5,000€	11,250€
Meeting costs	3	1	6,000€	18,000€
Transport + accommodation	3	1	15,000€	45,000€
Communication costs	1	9	200€	1,800€
Printing / IT roll out	1	1	20,000€	20,000€
Total costs				159,050€

Session 3

Review of Equipment/PPE Protocols What were the issues and what can we learn?

Session Overview

Keynote speakers, Constanza Vallenias and Adriana Velazquez from the WHO, and respondents from MSF, UKMED and the Department for International Development (DfID) highlighted the key issues to standard setters and practitioners in the field. In particular, speakers noted that a variety of Infection Prevention and Control (IPC) practices were occurring in the field, with potential for creating confusion particularly in relation to Personal Protective Equipment (PPE), hand hygiene and disinfection/spraying.

According to the speakers, actors responding to Ebola faced the following challenges:

- No “standard” PPE for Ebola or other communicable diseases and a lack of compatibility between PPE elements
- Variations across the different actors/suppliers in: naming, quality/standards, packaging, compliance, pricing, shipping and storage and usage
- Need for laboratory testing to verify PPE fit for purpose (shelf life is 5 years) and to consider safety, protection, resistance, efficiency, fire etc. in supply selection
- Bottlenecks in supplier manufacturing pipelines. Securing manufacturers’ commitment to enable build-up of stock and maintain quality
- Need for cost effective purchase, shipping and storage to offset high price of air freight during emergencies
- Lack of harmonized training on donning and doffing of PPE
- Lack of evidence on the stability and inactivation of the virus in different environments (fomites, liquid waste, PPE)
- Gaps in monitoring and technical guidance for implementation.

On the day, the speakers reached the following conclusions:

- PPE should protect the mucosae (mouth, nose and eyes) from contaminated droplets and fluids, must be appropriate for role/context e.g. burials in the rain and a procedure for taking off/doffing PPE is crucial.
- Hands are known to transmit pathogens to other parts of the body and to others. Therefore, hand hygiene and gloves are essential to protect the health worker and to prevent transmission.
- Health workers need the best possible protection against filovirus infection while allowing them to deliver the best care to patients with ease, dexterity, comfort and minimal heat-associated stress.
- Current PPE testing protocols vary across laboratories so there is a need for global standards for testing for each type of PPE.
- Previous outbreaks must be reviewed and global benchmarks agreed so that levels of stock can be pre-positioned centrally to respond to future outbreaks.
- A global standard for PPE and IPC kits and protocols for each primary viral haemorrhagic fever (VHF) was agreed by all main responders and agencies.

Session Workshop – Key Findings

The workshop group agreed on the following key recommendations for strengthening preparedness and recovery, improving the response, and scaling-up.

Challenges

The standards and approaches to PPE are currently vastly different, conflicting and frequently politicized. As well as this, there are discrepancies in the availability and use of PPE due to variation in brands.



Constanza Vallenás, WHO



Adriana Velázquez, WHO

Recommendations

There is a need for an internationally recognised gold standard PPE package and IPC protocols, to prevent confusion and allow pre-positioning of stock in advance of an outbreak. This would include clear criteria for PPE, outlining what equipment should be available for every role and skill set involved in the response to ensure appropriate use.

Rapid deployment requires kits not individual items, with a 30 day supply held at the global level available for initial response and a 6 month supply of back up stocks available to enable rapid scale up. To achieve this, PPE stock should be mapped by location, quantity and technical specifications, linking with existing emergency supply preparedness activities. The WHO should then ensure that stock reaches where it is needed most, and not held in excess by those that can afford it.

At-risk countries should prepare for outbreaks, with resources and plans in place such as stock, staff, vehicles, support structures, communication trees and strategies. These must be supported by an effective, funded supply chain and stock management system, allowing tracking of stock, flow monitoring and rapid distribution. Forecasting software to monitor consumption and personnel requirements that can handle multiple scenarios (e.g. variations case load) would assist in determining needs - ideally one standard version accessible to all.

Immediate detection of Ebola is key and there should be no delay in declaring or responding. Shortfalls in funding can hinder a response if not targeted to where it is needed most and any response should cover ETCs and non-ETC health facilities.

There should be an interagency toolbox with information on PPE, IPC training and messaging available online via an open access platform offering computer games/apps; mobile technology; standardised messages and training modules. Effective messaging can help increase community engagement and a demand for quality services.

Outbreak control guidelines need to be both technical and operational, and budgets should reflect this. Training should be led by the Ministry of Health (MoH), and standards set with packages for each category of staff with competencies based on level of care, facility type, and staff cadre. These should be embedded into basic and pre-service training courses, including emergency preparedness and response. Standardisation would facilitate movement of staff between facilities.

Training all healthcare staff is unfeasible so a core team (i.e. dedicated to investigation, response initiation, refresher training, etc.) should be developed and deployed by the MoH. Democratic Republic of the Congo (DRC) and Uganda are good models for such initiatives.

Rapid deployment should allow on-the-job training, coaching/mixed teams, supervision, and mentorship which proved successful in the recent Ebola response. External (if possible) biosafety checks, learning and assessment of PPE/IPC practices should promote harmonization across agencies supported by performance management, clinical governance and compliance. Response and recovery plans require follow-up to ensure relevance and implementation.

An interagency contact group, led by WHO (comprising technical and logistical staff), should be tasked with identifying PPE criteria, specifications etc. with a wider review group.

Session 4

Non-Ebola Health Facilities:

What were the key challenges, what are the new priorities and how can we be better prepared for future outbreaks?

Session Overview

Erin Polich, formerly the Emergency and Transition Coordinator at GOAL Sierra Leone, and who worked as part of an NGO Health Consortium with National Coverage during the epidemic in Sierra Leone provided the key input for the session.

Erin made the point that the health system did not collapse during the outbreak in Sierra Leone, however initially the support to it did, and ignoring non-Ebola health facilities and staff perpetuated the outbreak and led to further infections. Political intervention was crucial for getting the requisite support to the regular health services which saw staff and supplies diverted.

Despite initial panic amongst health care providers, the vast majority of primary health facilities remained open. Data from Oct 2014 showed that only 4.1% of public health units (PHU) closed, and 4% had previously been closed but reopened. Health Care Worker (HCW) deaths affected the availability of qualified personnel (particularly the specialists in hospitals), however they did not close facilities. HCWs did not stop working although some moved to ETCs and Community Care Centres (CCCs). HCWs continued to treat despite the risks, and did so without sufficient training or supplies.

Health seeking behaviour changed due to various reasons: some linked to fear of infection and fear of being referred to ETC, others to the vilification by Traditional Healers in the government, as well as the lack of supplies and in some cases skilled health workers.

When support was finally provided it was focused on IPC. 1,118 PHUs were trained in IPC in late 2014 with full supplies of PPE provided. The mentorship approach proved most successful with supportive supervision and facility monitoring. In the case of hospitals WHO/Centers for Disease Control and Prevention (CDC)/MoHs conducted periodic assessments throughout the Ebola epidemic, but no consistent support was provided until 22 hospitals were trained in IPC at the beginning of April 2015 and the mentorship approach was embedded in hospitals with supportive supervision and ward monitoring. MoHs IPC Directorate was established and every district now has an IPC focal point, and every hospital has an IPC focal point and mentor.

Session Workshop - Key Findings

Recommendations

The workshop group agreed on the following key recommendations for strengthening preparedness and recovery, improving the response, and scaling-up.

Strengthening Preparedness

- General health systems strengthening (HSS), including coordination mechanisms, supply chain, reporting/HIS mechanisms
- Continue working towards minimum IPC, screening and isolation standards
- Prewrite standard operating procedures (SOP) - including for pregnant women - and district management plans
- Improve accountability: HCW payment and adherence to protocols.
- Effective communication strategies for behaviour change amongst HCW e.g. competitive element, dry runs.

Improving Response

- Ring IPC and surveillance strategy
- Actively ensure that triage and isolation are in place
- IPC is not only PPE, so training on basics can happen without PPE supplies, standard precautions should be adapted in

- different contexts e.g. for pregnant women
- Mobile health facilities/teams should provide support to high risk communities
- At district level, there should be a pool of staff that can be rapidly deployed
- Feasibility to engage in large scale activities even during an outbreak e.g. malaria prophylaxes, vaccination
- Strong coordination needs to be put in place
- Communication plan should be in place - messages provided to population should be clear and reassuring including reducing stigma towards use of health facilities.
- Research that provides evidence, both clinical and behavioral, of what is necessary to improve survival.

Scaling Up

- Develop emergency preparedness plan for each county, prioritise actions and resource it, both in host and donor nations and at district level, while ensuring there is fidelity to the plan
- People should be predesignated to deploy - i.e. trained and agreed with current employer that they can be moved and exercised every 3 months.
- PPE and Water, Sanitation and Health (WASH) supplies should be stock piled - especially those that can be used for several diseases
- Governance structure for ensuring minimum standards are maintained in general health facilities
- Sustaining the cohort of community level surveillance.

Strengthening Recovery

- Basic standard IPC measures need to be in place.
- Information flow and management is key, ensuring communication is clear between the population and the health care facilities
- Community Health Volunteers should act as a liaison between the health care facilities and the community
- Vaccinations
- A holistic approach should be taken, focusing on strengthening the health system as a whole
- Invest in government and community ownership as they will be there after the INGOs leave
- Work with the government to ensure support for NGOs is not undermined and secure political buy in for preparedness and health systems strengthening



Erin Polich, GOAL



Dr Yatta S. Wapoe,
Ministry of Health - Liberia

Opening Speech - Day Two

Prof. David Heymann Communities at the forefront of the Ebola Response

Prof David Heymann,
London School of
Hygiene and Tropical
Medicine



Speaking on his past experience of treating Ebola Virus Disease, Professor Heymann gave an insightful historical overview of previous Ebola epidemics dating from 1976 (Democratic Republic of Congo - DRC) to 2015 (West Africa) demonstrating patterns of containment of the virus which could serve as basis for further research.

He discussed causes and conduits of the virus including animal to animal transmission, spontaneous containment of Ebola outbreak in DRC, hospital infection control and community reporting in Zaire and the recent Ebola outbreak in West Africa where countries such as Senegal, Mali and Nigeria were capable of containing the virus.

He concluded his presentation by emphasizing that a balanced approach is required to stop outbreaks of Ebola. These include hospital infection control and health worker protection, patient identification, management and isolation, surveillance/contact tracing, and community understanding with safe patient and body transport systems, safe burial and household/environmental decontamination

Session 5

Social Mobilisation: What did we learn about the value of understanding socio-cultural dynamics & the importance of participatory approaches, in preventing transmission?

Session Overview

The key speaker, Katharine Owen, of the Social Mobilisation Action Consortium (SMAC)/GOAL, focussed on three main lessons from experiences of the national social mobilisation pillar as a whole, in Sierra Leone. She set the scene by discussing “initial panic-driven, top-down response” to the outbreak involving strong military presence and the implementation of social mobilisation activities as an after-thought and the rapid exponential spread of cases in the first six months.

The first lesson learned was the importance of working with communities and not against them. It was emphasised that this was not a new lesson but something which has been learnt and documented following multiple other Ebola outbreaks in Africa. However, it was overlooked. It is important to recognise that international/national responses can be part of the problem and identify existing epidemic cultural models; appreciating that communities can have health-enhancing practices; and avoiding the assumption that ‘traditional beliefs’ are always the problem and never the solution.

There is a need to utilise multiple channels and participatory approaches. Building on existing, trusted local communication sources rather than ‘shipping in’ social mobilisers, and the importance of those sources using participatory approaches to engage communities, was discussed. This point was illustrated with the example of the Community-Led Ebola Action (CLEA) approach implemented in 10,000 communities in Sierra Leone with positive behaviour change outcomes. There is a need to embed community based interventions in the broader response in order to improve information flow to and from communities and to increase acceptance and uptake of services, as well as quality of services.

Katharine closed by adding that there is a need to go beyond lessons learnt and highlighted the fact that many of these lessons have been learnt before. How do we go beyond just re-learning them every time there is an outbreak to ensuring they are permanently learnt and accepted, and utilised in the early stages of a new outbreak.

Elizabeth Sermlimitsos, of the John Hopkins Centre for Communication Programs discussed “communication as the steering wheel, not the spare wheel” and the importance of understanding the reasons behind people’s behaviours before trying to facilitate uptake of new behaviours. She discussed the importance of targeting key problematic behaviours in an outbreak, rather than all behaviours (i.e. those that strongly link to Ebola transmission – such as washing the bodies of the deceased – rather than lack of handwashing among the general population), and using appropriate, persuasive techniques rather than assuming that because people know a certain fact, they will change their behaviours. Elizabeth concluded by asking what behaviours we should be targeting now, in a post-outbreak context, and which should be allowed to lapse.

Amanda McClelland, of the International Federation of Red Cross and Red Crescent Societies (IFRC) discussed the challenges of ensuring community engagement in the context of an already out-of-control outbreak. She referred to the time-sensitive nature of outbreak control and the lack of time for lengthy research. She highlighted examples of community-level challenges regarding safe, dignified medical burials and concerns regarding staff safety when sending social mobilisers/health promoters/burial teams etc. into communities who were mistrustful or scared.

Juliette Bedford, of Anthrologica gave positive examples of genuinely community-led responses in Liberia and went on to discuss the ways in which anthropology and social scientists can assist during an outbreak, to ensure communities are better understood and community engagement is not overlooked or done inappropriately, without necessarily taking a lot of time.

Juliette referenced activating networks of existing anthropologists and social scientists; crowd sourcing information; providing briefings, guidance notes, tools; giving technical support; conducting rapid research; and helping to operationalise and apply

findings. She went on to discuss how social anthropologists and social scientists would consider the 'community' as the central unit of analysis and seek to open and coordinate flows of information to and from communities in the response. They would also be striving to achieve mutual accountability, agency to act, and partnership. She concluded by discussing the current Zika outbreak and response and the ways community engagement was being considered there, but also the repetition of many of the same mistakes as were seen at the start of the Ebola outbreak, where not enough importance was being placed on community engagement.

Session Workshop – Key Findings

Recommendations

The workshop group agreed on the following key recommendations for strengthening preparedness and recovery, improving the response, and scaling-up.

Strengthening Preparedness

- Know what local manpower and resources exist before an outbreak occurs and invest in it. Mapping existing, trusted local communication sources ahead of time, and delivering training enhances their capacity to deliver participatory approaches in the event of an emergency.
- Support, strengthen and foster greater partnerships with local media which can be easily mobilised in event of an emergency, avoiding harmful reporting and improving the transfer of accurate, appropriate information to the population.
- Improve telecommunications, mobile phone coverage, radio broadcasting signals, access to internet etc. so that a greater proportion of population can be reached quickly.
- Improve coordination on the ground, even in non-emergency contexts. NGOs and local governments should know who works where and who is doing what so that relevant actors can be called upon to respond quickly to targeted incidences.
- Improve data-management systems so that more is known about regions/districts/health centres/villages etc. in non-emergency contexts so that emergency responses can be better tailored and safer.
- Develop humanitarian guidelines and strategies/minimum standards for social mobilisation which embed social mobilisation in the broader response and harmonize approaches to be adopted by all actors.
- Develop practical guidance for NGOs which discuss things like staff deployment, risk mitigation, insurance etc.

Improving Response

- WHO to advocate for governments to acknowledge an emergency early so that the response can start. Politics and slow declarations can hamper the ability to respond.
- Donors should be flexible with funds granted so that development funds can be reallocated at the first sign of an emergency, and also so that social mobilisation approaches can evolve in line with the outbreak and its changing needs rather than being tied down in dated logframes etc.
- Draw on existing assets and resources rather than waiting for/relying on international responders or activating social mobilisers from other areas, which can often be less effective.
- Ensure development and humanitarian sectors work together from the beginning of the outbreak. Development actors often have the contextual insights, networks, and community-trust needed to design appropriate social mobilisation activities which draw on existing assets and resources. Humanitarian actors can help take these activities to scale, fast.

Scaling Up

- Utilise modern technology (mobile phones, WhatsApp etc.), continuously monitor effectiveness and adapt messaging/activities as needs change.
- Empower communities to lead the response in their area.

Session 6

Surveillance and Contact Tracing: What is the importance of different approaches for different context for community acceptance and buy-in?

Session Overview

The key speaker Sarah Bennett of CDC provided the ground work by initially outlining what surveillance and contract tracing are and the epidemiology data from the outbreak. Sarah reminded us of the different approaches for surveillance and contact tracing and asked if we know what worked best, if there was one approach that turned the tide and do we have sufficient data analysed in the right way to inform the Surveillance and Contact Tracing approach to the next outbreak. Sarah suggested that there might be multiple surveillance and contact tracing activities and/or best practices that contributed to the ending of EVD. Alex Tran from GOAL showed us how charting death alerts geographically could allow us to see the under reported areas, allowing surveillance officers to work with the community to understand the barriers to their underreporting and to engage leaders in these areas. Focusing on these areas would also allow more targeted surveillance efforts. Using geographic information systems (GIS) allowed the mapping of health facilities within 5km and communities within 5km or 10 km to focus on the efforts of contact tracing and enabling rapid identification of the location of a contact.

Grazia Caelo and Rosa Crestani from MSF emphasised the importance of ensuring the community feeds into the surveillance response. They spoke about how surveillance attached to the Ebola Management Centres (EMC) and community-based surveillance are both lynch pins in the response. MSF stressed the need for all Integrated Disease Surveillance and Responses (IDSR) to be strengthened in every country so that response can be triggered earlier.

Philip Bemah from the Ministry of Health in Liberia presented on the different approaches taken in his country and concluded the session with lessons learnt from Liberia's response that echoed what all the presenters had said. Essential in improving surveillance and contact tracing for the next outbreak is building the trust of the community by having appropriate messaging that provides the truth, shows commitment and contains no lies. Everyone should deliver on promises and never promise what cannot be delivered. For good surveillance, laboratory networks are essential and they support effective and efficient decision making. This should be coupled with strong coordination and leadership.

Session Workshop – Key Findings

Overall, people agreed that one cannot have too many different surveillance systems in different geographical locations and yet the approaches must be flexible. Although we need the one health approach, whatever is developed globally must be adaptable for each context and the fundamental data collection aspects that are not changeable should be clear. Contact Tracing should be seen as an essential element of the response and must be planned for with the same rigorous standards as everything else in outbreaks. The importance of community based surveillance must not be underestimated in future outbreaks and should now be included in the development of standards.

Recommendations

The workshop group agreed on the following key recommendations for strengthening preparedness and recovery, improving the response, and scaling-up.

Strengthening Preparedness and Recovery

- Stronger public health systems in countries that includes strong IDSR.
- Community preparedness is essential and the standards for community based surveillance must be disseminated and incorporated in countries' IDSR.
- Identify the key aspects of surveillance and Contact Tracing that will be scaled up including key partners, work force,

laboratory access etc.

- IT solutions should already be in place for Contact Tracing and those now being developed such as unique ID bar codes or bio-metrics to be field tested and globally agreed on.
- Surveillance and Contact Tracing need to be a part of pre-service training for health service providers and it should be part of every health workers job.
- Countries should test their surveillance and contact tracing systems, as well as emergency response plans, and adjusted accordingly.
- Emergency response plans should include mechanisms to identify needed personnel and deploy them when needed.
- Senior managers need training on how to manage outbreaks, including coordination
- We need better information to be available on the economic losses incurred during an outbreak so that national governments understand the importance of preparedness.
- Each country must have put in place a trigger system at community and district level and information sharing across bordering countries must be strengthened.
- Contingency planning for surveillance and Contact Tracing between neighbouring countries is essential and this plan should include a proper communications system and how to conduct border surveillance.
- Detect/declare/respond across all levels of the health system including private partners.
- IDSR needs better technology for better data and analysis, time for investigation - trends and setting thresholds for triggers of response.
- Building an evidence base and communication channels - up and down and back.
- Surveillance and Contact Tracing need to be part of the health system strengthening approaches in country.
- Action Tools for the community to respond so not just a passive community passing information.
- Better coordination between partners on what are they each doing, sharing tools and information.

Improving Response

- There should be an agreed trigger system as part of surveillance systems which may be different for rural and urban.
- The triggers should be tested during dry runs to check that the IDSR is working and that the response is evidence based rather than a politically led response.
- Contingency plans must contain adequate budget planning including how funds are accessed and reported on.
- IT tools must be available for immediate adequate mapping and proper communication system for surveillance reporting.

Scaling Up

- Senior managers who have trained in management should led the response.
- Continual refresher trainings for all rapid response teams including senior managers.
- Budget allocated and accessible.
- Maps ready and scenario readiness plans available.
- Plans should be tweaked during the dry runs and not every day during the crisis.



Dr Sarah Bennett,
Center for Disease Control



Philip Bemah,
Ministry of Health - Liberia

Session 7

Supporting Survivors:

What were the key challenges, what are the new priorities, and how can we be better prepared for future outbreaks?

Session Overview

Dan Bausch of WHO began the session by raising the 4 key challenges facing survivors and the global health community in their care: 1) physical sequelae, 2) mental health sequelae, 3) virus persistence and 4) recrudescence disease. Dan ended his session by reminding us of the current draft Survivor Care Tool-Kit (April 2016).

Dan's presentation was complemented by 3 respondents, all bringing different perspectives of the needs and care for survivors. Carissa Guild of MSF raised concerns about key knowledge and implementation gaps including the definition of a survivor, capacity of MoH to integrate survivor care in the midst of the outbreak and the complex mental health needs of survivors and their families. Katie Bollbach of Partners in Health (PIH) followed by providing an overview of the PIH-led Survivor Care programming, comprising health, psychosocial and vocational supports, delivered in partnership with the government. The final presentation by Save the Children focused on the unique needs of child survivors and children affected by Ebola and led us all to review recent research entitled "1000 Children's Voices."

Session Workshop - Key Findings

Recommendations

The workshop group agreed on the following key recommendations for strengthening preparedness and recovery, improving the response, and scaling-up.

Strengthening Preparedness

- Have a care protocol in place from the beginning with an established pathway for reintegration into the community and this can be adapted with emerging research on medical care.
- Develop convalescence guidelines into ETC Designs.
- Train CHWs on survivor care.
- Develop SOPs for survivor care before they are needed (geographic areas at risk).

Improving Response

- Ensuring a package of non-food items (NFI) is prepared for those who are discharged.
- Creating a database for the registration of survivors.
- Employ willing survivors as peer supports/educators/social mobilisers.
- Training of staff to prevent survivor stigma.

Scaling Up

- Survivor care shouldn't be considered an "add-on" and needs to be integrated into the system and made a priority.
- There is need of a dedicated person liaising with Ministries to ensure survivors are registered and followed up.

Strengthening Recovery

- Ministries need to lead on survivor care, with NGO support.
- Broader HSS needs to occur.
- Research on the risk of virus persistence needs to occur, without stigma and we need the ability to check for viral load.
- Livelihood supports to survivors and their families need to be prioritized (i.e. grants, seedlings).

- Empower communities to develop their own or adapt existing mechanisms for sustainable reintegration and support to survivors (i.e. Child Protection, Foster Carers, and Survivor Associations).
- Work with schools for reintegration.
- Periodic mapping of survivors to call upon them in future outbreaks.

Lingering Questions and Issues

- Who is a survivor? Only someone with a certificate? What about those who were asymptomatic/cared for at home? Should families of survivors be prioritized for free health care/livelihoods supports?
- How long are survivors immune? Can they safely care for patients?
- Harmonisation of guidelines needs to be undertaken based on new and emerging evidence.
- How could guidelines be adapted for countries with poor health systems/in fragile states (i.e. South Sudan)?
- Measurement scales for stigma and psychosocial needs are not fixed, requiring cultural and contextual adaptation.
- How can lessons from Ebola for survivor care be adapted for other emerging diseases?
- Is it better to have standalone Survivor Clinics for survivors and their families (MSF model) or an integrated model within the MoH system?



Dan Bausch, WHO



Dr Kwame O'Neill,
Ministry of Health - Sierra Leone



Katie Bolbach, PIH

Session 8

Ebola Research and Data Management: What were the key challenges, what are the new priorities and how can we be better prepared for future outbreaks?

Session Overview

Laura Merson of Oxford University provided the key input for the session and told participants that strengthened research and more effective data management required leadership, engagement, collaboration and integration. She reminded us of the need for 'coordination without domination' and stressed the building of a "transparent and robust governance and ethical framework" which engaged affected communities, survivors, and scientific and statutory sectors.

Citing the variation in forms and data collection tools in use across the affected countries, Sharmistha Mistha of the University of Toronto echoed Laura's call for a standardised data collection tool to support more efficient and reliable analysis and reporting.

The need for harmonised data collection was also raised by Annick Antierens of MSF, who also outlined a number of challenges in clinical trials which could be addressed in the post epidemic period, including issues around the inclusion of children, pregnant women in such trials, methodologically feasible and acceptable trial designs and ethical issues such as obtaining informed consent from critically ill patients in the Ebola Treatment Setting. Annick referenced the lack of resources, expertise and political will that characterised the 2014 - 2015 epidemic.

Session Workshop - Key Findings

Recommendations

The workshop group agreed on the following key recommendations for strengthening preparedness and recovery, improving the response, and scaling-up.

Inputs at the workshop largely echoed the concerns expressed in the plenary session, and there was widespread consensus on the need for harmonised and transparent data. There was agreement that a 'ready to go database' which could be used for epidemiological and clinical research was a priority, and this could be an enhanced version of the database under construction by Laura Merson at Oxford University currently. There were ambitions for a data system that enabled 'real time data' to feed into clinical trials and some participants urged that 'data is owned by the patients' and stressed the need for a data collection, and reporting systems that met rigorous ethical standards.

The discussion identified that two types of epidemic related research were required: evidence of what works to reduce mortality and evidence of what works to reduce transmission.

Strengthening Preparedness

- Identify funding in advance for both clinical research, trials and medical device testing.
- Funding and undertaking vaccine trials.
- Capacity building with MoH in countries which are at high risk of epidemics; this includes coordination and communication with potentially affected countries and agreement of research strategies - including research protocols, contentious ethical issues and research questions.
- Identify specimen data archiving and sharing in advance.
- Disseminate the latest evidence and the evidence from the outbreak to the local healthcare population.
- Document what happened, when and where - what worked and what didn't.

- Conducting phase 1 trials in anticipation of the next outbreak.

Improving Response

- Researchers on the ground day one - and this research must be both clinical and anthropological. There was a strong sense that we need to get rid of false lines between research, clinical care, and epidemiology.
- Rapid analyses and dissemination of data to inform practice real time (feedback of data to clinicians).
- Relevant, concise and easily answered research questions.
- Solid, harmonized data (clinical and epidemiological) - enabling rapid change case definition, clinical management, identify research questions, and provide a baseline in case you do apply an intervention.
- Go into the community and figure out how to best engage with them (both in general and in relation to clinical/epidemiological studies).
- Deploy a rapid response assessment/research team.
- Have pre-agreements in place regarding research with samples (implied research without informed consent - as is being discussed in America).

Scaling Up

- Research that provides evidence, both clinical and behavioural, of what is necessary to improve survival and bring the epidemic under control.
- Research to identify the main epi-centre, including mapping surveillance.
- Research on vaccination logistics.
- Flexible ethical protocols, considering the complexities of obtaining informed consent from critically ill patients in the ETC environment.
- Meetings/consultation between clinicians and researchers to share knowledge on the disease process to enable sharing of knowledge re: research questions.
- Protocols for adaptive trial designs.
- Coordination between different research groups to avoid unnecessary duplication, and to maximize the impact of any investigation.



Laura Merson, Oxford University



Sharmistha Mistha, University of Toronto



Annick Antierens, MSF

Appendix 1

Ebola Lessons Learned Action Plan

Dimension

Clinical protocols, clinical governance, clinical supervision

Recommendation

Development of universal Clinical Protocols specific to Ebola, and protocols for vulnerable populations (Pregnant, lactating women, children) which may be amended and revised in real-time during an outbreak.

Principal Owner

WHO

Partners

MoH and partner agencies (IMC, MSF, GOAL, IFRC, CDC, UKMED, DfID, PIH, Save the Children)

Recommendation

General improvement of health infrastructure with a particular emphasis on training staff in the recognition and care of patients with potential outbreak pathogens.

Principal Owner

MoH

Partners

Supporting agencies (WHO, IMC, MSF, GOAL, IFRC, CDC, UKMED, DfID, PIH, Save the Children)

Recommendation

Improved triage tools that may be amended and updated during an outbreak based on real time analysis of patient data.

Principal Owner

WHO

Partners

GOAL, other INGOs

Dimension

Building Better Ebola Treatment Centres (ETC)

Recommendation

Implement a working group to examine the lessons learned in ETC management and practical solutions to identified problems from the last outbreak and that can advise on future methods.

Principal Owner

WHO

Partners

GOAL, Save the Children, Aspen, IMC, MSF

Recommendation

The WHO-led working group should develop clear guidelines for constructing and running ETCs.

Principal Owner

WHO

Partners

GOAL, Save the Children, Aspen, IMC, MSF

Recommendation

Working group guidelines distributed amongst the INGO community. Training of local health workers based on guidelines.

Principal Owner

WHO/MoH

Partners

District Health, Partner INGOs

Dimension

Review of Equipment/PPE Protocols

Recommendation

Setting up of an interagency contact group (comprising technical and logistical staff) to be tasked with identifying PPE criteria, specifications etc. with a wider review group.

Principal Owner

WHO

Partners

Partner agencies (IMC, MSF, GOAL, IFRC, CDC, UKMED, DfID, PIH, Save the Children)

Recommendation

Develop Epidemic Preparedness Strategy: stocks, vehicles, funded supply chain, support structures, staff, communication, forecasting software, staff training.

Principal Owner

MoH, WHO

Partners

Partner agencies (WHO, IMC, MSF, GOAL, IFRC, CDC, UKMED, DfID, PIH, Save the Children)

Dimension Non-Ebola Health Facilities

Recommendation

General HSS - including coordination mechanisms, supply chain, reporting/HIS mechanisms, HCW payment, adherence to protocols, communications, training.

Principal Owner

MoH/WHO

Partners

INGO

Recommendation

Stockpiling of equipment (PPE, WASH supplies etc)

Principal Owner

MoH/WHO

Partners

Partner agencies (IMC, MSF, GOAL, IFRC, CDC, UKMED, DfID, PIH, Save the Children)

Recommendation

Healthcare facilities should develop Facility Preparedness Plans, coordinated with District Preparedness Plans for the management of epidemics in their catchment area. Actions should be prioritised and resourced, both in host and donor nations and at district level.

Principal Owner

MoH/WHO/Local Government

Partners

Partner agencies (IMC, MSF, GOAL, IFRC, CDC, UKMED, DfID, PIH, Save the Children)

Recommendation

A pool of staff that can be rapidly deployed at regional level in case of outbreak with training and exercises every 3 months

Principal Owner

MoH

Partners

Local Government

Dimension Social Mobilisation

Recommendation

Identify, locate, and strengthen local communications sources and reliable local media, before the next outbreak

Principal Owner

MoH

Partners

National government, local communities, WHO, local and national media

Recommendation

Mass investment in telecommunications, mobile phone coverage, radio broadcasting signals, broadband internet

Principal Owner

National government

Partners

Local Government, and private sector

Recommendation

Research and improvement in inter-INGO communications, joint strategy, and guidance sharing.

Principal Owner

WHO

Partners

Partner agencies (IMC, MSF, GOAL, IFRC, UKMED, DfID, PIH, Save the Children)

Recommendation

Investment in mapping and data management systems

Principal Owner

WHO/MoH

Partners

University of Oxford, SMAC, GOAL, Oxfam, Concern, ICRC, and others

Dimension Surveillance and Contact Tracing

Recommendation

Support stronger public health systems through implementation of IDSR systems

Principal Owner

MoH

Partners

Supporting agencies (WHO, IMC, MSF, GOAL, IFRC, CDC, UKMED, DfID, PIH, Save the Children)

Recommendation

Develop standards for and support implementation of community-based surveillance systems.

Principal Owner

MoH/Local communities

Partners

Supporting agencies (WHO, IMC, MSF, GOAL, IFRC, CDC, UKMED, DfID, PIH, Save the Children)

Dimension Supporting Survivors

<p>Recommendation Standardised agreement on what constitutes a 'survivor'</p>	<p>Principal Owner WHO Partners WHO, MoH, IMC, MSF, GOAL, IFRC, CDC, UKMED, DfID, PIH, Save the Children</p>
<p>Recommendation Develop convalescence and survivor care guidelines and training into ETC Designs, CHW training, and response SOPs. Training should also combat survivor stigma.</p>	<p>Principal Owner WHO Partners Partner agencies (IMC, MSF, GOAL, IFRC, CDC, UKMED, DfID, PIH, Save the Children)</p>
<p>Recommendation Create a database for registration of survivors, with mapping and follow-up. Includes a dedicate liaison position between MoH, NGOs and survivors</p>	<p>Principal Owner MoH Partners Supporting agencies (WHO, IMC, MSF, GOAL, IFRC, CDC, UKMED, DfID, PIH, Save the Children)</p>
<p>Recommendation Research on survivor immunity and possibility of employment for them in care settings</p>	<p>Principal Owner WHO / MoH Partners Local communities, and INGOs</p>
<p>Recommendation Support survivor services when possible through strengthened services provided through existing MoH structures</p>	<p>Principal Owner WHO Partners Supporting agencies (MoH, IMC, MSF, GOAL, IFRC, CDC, UKMED, DfID, PIH, Save the Children)</p>
<p>Recommendation Community engagement to combat stigma and provide reintegration, support and livelihoods to survivors</p>	<p>Principal Owner National government / MoH/ local communities Partners Supporting agencies (WHO, IMC, MSF, GOAL, IFRC, CDC, UKMED, DfID, PIH, Save the Children)</p>

Dimension Ebola Research and Data Management

<p>Recommendation Identify and implement strategies to reduce the amount of time between identifying a research priority and implementing activities to gather data. Put arrangements in place for rapid response (data dissemination, rapid-response assessment/ research teams and pre-arranged, easy answered research questions). Convene Interagency group to develop a comprehensive Ebola research strategy to identify and implement strategies.</p>	<p>Principal Owner WHO, MoH, Local communities Partners INGOs, IMC, MSF, GOAL, IFRC, CDC, UKMED, DfID, PIH, Save the Children</p>
<p>Recommendation Improve local capacity to identify research needs, develop protocols, implement research activities</p>	<p>Principal Owner MoH Partners Supporting agencies (WHO, IMC, MSF, GOAL, IFRC, CDC, UKMED, DfID, PIH, Save the Children)</p>
<p>Recommendation Identify funding for clinical research, trials, medical device testing, and vaccine trials</p>	<p>Principal Owner WHO Partners Private sector, INGOs</p>
<p>Recommendation Develop comprehensive standardised information management system to support Ebola data collection, collation and analysis</p>	<p>Principal Owner University of Oxford Partners WHO, MoH, INGOs</p>

Appendix 2 - Conference Agenda

Strengthening the Global Response to Ebola Lesson Learning from the 2014-15 Epidemic Day One: Strengthening Standards for Better Outcomes Wednesday 20th April, 2016.

- 8:00 Registration
- 8:45 Welcome and Introductions: Jonathan Edgar (GOAL)
Chairperson: Jake Dunning (Public Health England)
- 9:00 What lessons can we learn about Centre and Community Based interventions from West Africa in 2014/15 and how can we embed these in new practices?
Keynote Speaker: Dr Sylvie Briand (WHO)
- 9:30 Clinical protocols, clinical governance, clinical supervision: reflection on best practice in West Africa and the unresolved challenges
Key Speaker: Nikki Shindo (WHO)
Respondents: Armand Sprecher (MSF), Alex Salam (GOAL), Dr Umar Ahmed (Emergency)
- 11:00 Coffee
- 11:15 Building Better Ebola Treatment Centres (ETCs): Strengthening standards for ETCs (design and construction for centres, patient flow, WASH, CCCs, Holding Centres and Treatment Centres)
Key Speakers: Francis Cathelain and Rosa Crestani (MSF)
Respondents: Dr. Pranav Shetty (IMC), Ammar Fawzi (GOAL), Nick Francis (Eadon Consulting, formerly a Major in the Royal Engineers)
- 12:45 Lunch
Chairperson: May Chu (Centers for Disease Control and Prevention)
- 1:30 Review of Equipment/PPE Protocols: What were the issues and what can we learn?
Key Speakers: Constanza Vallenias and Adriana Velazquez (WHO)
Respondents: Francis Cathelain (MSF), Karen Livingstone (UK MED), John McGhie (DFID)
- 2:45 Non Ebola health facilities: IPC and Standards. What were the key challenges for health facilities for non-Ebola patients and what will we do differently in the next outbreak?
Key Speaker: Erin Polich (GOAL)
Respondents: Marta Lado (IRC Kings Hospital), Dr Fatouma Mabeye (WAHA), Dr Yatta S. Wapoe (MoH Liberia)
- 4:00 Workshops
a) ETC Design Standards - Facilitator: Fiona Gannon
b) Clinical Protocols - Facilitator: Alex Salam
c) Equipment Standards/Protocols - Facilitator: Paula Sansom
d) Non Ebola health facilities - Facilitator: Geraldine McCrossan
- 5:30 Summary of Workshop Recommendations
- 6:15 **Cocktail Reception - "From lessons identified to lessons applied"** Anne Philpott (DFID)

Appendix 2 - Conference Agenda

Strengthening the Global Response to Ebola Lesson Learning from the 2014-15 Epidemic Day Two: Communities at the Forefront of the Ebola Response Thursday 21st April, 2016.

- 8:00 Registration
Chairperson: Claudia Williams (USAID)
- 8:30 Communities at the forefront of the Ebola Response
Keynote Speaker: Professor David Heymann (London School of Hygiene and Tropical Medicine)
- 9:00 Community Based Interventions: Social Mobilisation and Community Engagement to effect behavior change. What did we learn about the value of understanding socio-cultural dynamics and the importance of participatory approaches, in preventing transmission?
Key Speaker: Katharine Owen (Social Mobilisation Action Committee)
Respondents: Elizabeth Serlemitsos (John Hopkins, Liberia), Virginie Tanou (IMC, Guinea), Juliet Bedford (Anthrologica)
- 10:30 Coffee
- 10:45 Surveillance and Contact Tracing: What is the importance of different methods for different contexts for community acceptance and buy-in?
Key Speaker: Sarah Bennett (Centers for Disease Control and Prevention)
Respondents: Alex Tran (GOAL), Grazia Caleo/Rosa Crestani (MSF), Philip Bemah (MoH Liberia)
- 12:15 Lunch
Chairperson: Dr Kwame Oneill (MoH Sierra Leone)
- 1:00 Supporting Survivors: What is their role in an outbreak and how should they be supported during and after outbreaks?
Key Speaker: Dan Bausch (WHO)
Respondents: Carissa Guild (MSF), Katie Bollbach (PiH), Peter Bailey (SCUK)
- 2:30 Ebola Research and Data Management: What were the key challenges, what are the new priorities, and how can we be better prepared for future outbreaks?
Key Speaker: Laura Merson (Oxford University)
Respondents: Dr Sharmistha Mishra (University of Toronto), Annick Antierens (MSF), Chris Lewis (DFID)
- 4:00 Workshops
a) Social Mobilisation - Facilitator: Katharine Owen
b) Surveillance and Contact tracing - Facilitator: Erin Polich
c) Research and Data Management - Facilitator: Mary Van Lieshout
d) Supporting Survivors - Facilitator: Gillian McKay
- 5:30 Plenary Discussion on Workshops
- 6:15 Close : Fiona Gannon

Appendix 3 - Conference Attendees

Adriana Velazquez - Speaker
Aislinn O'Dwyer
Al Martin
Alana Bellew
Alex Salam- Speaker
Alex Tran- Speaker
Amanda McClelland
Amanda Rojek
Amanda Semper
Ambra Fabbri
Amer Sattar
Ammar Fawzi- Speaker
An Caluwaerts
Andrew Hall
Anne Philpott-speaker
Annick Antierens - speaker
Armand Sprecher
Armand Sprecher-speaker
Benjamin Black
Carissa Guild-speaker
Carole Chapelier
Catrin Moore
Chandrakant Ruparelia
Chris Lewis-speaker
Ciara Jordan
Ciara Smith
Claudia Lewis
Claudia Williams-speaker
Conor Cullen
Constanza Valenas- Speaker
Crestani Rosa- Speaker
Daniel Bausch- Speaker
David Bausch
David Fedson
David Heymann- Speaker
David Hoover
David Leach
David Wightwick
Denise Hill
Desiree Stewart
Dr Kwame Oneill
Dr Naomi Walker
Dr Umar Ahmed - Speaker
Elizabeth Serlemitsos- Speaker
Else Kirk
Erin Polich- Speaker
Estifanos D. Mengistu
Ethleen Deigh
Fatoumata Sakho
Felicity Fitzgerald
Fiona Gannon
Francis Cathelain- Respondent, speaker
Gaston Picchio
Gemma Freemantle
Geraldine Mccrossan
Gillian Mckay
Giulia Gustinetti
Grazia Caleo-speaker
Heather Pagano
Hilder De Clerck -Speaker Day 2
Ilaria Mastroiosa
J. Soka Moses
Jackie Duggan
Jake Dunning-speaker
Janette Macleod
Jennifer Fluder
Jenny Warner
Joanne Ferry
John Mcghie- Speaker
Jonathon Edgar- Speaker
Juliet Bedford
Juliet Bedford- Speaker
Karen Livingstone- Speaker
Karmel Garavan
Katharine Owen- Speaker
Katie Bollach- Speaker
Keria Smith
Laura Merson-speaker
Luisa Miranda Morel
Lydia Sparrow
Mark Phelan
Marta Lado-speaker
Mary Hadlock
Mary Van Leishout
Mary-anne Hartley
May Chu-speaker
Merete Storgaard
Michael Von Bertele
Mustapha Kallom
Nahoko Shindo- Speaker
Nathalie Macdermott
Nicholas Miller
Nicolas Vergauwe
Nina Gehm
Olimpia De La Rosa Vázquez
Oliver Johnson
Paul Richards
Paula Sansom
Petra Straight
Philip Bemah- Speaker
Pranav Shetty- Speaker
Rachael Cummings
Rachel Fletcher
Raul Pardinaz-solis
Rod Dubitsky
Rosalind Eggo
Rossella Miccio
Rudi Pauwels
Rugani Conteh
Sarah Bennett- Speaker
Sarah Downey
Sarah Murphy
Sharmistha Mishra- Speaker
Shelley Deane
Sophia Wilkinson
Sylvie Bond
Tim Brooks
Yatta Wapoe- Speaker
Yvonne Murray
Zoran Zelenika



Appendix 4 - Workshops Attendees

Day One - Wednesday 20th April, 2016.

ETC design Standards

Workshop Facilitator

Ms Fiona Gannon, GOAL

Attendees

Philip Bemah
Francis Cathelain
May Chu
Sarah Downey
Ammar Fawzi
Jennifer Fluded
Al Martin
Estafinos Mengistu
Luisa Miranda Morel
Crestani Rosa
David Wightwick

Equipment Standards/Protocols

Workshop Facilitator

Ms Paula Sansom, GOAL

Attendees

May Chu
Rachael Cummings
John McGhie
Claudia Lewis
Catrin Moore
J Soka Moses
Sarah Murphy
Chandrakant Ruperelia
Constanza Valenas
Ciara Smith
Adriana Velazquez

Non-Ebola Health Facilities

Workshop Facilitator

Ms Geraldine McCrossan, GOAL

Attendees

Juliet Bedford
Alana Bellew
Sarah Bennett
Benjamin Black
Tim Brooks
Grazia Caleo
An Caluwaerts
Conor Cullen
Dr Biliuogui
Olimpia de la Rosa Vazquez

Rod Dubiitsky
Joanne Ferry
Nina Gehm
Dr Fatoumata
Carissa Guild
Mustapha Kallom
Else Kirk
Marta Lado
Rosella Miccio
Sharmistha Mishra
Yvonne Murray
Katharine Owen
Heather Pagano
Anne Philpott

Erin Polich
Teresa Sancristoval
Amanda Semper
Elizabeth Serlemitsos
Lydia Sparrow
Ciara Smith
Yatta Warner
Jenny Warner
Katie Bollbach
Alex Tran
Mary Hadlock
Rugie Coneth
Oliver Johnson

Clinical Protocols

Workshop Facilitator

Dr Alex Salam, GOAL

Attendees

Umar Ahmed
Annick Antierens
Daniel Bausch
Rosalind Eggo
Ambra Fabbri
Felicity Fitzgerald

Judith Glynn
Andrew Hall
Mary-Anne Hartley
Nathalie Hutsebaut
Nathalie McDermott
Ilaria Mastroso
Amanda McClelland
Dr Kwame Oneill
Raul Pardinaz-Solis
Mark Phelan

Gaston Picchio
Amanda Rojek
Pranav Shetty
Armand Sprecher
Merete Storgaard
Petra Straight
Nicholas Vergauwe
Dr Naomi Walker
Gemma Freemantle
David Hoover

Day Two - Thursday 21st April, 2016.

Social Mobilisation

Workshop Facilitator

Ms Catherine Owen, GOAL

Attendees

Margaret Bee
An Caluwaerts
Carole Cahpelier
Ammar Fawzi
Jennifer Fluder
Denise Hill
Luisa Miranda Morel
Heather Pagano
Raul Pardina-Solis
Elizabeth Serleimitsos
Desiree Stewart

Surveillance and contact tracing

Workshop Facilitator

Ms Erin Polich, GOAL

Attendees

Philip Bemah
Sarah Bennett
Grazia Caleo
Rachel Fletcher
Karmel Garavan
Amanda McClelland
Rudi Pauwels
Rosa Crestani
Chandrakant Ruparelia
Rosamund Southgate
Yatta Wapoe

Research and data management

Workshop Facilitator

Mary Van Lieshout, GOAL

Attendees

Annick Antierens
May Chu
Conor Cullen
Rosalind Eggo
David Fedson
Felicity Fitzgerald
Judith Glynn
Regina Keith
Laura Merson
Rossella Miccio
Sharmistha Mishra
Catrin Moore
Alex Salam
Paula Sansom
Armand Sprecher
Petra Straight
Mary van Leishout
Ciara Smith
Claudia Williams
David Hoover
Andrew Hall
Chris Lewis
Claudia Lewis

Supporting survivors

Workshop Facilitator

Gillian McKay, GOAL

Attendees

Alana Bellew
May Chu
Rugiatu Conteh
Katie Bollach
Nelly Komba
Hilde de Clerck
Else Kirk
Fatoumata Salcho
Dr Pepe Bilirogui
Carissa Guild
Yvonne Murray
Kwame Onell

