CORDS

Connecting Organizations for Regional Disease Surveillance

REPORT

Emergency meeting

EBOLA

Lessons learned from past Ebola outbreaks to inform current risk management

Dar es Salaam, Tanzania

1st – 2nd September 2014

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1. Executive summary

Connecting Organizations for Regional Disease Surveillance (CORDS), together with the Southern Africa Centre for Infectious Disease Surveillance (SACIDS), organised an emergency meeting to gather and collate first-hand experience from previous Ebola outbreaks in Uganda and the Democratic Republic of the Congo (DRC) to inform current risk management. The East African Integrated Disease Surveillance Network (EAIDSNet) countries also contributed. This meeting included scientists (virology, medicine, health care, vector control), policy (East African Community (EAC), African Union (AU)), members of affected public, community, traditional healers, government officials (health and communication) and media representatives from Tanzania, Uganda, DRC, Zambia, Burundi and Kenya. With this unique mix of people this meeting aimed to focus on and elicit the social, cultural and risk communication aspects of infectious disease management that seem to be a massive problem for the current outbreak in West Africa. The meeting was held in Dar es Salaam, Tanzania, at the National Institute for Medical Research (NIMR) on 1st and 2nd September 2014. The report of the meeting is structured into *lessons learned* from previous outbreaks, *recommendations* and *action points* for the current risk management, mainly focusing on not-yet affected countries in Africa. Follow-up publications will highlight the conclusions from this evidence that will be useful for managing the current crisis in West Africa.

Lessons learned

Participants identified major lessons in six key areas: community, communication, capacity building, coordination, culture and science.

Community: work with the community – not against them

Infectious disease management will only work when it is built with and within the community and not directed against them. Containment measures and communication work well when originated within the community and especially involve community and religious leaders, traditional healers and other champions. Previous outbreaks happened as isolated events in rural communities and were managed at district levels with the involvement of national rapid response teams. Nationwide and cross border outbreaks have not been seen before and therefore there is no experience to learn from.

The outbreak in West Africa is unprecedented. Yet the lessons from working *with* the community seem relevant for this large outbreak.

Communication: share early and read rumours

There is a clear benefit in early sharing of information and surveillance data between professional groups and early communication with the public. This openness seems to contribute to the trust necessary to work with each other. Reframing messages to enable people rather than scaring them off with too many 'don'ts' seemed also have a better effect on people. Communities have their own communication networks and rumours are very strong: there are two kinds of rumours: rumours about possible *cases* and rumours about community explanations of *causes*. Both kinds of rumours are important indicators to guide case detection and to understand where communication efforts go wrong.

Capacity building: avoid blind spots: the first detectors

The group's experiences of outbreaks indicate that cases will appear in communities before medical attention is sought. The first detections of cases in the community are the blind spots of capacity building. Awareness raising in the community and capacity building efforts by training health professionals at local level must be continuous. The lack of support, guidance for case handling and provision of personal protective equipment (PPE) for health care workers contribute to a climate of fear and distrust between community and professional groups.

Coordination: generic response plans

Ebola response plans need to be comprehensive, inclusive and flexible: multi-sectoral collaboration including community and religious leaders, healers and NGOs are important parts of response planning that is generic in its operation and adaptable to the specific diseases and situations. Generic response plans can help to clarify and coordinate an evolving situation on different levels.

Culture: key driver of communities and limiting factor to infection control

Communities often have strong traditional practices for caring for the sick and the deceased. A compassionate understanding of these social, cultural and religious realities are the foundation to mitigate the infectious risks by finding acceptable compromises. Traditional burial practices, for instance, cannot be stopped by imposed infectious control measures

("Don't touch/wash"), but could be made *safer* by integrating protective steps into the rituals, such as using gloves and burying the deceased rapidly.

Science: increase knowledge base to inform risk management

There is very little knowledge available about Ebola that informs the prevention, treatment and infection control management. An explicit rationale for the risk assessment (causes, transmission, alarm indicators, etc.) could be a good basis for clearer risk communication and more effective infectious disease management.

Recommendations

Participants recommended three key activities:

Communication: Communication needs a broader approach that includes different channels (social media, local languages and champions) and a paradigm shift in listening to and learning from the community. Communication should not only include the promotion of hygiene and health messages; a key activity is the reading of rumours (cases and causes) and the understanding of traditional beliefs.

Capacity building: There is a great need for awareness raising and capacity building in communities, among health care workers and officials at district and sub-district levels. This should be coupled with building a base of expertise in field epidemiology, outbreak intelligence and management. Generic response plans that accommodate local realities and disease-specific necessities are crucial for good leadership at all levels. Better data analyses and risk assessments are needed to build better responses and better risk communication strategies, research programmes need to be set up in the short-, mid- and long-term perspective.

Collaboration, coordination and networking: "Birds flying together make a noise", said one participant meaning that efforts need to build on collaboration, coordination and networking. A crisis cannot be responded to alone. It is important to collaborate with community groups such as traditional and religious leaders, healers, government and non-governmental actors) and with multi-sectoral stakeholders at district, national and international levels; partnerships with the media are strongly recommended. Regional, multi-country networks in infectious disease surveillance are important tools to detect *earlier* and respond *faster* to outbreaks in order to mitigate the impact on societies.

Action points

The action points developed in this meeting were mainly focused on how to better prevent and prepare for likely imports of Ebola cases in not-yet affected African countries. Immediate actions for not-yet affected countries include:

Infection control

- Training of community leaders/sub-district and district health care workers (HCW)/local schools in infectious disease practices including use of PPE;
- Establish community-based surveillance systems;
- Create a pool of field epidemiologists and rapid response teams and offer simulations and exercises;
- Respect the cultural drivers of communities and build infection control measures on them to make communities *safer*.

Communication

- Devise strategies that involve different stakeholders in communication (media representatives as partners) and develop communication strategies with a wider dissemination;
- Base risk communication strategies on explicit risk assessment; and
- Frame enabling messages that provide guidance to communities in case handling and infection control.

Collaboration

- Strengthen generic response plans by building on existing infrastructures;
- Create networks that share information and expertise and make specific arrangements for collaborations between HCWs and in laboratory diagnosis;
- Initiate research projects to increase evidence for better risk assessment and risk communication.

Acknowledgements

We wish to express our thanks to the participants who made room in their busy work schedules to attend this meeting at very short notice. We are grateful for this unique opportunity to listen to and learn from each individual participant; sharing insights from first hand experience, perceptions and stories about the realities of infection control in previous Ebola outbreaks add incredible value to the urgent need to inform and support the current risk management worldwide. We would like to thank the National Institute for Medical Research (NIMR) in Dar es Salaam for generously hosting this meeting and providing logistical support and Mr Paul Kaczmarek (CORDS HQ) for support in editing this report. We thank the Rockefeller Foundation for the grant to CORDS to hold this meeting.

2. Background

Introduction

CORDS, together with SACIDS, organised an emergency meeting to gather and collate first-hand experience from previous Ebola outbreaks in Uganda and DRC to inform current risk management. This meeting included scientists (virology, medicine, health care), members of affected public, community and religious leaders (traditional healer, religious sister), government officials (health and communication) and media representatives (Annex 1: Participants). With this unique mix of people this meeting aimed to focus on and elicit the social, cultural and risk communication aspects of infectious disease management that seem to be a massive problem for the current outbreak in West Africa. The meeting was held in Dar es Salaam, Tanzania, at the National Institute for Medical Research (NIMR) on 1st and 2nd September 2014.

The report of the meeting is structured into *lessons learned* from previous outbreaks, *recommendations* and *actions points* for the current risk management, mainly focussing on not-yet affected countries in Africa. Follow-up publications will highlight the conclusions from this evidence that will be useful for managing the current crisis in West Africa.

Approach and agenda

This meeting was held under the *Chatham House Rule* to enable participants to speak freely and use the information and insights for their own decision-making and to ensure that the source of information remains undisclosed.

The agenda followed a logical sequence: infectious disease surveillance and response arrangements before the outbreak; detection of the first cases; and discussion of the existing health care infrastructure and risk communication in the affected community, both at public health authority level and in the cross-border context. Particular focus was given to rumour management. Response management, coordination with international agencies and the situation of health care workers were further discussed (Annex 2: Agenda).

To elicit more consideration of these complex fields two breakout sessions were held. In the first breakout sessions participants discussed in small working groups the topics they identified earlier that deserved more in-depth attention, including:

1. Community
2. Infection Control
3. Communication
4. Ideal Ebola Response Plan

The second breakout session was concerned with developing action plans to inform countries on next steps and participants worked in country teams.

The breakout sessions used simple tools to help structure the discussion: the first breakout session elicited consideration and discussion of the current situation, the desired situation and what needs to change. The second breakout session asked for a summary of action points in a short-, mid- and long-term perspective (Annex 3: Breakout session templates).

Although this meeting was primarily designed to facilitate discussion, participants heard a presentation on previous Ebola outbreaks and mobile surveillance at the start of both days.

Outcomes of the meeting

- An executive summary of lessons learned in a format for quick dissemination;
- A full report of the meeting that informs the current outbreak management in West Africa;
- Action plans for countries and communities for better preparedness and response strategies;
- Plan for publication in scientific journals to translate and reflect the meeting lessons for wider distribution;
- Steps in developing partnerships between participants (human and vet health professionals, traditional healers, community representatives, journalists) and building on participants' diversity for undertaking integrated approaches, increased collaboration and networking for better and more sustainable solutions in their local realities.

3. Lessons learned

3.1 Discussions

From the meeting agenda and resulting discussions, participants identified the following types of lessons learned:

- ***Community***: Infectious disease management will only work when it is built with and within the community and not directed against it. Actions and measures should originate from and especially involve community leaders. This entails raising awareness of infectious diseases, with special focus on containment measures and burial practices in the community. These measures aim to work *with* communities and integrate infection control measures into daily life more effectively (e.g. requiring personal protective equipment for first aid and teaching infection control measures in school curricula).
- ***Communication***: Early sharing of information and surveillance data among professional groups and early communication with the public are important for successful infectious disease surveillance and outbreak management. Improved media reporting is needed, and framing of the correct messages to *enable* people rather than scare them with too many 'don'ts' is a promising suggestion. Participants recommended: listening to and learning from rumours to gain insight of where communication efforts go wrong and adapting the communication strategy accordingly; implementing short-, mid-, and long term risk communication efforts; taking the opportunity to frame the context of a new disease, such as Ebola for West Africa, with diseases already experienced, such as HIV, that could enable people to better understand and make sense of them.
- ***Capacity building***: Awareness building in prevention and preparedness of health care workers, healers and community, is paramount. Priorities include continuous training for technical and non-technical staff, and identifying creative solutions to address the brain drain (the trend of trained personnel moving to other countries). There is a particular need to focus on health infrastructure, and participants identified creative solutions for low-resource settings, simulation and exercises as effective means for building and strengthening capacity, skills and collaboration. Improved capacities in diagnostics, specimen collection, referral and infrastructure have to be addressed and rapid response teams are needed to investigate alerts and rumours.
- ***Coordination***: Multi-sectoral coordination at the ministerial level with political buy-in is key to successful management through collaboration among different social groups (orthodox scientists and traditional healers, professional and public and religious groups, etc.). Partnerships with neighbouring countries to pool expertise and capacity meet the

need for effective strategies with limited resources. Participants called for specific arrangements along these lines in relation to laboratory diagnosis.

- ***Culture/Social***: It is important to increase the understanding of social, cultural and religious practices/realities and, where such practices intersect with infectious risks, it is necessary to identify solutions the public will accept. Traditional burial practices, for instance, cannot be stopped by externally imposed infectious control measures, but they could be made *safer* by integrating protective steps into the rituals, such as using gloves and burying deceased people more rapidly. These measures could be introduced into cultural practices via religious education, in consultation with community and clerical leaders.
- ***Science***: Surveillance, detection and contract tracing need to adapt to the *local* realities in the communities. More scientific evidence and treatment and vaccination options are urgently needed to inform communication and infection control measures. A better referral system would support a layered response. PPE stock monitoring is a particular challenge.

3.2 Breakout sessions

The group decided on four breakout sessions:

- Community
- Infection Control
- Communication
- Ideal Ebola Response Plan

While the breakout groups on community, infection control and communication focused on vertical, in-depth analysis ("digging deeper"), although with interlinking areas, the Ebola response plan outlined the horizontal organisation of an ideal response, which built on insights and recommendations from the vertical topic groups.

Most groups used the template provided (tool 1) to help guide the discussion. This template follows a simple structure, prioritizes relevant areas for current situations, envisions the desired situation and reflects on what needs to change.

Breakout session: Community

The current response status at the community level is incomplete because of a lack of reliable information about Ebola, especially regarding the factors that lead to transmission to humans,

case identification, case handling and protection of individuals and communities during an outbreak. It was highlighted that current information is inaccurate and causing fear and panic. For example, the notion that 90% of cases will inevitably die is not factual. Recent experience has shown a survival rate of around 50%, due in part to early and proper care (reconstitution body fluids and vital systems).

Public institutions and media must change their approach to informing communities during outbreak by prioritizing the provision of clear information that gives affirmative guidance for protecting individuals and communities and preventing the spread of disease. Additionally, public institutions should refrain from approaches that are scolding and prohibitive.

Community leaders, including religious leaders, community development groups, non-governmental organizations (NGOs) and the private sector (for profit businesses and non-profit organizations) need to become more involved, leading to greater multilateral and multi-sector collaboration. To prevent contradictory messages at the community level and enhance referral, these organizations must establish and strengthen partnerships with traditional healers. Traditional and orthodox practitioners should coordinate mutually agreed messages that take into consideration socio-cultural aspects (myths and beliefs) and behavioral inclinations of communities.

Community education on the importance of hygiene and simple disease prevention measures need reinforcement. Hygienic practices, like hand washing and proper handling of the dead (preventing contact with body fluids), should be given emphasis.

Community systems for handling suspected cases should be established and accompanied by a campaign to inform sufferers and practitioners about reporting illness and taking proper steps to while waiting for case confirmation, including managing contacts (e.g. the health worker who interviews a suspected case).

Over the long term, research is necessary for establishing endemic disease patterns, such as fever prevalence, in order to determine thresholds for alarm indicators. Additionally, research on epidemiological and ecological drivers of the disease is also needed.

Breakout session: Infection control

This group identified three major areas for infection control: use of protective gear, isolation facilities and community.

Protective gear: The current situation is characterized by inadequate or missing PPE, inappropriate use and poor practice, and varied quality of PPE. Ideally, health practitioners would have access to stocks of PPE, which, with a culture of good infection control practices,

would be used appropriately and effectively. Steps for attaining this ideal include: planning for special government procurement system for PPE, standardised guidelines and the dissemination of the emergency management of PPE; regular trainings and simulations; adaptation of the WHO infection control (IC) manuals and customise them to local settings; and strengthening IC practices by the district medical officer (DMO).

Isolation facilities: These are currently absent in all health care facilities and country entry points. The desired situation is where all high-risk situations and entry points include holding facilities and professional IC response teams. Next steps include: the creation of guidelines for isolation and holding facilities; functional infection control committees at all entry points and health facilities; and training, simulations and mentoring.

Community: It is necessary to ensure safe standards for the currently varied burial practices in communities. Next steps for achieving this include risk communication on safe burial practices and community engagement with religious and community leaders.

Breakout session: Communication

The group identified four key areas of consideration:

Working with the media: The current situation is characterised by spokespersons and media reporters who have not received sufficient health training, and thus give inconsistent information about the Ebola outbreak and sensationalise outbreak-related developments. Greater media accountability with clear ethics guidelines and codes of good practice would serve the public, as would strengthened partnerships between health and communication professionals and credible press associations. Steps to induce change include risk communication training for media and health professionals, a mentoring and partnership programme between professional groups and the creation of associations.

Framing of messages: The current media landscape is dominated by negative messages, significant information gaps, and a lack of opportunity for feedback from the community. A paradigm shift is needed towards a more enabling, empowering, and interactive media that focuses on actions people can undertake to help themselves. Alternative communication methods, such as social media, popular music, and art could contribute to the shift. Steps to induce change include risk communication training for communicators and inclusion of community leaders and local artists in the awareness strategy and engagement in social media activities.

Communication channels: The current weak partnership links between public and private institutions limits health communication, and, as a result, only a few communication channels

are used. Encouraging and strengthening public-private partnerships would foster a broader, multichannel approach to health communications. Steps forward include measures to ensure that companies comply with their corporate social responsibility.

Languages: The current situation is characterised by incorrect messages, which are given in official languages only and not in local languages. Testing messaging with local groups and seeking their feedback would help establish a more diverse, culturally sensitive approach with a focus on providing correct information.

Breakout session: Ideal Ebola Response Plan

The breakout session on the Ideal Ebola Response Plan recommended an Ebola response plan based on the National Response Strategy. This Plan should employ a multi-sectoral and coordinated approach at the ministerial level, and be delivered by a trained and dedicated task force, augmented by a mobile expert response team that would interact directly with sub health district investigations. The response should be triggered by event based surveillance and rumour investigation; early and rapid response is vital and requires communication from the sub health district to the centre. To be effective, such a plan must extend down to the community level, and training of sub district health teams is essential. Furthermore, implementation of risk communication before an event is key to reducing the impact. The task force at the central government level must lead any coordination of aid agencies. Data analysis from previous outbreaks would allow for identification of "increasing risk" triggers and enable their application to risk communication activities at local level.

Key principles

- A fast response at the local level
- Trained health teams at the local sub district health level (3-5 persons)
- Investigation of rumours (keeping a rumour book)
- Early reporting of rumours to the centre
- Communicating with the community affected
- A national expert response team

National Strategic Mitigation Plan

The Ebola response plans in Uganda and DR Congo are based on the National Response Strategy. This is achieved through a national multi-sectoral coordination task force involving all government departments and must include the aid agencies that may be helping in the

response. This task force addresses: finance, personnel, logistics, equipment, training, interventions, communication, infection control guidance, population movements, health care worker movements and motivation. Its function is to collect, analyse and present information for decision making. It has a national expert investigation team that can be sent to a developing incident anywhere in the country. Its function is to ensure:

- Support to the local team
- Laboratory diagnosis
- Sample collection, shipment, storage, referral
- Reporting of results
- Supervision of the local response
- Advice on infection control measures
- Provision of PPE to the local response team
- Implementation dedicated burial teams

Local response teams

There are several levels of health care delivery:

- National
- Province
- District
- Health zone
- Community health facility

The group recommended that primary response would be provided at the sub-district level where teams consist of three to five persons who have received training. The training was previously provided through the implementation of the Integrated Disease and Surveillance Response (IDSR) framework, but funding has now ceased. This cohort of local health care workers is mobile and, once trained, they can advance to better paid jobs. Training, therefore, has to be continuous. It is not effective to pre-position PPE, it has been tried in the past, but it was found that the PPE was used for other things and therefore not available for emergency response. The national expert response team therefore provides it when they arrive. Minimal PPE is, however, available at local level.

The major part that the local response teams play is the keeping of a rumour book and preliminary investigation of them. The next step is early communication to the centre where the country strategic response is initiated. The local response teams are responsible for the

early risk communication and they work to influence and help the community leaders who can make infection control interventions. Suspicious trends, such as the die-off of primates or occurrence of fever in persons who have killed and butchered monkeys, can trigger a response. Consumption of bush meat has been a practice for centuries and is a free source of protein for poor communities, so instructing or ordering people to stop consuming bush meat is not effective or realistic. The animal health sector needs to be involved at local level.

Coordination of aid agencies' plans is essential and should be achieved by making them part of the national strategic response.

Summary: Lessons learned

In summary, the participants developed six lessons learned drawing on the discussions and the breakout sessions:

Community: work with the community – not against them

Infectious disease management will only work when it is built with and within the community and not directed against it. Containment measures and communication work well when they originate from the community and involve community and religious leaders, traditional healers and other champions. Previous outbreaks occurred as isolated events in rural communities and were managed at district levels by national rapid response teams. Nationwide and cross border outbreaks have not been seen before and therefore there is no experience to learn from. The outbreak in West Africa is unprecedented and in many ways unique, yet the lessons gained in working *with* the community seem relevant.

Communication: share early and read rumours

The benefits of early information exchange and sharing of surveillance data, among professional groups and with the public are clear. . Such transparency contributes to trust building that is necessary to collaborative efforts. Reframing messages to enable people rather than alienating them with too many 'don'ts' also has a better effect. Of course, communities maintain their own communication networks, and rumours are very strong. Two types of rumours – about possible *cases* and about community explanations of *causes* – are important indicators to guide case detection and understand where communication efforts go wrong.

Capacity building: avoid blind spots: the first detectors

The group's experiences with outbreaks show that cases appear in communities before medical attention is sought. The first detections of cases in the community are the blind spots of capacity building. Awareness raising in the community and capacity building efforts by training health professionals at the local level must be continuous. The lack of support, guidance for case management and provision of PPE for health care workers contribute to a climate of fear and distrust between community and professional groups.

Coordination: generic response plans

Ebola response plans need to be comprehensive, inclusive and flexible: multi-sectoral collaboration that involves community and religious leaders, healers and NGOs are important components of response planning. Such plans are generic in operation and adaptable to the specific diseases and situations; this flexibility can help clarify an evolving situation on different levels and coordinate an appropriate response.

Culture: key driver of communities and limiting factor to infection control

Many communities maintain longstanding traditional practices for caring for the sick and the deceased. A compassionate understanding of these social, cultural and religious realities can help community leaders and health experts identify acceptable adaptations of practices, which, in turn, helps mitigate infectious risks. Traditional burial rites, for instance, cannot be stopped by imposed infectious control measures ("Don't touch/wash"), but could be made *safer* by integrating protective steps into the rituals, such as using gloves and burying the deceased more rapidly.

Science: increase knowledge base to inform risk management

Very little is known about Ebola that informs the prevention, treatment and infection control and management. An explicit rationale for the risk assessment (causal factors, triggers of suspicion, transmission, alarm indicators, etc.) could be a good basis for clearer risk communication and more effective infectious disease management.

4. Recommendations

This meeting focused on identifying the major drivers of efficient infection control and management in previous Ebola outbreaks. Based on these lessons learned participants developed recommendations that could inform current outbreak management in West Africa and improve preparedness strategies in not-yet affected countries.

Acute crisis response vs. risk management: A crisis response that requires urgent steps differs in some respects from a risk management approach that builds the capacity for better preparedness in the future. That said, some recommendations for change that apply commonly to crisis response and risk communication include:

- Ensure that measures are based in the community and work with the public;
- Frame positive, enabling messages rather that stressing don'ts;
- Develop creative solutions to keep community rituals and make them *safer* by implementing infection control (e.g. burial practices).

Communication: Effective communication requires a broader approach that includes different vehicles (social media, local languages and champions). Communicators and the public should implement a paradigm shift towards a more interactive model that listens to and learns from the community. Messaging should not only include the promotion of hygiene and health, but should investigate rumours and the understanding of traditional beliefs. Listening supports an interactive process through which new, sustainable solutions can be found that work in local realities.

Risk assessment to feed into risk communication strategies: Ebola poses a challenge for risk assessment and risk communication. The first symptoms are common and non-specific, and therefore it is difficult to give 'easy messages', e.g. if you develop fever, go and see a doctor and get tested for Ebola. This is relevant in outbreak hotspots, but is probably neither feasible nor reasonable as general advice. The same message ("…go and see a doctor") can be rendered useless by an overwhelmed health infrastructure, where the recommendation to see someone to get help may entail a dangerous journey that actually spreads the disease further. There is a need to better analyse and assess risks and build more precise response and risk communication strategies based on this risk assessment.

Capacity building: There is a great need for awareness raising and capacity building in communities, among health care workers and officials at district and sub-district levels. This should be coupled with building a base of expertise in field epidemiology, outbreak intelligence and management. Generic response plans that accommodate local realities and disease-specific necessities are crucial for good leadership at all levels. Better data analyses and risk assessments are needed to build better responses and better risk communication strategies, research programmes need to be set up in the short-, mid- and long-term perspective. The overall aim of these capacity-building activities is to create the knowledge and legacy that put people in better position to manage outbreaks – for now and in the future.

Collaboration, coordination and networking: "Birds flying together make a noise", said one participant meaning that efforts need to build on collaboration, coordination and networking. A crisis cannot be responded to alone. It is important to collaborate with community groups such as traditional and religious leaders, healers, government and non-governmental actors) and with multi-sectoral stakeholders at district, national and international levels; partnerships with the media are strongly recommended. Regional, multi-country networks in infectious disease surveillance are important tools to detect *earlier* and respond *faster* to outbreaks in order to mitigate the impact on societies.

5. Action points

Individual country groups developed action points for a short-, mid- and long-term perspective. These considerations are mainly focused on how to better prevent and prepare for likely imports of Ebola cases in not-yet affected African countries. Following plenary discussions, a more generic action plan was outlined:

Generic country action plan

Areas	SHORT term	MID term	LONG term
Communication	Devise strategies of involving the different stakeholders in communication Developing communication strategies and dissemination channels	Developing IEC material Dissemination of Information Review strategies	Review strategies Dissemination of information Risk assessment/Risk communication research
Coordination	Multi-sectoral approaches and political buy-in; collaborations between different social groups partnering with neighbouring countries to pool expertise and capacity, make specific arrangements for laboratory diagnosis	Advocate for One Health approaches; strengthen existing networks	Initiate new networks Develop management training tools for cross-border regions
Infection Control	Availability of PPE Training (Biosafety measures) IEC	Amplify training Equip facilities with necessary disease investigation tools and devices together with PPE	Amplify training

Community	Identify messages and group according to target audience and to disseminate to community Include community leaders Training of community leaders/HCW/school Risk communication Risk assessment Establish community based surveillance system	Amplify training Risk communication Risk assessment Organise more discussion forum on the disease to scale up the awareness of the community	Amplify training Risk communication Risk assessment
Health care system	Capacity building Training all level of HCW, lab and medical personnel National contingency plan Establish/strengthen surveillance system Develop National Plan for EIDC Strengthen infrastructure: PPE	Amplify training Monitoring and evaluation Review plan Infrastructure Research	Amplify training Monitoring and evaluation Develop management training Research

The key points for immediate actions for not-yet affected countries include:

Infection control

- Training of community leaders/sub-district and district HCW/local schools in infectious disease practices including use of PPE;
- Establish community-based surveillance systems;
- Create a pool of field epidemiologists and rapid response teams and offer simulations and exercises;
- Respect the cultural drivers of communities and build infection control measures on them to make communities *safer*.

Communication

- Devise strategies that involve different stakeholders in communication (media people as partners) and develop communication strategies with a wider dissemination;
- Build your risk communication strategy on explicit risk assessment; and
- Frame enabling messages that provide guidance to communities in case handling and infection control.

Collaboration

- Strengthen generic response plans building on existing infrastructures;
- Encourage multi-sectoral approaches and ensure political buy-in;
- Collaborations between different social groups partnering with neighbouring countries to pool expertise and capacity;
- Make specific arrangements for laboratory diagnosis
- Create networks that share information and expertise and make specific arrangements for collaborations between HCWs and in laboratory diagnosis;
- Initiate research projects to increase evidence for better risk assessment and risk communication.

6. Conclusion

This meeting revealed a wealth of expertise and experience in managing Ebola outbreaks. The lessons learned, the recommendations and actions points are valuable guidance to lead intensified preparedness in the current situation of a deteriorating Ebola outbreak in West Africa. It does require, however, some additional effort in terms of: 1) translating lessons learned into management principles to be applied on the ground, and 2) building the capacity to apply the paradigm shift in risk communication and risk management into the 'heads of decision-making' and 'feet of response'. The participants created on open, honest and creative atmosphere to think about past outbreaks and how these lessons can now be transformed into actual actions to support affected and not-yet affected countries. With the energy and buzz generated by the meeting, we would like to share our insights with the broader community and hope that this helps build the collaboration needed to create more sustainable solutions on the ground and a lasting legacy for future outbreaks.

Acknowledgements

We wish to express our thanks to the participants who made room in their busy work schedules to attend this meeting at very short notice. We are grateful for this unique opportunity to listen to and learn from each individual participant; sharing insights from first hand experience, perceptions and stories about the realities of infection control in previous Ebola outbreaks add incredible value to the urgent need to inform and support the current risk management worldwide. We would like to thank the National Institute for Medical Research (NIMR) in Dar es Salaam for generously hosting this meeting and providing logistical support and Mr Paul Kaczmarek (CORDS HQ) for support in editing this report. We thank the Rockefeller Foundation for the grant to CORDS to hold this meeting.

Annex

Annex 1: List of participants

Annex 2: Agenda

Annex 3: Breakout session templates

Annex 1 Agenda

EBOLA: lessons learned from past Ebola outbreaks to inform current risk management

1-2 September 2014

NIMR, Dar es Salaam, Tanzania

Agenda

1 September 2014	**EBOLA** PAST OUTBREAKS IN THE PERCEPTION OF PATIENTS, COMMUNITY AND PROFESSIONALS
09:00 – 9:30	Arrival; Tea/Coffee
9:30 – 9:45	Greetings, General introductions
9:45 – 10:15	**Presentation: Ebola outbreaks: past outbreaks, big issues and policy implications**
10:15 – 11:00	**Foundations: Infectious disease surveillance** Existing surveillance infrastructure, Signal and noise in surveillance, Alerting mechanisms (what was there *before* the outbreak) *Discussion*
11:00 – 11:45	***"Index case"*** Perception of patients, families and relatives *Discussion*
11:45 – 12:30	**Affected communities in Uganda and DRC** Existing health care infrastructure and risk communication Perspective: Community (Traditional healer Uganda) Perspective: Health Authority *Discussion*
12:30 – 13:00	*Lessons learned*
13:00 – 13:45	LUNCH
13:45 – 14:30	**"Unaffected" communities in Uganda and DRC and cross-border communication** Perceptions and conceptions *Discussion*

14:30 – 15:15	**Rumour management: Risk communication strategies on community level** What were the rumours and community reactions to the outbreak – and how were risk communication strategies designed to respond to these? *Discussion*
15:15 – 15:45	COFFEE BREAK
15:45 – 16:30	**Rumour management: Risk communication strategies on government/public health authority level and the media** *Discussion*
16:30 – 17:00	*Lessons learned*
17:00	END OF DAY 1

2 September 2014	**EBOLA** LESSONS FROM PREVIOUS OUTBREAKS TO INFORM THE CURRENT RISK MANAGEMENT
9:00 – 9:30	**Presentation: Mobile Phone Surveillance**
9:30 – 09:45	Recap of Day 1
09:45 – 10:30	**Response management** *Discussion* **Coordination with International Agencies** *Discussion*
10:30 – 10:45	COFFEE BREAK
10:45 – 11:30	**Health care – health care workers** *Discussion*
11:30 – 13:00	**Recommendations for West Africa, other African countries and international community** *In Breakout sessions*
13:00 – 13:45	LUNCH
13:45 – 14:30	**Breakout session presentations**
14:30 – 15:15	*Discussion*

15:15 – 15:45	COFFEE BREAK
15:45 – 16:30	**Action plan: research, capacity building, policy & strategy** *In country groups*
16:30 – 17:15	**Action plan presentations** *Discussion*
17:15 – 18:00	**Outcome summary**
18:00	END OF DAY 2

Annex 2 Participants

Prof Nigel Lightfoot CBE – Director, CORDS

Dr Petra Dickmann – Director Strategy & Operations, CORDS

Prof Mark Rweyemamu – Director, SACIDS

Dr Filomena Namuba – SACIDS

Dr Julius Lutwama – Uganda Virus Research Institute, Uganda

Dr Rachel Eidex – CDC, Tanzania

Dr Muleka Kabinga – Ministry of Health, Zambia

Dr Henry Kyobe-Bosa – Uganda People Defence Force, Uganda

Sr Clara Timanywa – Rulenge Hospital, Ngara, Tanzania

Dr Eustace Nyakubaho – Traditional Healer - Ngara, Tanzania

Dr Nazareno Mayola – Ngara district Surveillance officer, Tanzania

Dr Richard Ngowi – District Veterinary Officer Ngara, Tanzania

Dr Ashery Biyoboke – Ngara, Tanzania

Mr Ambakisye Kuyokwa – EHO RAS - Kigoma

Ms Regina Mutuku – Medic Mobile, Kenya

Mr Bather Kone – AU Science, Tech and Research Commission, Abuja, Nigeria

Dr Buhizi Celius – Burundian Health Ministry, Burundi

Dr Spes Ndayishimiye – Ministry of Health, Burundi

Dr. Ahmed Hamdy – AU Science, Tech and Research Commission, Abuja, Nigeria

Dr. Mohammed Kyari – AU Science, Tech and Research Commission, Abuja, Nigeria

Ms Jennifer Bakyawa – Journalist, Uganda

Dr Justin Masumu – Scientist, SACIDS/DRC

Prof Esron Karimuribo – SACIDS

Dr Andrew Kitua – SACIDS

Dr Leonard Mboera – NIMR

Dr Stanley Sonoiya – EAC

Dr Peter Mmbuji – MOHSW, Tanzania

Mr Muchunguzi Victor – National Lab Quality Assurance & Training Centre

Ms Amby Lusekelo – Media & Social Media, Tanzania

Ms Anita Kabwogi – SACIDS

Mr Yunus Karsan – SACIDS

Mr Geoffrey Mchau – MOHSW, Tanzania

Annex 3 Templates

Breakout sessions

Session 1: Topics

1. Infection control (group chooses topic)
2. Community (group chooses topic)
3. Communication (group chooses topic)
4. Ideal Response Plan

Areas	CURRENT SITUATION What is actually there	DESIRED SITUATION Where would you like to be	CHANGE What needs to change

Session 2: Action plan

In country groups

Based on the areas identified, develop an action plan for your government to implement these actions in the short, mid- and long-term perspective

SHORT term	MID term	LONG term