Building resilient health systems: lessons from international, national and local emergency responses to the Ebola epidemic in Sierra Leone

Ebola Gbalo Research Group
Presentation of emerging findings
Bo and Freetown, Sierra Leone, January 2019

Njala team: Lawrence S Babawo, Tommy M Hanson, Bashiru Koroma, Alfred Mokuwa, Esther Mokuwa, Paul Richards, Ahmed Vandi

LSHTM team: Dina Balabanova, Johanna Hanefeld, Susannah H Mayhew, Melissa Parker

NJALA UNIVERSITY
P.M.B. Freetown, Sierra Leone

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

Objectives

1. To examine the **extent, nature, motivations and drivers of the policy response** to Ebola in Sierra Leone and their perceived effect;
2. To examine the level of **coordination, oversight and regulatory mechanisms** and their perceived effect on health systems;
3. To explore **what actions** were implemented **at the district**, **why and how**;
4. Determine the **local issues which shaped what happened** during the Ebola epidemic;
5. Develop **conclusions**, in the context of Sierra Leone, on what constitutes a **resilient health system** and how this may change in the face of an emergency;
6. Identify **lessons on how to respond to emergencies** without undermining existing health systems capacities and strengthening initiatives.

NJALA UNIVERSITY
P.M.B. Freetown, Sierra Leone

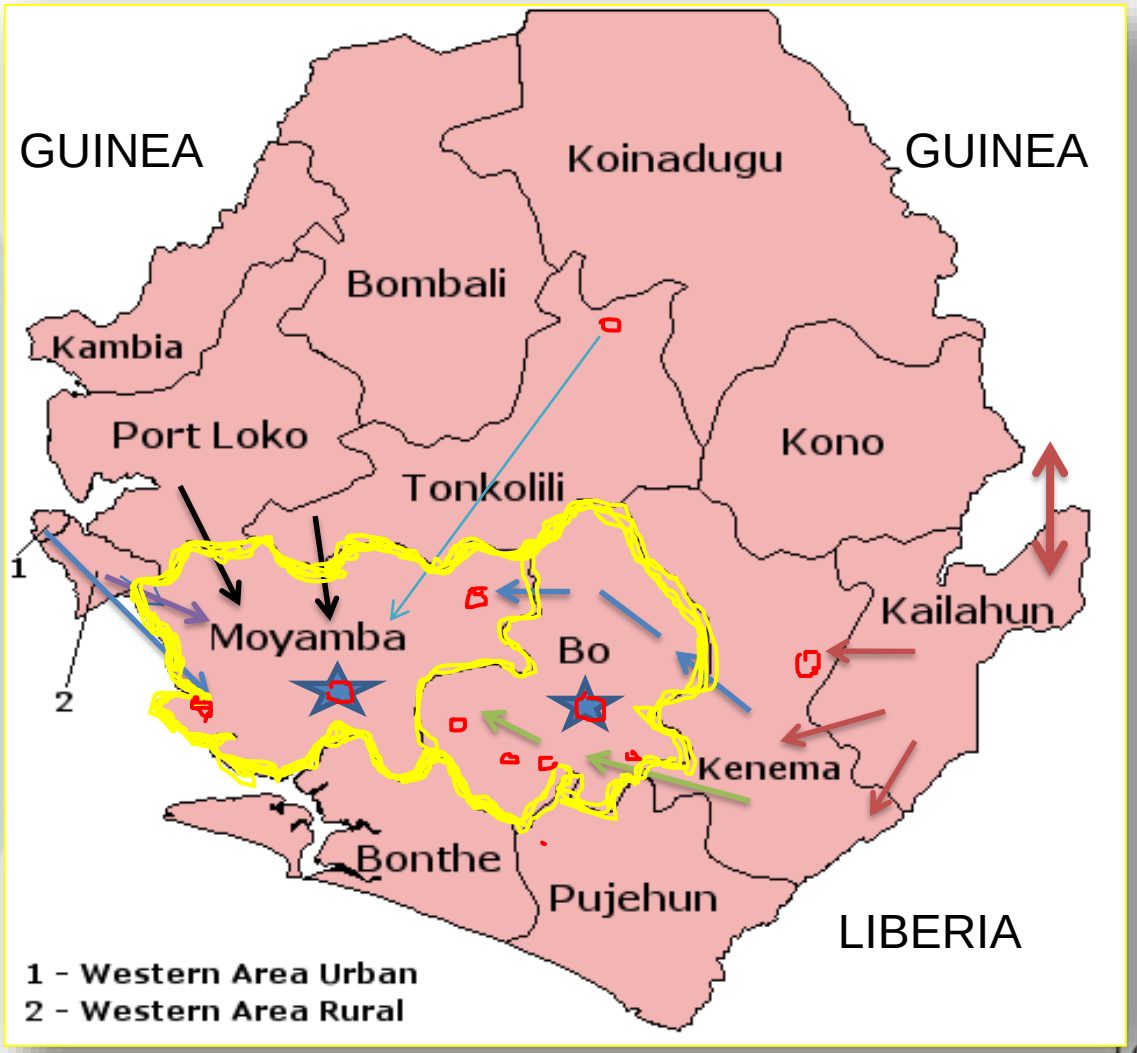
LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

Mixed methods; multi-disciplinary research

- Review of key policy documents and guidelines at national and district levels.
- Key informant interviews at international, national, district and local levels.
- Ethnographic work including participant observation, unstructured interviews and informal group discussions.
- Interviews usually tape recorded and where necessary subsequently translated from Krio, Mende or Temne into English.
- Core themes were identified and analyzed inductively.

NJALA UNIVERSITY
P.M.B. Freetown, Sierra Leone

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE



LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

Local level

Determine the **local issues which shaped what happened** during the Ebola epidemic (e.g. structural factors, material conditions, cultural perceptions, actual behaviour).

Esther Mokuwa and Tommy M Hanson for the Ebola-Systems team

NJALA UNIVERSITY
P.M.B. Freetown, Sierra Leone

Infection chains in Bo and Moyamba districts

NJALA UNIVERSITY
P.M.B. Freetown, Sierra Leone

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

Time line – village studies

date of first confirmed cases, Bo District

- **Kakua – June 6 2014 (151 cases)**
- **Badjia – June 28 (6 cases)**
- **Lugbu – July 4 (1 case)**
- **Baoma – July 5 (22 cases)**
- **Tikonko – July 23 (29 cases)**
- Valunia – August 3 (15 cases)
- **Njala Komboya – September 5 (7 cases)**
- **Wunde – September 28 (6 cases)**
- **Jiama Bongor – September 29 (3 cases)**
- **Bumpeh Ngao – October 3 (49 cases)**
- **Gbo - October 16 (4 cases)**
- **Selenga – October 17 (1 case)**
- Niawa Lenga – October 17 (19 cases)
- **Jimi-Bagbo – December 11 (2 cases)**

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

Infection chains: tracing through villages

date of first confirmed cases, Moyamba District

- **Kori – July 2 2014 (23 cases)**
- **Kaiyamba – July 27 (21 cases)**
- **Timdale – August 8 (1 case)**
- **Kowa – August 14 (1 case)**
- Bumpeh – August 23rd (17 cases)
- **Fakuniya – September 9 (49 cases)**
- **Kargboro – September 18 (8 cases)**
- **Banta (lower) – September 18 (36 cases)**
- **Bagruwa – September 26 (6 cases)**
- **Ribbi - October 11 (49 cases)**

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

CASES, DURATION OF OUTBREAK (days)

BO DISTRICT

(5.47 cases per 10,000)

- Kakua: 151, 201
- Bumpe Ngao: 49, 100
- Tikonko: 29, 149
- Baoma: 22, 98
- Niawa Lenga: 19, 36

TOTALS: cases 270, days 584

Case days per case: 2.16

MOYAMBA DISTRICT

(6.63 cases per 10,000)

- Ribbi 49, 123
- Fakuniya: 49, 57
- Lower Banta: 36, 75
- Kori: 23, 215
- Kaiyamba: 21, 70

TOTALS: cases 178, days 540

Case days per case: 3.03

NJALA UNIVERSITY
P.M.B. Freetown, Sierra Leone

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

Infection chains in Bo District

- First cases (Bo town and Baoma chiefdom [Jembe]) were overspill from Kailahun and Kenema
- Infection from Jembe to Kalia
- Kalia cases taken to outpatients at Bo hospital, returned to Kalia
  - Unplanned response in July, but Kalia case at Bandajuma maternity shows nurses prepared by August
- Nosocomial infection from Bo Hospital to Bo town (151 cases)
- Kalia outbreak – cases spread to Tikonko at end of July (29 cases)
- Tikonko outbreak – cases spread to Bumpeh Ngao in October (49 cases)
  - Bumpeh Ngao outbreak involved a laboratory false negative result

Infection chains in Moyamba District

- First infection chain (July) at Fogbo, isolated village in northern Kori in July chiefdom
  - Infection from Kenema
  - Testing was delayed due to river flood and lack of coordination with chiefdom authorities
  - Cases taken to Improvised holding centre at Moyamba
- Cases in Moyamba town (July, 22 cases)
- Infection spread from Fogbo to Moyamba Junction (September, 49 cases)
- Second infection chain from Western Rural outbreak (Waterloo) to Lower Banta chiefdom (September)
  - Gbangbatoke, 36 cases)
- Third infection chain from Western Rural to Ribbi chiefdom in October (49 cases)
  - Army deployment, resistance in Mathainneh village, cases cared for locally in the bush, with mixed results

Bo District case studies

NJALA UNIVERSITY
P.M.B. Freetown, Sierra Leone

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

Kalia outbreak, Bo

Imam dies and receives traditional burial (washing)

Wife becomes sick and seeks treatment in nearest HC (Bandajuma)

Though woman showed no “Ebola symptoms”, but nurse suspicious and employs IPC measures & prevents spread.

Wife delivers at home; she and baby die … Nurse follows up – hears lady died. DHMT alerted and DSOs investigate

People reluctant to engage with investigation …

Imam’s brother falls sick [eventually dies] & seeks advice from paramount chief

Many in town become sick: town quarantined and 17 moved to Bo

No facilities at Bo so returned with military quarantine as agreed by the Task Force

Families excluded from care and burial … tensions rise

They deployed soldiers around them. After the war we forgot about guns but if someone falls sick and is being surrounded by gun men, why have you brought in those guns? […] you don’t treat illness with guns. Sickness is all about encouragement.

Tinkonko and Bumpeh Ngao outbreaks

- Women's leader (Madam) infected when attended funeral in Tikonko, returned to Kaniya where showed Ebola symptoms.
- MCH Aide called CHO (chiefdom supervisor) who investigated and called the ambulance.
- MCH Aide was attacked and people stopped going to her health centre; DHMT therefore relocated MCH Aide.
- Lady died in Bandajuma ETC and large funeral averted.

… infection spread to Bumpeh Ngao

- In Bumpeh Ngao a confusion arose in the lab reports for one male victim who was sent the wrong report, incorrectly receiving a negative result and underwent a traditional burial.
- When other infections appeared in the house of the deceased the chief called the chiefdom supervisor who informed the DHMT who investigated.
- Spread was pure bad luck.

Moyamba district outbreak

NJALA UNIVERSITY
P.M.B. Freetown, Sierra Leone

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

Responses to the outbreak in Mathaine Village, Moyamba District

- Located in Ribbi chiefdom.
- Ribbi chiefdom borders Port Loko and Western area rural, and there were **28 crossing points** to these districts.
- Had a population of 272, with 192 people aged 18 or more.
- Residents are Muslims and predominantly speak Temne.
- In common with other villages in Southern Province, they rely primarily on subsistence agriculture

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

KEY FINDINGS

- Health seeking behaviors
- Power and authority relations, Local bylaws and compliance
- Care and medication
- Military intervention

NJALA UNIVERSITY
P.M.B. Freetown, Sierra Leone

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

Health seeking behaviors

- Respondents said they rarely sought care at the Health Centre because of travel costs and payments expected for clinical services and medicines.
- Health Centre patient registers, however, showed they were attending the clinic more than the other villages in the catchment areas.
- Insight into understanding the behavior of communities that yearned for facilities like health centres etc.
- Refusal to report illness to DHMT/DERC fearing they will be taken to the holding Centre and never return

"He did not survive and, in common with others who died from Ebola, his body was not returned. Our house was quarantined, with soldiers permanently" (wife of a deceased man)

- Traditional medicine was an alternative.

Power and authority relations, Local byelaws and compliance

Power and authority relations

- Historical conflict shaped and influenced the response(inter village and section conflict)
- Pressure from national, district and chiefdom levels leading to suspensions and beating of villagers by members of Ebola taskforce.

Local byelaws and compliance

- Anyone found not reporting a death, illness, keeping strangers, will be fined 500,000 Leones
- Villagers agreed that anyone who leaked information about burials occurring in the village would be fined the equivalent sum of 500,000 Leones.

Care and medication

- Strong local mobilization at village level with respect to care, and burials.

- Those who fell ill were instructed to be taken to the bush, consume small amounts of pepper soup, and a drink of lime and honey.

- There was a real local effort to avoid physical contact by placing water, lime and honey and/or pepper soup in the reach of the sick relative, but ensuring they did not touch them while they drank it.

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

Care and medication cont.

- Locally Improvised PPE: Used plastic bags for gloves, sugar or rice sacks to wrap around their body etc.

- Never used the same equipment twice. They buried the plastic bags and sacks with the body to ensure there was no cross infection.

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

Visiting ‘secret’ burial sites

- Burials were mostly done at night by men without the knowledge of the women.
- Some burial locations were in their farms with distances up to two miles.
- Children were instructed to play at the deceased house and women strictly warned not to cry publicly.

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

Military intervention

- The military was used in the village to force compliance to the EVD regulations.

Women described how they were kicked down the main path running through the village, men described how they were hit with the butts of guns (with some still visibly suffering from injuries), and children described how they were offered large sums of money if they showed them the places where people had been secretly buried

- Despite military intervention, our findings show that – among the people of the Mathiane – the survival rate in the bush was higher than the survival rate in the ETU.

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

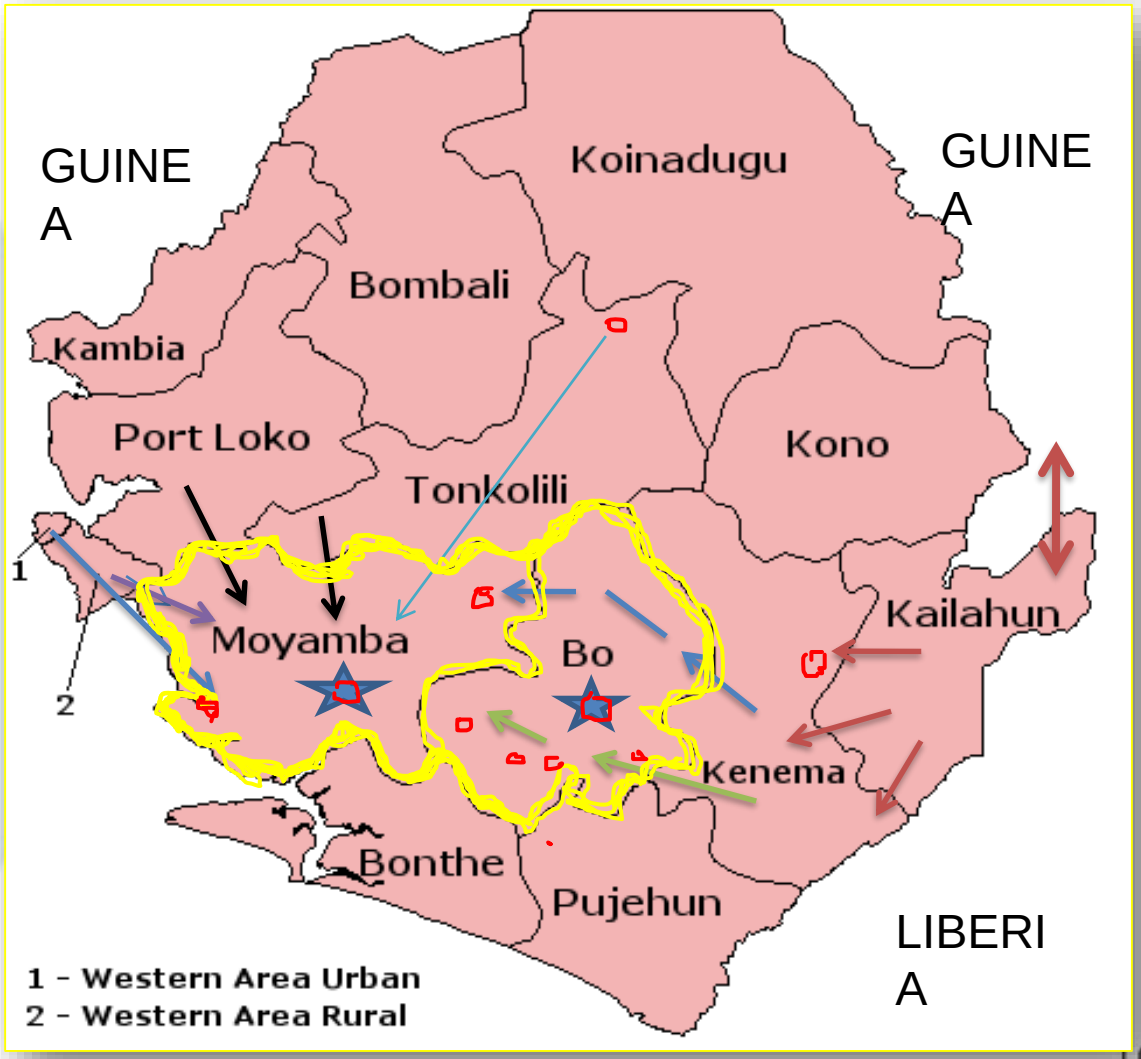
District level findings

Objective: To explore what actions were implemented at the district, why and how, and the extent to which they were affected by (or perceived to be affected by) international/national actions.

Ahmed Vandi for the Ebola-Systems team

NJALA UNIVERSITY
P.M.B. Freetown, Sierra Leone

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE



LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

Key findings

- Preparedness
- Leadership
- Coordination

NJALA UNIVERSITY
P.M.B. Freetown, Sierra Leone

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

PREPAREDNESS

BO

- PRE-EBOLA: None- no resources- but there was already very good relationships between stakeholders in the district.
- DURING EBOLA: Never waited for the resources to start coming from out side.

"We organized our towns and we started internally generating funds, requesting people for voluntary donations' before cases were detected."

"We collected about two hundred million Leones in this district and that was the money we were using you know … to control the outbreak"

MOYAMBA

- PRE-EBOLA: None- There were management meetings with DHMT, Educational sector, etc. to keep abreast with what was happening in the district.

"I mean that had been functioning over the years since the devolution took place"

- DURING EBOLA: Donation from the community came in only when there were now cases in the Moyamba town. This was to prepare the holding centre in Moyamba town.

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

PREPAREDNESS Cont.

BO DISTRICT

- In early weeks, health workers shared information on symptoms and outbreaks by word of mouth … these informed DHMT meetings
- Following the declaration of the health emergency, chair person took up leadership.

"EOC was established which involved local partners and even our international partners and I became the chairman"

MOYAMBA DISTRICT

- Council was not fully involved when they had what was called the Ebola Operation Centre (EOC).

NJALA UNIVERSITY
P.M.B. Freetown, Sierra Leone

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

LEADERSHIP IN DISTRICT OPERATIONS

BO

- Chairman continued with the leadership role.

"As chairman of the council in the district, I am the people's leader."

"So as a leader, I don't think you are going to ask ….'what do I need to do?'. So that is how I became in the beginning the chairman of the EOC"

MOYAMBA

- Chairman never led the operation.

"I wasn't like featured in the structure. Then when DERC came it was even worse. DMO and the DERC coordinator were like the co-managers"

NJALA UNIVERSITY
P.M.B. Freetown, Sierra Leone

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

DHMT views of by-laws and community actions in controlling transmission

BO

- The chiefdom authorities (ie paramount chiefs; traditional leaders) came together and passed the by - laws on the safe burials and social movement etc.

"That assisted greatly in the fight against Ebola because that was why in fact the traditional leaders' approach became [more] effective than any other approaches ever implemented for the fight against Ebola. People listened to their traditional leaders and when they made the by-laws, it was enforced, people abided by those by-laws."

MOYAMBA

- Problems in abiding by the by-laws that were put in place by chiefdom authorities.

"We had difficulties with a lot of people, especially in the Ribbi area. We had a lot of difficulties with the community people'"

"They were still doing burials without approval and that made it very difficult to actually stop the Ebola in that area."

District actor co-ordination

BO

- There was a committee that brought all other stakeholders together… paramount chiefs and whatever, all major stakeholders.

  "Again that was where the council was in-charge of the District Coordinating Committee (DCC)… bringing every player on board, coordinating issues, planning and executing programmes."

- Even the members of the command centre(including the military) had to attend the bigger umbrella meeting (DCC) in the district.

MOYAMBA

- The command structures (e.g. the previous Health Committee in the district council) had no function & was not recognized by any International Organizations (IOs)in the district.

  (the reason why the incoming and the outgoing of most of the actors cannot be remembered). E.g. No better information on the Norwegian health workers)

The council was not fully involved in most of the activities. No actor in the district directly reported to the council. The council as a body only attended the coordinating meetings organized by the DERC.

OUTCOME

•BO DISTRICT ADAPTED EASILY AND QUICKLY TO PUT IN PLACE MEASURES TO FIGHT THE EPIDEMIC.

- There were fewer cases per 10,000 population in Bo (5.5) than Moyamba (6.6) and cases were brought under control quicker (in 2.16 days vs. 3.03)

•MOYAMBA DISTRICT TOOK SOME TIME TO PUT MEASURES IN PLACE TO FIGHT THE EPIDEMIC.

- The district took more time to control transmission of the infection with more “late” outbreaks and fewer “averted”.

NJALA UNIVERSITY
P.M.B. Freetown, Sierra Leone

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

National/international level

Objectives:

1. To examine the extent, nature, motivations and drivers of the policy response to Ebola in Sierra Leone and their perceived effect;
2. To examine the level of coordination, oversight and regulatory mechanisms and their perceived effect on health systems

Lawrence Babawo for the Ebola-Systems team

NJALA UNIVERSITY
P.M.B. Freetown, Sierra Leone

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

NATIONAL RESPONSE STRUCTURES

- The National Ebola Response Centre (NERC) was launched on 18 October 2014,
- It was the third and final iteration of the national cross-sector response mechanism, designed to provide national operational coherence, resourcing and direction.
- NERC was placed under the Defence Minister (CEO) with other members including international partner organisations (WHO, UNICEF, UNFPA, UK Military).
- The DERCs (Nov/Dec) were the district arms, tasked with bringing together planning, operations, logistics, finance and administration.
- DERCs were generally headed by a politically appointed district chairman and the district medical officer. They were designed to be adaptable to local needs, so each operated slightly differently.
- National Council of Paramount Chiefs developed bylaws in June 2014 and were regularly consulted at Chiefdom level. They were not a formal part of the NERC/DERC but representatives from chiefdoms sat on some DERCs (e.g. Bo).

Outcomes

- Weaknesses in the overall coordination of the response in early months affected the response.
- In particular, organisations within the NERC had their own strategies which was often not aligned with NERC's plans or resulted in tensions, discrepancies & confusion at implementation levels (e.g. MSF, CDC & WHO case definitions and chlorine use; media messaging).
- Coordination and governance were key to changing the response from flailing to effective (some areas, eg Bo, had strong pre-existing governance structures)
- There were strong leadership systems but not without tensions and the need to control the international actors became even more apparent in terms of who would what activities.

"Leadership had to come into it because where you have CDC, the Americans, you have WHO and these are people who are always fighting for supremacy. So you have the Americans, you have the British, you have other players, the Italians were on board but then you have to contain them. The president was looking for someone who will be able to control them. And then from the very first meeting I had with them I said this is not the time for you to fly your flag high" (NERC CEO)

Outcomes

- It was revealed that where capacity existed, the response was already organized in a manner that coordination became very easy to effect – as evident in Bo.
- The study revealed that external actors had tremendous influence on the turn of events during the response once resources started flowing (e.g. vehicles; local treatment centres).
- In particular, they enforced parallel systems of health care delivery(NERC; DERCs) which supported a more efficient management of financial resources & specialist skills (e.g. surveillance) but clashed with some national health priorities and some District structures.
- This further undermined the already existing weak and non-functional health governance structures.
- International actors were convinced they knew best resulting in tensions at district and local levels and impeding local responses.

What worked

- There was (eventually) a strong central coordinating authority for international contributions.
- Strong personal leadership.
- Military logistic capacity had high potential to support emergency response.
- The use of the military in some instances where soldiers enforced compliance with bylaws and regulations to prevent movement of people, but perceptions were mixed.
- Coordination – NERC started acting as a central clearing house.
- Involvement of paramount chiefs through their Council:
  - Levying fines
  - Reporting movement of people
  - Involving other traditional chiefs/authorities in the community

What didn't work?

- Lack of skills in handling EVD and failure to learn from the "frontline".
- Huge capacity issues at MOHS
- Tension between military and MOHS when NERC and DERC were created
- No accountability of international actors within the districts
- Failure of international actors to rapidly coordinate
- Failure of national and international actors to meaningfully engage with, listen to or learn from district and local level responders.
  - This prolonged the development of acceptable home care and safe, dignified burial guidelines.
- Neglect of routine health services, leading to excess non-Ebola deaths.

NJALA UNIVERSITY
P.M.B. Freetown, Sierra Leone

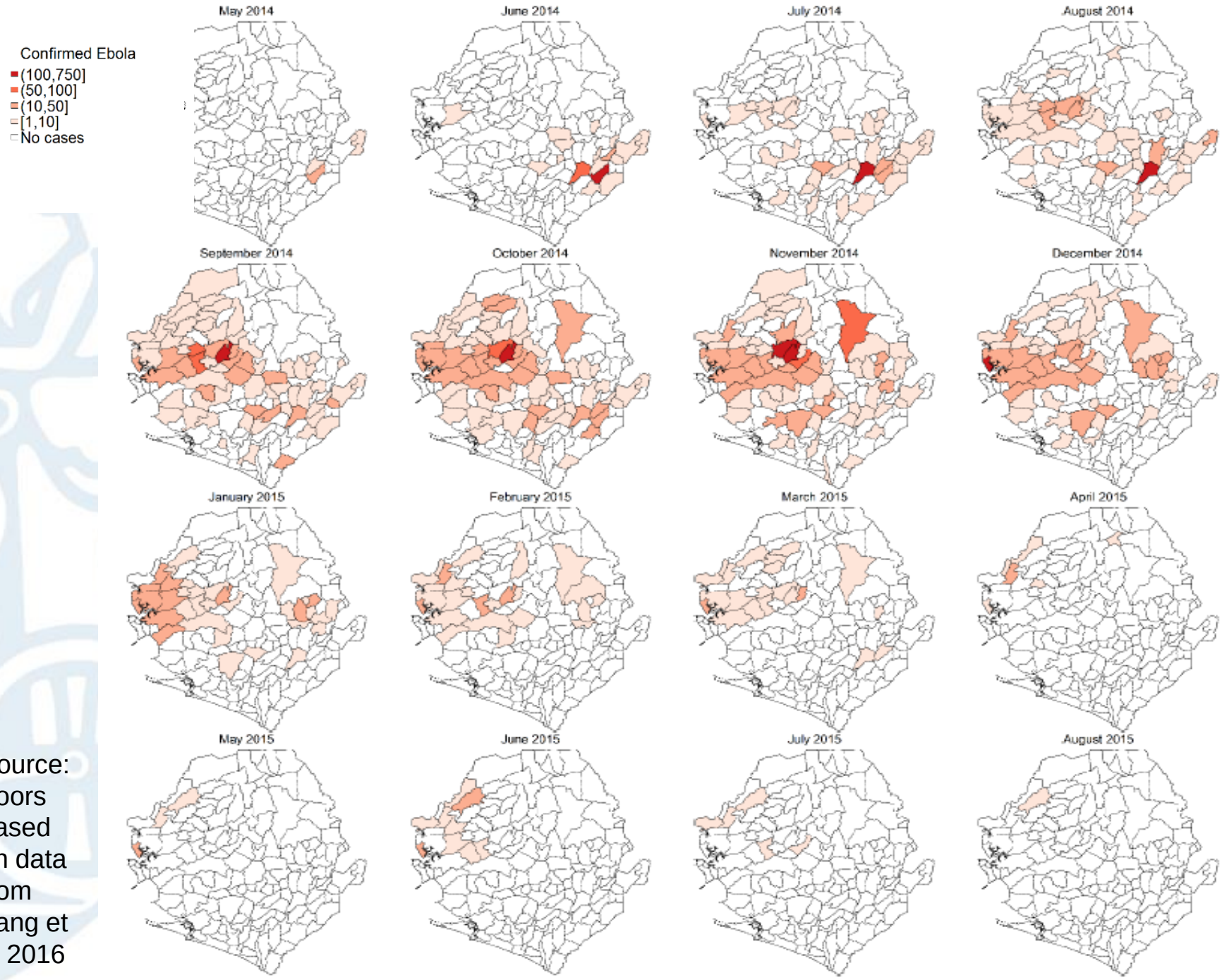
LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

Mapping the multi-level response to the Ebola crisis: connections, disconnections and lessons for the future

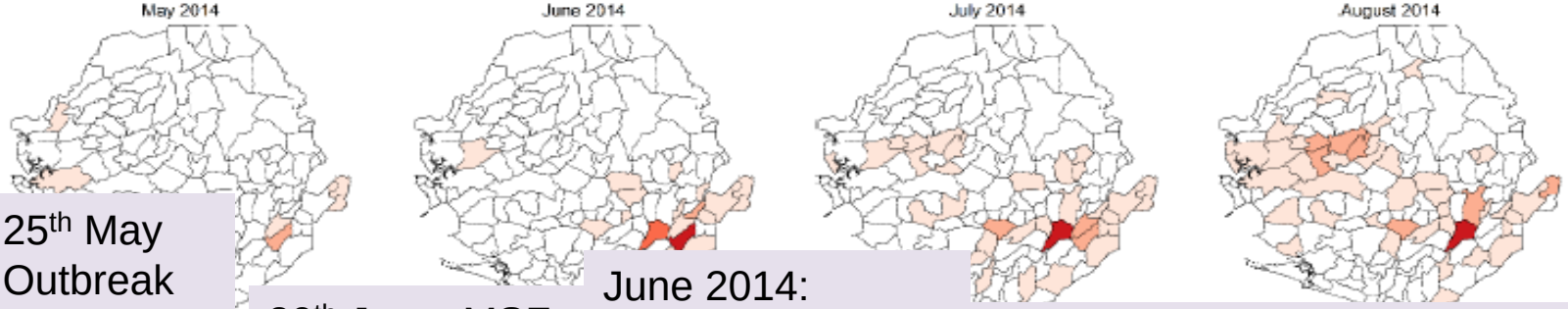
Susannah Mayhew for the Ebola-Systems team

NJALA UNIVERSITY
P.M.B. Freetown, Sierra Leone

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE



Source: Voors based on data from Fang et al 2016



March-April 2014 No official data

25th May Outbreak declared in Kailahun

20th June: MSF Statement. Ebola Operations Centre (EOC) estab in Freetown in WHO office

June 2014: Paramount Chief bylaws in Mobai in Kailahun; adopted nationally Aug

30th July National state of emergency

4th Aug: 750 SL troops deployed to set up quarantine in Eastern districts

March/April: HW contacts pass on info from Kenema.

Bo DHMT on high alert; monthly mtgs on IPC; no resources to prepare Tx centres.

May Dist raises L2mil

6th June: 1st lab confirmed case reported in Bo

Early June: Bo Dist Ebola Task Force (EOC) established

June: 1st & biggest outbreak, Kakua chiefdom

Nurse actions stop spread outside HC. 17 from Kalia to Bo Hos … then returned. Bo City Council alerted; DSO investigates.

July: Baoma/ Tikonko outbreaks

Increased District response: Kalia quarantined (42d); 1st lock-down: district-wide Dist Hos as holding centre

Communities hostile to Dist HW; EVD info believing it to be political manipulation

Moyamba: DHMT handling Ebola

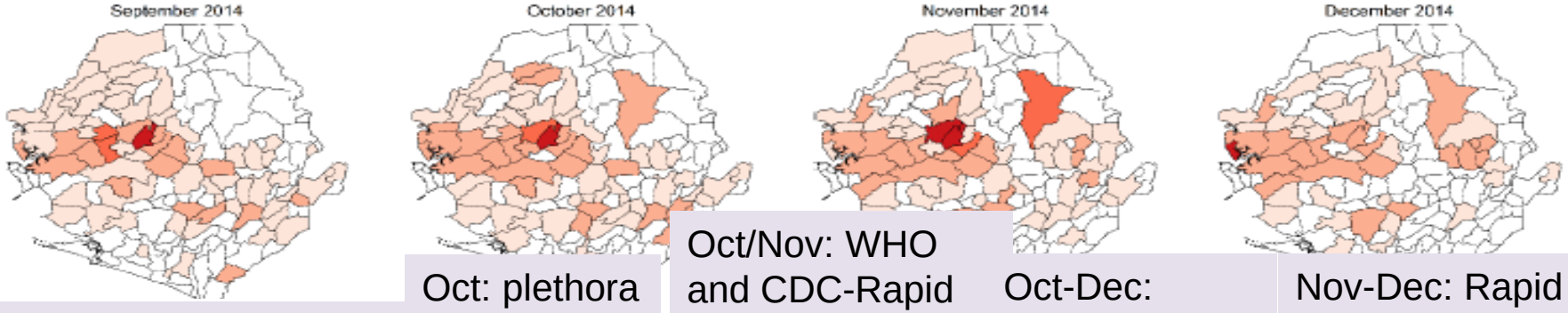
July: 2 major outbreaks: Kori; Kaiyamba

Kalia: initial hostility, then cooperation but military quarantine = resentment

Early infections hidden and home treated; widespread denial & hostility to HWs

Task forces estab at chiefdom level to bury and quarantine

4th Aug: 1st case in Moy hos; Holding centre established; 1st lockdown in Moyamba



UK military arrive

Quarantine extended; national lockdowns

Oct: plethora of SOPs; NERC & DERCS established

Oct/Nov: WHO and CDC-Rapid response and infection control Training Plan put in place

Oct-Dec: NERC training for DHMT & info for cmties through Chiefs

Nov-Dec: Rapid increase in donor/NGO input + in ETUs established

Safe & **Dignified** Burial SOPs

The ETC at Bandajuma, Bo

October 3rd: Bumpeh Ngao outbreak

Oct 17th: Niawa Lenga outbreak quickly quashed

Oct-Dec: int actors bring resources

Nov-Jan: IRC, WV, Unicef training on PPE, signs/symptoms, prevention

HWs in cmties report fear of identification

HW & DSO actions & comms contain infection in several HCs

Bo District Ebola Task Force becomes a DERC who order a 2nd Bo lockdown

19th Dec ETU estab

ETC closed 27th Dec?

3rd September 1st case admitted to Holding centre; hard to staff

Bumpeh Ngao: denial & hostility; contact tracer beaten

DERC 1st Nov

DERC "mini command" estab in Ribbi

Oct-Dec: various trainings by int actors

PC bylaws & Chiefs play key role in response

Sept 9th/18th: outbreaks in Fakunyia & lower Banta; 24th Dist quarantined

Oct 11th: Ribbi outbreak; military quarantine (from FT)

Ribbi: military brutality creates serious tensions; cases hidden & self-treated

Hostility to HWs, denial and confusion in many chiefdoms

What do we learn from analysis of response levels? (1)

- Village leaders and district authorities learned rapidly and successfully responded before the national/international guidelines or support reached them. Their experiences & learning were not taken into account at higher levels.
- Rapid learning was crucial to shaping outbreak progression and response in Bo and Moyamba?

➢ ***Emergency responses require immediate connection and support to local responders and must reward them for their learning.***

➢ ***National/international responders must accept they do not always know best.***

➢ ***Respectful and open-minded engagement and learning by all actors is essential.***

- Some evidence of well prepared response in Bo which had a lower caseload. However, Moyamba had particular challenge because of cases entering from three neighbouring districts.

➢ ***Early preparedness through leadership and coordination at***

What do we learn from analysis of response levels? (2)

- District level responses alone cannot tackle outbreaks like Ebola; without support and cooperation from village leaders responses will fail.
- ***Meaningful inclusion of local leaders in decisions about key aspects of treatment, care and burial is essential & national/ international actors must be prepared to compromise to accommodate local practices***
- District level responses, from development and use of communication material to building and running of holding and treatment centres, is hampered by slow flow of national/ international resources.
- ***Rapid deployment of resources to frontlines even without national frameworks in place is necessary.***
- ***Decentralisation of resources and decision making is essential.***
- Individual actions (through accident or intent) can spread or prevent new outbreaks;
- ***Need everyone, at all levels, to cooperate***
- Closure and recovery support: still missing graves and information; no counselling, little support for survivors; no resources for follow-up.
- ***Epidemic doesn't end when cases stop; plans and resources for recovery are urgently needed … Njala Museum & Archive is the national repository***

Thank you!

NJALA UNIVERSITY

P.M.B. Freetown, Sierra Leone

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

Questions for discussion

- What did the international response achieve in Bo or Moyamba? And in general?
- Did the presence, role and logistics of the military help or hinder the response?
- Frontline responders learned rapidly and positively shaped effective response in Bo and Moyamba. How can national/international responses rapidly learn from the front-line responders?
- What is the legacy?
  - Health system strengthened?
  - More effective emergency response … to mudslide?
  - Support for survivors?
  - Remaining resources (capital; trained personnel)?

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

EXTRA SLIDES

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

Questions for stakeholder discussion

- What shaped the relationships between stakeholders at different levels (national, international, district, local) during the response?
- How do you create ***"respectful and open-minded engagement and learning"*** and "***meaningful inclusion of local leaders in decisions about key aspects of treatment, care and burial"?***
  - How could national/international actors have quickly and better engaged with front-line health care workers, district decision makers, chiefdom and village leaders?
  - How could tensions between health workers/authorities and communities have been (or in future be) avoided?
- What do you think eventually led the national/international responders to agree to change key response guidelines e.g. on home care and placement of treatment centres close to people's homes?

NJALA UNIVERSITY
P.M.B. Freetown, Sierra Leone

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

Questions for stakeholder discussion

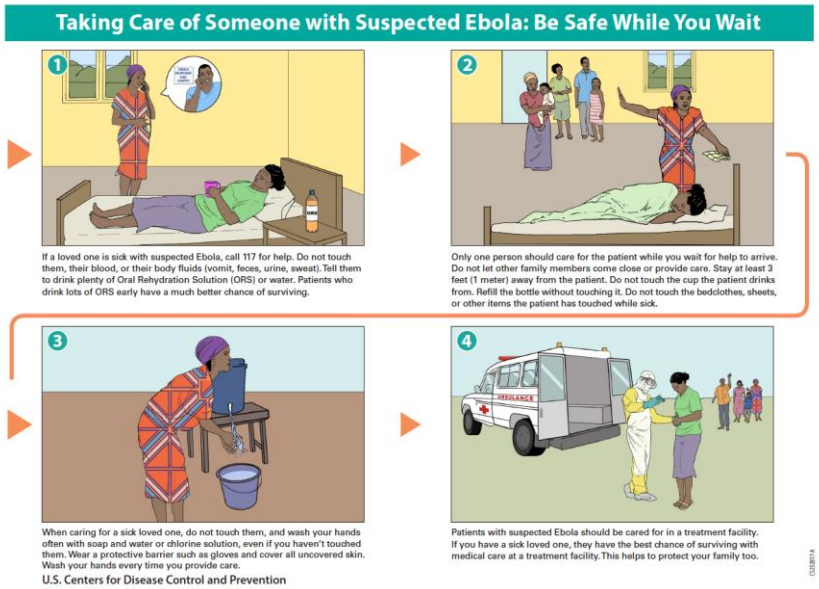
- Is decentralisation important for effective emergency response?
  - How would you achieve this within the command-and-control structure of typical international humanitarian responses?
  - Would this enhance accountability? (or not)
- What are your views on the role of the military in emergency response?
  - Did the presence, role and logistics of the military help or hinder effective response in Bo and Moyamba?
- What is the role of the media in emergency responses?
- What has been the legacy of the Ebola response?
- ***Any other views, thoughts or reactions?***

NJALA UNIVERSITY
P.M.B. Freetown, Sierra Leone

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

Village vs Health Systems Hierarchies: solutions to promote engagement

Community Care Centres (CCCs)



Home care protocols

Equip village burial teams

Conclusions on local response

District health system responses initially focused on infection identification and safe burial with no compromise;

This clashed with villagers' desire for personal care of their sick and respectful burial of their dead;

Therefore communities frequently did not engage with district health systems, took matters of care and burial into their own hands and were sometimes actively hostile;

The involvement of the heavy-handed military into the response at community level compounded the hostilities creating panic, fear and resentment.

Therefore critical to ensure cooperation and respect between communities and health systems …medics need to think like communities!

Many local bylaws and improvisations helped contain outbreaks locally.

Experience and knowledge of other infectious diseases (like smallpox) helped with acceptability of quarantine etc.

District level Conclusions

- Districts played a key role before international and national actors got involved at that level.
- Leadership, coordination and vision helped Bo be prepared.
- But, lack of proper devolution meant local governments relied on central government for resources and guidelines to implement services.
- This hampered rapid treatment responses and contributed to the widespread perception that ETUs were places of death, not treatment, creating hostility towards health workers.
- There is much work to be done on rebuilding trust in the formal health system.
- Local knowledge of health care workers involved in the response, and the new cadre of community health workers on the ground need to continue to be utilised and supported.

Conclusions national level

- The set-up of a Ministry of Health-led, military supported operation worked well in many aspects, and district structures provided quick access to the affected populations.
- Findings show that even under-resourced health systems can support emergency responses through well-coordinated cross-sector governance.
- Nevertheless, identified areas for strengthening include updating health regulations, ensuring and enforcing monitoring, accountability and transparency mechanisms.

NJALA UNIVERSITY
P.M.B. Freetown, Sierra Leone

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE