Three Lessons for One Health from the Upper West African Ebola Epidemic

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1. Improve speed of response
Causes of delay

• Confusion with other diseases (e.g. Lassa Fever)
  – Cases in Guinea from December 2013, and in Sierra Leone from March 2014, reported to WHO as Ebola only in May 2014

• Internal political factors
  – earlier rebellions and poor roads limited access

• Slow international response
  – WHO announced PHEIC only in August 2014
Necessary responses (1)

• Improved infectious disease surveillance
  – E.g. Sierra Leone’s system of volunteer village health workers

• Improved communications
  – E.g. “final mile” access, e.g. motor bike tracks (Liberia)

• Better inter-agency cooperation at all levels
  – International (e.g. GHC), regional (e.g. MRU), and national/local (role for “citizen science”?).
The following names are proposed for have been paid out by community process.

- Bottle of water bought fresh in Kpondu. This will cool down and be ready to use.

- The water people at the water well.

- A woman with 3 years of education of traditional birth. She can help in delivering the baby, but there is no medication.

- This woman lived in the village in the community, and no one had any help or support from the health center.

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Crossing to Fogbo
2. Knowledge biases matter
“How institutions think”

• Social ordering shapes ideas and flow of information
  – These biases are inescapable, science included
    • These can only be understood, and allowed for, not eliminated

• “Clash of institutions” undermined Ebola response
  – E.g. family mobilization is the local response to sickness
    • Centralised (hierarchically organised) Ebola Treatment Centres excluded families, feeding local fears, e.g. of organ harvesting
Bandajuma Ebola Treatment Centre (Bo, central Sierra Leone)
Dressing shed
(Bandajuma)
The (Thin) Red Line
(Bandajuma ETC)
One Health
Cognitive “hot spots” and “blind spots”

• “One Health” stresses risks of zoonotic “spillover”
  – Historically, Ebola risk associated with forest infection
    • e.g. hunting and bush meat consumption

• Spillover was associated with bats
  – Local evidence of bat eating has been found (Suluku)
    • BUT no firm evidence that Ebola in West Africa resulted from contact with bats (or bush meat consumption)

• Human contact drove the West African epidemic
  – family care, and sexual transmission
Necessary Responses (2)

• Avoid “clash of institutions” by “mapping” institutional biases
  – Understand why the organizational biases of scientific disease control and family care clash

• Create space for adjustment
  – ETCs were eventually “scaled down” to accommodate family involvement in sickness
    • Agencies opposed Community Care Centres as “unsafe”, but were proven wrong
Kenema ETC
(victims from far)
3. Involve communities
Community action cut infection chains

• Last cases in Kailahun District (Sierra Leone) predated international response
  – but followed upon community mobilization for case finding, quarantine and safe burial

• Bike taxi riders were the first “ambulances”
  – Community-based bike taxi riders brought first patients and their blood samples from “last mile” villages to the first international responders
Local action to end infection
Locally applied quarantine
Necessary Responses (3)

• Find ways to build on local volunteer action for One Health
  – CHWs (village-level health volunteers) are a start
    • bottom rung in national disease surveillance chains
• Legacy of “family care” needs a better response than marginalization
  – Many key One Health challenges require mobilization at community/family level
Where to start?

MALARIA