Before, during and after the Ebola outbreak 2000: Lessons for preparedness from a Northern Uganda hospital

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Outline

• Introduction

• Ebola in Uganda 2000

• St. Mary’s Hospital

• Reflections for preparedness and prevention
This is Lacor

Mission
To provide health care to the needy and fight diseases and poverty, thus witnessing the maternal concern of the church for every sick person regardless of ethnic origin, social status, religious or political affiliation.

Vision
A general referral hospital serving Northern Uganda and offering affordable quality care

Over all Objective
Improve health and welfare of the population of northern Uganda by being a driver of quality health care provision and socio-economic development
The story of Lacor

• Started in 1959 by Gulu Catholic Diocese. In 1961, Piero Corti and Lucille Corti took responsibility for fundraising and management.

• From 1965 with 154 beds, 58,321 patient contacts and 44 Ugandan staff, we now have 482 beds, 280,000 patient contacts and 600 staff, 99% local.

• Progressively grew in 70-80’s, built three lower level health units, training schools for nurses and laboratory, wards, support services.

• Heavily affected by war in 80’s -2000’s, endured.
HIV and TB Pandemic started in the 1980s.
FROM 1996 – 2006; 3,000 – 10,000 CHILDREN AND MOTHERS TRACKED 10 – 20 KM DAILY TO SEEK SHELTERS IN THE HOSPITAL COMPOUND.
NIGHT COMMUTERS SLEPT IN ANY OPEN AREAS OF THE HOSPITAL FOR ABOUT 10 YEARS
OVER 2 MILLION PEOPLE DISPLACED INTO IDP CAMPS LIKE THIS ONE SURROUNDING LACOR AMURU HC 111.
Before the outbreak

• Some basic PPE were present, use inconsistent
• Handwashing facilities there, not widespread
• We were reusing some needles, catheters, etc after some sterilization, of course.
• Routine reporting/surveillance was present, but took some weeks before notification
• Strange deaths seen among patients, HCW and community
During the outbreak 1/3

• “Firefighting”, strain, stress, stigma and gain

• There was a delayed but accelerated response

• Gradual influx of resources: technical human resource, capacity building, equipment, supplies. Locally, staff volunteered.

• Diagnostic lab set up by CDC

• Lots of capacity building, especially volunteers
100 HEALTH WORKERS VOLUNTEERED TO WORK IN THE ISOLATION WARD. 425 people were infected. 224 people died. Mortality rate 52.7%, including 13 hospital staff.
100 HEALTH WORKERS VOLUNTEERED TO WORK IN ISOLATION WARD.
277 PATIENTS WERE ADMITTED TO ISO. 200 RECOVERED.
77 DIED. (INCLUDING SUSPECTS)

EBOLA ISOLATION WARD WAS SET UP IN THE HOSPITAL
During the outbreak 2/3

• But stigma ensued: HCW avoided, shunned.

• Grave fear of EVD and processes: some people were hidden to avoid “being killed”

• Some health workers were also fugitive. Some patients tried to escape, and spread EVD.

• Engaged the culture, clergy to change some practices like washing corpses, greeting

• Multisectoral: army, politicians, religious, health and others engaged.
425 people were infected. 224 people died. Mortality rate 52.7%. 
EBOLA VICTIMS BURIED AT DIFFERENT LOCATIONS
During the outbreak 3/3

• Severely destroyed by suffering and death of colleagues
• A sense of despair can arise.
• **Fear:** Are we going to be driven by fear?
• **Research:** Little was done few publications, no major clinical study

Okware SI et al; An outbreak of Ebola in Uganda; Tropical Medicine and International Health, 2002, 7(12):1068-1075
Ebola Hemorrhagic Fever Transmission and Risk Factors of Contacts, Uganda

Paolo Francesconi,* Zabulon Yoti,† Silvia Declich,* Paul Awil Oniek,‡ Massimo Fabiani,* Joseph Olango,‡ Roberta Andraghetti,* Pierre E. Rollin,§ Cyprian Opira,† Donato Greco,* and Stefania Salmaso*

Figure. Chains of transmission relative to 27 Ebola cases, Gulu District, Uganda (September–October 2000). The numbers above the blocks indicate the total number of healthy contacts identified for that patient. The slashes indicate patients who died. The isolation ward at Lower Hospital by the Center for Disease Control.
Elio Croce

Più forte di Ebola

Diario dall’epidemia in Uganda
After the outbreak

- An epidemic preparedness plan in place: challenges with wide awareness and use
- Various surveys, notable of which is the Hospital acquired infection surveys, antibiotic sensitivity surveys, drug use, client satisfaction, etc
- A sentinel site: lab samples can be quickly be transported, sometimes quick reporting.
- Practices difficult to change. Few hospitals have functional infection control committees
After the outbreak

• Personnel: we have local physicians, specialists, but **none** specifically trained for Biosafety.

• Only 1/9 hospitals had an Epidemiologist, 1/3 lab staff unaware of biosafety level. Most labs are functionally BSL 1.

• Equipment a challenge: Lacor had 10 PPE, to ask for more in case of outbreak.

• Training: some outbreak trainings, target few. most staff unaware/untrained/uninduced.
## HAI prevalence

### HAI prevalence and type distribution  Lacor 2014, 2013,2011,2010

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<td><strong>HAI prevalence</strong></td>
<td>12.96%</td>
<td>13.60%</td>
<td>14.00%</td>
<td>15.30%</td>
<td>14.00%</td>
<td>28.00%</td>
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<td><strong>Type of infection</strong></td>
<td>n</td>
<td>%</td>
<td>n</td>
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<td>UTI</td>
<td>6</td>
<td>25.0</td>
<td>8</td>
<td>34.8</td>
<td>32</td>
<td>58.2</td>
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<td>SURG WOUNDS</td>
<td>7</td>
<td>29.2</td>
<td>2</td>
<td>8.7</td>
<td>10</td>
<td>18.2</td>
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<tr>
<td>RESP SYST</td>
<td>1</td>
<td>4.2</td>
<td>6</td>
<td>26.1</td>
<td>3</td>
<td>5.5</td>
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<tr>
<td>BLOOD STREAM</td>
<td>9</td>
<td>37.5</td>
<td>7</td>
<td>30.4</td>
<td>10</td>
<td>18.2</td>
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<tr>
<td><strong>Total</strong></td>
<td>24</td>
<td>100</td>
<td>23</td>
<td>100</td>
<td>55</td>
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A total 1550 clients were surveyed in six years, average 293 per survey. No prev difference by age, sex. Diarrhea, drain from 2015
Prevalence of hospital-associated infections can be decreased effectively in developing countries


Invasive procedures and Hospital Acquired Infection (HAI) in A large hospital in Northern Uganda.

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Hospital Acquired Infections in a large North Ugandan hospital

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Conclusions

- Outbreaks are still likely to occur, some new.
- Many **settings** are not specialised units; need support (staff, tech, lab) and preparedness in context.
- Trainings needs to be consistent amidst competing training needs. **Be calm, be vigilant**
- Some basic level of supplies and equipment should be urgently accessible when needed
- Community and other sector involvement key.
- Ongoing activities, like surveys, drills, **surveillance**
- Research during outbreaks be enhanced
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