Sterilization departments of hospitals in Liberia preparing for post-Ebola Challenge



2016



Healthcare through **A**ppropriate and **R**eliable **T**echnology

Quadenoord 2, 6871 NG Renkum, THE NETHERLANDS

Tel: +31-317316756 Mobile: +31-617918924

e-mail: jh@heartware.nl

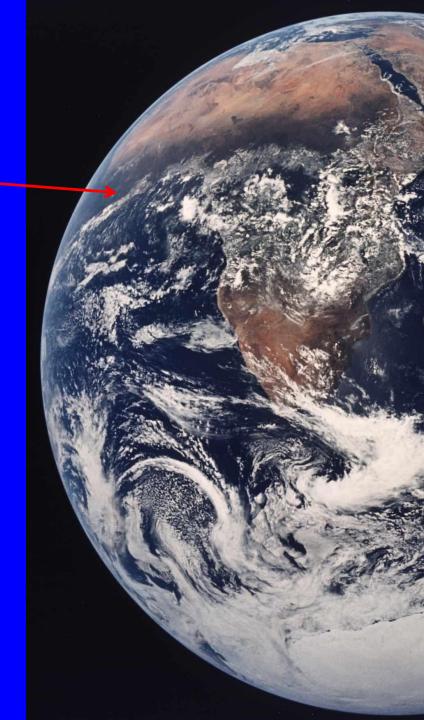
www: http://www.heartware.nl















50th Anniversary



Vereniging van Deskundigen Steriele Medische Hulpmiddelen

20th Anniversary

WORLD FEDERATION FOR



HOSPITAL STERILISATION SCIENCES

20th world sterilization congress

Training and *recognition* of the profession











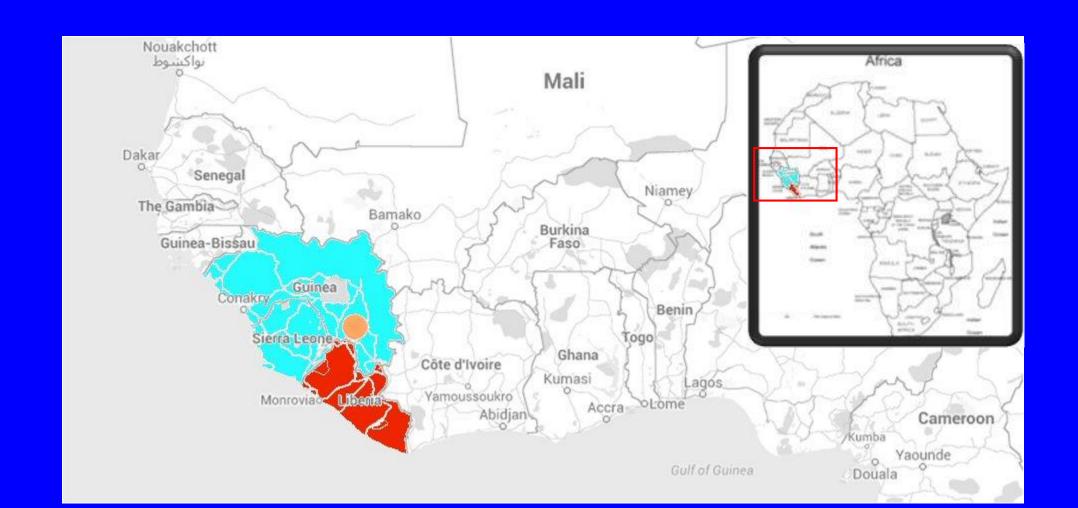
Sterilization departments of hospitals in Liberia preparing for post-Ebola Challenge

- Liberia 2014: Ebola crisis
- St. Josephs Hospital and JF Kennedy Medical Centre: CSSD support call
- Nov 2014 Assessment visit
- Dec 2014 May 2015:
 Preparation/Procurement/Training
- May-July 2015:
 - Implementation of repairs, installations
 - Training of Users and Technicians



Development of the Ebola Crisis: Africa

Origin: Guinea: March 2014



Development of the Ebola Crisis; Africa

Guinea 3770 cases 2509 deaths Sierra Leone 13209 cases 3947 deaths 10673 cases 4808 deaths Liberia:

Total Africa: 27652 cases 11264 deaths

Figures: July 20th 2015

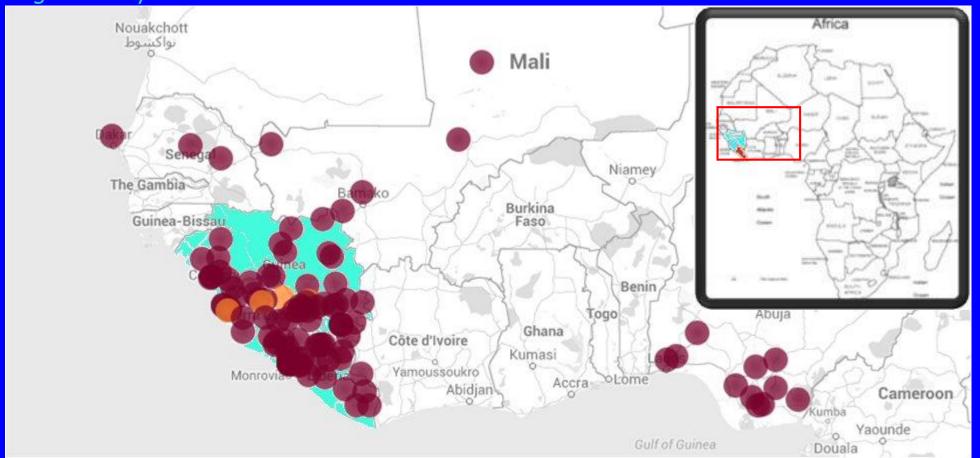
Senegal: 1 case

Mali: 8 cases; 6 deaths Nigeria: 20 cases; 8 deaths

United Kingdom: 1 case

Spain: 1 case

United States: 4 cases; 1 death



Development of the Ebola Crisis

Pictures that went around the world

Photo: Time magazine





Liberia: Love of liberty



Monrovia: Nov 2014. Typical city view



St. Joseph's Hospital, Monrovia Ebola: effects/side-effects

- Policy during Ebola crisis: avoid direct contact. Larger meetings of people are forbidden. Markets are avoided
- Society disintegrates. The already weak economy further collapses
- In hospitals: staff members die; fear among staff.
- Result: hospitals were closed. Health care system collapsed
- Example: St. Joseph's Catholic Hospital. The director died of Ebola; total 9 staff died





Br. Patrick Nshamdze, our Hospital Director, dies at 52



Ebola side effects: forgotten deaths

- Non-Ebola patients did not receive treatment anymore!
- For every Ebola victim (7-10-2014):
 9 Tuberculosis; 31 Diarrheah; 42 Malaria; 52 HIV/AIDS

Total for every Ebola victim: 134 Non-Ebola victims/day





Request for support for reviving Sterilization Department

- St. Josephs Hospital: 140 beds; 2 delivery rooms; 4 OR's
- Was closed since august 2014
- In November 2014 maternity was opened. Gradually other departments opened.
- Focus on non-Ebola patients
- Need for adequate sterile supply
- Support through German Government / Misereor/MI Wuerzburg







Location of St. Joseph's Hospital, directly at the shore of the Atlantic



On the other side of the hospital fence





All patients have to pass the triage station



Triage station: Crucial Strategic point: temperature taken; interview; diagnose





Ebola suspects are isolated in the CCC (Community Care Centre)



At the entrance of every building Hand disinfection station



All staff have their temperature taken at the gate



At the far end of the hospital compound: the graves of Brothers and Sister of St John that died of Ebola in July/august



CSSD: broken down automatic sterilizers (from 1999)





The old sterilizer really needs an overhaul



Sterile storage. Lack of storage space; corroded containers





Sterilization at time of assessment visit



Manually operated, charcoal heated pressure-cooker type autoclave



Transport of sterile goods to the hospital building



Dec 2014: maternity was reopened. After CS the mother is taken back to the ward



Welcome to mother earth. The new born baby is doing well



Cleaning/disinfection of the OR: Spraying the table and floor



After the operation: Disinfection and cleaning of instruments



Cleaning problems



Drying the instruments on a trolley



After 1.5 hour in PPE the suit is like a swimming pool



Handling the infectious waste









The KSG could have a temporary fix until next visit



Preparation for renovation of the CSSD

- Planning layout and equipment needs of the departments
- Procurement/shipment of equipment
 - 2 new autoclaves: 1 automatic; 1 manual
 - Equipment for sterile storage
 - Equipment for cleaning
 - Packaging materials
 - Sterilization control materials etc
 - Spare parts for overhaul KSG autoclave
- Training on new autoclaves (Matachana)

May 2015: Visit for installing/training on new equipment. At the time: Reason to celebrate: Liberia is Ebola free!





Getting the CSSD room ready Removal of one of the old sterilizers





Keeping Ebola out: preparing the chlorine solution for the buckets in front of each building





Preparing the room of the CSSD for receiving the new equipment





Getting the new autoclave on its location in the CSSD







Installing, testing, and commissioning the new autoclave





Reality: people die.

Removal of a body by the dead-body team

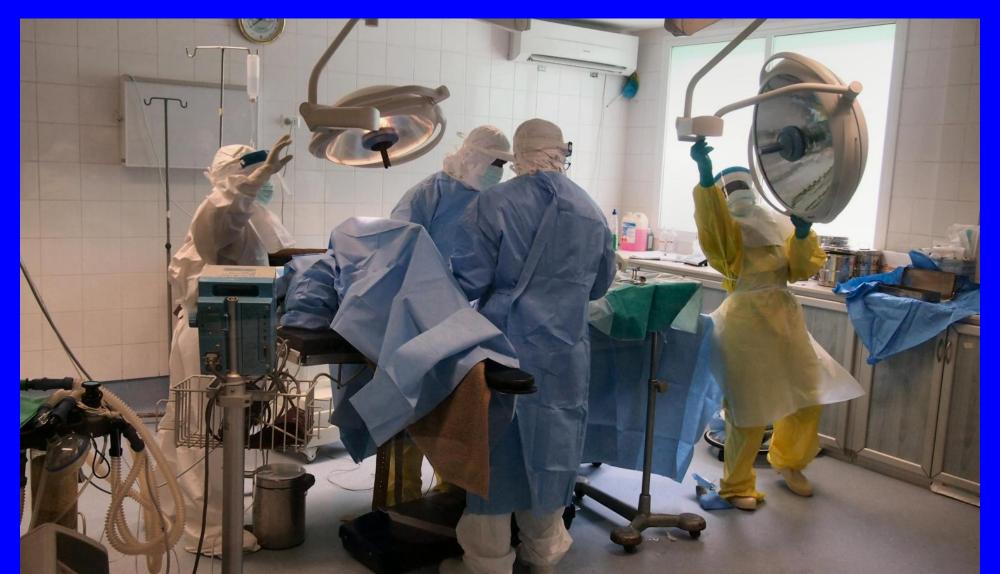




Installing, testing, and commissioning the new autoclave



Slowly the hospital comes back to live: the main theatre is opened again



Intalling and testing the manual vertical autoclave: Steriflow Robustex



Challenges while overhauling the KSG autoclave



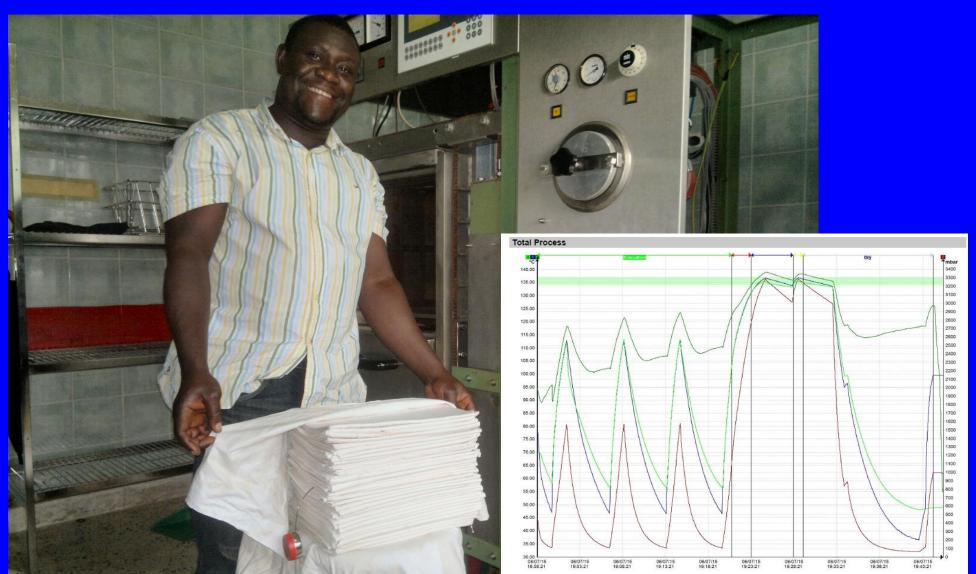








Overhauling of the KSG autoclave Final Testing: B-D-test

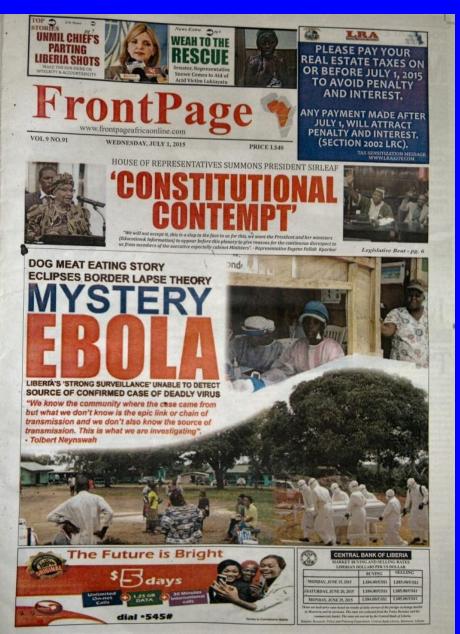


The department is getting shape!



July 1st: Ebola hits again!





Remaining on the alert: on-going training on Infection Control Protocols



The final: Training of users and technicians



User training: practicals

Testing the stove for the Robustex manual autoclave







Training of technicians









Proof of attendance



Celebrating together: honoring the hospital heroes!



Handing over; A final good bye: With Dr. Senga, Mr. Mozes and Mr. Lah



The real health care heroes!









Training of staff in sterilization departments and technicians: Fun!











Back home!



