THE ROLE OF ENVIRONMENTAL HEALTH OFFICERS IN AN INTERNATIONAL DISASTER RESPONSE

Bob Handby
Water & Sanitation
Aid Worker & Ambassador
Australian Red Cross

redcross.org.au
- Australian EHO’s have and are still playing a major role in the response to International Disasters

- The Water & Sanitation Department of the International Committee of the Red Cross [ICRC] Geneva was developed by an Australian EHO in the 1970’s.
Red Cross utilises the skills of E.H.O’s in the following:

- International Committee of the Red Cross (ICRC)
- International Federation of the Red Cross and Red Crescent (IFRC)
- Community Health Module of Emergency Response Units
- Australian Red Cross Disaster Response Team
- Development Projects
- New and emerging diseases
- The profession is ideally suited with the broad range of knowledge and skill
- EHO’s are sought after and recognised internationally
The following are examples of this work that I have undertaken focusing on the Red Cross, but acknowledging that other Aid Agencies, the United Nations and Australian Defence Forces also utilise the skills of EHO’s. internationally:
INTERNATIONAL COMMITTEE OF THE RED CROSS (ICRC)

- Construction of camps
- Provision of water
- Sanitation and Hygiene Promotion
- Security (Sri Lanka)
I F.R.C. • Boxing Day Tsunami - Banda Aceh

redcross.org.au
Pakistan floods (assessment)
COMMUNITY HEALTH

- History
- Training
- Deployment
- Purpose
AUSTRALIAN RED CROSS DISASTER RESPONSE TEAM consists of 4 modules:

- Emergency water
- Shelter
- Sanitation
- Vector Control
• Emergency Water
- Emergency water
- Shelter
- Sanitation - includes hygiene promotion, latrine construction and distribution of hygiene kits
- Vector Control
DEVELOPMENT PROJECTS UTILISING PHAST METHODOLOGY

redcross.org.au
NEW AND EMERGING DISEASE

- Ebola
- Zika
Ebola Response in Sierra Leone included:

- Operation of an Ebola Treatment Centre (case management)
- Laboratory capacity
- Contact tracing and surveillance
- Social mobilization – education
- Safe and dignified burials
- Legislative requirements
- Psychosocial support
The Ebola Treatment Centre is divided into two zones, the high risk and low risk areas. The high risk includes the following:

Separate areas for suspect, probable and confirmed patients
High Risk Zone

redcross.org.au
Loading and unloading area for ambulances.
The area in triage occupied by patients is in the High Risk Zone
Mortuary

redcross.org.au
The undressing area is divided into High and Low Risk
All solid and liquid waste from the High Risk Zone must be retained within that area for environmental, safety and because of concerns of the local community.
Low Risk consists of:

- Dressing
- Laundry
- Meeting/resting rooms
- Pharmacy/stores
- Kitchen
- Laboratory
- Technical area (generator/chlorine dosing & testing)
- Water tanks

redcross.org.au
Infection, prevention and control consists of many procedures and activities to reduce the risk of transmitting infections:

- Use of PPE (dressing and undressing)
- Hand hygiene
- Needle stick prevention
- Cleaning and disinfecting surfaces
- Safe burials
- Staff rotation (monthly and hourly)
- IPC and medical staff should always work as a team
- Buddy system
- Treatment of re-usable material  
  - goggles
  - boots
  - stretchers
Kono Holding Centre

redcross.org.au
TEST RESULTS OF PATIENTS ADMITTED TO THE HOLDING CENTRE

- **Pending**
- **Negative**
- **Unknown**
- **Positive**
Construction of an Ebola Treatment Centre

Site considerations:
- Land ownership
- Location
- Size
- Drainage (soil type)
- Access
- Security
- Access to water
Construction of the Kono Ebola Treatment Centre
FLOW – Movement of staff and patients within the High Risk Zone

An ETC must be designed to allow the safest movement of staff and patients.
Staff and patients can only move in one direction, i.e. from the suspect area > probable > to the confirmed area.
Patients – move from arrival to triage and then if admitted into suspect, probable to confirmed.
Patients leave via a “happy shower”, ambulance transfer or to the mortuary.
**STAFF** enter via the Dressing Area, then move in one direction through suspect, probable and confirmed; and then exit via the Undressing Area.
Ebola survivors leaving for home after their “Happy Shower”
Red Cross Kono Ebola Center – Sierra Leone
ZIKA VIRUS – where to from here ??

- Another opportunity
Thank you for listening