Biosafety& Biosecurity in Zimbabwe's PHL Labs

Abel Waldman

Chief Medical Laboratory Scientist

(MOHCW)

Department of Pathology

Based at Bulawayo Group Laboratory

Mpilo Central Hospital

Bulawayo

Zimbabwe

Zimbabwe's Public Health Labs

- Biosafety in Zimbabwe's Public Health Labs
- Biosecurity in Zimbabwe's Public Health Labs
- The Personnel
- Training & Learning Opportunituies
- Structure
- Infective agents encountered
- Activities
- Concerns/Goals

STRUCTURE

- NUMBER: There are 7 Main Reference PHLs, 4 in Harare 3 in Bulawayo
- There are other Provincial and District PHLs in the ten provinces
- The Facilities include
- A National TB Reference Lab

(biosafety level 3 facility)

A National Microbiology Reference Lab

(biosafey level 2 facility)

STRUCTURE

- Provincial Public Health Labs
- (biosafety level 2 facilities)
- District Public Health Labs
- (biosafety level 1 and 2 facilities)

Personnel& Training

- Clinical Scientist (MSc or Doctorate)
- Specialist Medical Laboratory Scientist

(After 6 year course)

- Medical Laboratory Scientist (4 year degree course)
- State Certified Medical Laboratory Technicians (2 year course)
- Rapid HIV Testing Nurse Practitioners
- Laboratory Hands
- General Hands
- Clerical Staff

LEARNING OPPORTUNITIES and ORGANISATIONS

- University of Zimbabwe
- National University of Science & Technology
- The Pathology & Reference Public Health Laboratories, Provincial & District PHLs
- Incorporation of Biosafety& Biosecurity concepts in basic training
- Workshops
- Post Graduate training courses
- International Training Instituitions

ACTIVITIES

- Microbiological Risk Assessment (as per WHO guidelines)
- Packaging & Transportation
 (follow WHO & IATA recomendations)
- Monitoring(follow chain of conveyance)
- Handling
- (SOP derived from WHO & Good Medical Laboratory Practice guidelines available)
- Dispoal(incineration)

INFECTIVE AGENTS ENCOUNTERED

- Bacteria
- Viruses
- Fungi
- Parasites
- Organisms of unknown pathogenicity

Some Findings In CSF Specimens examined at Bulawayo Group Lab from 1st April 2007to 3thApril ,2008

| Total number of CSFs | 1184 |
|---|------|
| Escherichia coli | 32 |
| Klebsiella pneumoniae | 22 |
| Staphylococcus aureus | 5 |
| Cryptococcus neoformans | 225 |
| • Streptococcus Group B | 4 |
| • Streptococcus Pneumoniae | 16 |

CONCERNS/GOALS

- To redesign lab buildings to enhance biosafety and biosecurity
- To have legislation for Laboratory Biosafety& Biosecurity
- Creation of Specialist Laboratories to deal with extremely dangerous infective agents
- Enhance research in Laboratory biosafety & biosecurity
- To have periodic Microbiological Risk Assessments.

CONCLUDING REMARKS

Challengers

Limits in resources

Improvements

In medical science practice together with safety

Opportunities

technologies to tap a vast range of unexplored information

• Hopes & Ambitions

Improved biosafety and biosecurity in a progressive science era with improved medical care

- Best Wishes for better safety in scientific work & research
- THANK YOU