Clinical Waste Management at Referral Hospitals

Botswana

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Background Information

- BACKGROUND
  - Risks of Clinical Waste to Human Health, Environment and Natural Resources
  - Growing Public Awareness and Media concerns about Clinical Waste in Botswana
    - Inappropriate segregation, handling, storage, collection,
    - Incineration, transportation and disposal
- AUDIT PLANNING
  - Scope: 3 referral hospitals' waste stream from generation to the ultimate disposal of residuals
    - Coverage: 3 years (2003/04 to 2005/06)
  - Audit Objectives
    - Determine compliance with the Botswana Clinical Waste Management Code of Practice (BCWMCP)
    - Assess how risks associated with clinical waste were managed
    - Determine how clinical waste information was compiled to assist in decision making

Audit Planning cont..

- Audit Criteria
  - Clinical waste management for the referral hospitals should be reflected in Strategic Plans
  - BCWMCP should be complied with entirely
  - Clinical waste should be appropriately managed to protect human health, environment and natural resources
  - Sufficient, reliable and relevant data on Clinical Waste should be easily accessible to assist in making informed decisions
  - The Code of Practice should be reviewed to ensure it addressed all clinical waste issues

Audit Methodology

- Interviews
  - 119 people interviewed
    - 20 Professionals (Doctors, Pharmacists, Radiologists, and Laboratory staff, Engineers, Environmentalists, Administrators, Contractor and others
- Document Review
  - Public Health and Waste Management Acts, Policies on Environment and Natural Resources and Studies on Clinical waste management
- Observation
  - Hospital wards, incinerators and landfills

Key Audit Findings

- Clinical waste management issues not provided for in Strategic Plans
- Non compliance to the Code of Practice (BCWMCP)
  - Inappropriate segregation,
  - Inappropriate:
    - Receptacles, handling, storage, transportation
  - Waste loaded into incinerators before adequate combustion temperatures had been reached

Waste carried by hands

Clinical waste stored in wrong bags

Waste stored in unsealed boxes

Waste left in direct sunlight

Waste transported in open trucks

Findings continued..

- Risk management
  - Health care workers and operatives not vaccinated against potential diseases
  - Inadequate protective clothing
  - Delay in disposal of clinical waste
  - Dumping of residuals and ashes at landfills instead of burying in special excavations
  - Ashes and residuals not regularly tested
- Inadequate maintenance of data on Clinical Waste Management
- Code of Practice not reviewed since 1996

Clinical waste mixed with domestic bags

Incinerator not cleared

Ashes mixed with tins

Ashes piled in open space

Recommendations

- Development of Strategic Plans and Objectives for management of clinical waste
- Compliance with Code of Practices and International Best Practices
- Establishment and adherence to Risk Management procedures
- Develop and maintain database on Clinical Waste Management information
- Periodic review and Evaluation of the Code of Practice to ensure alignment with International Standards

- IMPACT AND RESULTS
  - Management accepted all the audit findings and concurred that it reflected the reality at the 3 referral hospitals
  - Promised to remedy deficiencies established during audit
  - Follow up will be undertaken to assess remedial action taken
- CHALLENGES AND BARRIERS
  - Performance audit reports not being discussed by the Public Accounts Committee
  - Time and resource constraints limited scope of the audit to 3 referral hospitals instead of nationwide coverage
  - Absence of clinical waste management objectives and strategies made it difficult to assess performance
  - Clinical waste management issues not given due priority by management of health facilities
- LESSONS LEARNED
  - Interviewing relevant professionals such as Environmentalists and Toxicologists greatly assisted in compiling report
  - Important to collect concrete evidence such as photographs so that auditees may not challenge the audit findings