

# BIOMEDICAL ENGINEERING AND MAINTENANCE SERVICES DIVISION (MOMS) 1<sup>st</sup> East African Regional Scientific conference

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FOR: HEAD OF MEDICAL ENGINEERING DIVISION AT TOM MBOYA  
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## About the Division

- Biomedical Engineering Services Division falls under the department of Technical Administration in the Ministry of Medical Services.

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## Core functions

- i. Development and implementation of maintenance management system for medical equipment/devices, plants and instruments in public hospitals
- ii. Development of policies and guidelines for rational incorporation, safe deployment and optimum use of medical equipment/devices (WHO, EB 120/13, 2007)
- iii. Promotion of use of appropriate medical equipment/devices, plants and instruments (Health Technology) in public hospitals for solving health problems and improvement of quality of lives.

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## Core function I

- (i) Development and implementation of maintenance management system for medical equipment/devices, plants and instruments in public hospitals

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## Activities for core function I

- To attend to corrective maintenance in a timely way in the hospitals
- To conduct preventive maintenance as per schedule in the hospitals
- To conduct user training on effective use of medical equipment/devices

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## Definition of terms

- What is maintenance?
- All activities carried out on an equipment in order to restore its specified performance
- Types of maintenance – Corrective , Preventive.
- Corrective- Activities undertaken to restore the functions of an equipment after failure- Generally called- Repairs

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## Definitions- Conti.

- Preventive- Scheduled activities undertaken on an equipment to avoid failure and ensure proper functions.
- Same principles work for equipment, plant and buildings

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## Key Challenges

- Non availability of spare parts/ material
- Poor procurement system for spare parts
- Low budgetary allocation for maintenance
- No policy on cost sharing funds as far as maintenance is concerned
- Liaising with outside contractors without the knowledge of medical Engineering staff at facility level
- Purchase of equipment without involving medical engineering staff at facility level.
- Inadequate technical information.
- Improper work environment ; lack of dustcoats, gloves, disinfectants, testing equipment, workshop facilities

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## Key challenges

- Inadequate training opportunities to update with emerging technologies
- Inadequate resources for supervision, training, and monitoring especially at the provincial level
- Low priority to maintenance issues
- Misuse of available maintenance fund at facility level- creating artificial emergencies towards end of week and holidays.

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• Non allocation of running funds for LMU

## Way forward

- Proper and transparent utilization of the limited maintenance funds
- Give priority to maintenance issues especially quick responses to spare parts matters
- Assist in allocation of more fund for maintenance i.e. 25% of cost sharing funds to go to maintenance
- Recognize maintenance as a full profession. Medical Engineering staff are part of the hospital like any other staff and should be involved on all matters related to medical equipment
- Improve working condition especially protective clothing should be provided or allowance given like other hospital staff.
- Instill discipline.

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## Plans for the next 3 years

- Implement guidelines for maintenance of equipment in Level IV and V hospitals. ( training, filing of returns, monitoring, control and evaluation). This involves corrective and preventive maintenance. Creating awareness.
- Conduct skill upgrading courses and user training.
- Advocate for increased allocation of maintenance funds- especially from cost sharing fund.
- Improve maintenance management system to meet ISO 9001 certification standards ( Q/A labs)
- Improve availability of various medical spare parts for critical medical equipment.

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## Budgetary provisions (MTEF)

- Year 1(2008/09) Ksh.178 M
- Year 2 (2009/2010) Ksh.178 M
- Year 3 (2010/2011) Ksh.178 M

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## Core function II

Development of policies and guidelines for rational incorporation, safe deployment and optimum use of medical equipment/devices (WHO, EB 120/13, 2007)

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## Activities for core function II

- Develop Health Equipment policy in collaboration with WHO.
- Develop guidelines for medical equipment life cycle management. This involves equipment needs assessment, selection, installation and training, operation and maintenance, disposal and replacement
- Implement the policy and guidelines

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## Key Challenge

- Inadequate resource to hire consultant to spearhead Health equipment policy as per WHO guidelines
- Inadequate resources to develop the policy and guidelines.

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## Planned activities for the next 3 year

- Develop health equipment policy
- Develop guidelines for medical equipment life cycle management. This involves equipment needs assessment, selection, installation, maintenance, disposal and replacement

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## Budgetary provisions

- Year 1(2008/09) Ksh.7.5M
- Year 2 (2009/2010) Ksh.5M
- Year 3 (2010/2011) Ksh.5 M

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## Core function III

Promotion of use of appropriate medical equipment/devices, plants and instruments (Health Technology) in public hospitals for solving health problems and improvement of quality of lives.

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### Activities for core function III

To ensure availability of appropriate medical equipment/devices, plants and instruments to level IV and IV hospitals as per KEPH guidelines. ( In collaboration with users)

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### Key challenges

- Inadequate funding
- Long procurement process
- Construction of more facilities through CDF that will require equipping

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### Planned activities for the next 3 years

- Equip existing 191 level IV hospitals to meet KEPH standard. 50 facilities each year
- Research on alternative energy sources for health sector.
- Upgrading electrical power system in public hospitals.
- Improve medical gases supply in level IV and V hospitals

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### Budgetary provisions

- Year 1(2008/09) Ksh.2 b
- Year 2 (2009/2010) Ksh.2 b
- Year 3 (2010/2011) Ksh.2 b

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### Famous maintenance Quotes

- Maintenance works on the principle of economics- Maximum utilization of available scarce resources.
- "Maintenance is a way of thinking" – J. Paton (GTZ)
- "Maintenance is a way of thinking and action – Maximum use minimum resources" – K. Ajiki (JICA).

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THANK YOU

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