The word 'Jambo!' is written in a large, stylized font. The letters are filled with the colors of the Kenyan flag: black, white, red, and green. The exclamation mark is black with a white outline.

# Jambo!



## ***Infection Control Challenges in Public Hospitals in Kenya***

**1st Global Forum on Bacterial Infections: Balancing  
Treatment Access and Antibiotic Resistance New Delhi,  
India**

**Oct 3-5, 2011**

Dr. Linus Ndegwa, MPHE, HCS, PhD  
Infection Prevention and Control Manager  
Global Disease Detection Division  
Centers for Disease Control and Prevention- Kenya



# Presentation outline

- Introduction
- Factors affecting infection control
- Lessons learned
- Critical issues

# Introduction

- Pathogens transmitted in hospitals responsible for substantial morbidity and mortality in Kenya
- Infection control crucial to reducing hospital transmission of existing and emerging diseases



# Global Burden of Poor IPC Practices

- In US, an estimated 2million/year HAIs occur every year
  - Cause more than 90,000 deaths annually
  - Cost 4.5-5.7 billion \$ in additional healthcare spending annually
  - More serious illness
  - Prolong hospital stay
- Little data from African countries
- World Health Organization (WHO) estimates 10-30% of all admissions result in an HAI
- 1.4 million people at any given time have HAIs

# Global Burden of Poor IPC Practices

- 80% of HAIs are either:
  - UTIs
  - Surgical sites
  - Pneumonia and
  - Blood associated with IV devices



# Effects of HAI

- Long term disability
- Excess deaths
- Massive additional financial burden
- High cost on patients and families



# Factors affecting IPC-1

- Badly structured and equipped facilities
- Heavy burden of healthcare on very limited HCWs
- No IPC policy and legal framework
- Healthcare worker attitudes- e.g. HH adherence <40%, (WHO)



# Factors affecting IPC-2

- lack of training and knowledge on IPC
- Low risk perception
- No resources dedicated to IPC-Health budget <15%





# Factors affecting IPC-3

- Technological gap
- inadequate direction often related to a lack of monitored systems, leadership and policy.
- Improper handling of health care waste



# Factors affecting IPC-4

- Improper antibiotics use and lack of microbiological information
- Understaffing and overcrowding
- Newer modern IPC technologies expensive and not accessible.

# Scenarios in Facilities without IPC program














# Antibiotics resistance and IPC



- Antibiotic resistance organism increases hospitals stay of patients
  - Part of HAI
- Prevent antimicrobial resistance in healthcare settings.
- The campaign centers on four main strategies:
  - prevent infection
    - Decrease antimicrobial use
  - diagnose and treat infection
    - Appropriate use of microbial saves life
  - use antimicrobials wisely
    - Programs to improve antimicrobial use are effective
  - prevent transmission
    - HCW can prevent the spread of infection from patient to patient



prevent infection



diagnose and treat  
infection



use antimicrobials  
wisely



prevent transmission



# Key Strategies:Our approach



- System change-advocacy with administrators
- Support Ministry of health (MOH) to develop policy on Infection prevention and control (IPC) issues
  - Injection safety, blood safety and IPC general
- Education of healthcare workers
  - E-learning on IPC
- Monitoring, feedback of performance and surveillance
  - Surveillance for healthcare associated infections (HAI)



# Key Strategies Used



- Administrative support
- Leadership and culture change
- Advocacy and BCC
- Procurement, logistics and supply systems for IPC commodities
- Construction of waste management systems such as disposal pits, placenta pits and incinerators

# Policy development

- **National policy and standards on injection safety and waste management launched & disseminated**



October 2007-Policy Launch ceremony



Republic of Kenya



## **National Infection Prevention and Control Guidelines for Health Care Services in Kenya**

**Ministry Of Public Health And Sanitation**

**Ministry Of Medical Services**

**September 2010**

# Capacity building

- Training and capacity building:
  - 25000 health workers in 1860 facilities trained
  - Integration of IS into pre-service training



**Medical Students practicing use of safe injection devices in the skills lab**

# Low-Cost Interventions



Practicing  
“Cover your cough”

- Respiratory cohorting
  - Patient placement decisions
  - Cough etiquette
- Hospital Isolation Rooms
- Health care waste management
- Reduction of unnecessary injections
- ABHR production



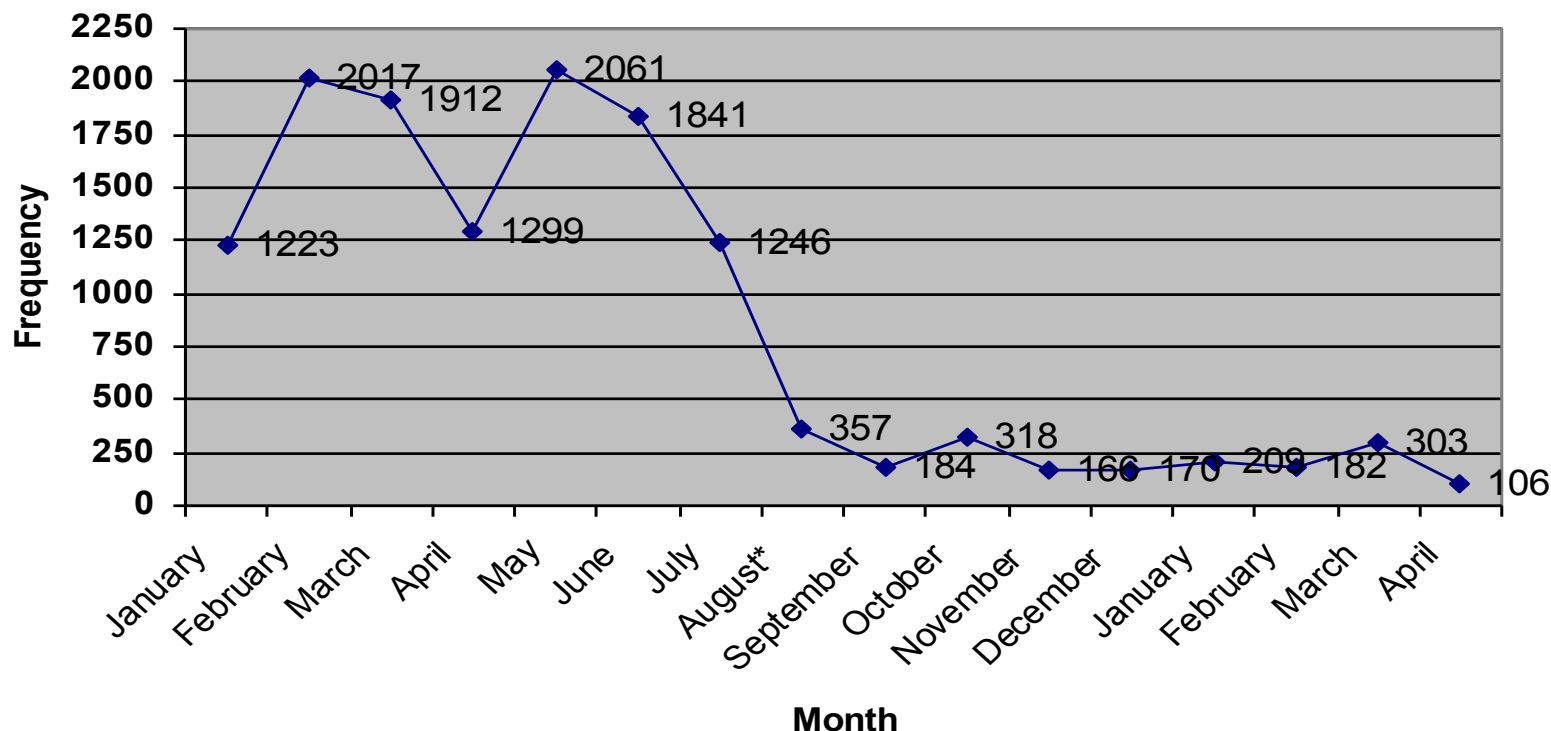
# Surveillance

- Establishment of surveillance for healthcare associated infections (HAIs)
- Monitoring of sharps injuries and uptake of PEP
- Provides feedback to motivate
  - Healthcare workers –HH improved to 51%
  - Most hospitals have IPC committees meeting regularly

# Reduction of unnecessary injections: Case of provincial hospital



Number of Curative Injections Given in MCH dept of Embu Hospital  
January 2006- April 2007



\*MMIS training started in June and ended on August 13, 2006.



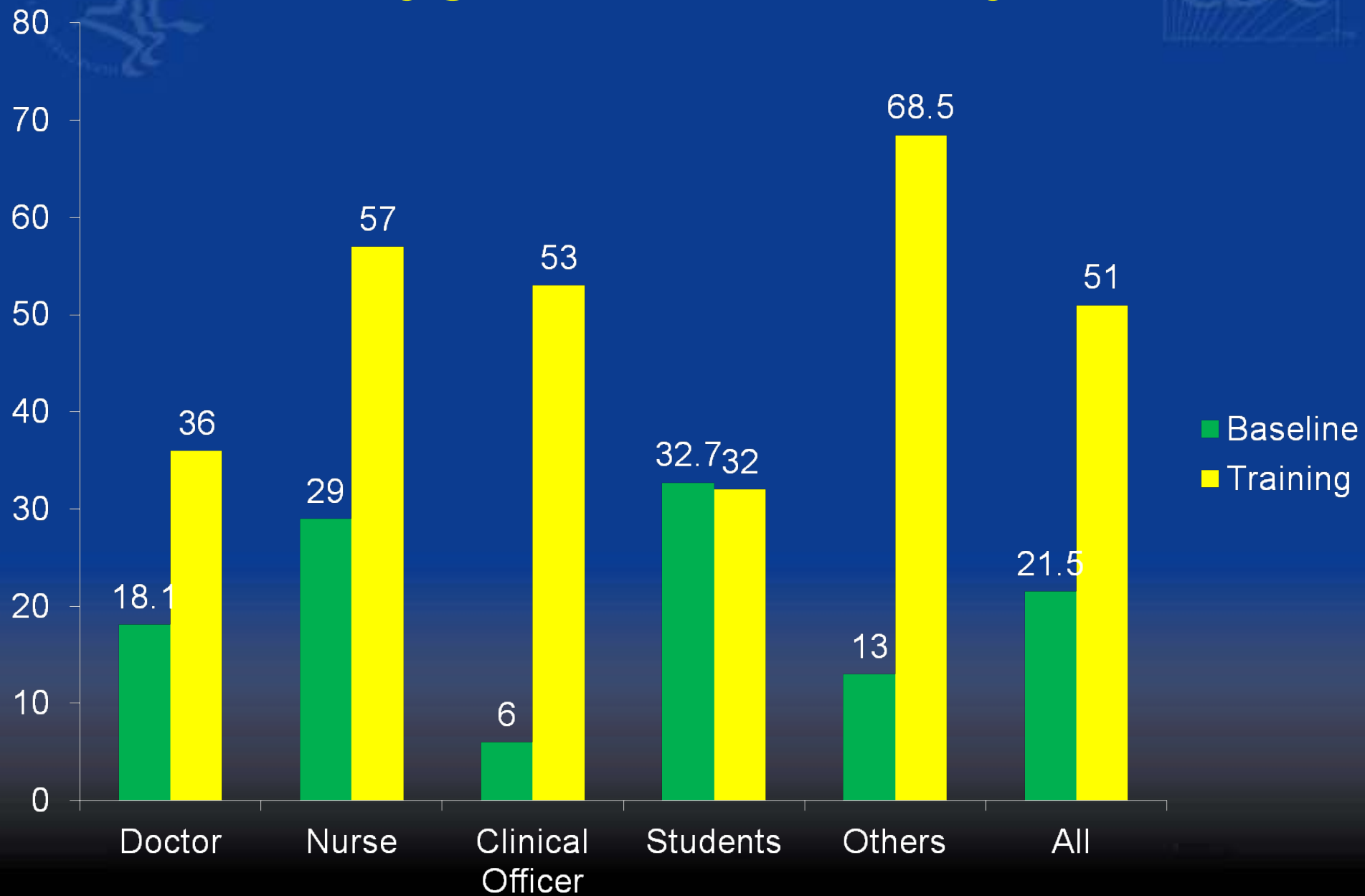
# Hand hygiene



**Hand Washing**



# Hand hygiene adherence by Cadre



# Health Care Waste Management

Containers & Colour Codes for each category of Waste





# **Social mobilization activities: Mass media campaigns, community interactive theatre, Community dialogue**



**Chiefs & women group  
leaders consultations**



**Flames theatre group: schools program  
Tigoni primary sch. Kiambu**



**Ulusi youth group, in Usigu Bondo**



**Flames theatre group, in Kiambu town**



# Lessons learned

- MOH commitment at all levels is required
- Staff must be motivated
- Team work is essential
- Partner support is key
- Behaviour change is not easy



# Future

- Affordable technologies:
  - Suture less cataract surgery
  - Syringes with safety devices
- Attitude changes
- Update training curriculum and teachers
- Informal sector
- Newer infections with higher risk HIV, MDR-TB, XDR, MRSA
- New antimicrobials?



**Are there any questions?**

**Protect your patients. Protect yourself. Protect your family.**