SURVEILLANCE SYSTEMS

CHALLENGES AND LESONS FROM A HUMAN HEALTH PERSPECTIVE

MARCH 05 2008

MMIS
Making Medical Injections Safer

BACKGROUND

- Animal health is important for Human Health
- For centuries however, focus had been on domestic animals mainly in the context of farming or of those animals leaving close to humans
- Example: use and place of veterinary medicine and sciences
- Increasingly more interest in wild life against backdrop of environmental concerns
- Main aim in this context: conservation

BACKGROUND: RISKS AND THREATS TO HUMAN LIFE

- **In the context of farming seen as minimal: MAD COW**
- **Vaccines developed for diseases RABIES, RUBELLA**
- **In the context of wild life: seen more in the context of safety and again seen as minimal in terms of disease transmission**

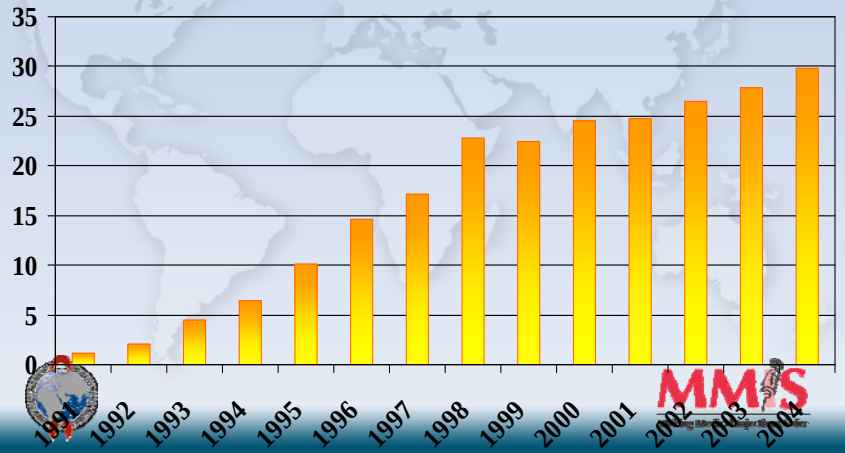
GAPS IN THIS APPROACH

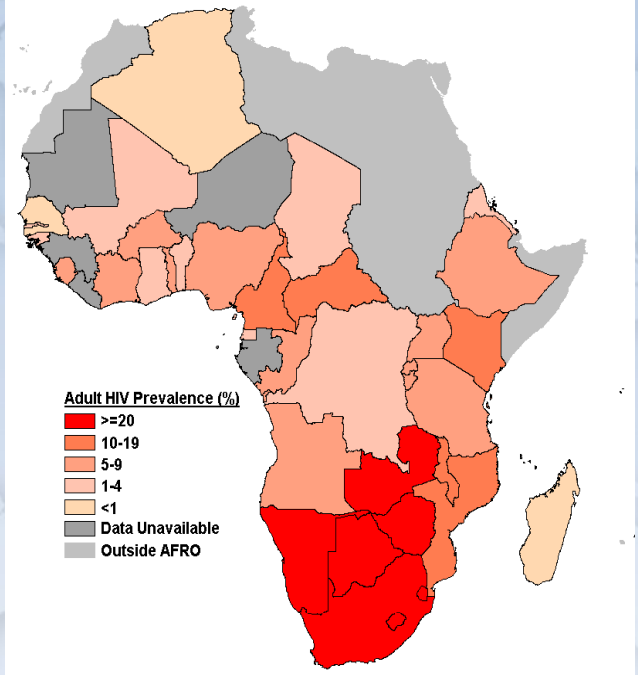
- Unperceived threats in wild life: EBOLA, MARBURG, CONGO AND OTHER HAEMORRAGIC FEVERS
- Farming industry: H5N1 IN THE CONTEXT OF BIRD FLU

MAJORS EVENTS IN RECENT YEARS

- Pandemics
- Emerging and re-emerging infectious diseases
- Concept of sustainable development and global security and safety
- Have forced the world to look at a more integrated approach

HIV Prevalence in women attending public antenatal clinics, South Africa



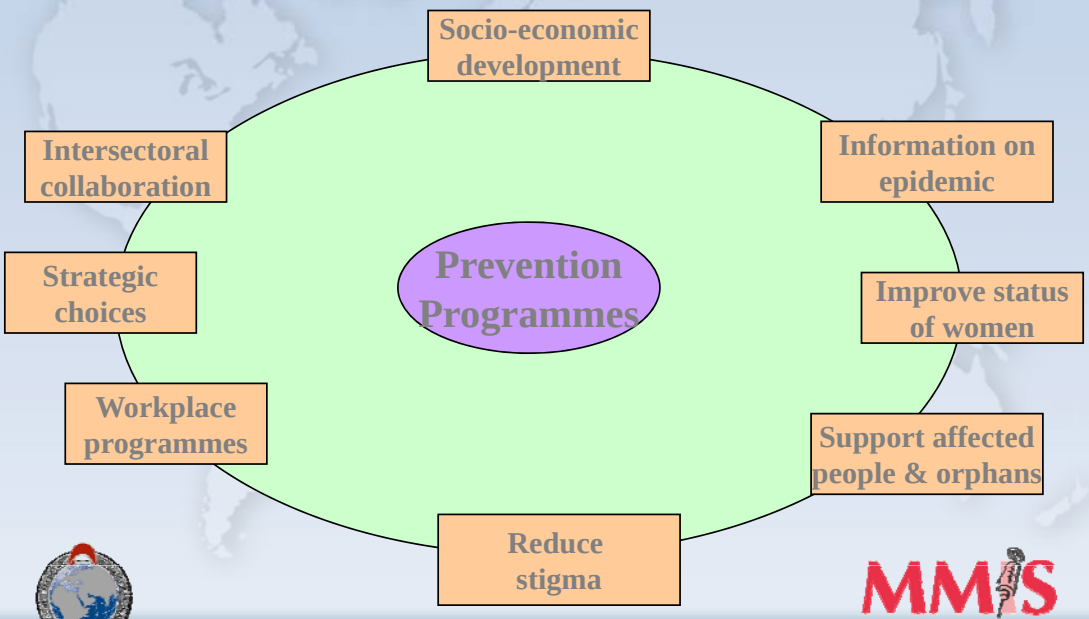


Adult HIV Prevalence, Africa

UNAIDS/WHO

AIDS HELPLINE
0800-012-322

NEED FOR AN INTEGRATED APPROACH



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Avian influenza and H5N1

Regional approach
looking at continents
as opposed
to
countries

Viral Heamorrhagic fevers

Ebola in Africa: DRC, Congo Brazzaville, Sudan, Gabon, Uganda, South Africa

Wild chimpanzees

Social and economic pressures impacting on the eco-system

WHAT TO DO?

WHAT IS THE MEASURE OF RISK

- Mapping exercise
- We need to know what is prevalent
- We need to know what else could happen
- Describe population and their socio-economic

- Measures taken to prevent transmission of infection whenever there is anticipation….or preparation for…

Prepare and implement

- Identify deficits: at policy, programme level
- Draw strategies that take into account the reality on the ground
- Compile training plan, train and build capacity in terms of local expertise
- Tap into international knowledge and skills
- Implement.

Policy framework

- Safe IPC **policies** form the basis for action
  - Policies are organisational statements that govern operation
  - Policies give direction for operations

Policy framework…

LEGAL FRAMEWORK

- The Constitution
- Occupational Health and Safety Act
- Basic conditions of Employment Act

APPLICATIONS

- Hep B vaccination at induction, regularly
- Clean and safe environment
- PPE, post exposure prophylaxis

Application of the Policy

- ***Standards***
  - A level of quality of care with regard to ensuring safety of injections
- ***Guidelines***
  - Refer to procedures for performing a task to ensure the safety of injections

AVAILABILITY OF PERSONAL PROTECTIVE EQUIPMENT

Overalls are the most commonly provided equipment, followed by boots and heavy duty gloves for waste handlers

Goggles are the least used item

Generally, availability is very low ranging from 7.7 to 54.3%

DANGEROUS PRACTICES NEED TO BE IDENTIFIED

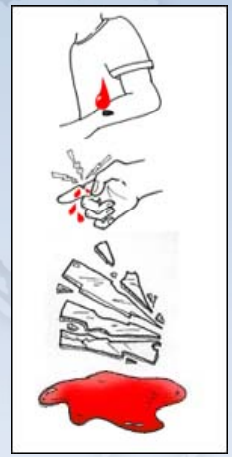
- At work
- In communities
- In the wild life

STANDARD OR UNIVERSAL PRECAUTIONS

- Hand washing
- Wearing of protective clothing
- Linen management
- Waste management
- Patient care equipments
- Surface hygiene
- Injection safety

TRAINING AND ACCESS TO INFORMATION

- Very little availability of job aids/posters and other IEC materials for all categories of workers
- Most common mean of access to information: training workshops
- Most workers trained many months ago, waste handlers have received the least training



EQUIPMENT AND TOOLS

- Policies, guidelines, Standard Operating procedures (SOP's)
- Information, Education and Communication (IEC) material
- Commodities and other support material: vaccine, medication for PEP, PPE

Resource contents and materials

- Field facilitator manual:
- TOT Participants/facilitator's manual

VIDEOS: Safe administration of injections, needle prick injuries and Post Exposure Prophylaxis or PEP, standard precautions, personal protective equipment

Access to international expertise

Purpose of standards and guidelines

- Ensure safety
- Ensure uniformity of practice
- Provide baseline for monitoring and evaluation
- Act as a mitigation tool for law enforcement

Standard Precautions

They are used for:

- Elimination of hazards
  - e. g. giving oral medications instead of injections
- Engineering controls
  - e. g. use of auto-disable syringes and needles
- Administrative controls
  - e. g. use of standard precautions, policies and training programmes on infection prevention and control and injection safety
- Work practice controls
  - e.g. non-recapping of needles, appropriate use and disposal of sharps containers.

Standard Precautions include

- Hand Hygiene
- Personal Protective Equipment
  - Gloves, Mask, Eye Protection, Face Shield,Aprons,Gown
- Sharps Management
- Post-exposure Management
- Appropriate Healthcare Waste Management
- Patient Care Equipment
- Linen
- Environmental control
- Patient placement

BIORISK REDUCTION

- The goal of biorisk reduction is to ensure that current scientific knowledge regarding viral hemorrhagic fevers, epidemic-prone orthopoxviruses, and emerging severe zoonotic diseases affecting humans, is maintained in order to apply the most appropriate guidance for treatment, control, and safety to mitigate the risks regardless of the source of the disease event.

Information, Education, Communication

ENGLISH: Universal Precautions for Infection Control

Nosocomial infections

Every year hundreds of people, including health workers, get sick and sometimes die from infections picked up in hospitals and clinics. These are called nosocomial infections. Patients often pick up infections more easily because they are ill, very young or very old. For example, newborn babies in high care wards or people living with HIV who have a weakened immune system. Not all nosocomial infections are avoidable. But many can be prevented by using universal precautions.

What are universal precautions?

Universal precautions are steps that can be taken in the health care setting to reduce the risk of disease tranamission to health workers, patients and the community. Universal precautions can be used with all patients in the health care setting. They must be used with:

- Blood and most body fluids whether or not they contain blood
- Broken skin
- Mucous membranes

You can reduce the risk of disease tranamission if you use the following universal precautions:

Wash your hands

- Wash your hands with soap and water before and after examining patients; also after any contact with blood, body fluids and contaminated items. Washing hands saves lives.

- Wash your hands whether or not you wear gloves.
- Use soaps containing an antimicrobial agent like chlorhexidine.

Wear gloves

- Wear gloves that are clean and fit you well any time you have contact with blood, body fluids, mucous membranes and broken skin.
- Change gloves between tasks or procedures on the same patient.
- Before going to another patient, remove your gloves, and wash your hands immediately. Then put on new gloves.

Use protective wear

- Wear a mask, protective eyewear and gown or plastic apron during any patient-care activity when splashes or sprays of body fluids are likely.
- Remove the soiled gown or apron as soon as possible and wash your hands.

Inject safely

A safe injection is one that does not harm the patient, expose the health worker to risks, or result in dangerous waste for the community.

- Wash your hands before giving an injection.
- Use a new sterile disposable needle and a new syringe for every injection.
- Throw away the needle or syringe if there are any tears or breaks in the packaging.
- Make sure that the injection site is clean by wiping with an antiseptic swab. Wait for the site to dry.

- Never touch the needle with your fingers.
- If a multi-dose vial must be used, make sure that the septum is cleaned. Always use a sterile needle to pierce the septum.
- Never recap or bend needles.
- Place the used needles and syringes into safety boxes immediately after use.

Handle other sharp instruments safely

Place sharp instruments into puncture-resistant "sharps containers" immediately after use.

Routinely clean and disinfect areas

This includes surfaces that are touched often, beds, bed rails, patient examination tables and bedside tables.

Clean and disinfect soiled linens safely

- These should then be sent to the laundry.
- Avoid direct contact with items soiled with blood and body fluids.

Developed for the Department of Health: HIV, AIDS and TB Chief Directorate: Tel: (012) 312-0121/2; Fax: (012) 326-2591; Private Bag X828, Pretoria, 0001

Caring together for life

Khomanani

Universal Precautions for Infection Control

ENGLISH	Universal Precautions for Infection Control
AFRIKAANS	To Follow

Red Ribbon Resource Centre
(011) 356-0405
AIDS Helpline 0800 012 322
www.aidsinfo.co.za

HOW TO HAND RUB: PRACTICAL TRAINING SESSION

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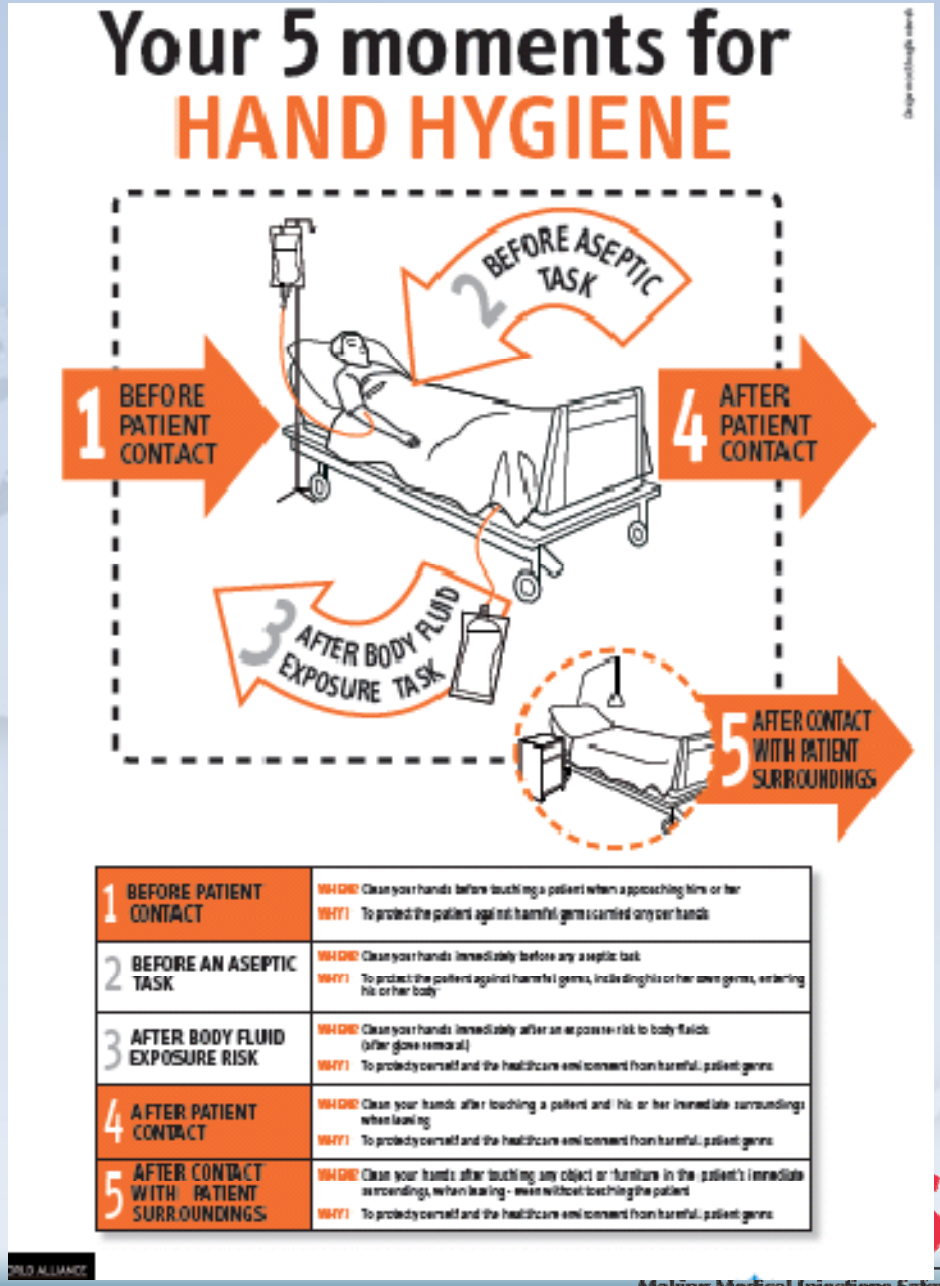
Training

- **When and Why posters**
- "How to" posters
- General promotional/marketing posters
- Educational slide package on health care-associated infections and hand hygiene promotion



Training

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Example: Prevention And Management Of Exposures

- **Needle stick injury:**
  - Puncture of the skin caused by an injection needle
- **Sharps injury:**
  - An injury caused by puncture of the skin by a sharp object/instrument including the type used in surgery

Example: Categories at-risk for needle stick injuries

1. Nurses
2. Physicians
3. Medical Laboratory Technologists
4. Housekeeping Staff
5. Laundry Workers
6. Waste Collection Personnel
7. Patients/Clients
8. Community

Example: Requirements of a Successful Sharps Injury Prevention Programme

- Management commitment to reducing blood-borne exposures
- A designated multidisciplinary prevention committee with decision-making authority (incl.. healthcare workers, management & procurement staff)
- The assessment of hazards and use of data to identify highest risk products and procedures.
- Identification and elimination of injuries.
- Reporting of injuries.

Requirements of a Successful Sharps Injury Prevention Programme cont…

- Needle stick injury log containing the situation, and type of device causing injury.
- Frontline healthcare worker involved in the evaluation, selection, and implementation of safer needle devices.
- An Exposure Control Plan containing policies
- Annual revision
  - Post-exposure evaluation and follow-up
  - Placement, checking, and replacement of sharps containers
  - Interactive training for committee and workers
  - Evaluation of work and efficacy of engineering controls
- Record keeping

Dangerous practices for HCW

- Carrying around used needles before disposal
- Placing needles and syringes on a surface prior to disposal
- Recapping needles (two-handed)
- Reaching into a container of used syringes and needles
- Manually detaching needles from syringes
- Manipulating used sharps (cleaning, changing, bending, breaking or cutting hypodermic needles)
- Passing on sharps from one healthcare worker to another
- Overfilling sharps containers
- Using a syringe on an agitated patient without assistance

OUTBREAK RESPONSE

- Experience is gained through response activities, managing clinical and laboratory environments, networking with subject matter experts and developing partnerships with stakeholders. Events can be of natural, accidental or deliberate origin; therefore provision of specific knowledge and translated practices prepares responsible partners to address the unexpected.

CHALLENGES

- Monitoring and Evaluation
- Uniformity across borders from a policy and resource point of view
- Limited synergies across partners and partnership

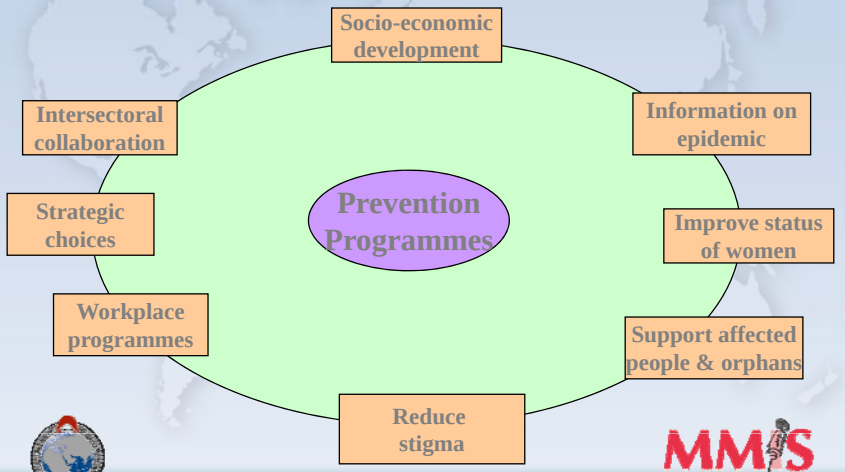
IN CONCLUSION:

- Common Vision
- Regional framework and responses
- Fair assessment of current interventions, mapping needed
- The gaps are definitely at the level of social constructs, dynamics
- More than at policy and programme level
- Capital: human, financial
- Maximise Efficiency

RISK, OCCUPATIONAL EXPOSURE

- Perception of being at risk of infection : real
- Degrees of perceived risk vary from HCW to their supervisors and between categories
- High levels of awareness around possibility of contracting certain diseases
- Low awareness regarding others associated with very low levels of knowledge around vaccine requirements as well as vaccine coverage

NEED FOR AN INTEGRATED APPROACH



THANK YOU

- Acknowledgements
  - NDOH
  - Centres for Disease Control and Prevention
  - World Health Organisation