Partnerships to ensure effective use of Health Information Systems and other Health Technologies in support of hospital services

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Addressing the Challenge of Patient-Centered Care and Safety
Outline

• Background and context
• Existing resources
• Partnerships for effective use
• Concluding remarks
Background and context: Current environment

• The NHI (National Health Insurance) requires effective health information system (HIS) and health technology (HT) support

• There are overlapping requirements for HISs and other health technologies.

• There are significant resources being expended on computerised and manual HISs and various other health technologies - also in limited resource settings such as district/level 1 hospitals.

• There is limited available information on the effectiveness of the existing HIS and HT implementations.
Background and context: Health technology

Devices, drugs, medical and surgical procedures, and the knowledge associated with these, used in the prevention, diagnosis and treatment of disease, as well as in rehabilitation, including the organisational and supportive systems within which care is provided.

(Department of Health, South Africa. A framework for health technology policies)
Background and context:
Scope of health informatics

The discipline dedicated to the systematic processing of data, information and knowledge in medicine and health care (Haux (2010) (quoting Hasman et al. (1996)))

**Background and context: eHealth**

The cost-effective and secure use of information and communication technologies (ICTs) in support of health and health-related fields, including

- health-care services,
- health surveillance,
- health literature and
- health education, knowledge and research.

(World Health Assembly 2005, resolution on eHealth (WHA58.28))
Background and context

Health technologies

eHealth technologies

mHealth technologies
Existing SA resources: Human resources

- Health information management and health IT structures at multiple levels
  - Information officers at sub-district and facility levels in some provinces
- Separate health technology personnel structures at multiple levels.
Existing resources: (electronic) Health information systems

- Multiple HISs in use at facility and district level
- National standard HISs for reporting for certain conditions:
  - 3-tier standard for ART (antiretroviral therapy) programme reporting (TIER.net)
  - Electronic TB record (ETR.net)
- ICD-10 as national standard for diagnosis coding
- District Health Information System (DHIS) for routine reporting at facility level.
Existing resources: Health technologies and Health technology management

• Multiple HTs in use at facility level
• Established medicines control processes
• Planned legislation for Health Technologies other than medicines; focus on medical devices.
  • Establishment of SA Health Products Regulatory Authority (SAHPRA):
    Legislation published January 2016:
    Medicines and Related Substances Amendment Act, 2015 (Act 14 of 2015)
Existing resources: Frameworks & standards

- SA National eHealth strategy - including implementation plan
- SA National health technology policy framework [status not known]

Existing resources: Challenges

• Identification of appropriate HISs and HTs at hospital level
• Ensuring availability of required resources on a sustained basis
• Identification and/or development and/or empowerment of knowledgeable, confident decision makers and managers.
Existing resources: Opportunities

- Potential to harness available resources, including donor funding
- Potential to make a significant difference through the identification, acquisition and implementation of appropriate HISs and HTs at hospital level
- Increased general awareness of
  - The need for co-ordination of HIS activities
  - The need to harness donor resources effectively
- Multiple available models and guidelines for HIS and HT evaluation - no need to reinvent the wheel!
Partnerships for effective use

- Strong co-ordination between systems and services
- Local development of appropriate skills
- Appropriate technologies
- Co-ordination between role players
**Partnerships:** Strong co-ordination between HIS, HT, and related systems and services

- Identify opportunities for vertical and horizontal co-ordination
  - Horizontal: disciplines and services within hospitals
  - Vertical: levels of the health care service
- Harmonise planning for HTs and HISs at hospital level
- Identify common requirements for skills and resources at hospital level
- Use available skills effectively and appropriately
- Facilitate networking between HT and HIS practitioners: formal and informal.
Partnerships: Appropriate local skills

- Define skills requirements; identify overlaps and gaps
- Allow for the development of generalists and specialists
  - May require new types of personnel, at multiple levels
  - Require ability to practice in low-resource settings
- Review curricula and training programmes
  - Allow for multiple entry and exit points
  - Ensure recognition of prior learning and experience
  - Consider bridging programmes.
- Define clear career paths and reporting structures.
- Ensure orientation for management at multiple levels.
Partnerships: Appropriate technologies

- Clear definitions of local (hospital) requirements, including requirements to ensure sustainability
- Effective management and use of available resources – HISs, HTs
- Common conceptual frameworks where appropriate
- Integrated reporting systems
  - Multiple programmes
  - Multiple government departments; multiple levels
  - Donors
  - International agencies, e.g. regulatory agencies
  - etc.
Partnerships: Role players

- National, provincial and district health management
- Donors
- International agencies
  - Hospital CEOs and management teams
  - Healthcare engineering and Health Informatics practitioners
- Research sector
- Centres of excellence / expertise
- Professional organisations
- etc.
Concluding remarks: *Co-ordination to facilitate effective use of limited resources?*

• Should be possible in practice
• There are available solutions to effective HIS and HT implementation
• Require support from all role players and stakeholders at multiple levels
• Require different thinking, rather than (necessarily) different structures or additional resources
• Hospital CEOs are the key to ensuring effective and sustained implementation at hospital level
Concluding remarks

• Hospitals are resource-intensive (and relatively well-resourced) in the context of national health systems

• It is essential to make the best possible use of available resources in hospitals, especially in the context of low resource availability

• Partnerships within and beyond individual hospitals, especially in relation to implementation of health technologies provide opportunities for improved effectiveness of implementation, and hence improved health services.
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