ELECTRONIC RECORDS MANAGEMENT IN THE PUBLIC HEALTH SECTOR OF LIMPOPO PROVINCE, SOUTH AFRICA

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1. Introduction and Background of the study

- The study is focused on
  - electronic records management in support of service delivery in the public health sector of the Limpopo Province in South Africa.

- The research survey was conducted
  - to establish how electronic records were managed.

- This is because government must keep records to
  - ensure the permanent preservation of their memory
    - so that people account for their actions to citizens (Tafor 2003:73; Currall and Moss 2008:70).
Public service delivery in the public health sector seems to be a problem due to, but not limited to the following factors:

- Lack of effective systems for opening, tracking and indexing files (Ngulube and Tafor 2006:59-60)
- Lack of e-records management effective training, legal and regulatory tools (Nengomasha 2003:66)
- No plans for managing e-records (Nengomasha 2009:112)
- No proper records capturing and preservation (Wamukoya and Mutula 2005: 70)
- Lack of knowledge about the electronic records program’s fundamental elements,
  - skilled staff and necessary competencies in the electronic information system;
  - electronic records management legal and administrative requirement; and
  - accurately documented policies, standard operating procedures and formal methodologies for managing e-records (Wamukoya and Mutula 2005: 70)
- Lack of core competencies in records management (Nengomasha 2009:112)
2. PROBLEM STATEMENT

- health workers in the public health institutions, (such as medical doctors and nurses), are usually not able or are struggling to render timely and effective health services to citizens due to a lack of effective records management systems.

- Ineffective records management systems usually lead to
  - long patient waiting times.
  - Health service not rendered or poorly rendered

3. STUDY PURPOSE

- to investigate the extent to which the current record keeping practices in the Limpopo Province support or undermine service delivery.
4. STUDY OBJECTIVES

- To establish how electronic records are managed in the public health sector of the Limpopo province in South Africa.

5. RESEARCH QUESTIONS

- How are electronic records managed in the public health sector?”
6. Contextual overview of electronic records management
6. Contextual overview of electronic records management

6.1. Managing electronic records

- Electronic records preserved should be protected from changing of its form, retrieval, reliability and authenticity

- IT is a good tool that can be utilised in smoothening access to records and information.

- The ESARBICA are still far behind with the adoption of IT for records management.
  - E.g. is Kenya and South Africa
6.2. Electronic records management in the public sector

- Records management is very important for the public sector since it
  - serves as an important tool for good business governance and efficient administration
  - provide information for improved planning and decision-making.
  - provide evidence for government accountability and transparency
is also subject to specific legal requirements.

document what is done, when and why

provide evidence of communications, decisions and actions.

eventually become part of South Africa's documentary heritage


the main problem in the archival repositories is

non-utilisation of information technology

• to ensure a smooth running of the records management administration (Kemoni, Wamokoya and Kiplang’at 2003:40)

IT helps archivists to improve their information services by

• providing faster access to and usage of data (Kemoni, Wamokoya and Kiplang’at 2003:40 cited Mutiti’s 1999)
with electronic medical records it is

- faster to compile clinical documents which are filed automatically (Gerntholtz, Van Heerden and Vine 2007:26).

The formulation of patient summary on referrals, retrieval of information as well as auditing of clinical information is also fast (Gerntholtz, Van Heerden and Vine 2007:26).
The adoption of electronic medical records is very slow because
- it needed a change in the operational ways of doctors and
- more training is also needed for effectiveness of the new system
  (Gerntholtz, Van Heerden and Vine 2007:26).

Technological improvement is developing faster than the skills and infrastructure development (Thurston 2005)

In adopting IT, the government should consider the
- records media’s instability, obsolete hardware, hardware incompatibility, software, data format, storage media, lack of metadata, context of information, clearly assigned responsibility and long-term records preservation resources in implementing e-records management.
7. Research methodology

- Population
  - Target: information and records management officials in 40 hospitals
  - Total population 324
  - Sampled participants 210.
  - Response rate was 77% (162).

- sampling methods:
  - probability sampling method
    - stratified sampling.
  - non-probability sampling method,
    - purposive sampling method,
      - for qualitative data collection.
Data collection tools:
- questionnaire
- observation
- interviews

Data analysis methods:
- qualitative data analysis
- quantitative data analysis

In quantitative data
- was presented using tables and graphs

Qualitative data
- was presented through narratives, explanations and descriptions.

According to Terre Blanche, Durrheim and Painter (2006:52) the aim of data analysis is “to transform information or data into an answer to the original research question”. Data analysis can be done in either a qualitative or quantitative way.
8. Findings of the study

8.1 Electronic records management in the public health sector

- The government is aware that the old manual system did not assist in services improvement
  - because people used to online service (Sinclair 2002:103).

- but did not fully take advantage of technology to
  - handle their records
  - improve their business transactions (Tafor 2003:72 cited from Ngulube 2001) and
  - to complete the organisation’s work quicker with little effort, with quality, less costs and with compliance with law and regulations (Johnson and Bowen 2005: 134; Tafor 2003:75; Ojo 2009:99).
8. Findings of the study CONTINUES…

8.1.1. Knowledge and understanding

• a lot of staff managing records in the Sub-Saharan countries were not capable of managing digital records professionally.
• Records management officials need to be capacitated (Ngulube 2007:7).
• The officials engaged in creating and receiving records should understand the
  • importance and
  • administration of records (Wamukoya and Mutula 2005a:72-74 cite IRMT 2003).
Figure 8.1.1.1: The rate of respondents’ knowledge about electronic records management
Figure 8.1.1.2: The meaning of electronic records
8.1.2. Electronic records management system

- The main problem in the archival repositories was:
  - non-utilisation of information technology
  - to ensure the smooth running of the records management administration (Kemoni, Wamokoya and Kiplang’at 2003:40)
8.1.3. Electronic records disposal

- Keeping all government records permanently is very costly in terms of space, money and staff (State Records of South Australia 2003:7; Sims 2002:10; Currall and Moss 2008:70)

- records disposed only done with a written disposal authorisation by the NARS (National Archives and Records Service of South Africa Act No. 43 of 1996 as amended)

- Develop
  - records inventory ,
  - appraisal guideline, and
  - retention schedule (Chachage and Ngulube 2006:14).
Figure 8.1.3.1: Electronic records disposal authority availability
Figure 8.1.3.2: Availability of e-records disposal plan in the institutions
8. Findings of the study CONTINUES…

8.1.4. Electronic records keeping

• “government departments need systems in place
  • To take care of the secure capture, storage and retrieval of information” (Mullon 2004).

• In implementing e-records management consider
  • records media’s instability,
  • obsolescence, hardware incompatibility, software, data format, storage media, and lack of metadata,
  • context of information, clearly assigned responsibility and long-term records preservation resources (Thurston 2005).
Figure 8.1.4.1: The best methods for keeping patients records

8.1.4. Electronic records keeping…continues
8.1.4. Electronic records keeping…continues

Figure 8.1.4.2: The use of electronic records
8. Findings of the study CONTINUES…

8.1.5. The most serious administrative problems for records management in the institution today

- The Eastern and Southern African countries had several challenges with regard to capturing and preservation of electronic records, such as:
  - No records management plan, inadequate knowledge about the importance of records management.
  - Lack of records handling coordination and responsibility, no legislation, no policies and procedures, lack of central ability to manage records, understaffing on records management unit.
  - No budget, poor records security and access control, no records retention and disposal policy, no systems for opening, tracking and indexing files and no records movement control techniques.
  - No management support, no general training, no effective system training and resistance to change (Gunnlaugsdottir 2008:33-34).
8.1.5. The most serious administrative problems for records management in the institution today ... continues...

Figure 8.1.5.1: The most serious administrative problems for records management in the institution today
8.1.6. Advantages of electronic records management

- The survey shows that electronic records management is important and necessary in the hospitals.
Figure 8.1.6.1: Electronic records management assistance in improving business processes
• the **disadvantage** of the handwritten medical records is that
  • it might be **illegible, incomplete, not well organised** and could **sacrifice the quality of care**.

• **Electronic medical records** have several **benefits** such as
  • **minimum paperwork**, **maximum communication** with users, **low medical errors**, **low costs**, **timely access to information**, **accurate data** and **high physical efficiency** (Tsai and Bond 2007:136).
Figure 8.1.6.2: The electronic records management problem minimisation ability

8.1.6. Advantages of electronic records management…continues…
8.1.6. Advantages of electronic records management…continues…

**Figure 8.1.6.3:** Recommended solutions for records management problems

- Move to electronic records management
- Review staff establishment and add more staff
- Provision of bigger buildings for records storage
- Capacitate records management staff
- Provision of enough budget specifically for records management
- More training for staff
- Conduct regular scheduled records awareness workshop
- Other
### Table 8.1.6.1: The rate of electronic records management improvement to service delivery

<table>
<thead>
<tr>
<th>ITEM RATED</th>
<th>1 (excellent)</th>
<th>2 (Very good)</th>
<th>3 (Good)</th>
<th>4 (Poor)</th>
<th>5 (Very poor)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved business processes</td>
<td>57%</td>
<td>28%</td>
<td>11%</td>
<td>3%</td>
<td>1%</td>
</tr>
<tr>
<td>Quality of service</td>
<td>53%</td>
<td>26%</td>
<td>17%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>File retrieval time</td>
<td>64%</td>
<td>19%</td>
<td>7%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Patient waiting time</td>
<td>48%</td>
<td>28%</td>
<td>18%</td>
<td>4%</td>
<td>2%</td>
</tr>
<tr>
<td>Customer satisfaction</td>
<td>45%</td>
<td>36%</td>
<td>13%</td>
<td>4%</td>
<td>2%</td>
</tr>
<tr>
<td>Compliance to policies and norms</td>
<td>43%</td>
<td>29%</td>
<td>22%</td>
<td>4%</td>
<td>2%</td>
</tr>
<tr>
<td>Job satisfaction</td>
<td>51%</td>
<td>22%</td>
<td>21%</td>
<td>4%</td>
<td>2%</td>
</tr>
</tbody>
</table>
9. RECOMMENDATIONS

1) **Capacitate records management staff** with training, courses and workshops.

- The records management training, courses and workshops also need to cover the scope about
  - professional management of digital or electronic records (Ngulube 2007:7).
  - ability to establish the necessary records keeping infrastructure (Johare 2006:2; Wamukoya and Mutula 2005a:72-74 cite IRMT 2003; Chinyemba and Ngulube 2005).
  - new skills and competencies for effective operation in the new technology.
  - records management, information management and technology skills.
- The specific skills required in electronic records management includes
2) Fully utilise **ERMS** to
   • save retrieval time, filing space and stationery,
   • pave a way to paperless offices and avoid users queuing for one file,
   • Ensure maximum communication with users, low medical errors, low costs, and timely access to information, accurate data and high physical efficiency.

3) **Upgrade and use the existing servers**
   • as a storage media for complete electronic patient records keeping.

4) **Make disaster backup available for records recovery**
   • in case affected by disaster like fire and water.

5) **Maintain the antivirus**
   • as they used Symantec endpoint protection.
6) **Cover all patient details in electronic records management system**
   - instead of only personal and financial details of the patients.
   - Since the system has a provision to cover all the details, the hospital officials like doctors, nurses, pharmacists and clinical support staff
     - need to use it through those available system functionalities.
   - The systems should be
     - common to all hospitals and
     - interlink to communicate with each other.

7) **Develop a disposal plan and apply for e-records disposal authority.**

8) **Develop patients’ records administration and management policies.**
   - The records officials should also be trained in the policy after creation, and legislative framework governing patient records management.
10. CONCLUSION

- In conclusion, the key recommendation for this study was for the hospitals to move to fully electronic record creation and management in assisting medical professionals to provide timely and effective access to records.
  - This is because
    - the current records management system somehow contributed to the long patient waiting time before patients receive health services.

- the hospitals, through the support of the Department of Health, should take the advantage of improving records keeping systems in order to experience improvement in the health service delivery.

- The timelines of health service to patients depend on, amongst others, timely retrieval and provision of patients’ records to clinicians and nurses.

- The quality or proper health service depends on, amongst others, quality records that are authentic, reliable, trustworthy, unaltered, not erased/changed, retrievable, usable and accurate.

- The department should ensure that the necessary resources and budget are available to assist in improving records management and administration since this will positively impact on improvement in health care services.