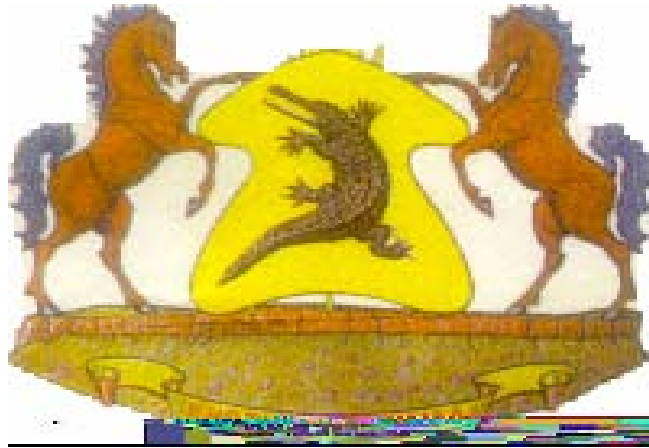


Government of Lesotho

Ministry of Health and Social Welfare



**Information Communication Technology
Policy Guidelines (2003)**

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1. Abbreviations

BOS	Bureau of Statistics
CHAL	Christian Health Association of Lesotho
DCU	Disease Control Unit
DMO	District Medical Officer
EDF	European Development Fund
ESP	Essential Service Package
FHD	Family Health Division
FMIS	Financial Management Information System
FP	Family Planning
GOL	Government of Lesotho
HIS	Health Information System
HMIS	Health Management Information System
HPSU	Health Planning and Statistics Unit
HRD	Human Resource Development
HSA	Health Service Area
ICD-10	International Classification of Diseases, 10 th revision
ICT	Information Communication Technology
ISP	Internet Service Provider
LGCC	Lesotho Government Computing Centre
LHSR	Lesotho Health Sector Reform
M&E	Monitoring and Evaluation
MCH/FP	Maternal and Child Health/Family Planning
MOHSW	Ministry of Health and Social Welfare
MPS	Ministry of Public Service
NHTC	National Health Training Collage
NUL	National University of Lesotho
PHC	Primary Health Care
SS	Statistical section (of HPSU)

Foreword

'The digital divide still yawns as widely as ever, with billions of people still unconnected to a global society, which on its side is more and more wired' Kofi Annan UN General Secretary during the opening of the GA plenary meeting on ICT development June 2002

The GOL and indeed the MOHSW appreciates the challenges that the above position poses for Lesotho in the era of globalilization. There is no doubt however, that ICT can save life, improve the quality of health services and reduce cost of care system.

For example a patients reporting at a service point in Lesotho for admission has her/his particulars e.g name recorded repeatedly in different registers and forms for about 10 – 20 times before discharge. On the introduction of electronic medical record, the name will be entered once and subsequently available for all other records. Therefore streamlining the paperwork through introduction of electronic recording system has the ability to remove duplication, maximising accuracy and reducing workload. The time saved can then be used for patients care.

E-health, i.e. the application of ICT in health care delivery brings on board innovative that in the long run shall improve health care in Lesotho. These include increased public access to health information, better professional dialogue and information sharing within the system, online databases for patient and service management etc.

It is in this context that the MOHSW seeks to develop an ICT strategy that will progressively guide the process of building a health network that will enable the institutions and individuals to exchange electronic records, share information and deliver better quality services. Among others the strategy shall endeavour to build a critical mass of ICT personnel, programs and procedure to sustain the innovation in the sector.

ICT in as far as it support improvement of the health of the people, it forms a critical component of the engines of economic growth for the nation. In addition, the technology facilitates closer collaboration between users of the health system, care givers, policy makers and the public. In appreciation of these qualities, the MOHSW shall therefore continue to invest in ICT development in the sector.

Hon. Dr. M. Phooko
Minister of Health and Social Welfare

1. Introduction

1.1 Background

Lesotho Vision 2020 aims at building a technological well equipped nation by year 2020. In conformity therefore, the MOHSW is expected to ensure that the benefits of science and advances in technology contribute positively to better health for all Basotho. The end point is a situation where all dimensions of health will be supported by Information Communication Technology (ICT) applications, not only for information transfer but also for promotion of healthier behaviour, improvement in decision making, professional support and enhancement of effectiveness of health institutions.

Furthermore the World Health Organization (WHO) has adopted telematics as a component of its health-for-all strategy for the 21st century. The immediate challenge for the MOHSW is thus shaping the sector to implement an aggressive ICT program to bridge the technology gap and transform information into a major resource for health development and service delivery. To guide the process, an ICT policy defining issues and decision-making process that promote broad actions towards the desired end is mandatory. It is in this context that the MOHSW has drawn the guidelines herein.

It is envisaged that ICT applications in Lesotho shall substantially improve access to service, public education, transfer of diagnostic information, strengthen decision making and promote information exchange for research and learning.

1.2 Rationale for the Policy

Like elsewhere, the health and social welfare sector in Lesotho is information intensive. The collection, collation and in some centres compilation of the information is mostly manually processed. The practice has compromised timeliness, accuracy and the frequency of publication. Application of ICT solutions in some many organizations has mitigated the setbacks. At the moment however, there is no formal ICT policy harmonizing the development of such infrastructure to support operations of the MOHSW. On the other hand, where attempts have been made, the need of an efficient ICT system is outpacing the availability of computer skills and ICT raining in the health and social welfare educational system.

The Ministry of Health and Social Welfare thus needs to strengthen ICT to support and guide the core programs in implementing their objectives. This shall involve harmonising the computer hardware and software, connectivity and networking as well as human resource empowerment and research for health and social welfare development. A comprehensive ICT policy shall thus give MOHSW the directions on developing and harmonising computer and related electronic tools management, data base management and operations of relevant communication media.

2. Situation analysis

Currently the functions of HMIS (Health Management Information Systems) and ICT in the MOHSW are combined. The arrangement has in a way contributed to a compromised attention in some aspects of both programs due to overstretched resources. The future direction is to strengthen ICT as a stand alone program supporting development and management of the core programs including HMIS for the whole Ministry. This separation is envisaged to improve performance in respective roles and allow a higher degree of accountability.

Lack of policy on ICT has in a way lead to uncoordinated acquisition and use of different hard and soft wares by various departments in the same Ministry. The practice has thus complicated data management and information sharing. The ideal position would have been standard databases compatible with the standard software used within the MOHSW.

In building the infrastructure that health ICT development strategy will require, it is paramount and most relevant that collaboration with the national ICT-network development is maintained. The e-GOL strategy broad goals are relevant in the process and so are future developments in the telecommunication system. It follows therefore the MOHSW will endeavour to work with other GOL departments and the private sector to enhance e-health.

District/HSA based ICT programs can be seen as the building block for the MOHSW e-health system. Currently the capacity in all districts/HSAs is poor and critical ICT tools are not readily available. Again where ICT innovation is in place, the pace of acquisition of equipment far outweighs development of skills.

Worse still very little in terms of computer training is ongoing in primary and secondary schools or even health institutions. For example the majority of graduates of National Health Training College complete their training with very little or no computer skills. This is withstanding the fact that chances of ICT in-service training for those in service points are very limited.

3.1 The Vision

An efficient health and social welfare system with the relevant infrastructure, resources and skills, implementing on a sustainable manner ICT applications in all dimensions of health and social welfare delivery.

3.2. The Missions

To establish a strong ICT platform relevant to MOHSW, capable of delivering and maintaining a stable, robust, secure and effective eHealth environment to support the Health and Social Welfare sector.

4. Specific Objectives

- 4.1 To support MOHSW core programmes in the development of a co-ordinated, integrated and comprehensive database based on advances in ICTs applications and knowledge management.
- 4.2 To develop and provide continuous maintenance and update of an efficient electronic communication network for MOHSW.
- 4.3 To harmonise and support all ICT programs in the MOHSW.
- 4.4 To conduct and support ICT operational research and training in the MOHSW.

5. Guiding Principles

5.1 Political commitment

In line with Vision 2020 the ministry of Health and Social Welfare shall support and mandate development of ICT program through financial support for equipment and training through dedicated budget provided in the annual plans.

5.2 Co-ordination

The ministry shall promote and participate in the multi-sectoral development of ICT in close collaboration with other inter-ministerial agencies (like education, public services, telecommunication) to avoid overlapping of initiatives. Close public-private partnership shall be promoted for efficient use of limited national resources, experiences as well as developing collaboration on the international arena.

5.3 Accessibility and Equity

The MOHSW shall use ICT to improve access to services focussing on those with most needs. When the system is fully developed among others it shall provide online specialist advice for professionals in remote areas, access to internet and intranet, capacity to management data for planning at all levels and information to the public.

5.4 Effectiveness and quality

The Ministry shall promote the use of unified and scalable databases that can process data in line with normative aspects of quality care. The databases shall be designed such that it enhances quality control, rapid response and low down time rates.

5.5 Sustainability

The Ministry shall guarantee short and long term resource supply for expanding or sustaining the current level of ICT services. That shall include short and long term training of the ICT personnel and the rest of the staff within the MOHSW.

5.5 Social participation

The general public irrespective of class, ethnicity, political and religious affiliation, gender, age, occupation, shall be able to participate in any kind of media in which individuals will have equal opportunities to develop sector's potential e.g. through website participation

6. ICT management and organisational responsibilities

6.1 Lesotho Government Computing Centre

The LGCC is supposed to serve the computing needs of all the ministries. However, due to insufficient resources the centre mainly services the Ministry of Finance. The MOHSW shall endeavour to strengthen its ICT capacity in close collaboration with the LGCC, taking advantage of the resources at the latter and at the time avoiding duplication or competition.

6.2 Ministry of communications

One of the objectives of the Ministry of communication is to provide electronic networking and access to global information infrastructure technologies through the internet. The Ministry also intends to provide internet connectivity throughout government institutions and to facilitate increased access to telecommunication services. The MOHSW has stake in these goals and shall endeavour to cooperate with the former in customizing these broad goals to address the core business of the MOHSW.

6.3 HPSU (ICT Team) – MOHSW ICT Strategy

The ICT team at the HPSU shall provide leadership in planning and implementation of the MOHSW information, communication technology strategy. To enhance ownership, an ICT Steering Committee with representation from critical departments in the MOHSW shall be set up to spearhead the technology. At the operation level the ICT team shall provide and guarantee internet and other ICT media operations without major interruptions and support connectivity, information systems, training and trouble shooting. The ICT team shall also establish and maintain an up-to-date inventory of ICT equipment and resources.

The ICT team shall also design and maintain an accessible website, set up and manage an email information network and work close together with Internet Service Providers to ensure the best possible level of service. It shall also provide information and advice to other members of staff who may need access to asp-systems. The team shall make back-ups, install and maintain virus protection as well as other procedures related to safety and data security

6.4 HPSU (ICT Team) - MOHSW Database Management

The ICT team shall work in close collaboration with the HMIS team to ensure interoperability of databases and co-ordinate the development of an integrated and unified data management system that can communicate and exchange information. The team shall publish guidelines for development of different databases at all levels in the Ministry.

6.5 District Health Management Team (DHT)

The DHT shall plan, coordinate and supervise implementation of the ICT strategy at operational level in line with the Ministry broad objectives. The team shall promote high levels of computer literacy among themselves and the district health fraternity at large and ensure that frontline workers benefit from advances in technology.

6.6 Bureau of Statistics

In line with the Lesotho Bureau of Statistics Act (2001) MOHSW and BOS shall work together to strengthen online publication of health data for wider access by health workers, researchers and the public at large.

7. General policies

7.1 Hardware policy

7.1.1 All computer hardware devices acquired for or on behalf of the MOHSW shall be deemed to be property of the Ministry and shall not be used for commercial purposes unless otherwise regulated. All persons authorized to use MOHSW electronic resources shall assume responsibility for their appropriate use in line with relevant regulations all the time.

7.1.2 Defining a minimum configuration of PC's will improve performance, interoperability and simplify communication. The ICT team in consultation with users shall publish annually minimum hardware standards and configurations for all new computer hardware devices. The team shall also maintain an update inventory of ICT equipment in the Ministry.

7.1.3 ICT equipment used in various donor projects within the MOHSW or/and donations of computer related equipment shall be observe the minimum standards and configuration as published by the HPSU.

7.1.4 The ICT team at the HPSU shall provide computer support that includes, needs assessment and strategic planning, training and trouble shooting. Various departments within the MOHSW shall budget for repair and upgrade of their individual devices. However repair of PCs shall only be undertaken if the cost is under 50% of the cost of replacement.

7.2 Software policy

7.2.1 All soft ware acquired or developed for or on behalf of the MOHSW shall be deemed Ministry's property and used in compliance of applicable licences, contracts or agreements.

7.2.2 Unless otherwise regulated, soft ware use in the MOHSW shall be standardized to maximize interoperability and information sharing. The ICT team in HPSU in consultation with users shall publish annually, standard software specifications for the Ministry. In general, no two or more products with the same functionality shall be recommended.

7.2.3 All authorized users of MOHSW computer system shall assume personal responsibilities of reading, understanding and applying accordingly copyright regulations on all software they are using. The bottom line is that all soft wares in use shall be properly licensed and no unauthorized duplication of software shall be conducted in the MOHSW.

7.3 Database policy

7.3.1 The future direction is to harmonize the different databases in the Ministry of Health using simple, compatible and easily understandable packages. Whilst the ICT unit shall endeavour to keep the system abreast with developments of the time, caution will be exercised to define standard off-the shelf packages e.g. Microsoft Access for database development and SQL servers. In deciding on the standard packages compatibility with WHO recommended packages for GIS (Health Mapper) and health questionnaire analysis (EPIINFO) will be taken into account.

7.3.2 The MOHSW shall designate a data manager that will be responsible to ensure harmonization of databases in different department, data base support, data security, data accessibility and enforcement of the weekly back-ups policy.

7.3.3 In order to maintain the database security direct access to the database server shall be limited to few people on presenting acceptable credentials.

7.3.4. District Health Teams shall submit soft (electronic) copies of their database to central level to be aggregated and stored on the national server. Once on the server the district teams shall still maintain online access to their district specific data but on line modification shall not be possible.

7.4 The Ministry of Health Website

7.4.1 The Ministry of Health and Social Welfare shall maintain a non profit making and quality website with evident transparency and honesty to maximize communication, publication and information sharing.

7.4.2 For all information posted on the website, there shall be included clear statement of the sources, the most recent update and regular checking of the relevancy of the information.

7.4.3 The Ministry of Health and Social Welfare shall appoint a web editor who will be accountable for privacy in issues of personal data, regular updates, ensuring that only relevant information is posted on the web site and only qualified persons give response to user's queries.

7.5 Email and internet/intranet policy

7.5.1 Email is a very powerful and yet a cheap communication and business tool. All outgoing emails therefore shall be of the same quality as any other letter on Ministry of Health and Social Welfare letter heads.

7.5.2 Unless otherwise regulated, email messages are not strictly legally official correspondences. However the MOHSW holds responsible those with access to email to maintain the good image for the Ministry through prompt and well structured replies and refrain from sending or forwarding any libellous, offensive, racist messages etc.

7.5.3 Although the Ministry of Health email system is for business, limited personal emails shall be allowed in as long as they don't interfere with work and the same guidelines are observed.

7.5.4 Notwithstanding the provision above (7.5.3.) the MOHSW of Health reserves the right to monitor email contents periodically, scan for virus for in and outgoing emails without notification to users to ensure compliance to policy and good practice.

7.3.5 Internet and intranet provide access to stored information worldwide and within GOL Ministries respectively. In collaboration with sister Ministries the MOHSW shall strengthen development of intranet through active contribution to the GOL website and establishment of MOHSW web site.

7.6 Soft Ware Virus Prevention Policy

7.6.1 Computer virus is known to constitute a major data and information security risk in any organization and every effort shall be exerted to maintain the MOHSW computer system virus free.

7.6.2 To minimize the risk of infection, all users of MOHSW computer system and all system file servers shall always run an on-access scanner at all times.

7.6.3 All departments in the MOHSW shall undertake to obtain, install, regularly update and use effective antivirus software in all computer related equipments under their jurisdiction.

7.6.4 All computer virus outbreaks which extend beyond two PCs or any suspected virus hoax shall be notified to the ICT team at HPSU who shall guide investigation, analysis and control.

7.6.5 It shall constitute an offence for any MOHSW employee to write, distribute or introduce any software or file known or suspected to be infected into the MOHSW system.

7.7 Network infrastructure policy

7.7.1 The ICT network infrastructure in the MOHSW shall provide link between the data communication devices and user of the system. In cognisance of the above, the MOHSW shall work with relevant sister Ministries and the private sector to progressively build and maintain a country-wide communication network linking the major public and private health facilities.

7.7.2 In Lesotho the communication infrastructure is provided with varying degree of penetration. The MOHSW shall take advantage of existing capacities to expedite connectivity of health facilities. These include establishing linkage through Government Computer Centre servers and use of wireless technologies including radio links.

7.8 Security policy

7.8.1 The users of the ICT system are responsible for the protection of the technology and information assets therein. In pursuance of the above obligations, users shall ensure that ICT resources are used for legitimate tasks and no legitimate user is denied of information. Further to that they shall ensure that unauthorised creation, alteration and destruction of information are checked.

7.8.2 Storage and transmission of information in various databases in the MOHSW shall be conducted with appropriate data security checks. These shall include at least passwords and/or other user identification credentials, access rights and virus protection.

7.8.3 Users of MOHSW system shall be made aware of all the security features in place including possibilities monitoring usage without warning. However, efforts shall be exercised to make sure that users have access only to information that they need in their tasks.

7.8.4 There are records of instances whether proprietors have been held responsible for all information transmitted on or from their system. As a result inappropriate use of email can result in liabilities, breach of confidentiality, loss of productivity and even damage to reputation. Users of the MOHSW system shall be attached a disclaimer rescuing the Ministry from liabilities in all their emails through the system. e.g. *'Please note that the views expressed in this email are solely those of the author and do not necessarily represent those of the MOHSW'*

7.9 Training policy

7.9.1 Knowledge and skills for development and implementation of ICT applications is very limited in all levels of care in the MOHSW. The Ministry shall facilitate staff training, development of appropriate curriculum for its training institutions and improve the access to ICT equipment.

7.9.2 In order to fast track ICT solutions applications in the MOHSW the National Health Training Centre computer laboratory will be equipped and better staffed to facilitate pre-service and in-service training include research.

7.9.3 The medium goal of the MOHSW shall aim at creating as fast a possible a critical mass of staff familiar with ICT application in their day to day work. A minimum level of computer competency required for various level of employment and MOHSW institution graduates should be defined.

7.9.4 The MOHSW shall promote and facilitate ICT application in all its offices and central and district levels. The minimum package for each officer shall constitute: a desk top and printer, capacity to implement word processing, send and receive electronic mail, document storage and retrieval, management of spreadsheets, desk top publishing, establishing access to internet and intranet.

8. Specific policy

8.1 Policy on ICT resources ownership

8.1.1 Generally the Chief Accounting Officer of the MOHSW shall be the principal owner of ICT resources and information thereof on behalf of the MOHSW. In pursuance of the above understanding therefore, any ICT programmes, software or any other innovations developed within the MOHSW shall be documented and copyright protected for and on behalf of the Ministry.

8.1.1 In an attempt to standardize practice and enhance information exchange, one standard office software (spreadsheet, word processing, presentation, simple database) package shall be recommended for the routine use for all units of the MOHSW. Microsoft Office is currently recommended but because of their wide approval, approaches like Linux and Open Source shall be considered for the future.

8.2 Policy on – ‘make or buy’ soft wares

8.2.1 Some specialized operation in the MOHSW may require the development of ‘in-house ICT applications. In such circumstances, in-house competence to maintain, service and upgrade the application shall be developed alongside the product. In addition, for all in-house made or customized soft ware or database, a corresponding instruction and training manuals shall be developed.

8.2.2 Notwithstanding the advantage of making on ICT application in relation of strengthening professional competence in soft ware development, consideration shall be made on cost, time taken, capacity and availability of other options.

8. Policy implementations

8.1 The policy shall provide sustainable development of ICT capabilities in the MOHSW. A strategic master plan shall be developed alongside the policy to guide priority setting, appropriate resource allocation and monitoring and evaluation of the process.