POLICY BRIEF

Enhancing Health Information System for Evidence based decision making in the Health Sector

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Executive Statement

Over the last two decades, Kenya has received massive support towards strengthening Health Information systems. To accomplish the vision for the health sector which is "to provide equitable and affordable quality health services to all Kenyans", the first Medium Term Plan 2008- 2012 of the Vision 2030 identified the need to strengthen the national health information systems with timely and understandable information on health. Furthermore, Health Information was identified as a key investment area in the Kenya Health Sector Strategic and Investment Plan (2014-2018) for better coordination and alignment of health care resources. The Kenya Health Act, 2017 and Health Information Policy 2014- 2030 provides for a National Health Information Systems that is responsive to the needs of the population.

Key Messages

- The current HIS investment levels is low suggesting the need to be beefed up to ensure full implementation and sustainability of strategies.

- There is limited human resource and capacity of primary care facilities to utilize electronic based system

- linkage of data from various sub systems to the DHIS-2 is weak.

- Fragmentation of systems in the health sector still persists, and even where quality data is present, its use for rationalizing key health decisions is still limited.

- Theres Need for Financial allocation to Health Information System at both county and national level.

- Utilization of information needs to be strengthend at all levels of the system, through enhancing the culture and practice of "Data and Information use for Decision-Making" and capacity building at national, county and facility levels.

- Productive, effective and powerful Health Information System underpins acknowledgment of evidence – based decision making process that will positively impact service delivery in a devolved healthcare set up.

- Consolidation of resources and efforts in HIS/M&E in focus areas is needed across national and county levels.

Introduction

Review, harmonization and adoption of health sector indicators have been finalized in line with the data requirements of the Health sector with the aim of reducing the data transaction costs. Data requirements, summary tools and data capture tools (registers and summary forms) have been revised and distributed for use. However, there is no substantial financial allocation to support this system from the Ministry of Health at National Government and County Governments. Also much of the support has been from partners.

Electronic District Health Information System has been launched and rolled out nationally.

At facility level, Routine health Data are collected manually using registers and other paper based tools. Adequate data storage capacity has been established, to facilitate National and County data storage of HMIS information.

Other data are collected through mobile technologies (m-Health) and Electronic health records (EHRs)/ Electronic Medical Records (EMRs). The number of EMRs in the country is however still minimal and not well coordinated.

Despite the attention, however, some gaps still remain;

There is inadequate guidelines and capacities of HIS staff, unskilled personnel handling data, lack of integration, and poor coordination, amongst others. Overall, the current HIS provides limited information for monitoring health goals and empowering communities and individuals with timely and understandable information on health. Issues of access and intensity of use of health services have always been of significant concern in the health sector in Kenya.

Furthermore, the culture of information use is not fully embraced in the health sector due to weak legal framework to coordinate and manage Health Related Information generation across sectors, and different actors.

Many parallel data collection systems exist whereby data for the health sector is held in different databases such as iHRIS, Commodity and logistics supply Management systems, DHIS2, Integrated Financial Management Information systems, KMHFL, KMCUL, Integrated Disease surveillance and Response Information systems (IDSR), community health information systems, Civil registration system, TIBU, KNBS, EMRs/EHR etc. The systems currently are not interoperable apart from TIBU, EHR and IDSR. This creates a situation where we have a lot of data redundancy resources and time wastage in data collection and management.

Weak reporting from non-state facilities (NGO/FBOs and private sector).

Irregular updating / changing of indicators by programs, leading to varying capacities for data collection

Many partners supporting generation of routine HMIS information – who are not well coordinated leading to duplication of efforts (e.g. purchases of hardware and training).

Limited human resource and capacity of primary care facilities to utilize electronic based systems

Absence/Limited Supportive Supervision, resistance and poor support from the management of institutions.

Weak reporting of inpatient morbidity and mortality statistics.

Methodology

This policy brief is based on a comprehensive desk review of existing literature that included scientific papers, global reports, health sector strategic documents, Mid-term review(MTR) of the Final KHSSP report, 2016, DQR 2016 Report, HIS Strategic plan 2014 - 2018, HIS Annual report 2016, MTPII, MOH Strategic Plan 2008-2012, NHSSP II2005-2010 and SARAM Report 2013,

FINDINGS

Sound and reliable Health information is the foundation of decision-making across all health system building blocks, and is essential for health system policy development and implementation that is; governance and regulation, health research, human resources development, health education and training, service delivery and financing (WHO, 2008).

Health Information System is "The Pillar of Pillars" and key for strengthening the national health system.

Methodology Findings

1) Health Information System

The mid-term review of KHSSP 2014-2018 identified cardinal problems and gaps in the National Health Information System that require urgent intervention (MTR, 2017). the review revealed that while progress has been made in improving data quality level of analysis and use, Kenya was still having challenges in ensuring better resourcing, integration and harmonization of efforts from stakeholders. This is essential to minimize duplication of activities in HIS/M&E and ensure efficient use of the available resources in strengthening health information systems (MTR, 2017).

Overall, the current HIS provides limited information for monitoring health goals and empowering communities and individuals with timely and understandable information on health. The increasing levels of investments in the health sector and the need to show more precisely commensurate achievements and benefits to vulnerable groups In particular, have considerably intensified these concerns. Consequently, performance measurement has become a critical management endeavour in the health sector. Performance measurement has influenced and exerted pressure on both national and global demands for information. The demand for evidence towards the achievement of the SDGs, coupled with the increasing need for both multilateral and bilateral donors to demonstrate their contribution towards health development has also created increased demand for information (HDC, 2017).

One of the key challenges in the Kenyan health sector identified in First Medium Term Plan 2008- 2012 of Vision 2030 document is weak health information systems which includes; lack of policy and guidelines, inadequate capacities of HIS staff, unskilled personnel handling data, lack of integration, many parallel data collection systems, and poor coordination, amongst others always been of significant concern in the health. Significant investments in the health sector Health Information systems has changed this scenario to a more responsive Health Information systems that is now increasingly more reliable for routine monitoring and evaluation of service delivery in Kenya.

Although new developments in technology, including the use of the Internet and other modes of communication offer a great potential in the flow of information amongst the providers and recipients regarding the provision and management of healthcare services, the Kenyan health sector remains far behind in taking advantage of such developments to improve reporting. Performance is grossly under reported with notable exclusion of key providers in the private and quasi government sectors; developments to improve information management lag behind other sectoral improvement activities; the whole culture of information generation and use remain under-developed and, mechanisms for validating and assuring reliability are not optimally functional.

1. Policy gaps

• Weak legal and regulatory framework governing NHIS

• Lack of current SOPS and guidelines HIS and M&E

• High Dependency on Donor support

2. DHIS-2

The District Health Information System Software (DHIS-2) is a free and open source database and application for collecting, processing, and analyzing health information. It is evident that the DHIS2 system has presented unprecedented potential for Kenya to move from the era of unreliable and fragmented manual HIS system to the more ideal situation of availability and use of quality health information for rational decision making.

There are still challenges reported with regard to data quality as well as capacity of various health workers to analyze and use DHIS -2 information, in addition to very low levels of data demand and use by the targeted users in Kenya.

Lack of standardization and uniformity due to different EHR software programs that are installed, these software programs are incompatible with each other and with DHIS-2 because of different platform and data format or types. This leads to poor integration which results to poor electronic information interchange.

It is important that the range of data and information available in the systems be explored so that health managers, researchers and other stakeholders can be challenged to take a more proactive role in use of data for more informed health decision making and operational research.

DHIS-2 is suffering from an overload of data elements and indicators. It contains too many indicators that have very limited use. The demand for disaggregation further risks increasing the burden of recording and reporting for health workers. Embracing Electronic Health Record (EHR) in data entry at the service provider level is an important strategy to reduce the burden of recording and especially reporting, but still requires a rational approach to avoid an overload of data collection at the cost of service provision. The DHIS-2 should be protected from programme and partner requests for more data through a formal approval process that is driven by technical expertise in all areas of data collection with a view of minimizing the burden of recording and reporting. Furthermore, theres still indequate capacity for analytics as well as DHIS is still unable to generate some of the inadequate investment in e-health and information required for most of the non-communicable M&E in the sector conditions.

3. DATA QUALITY ASSESSMENT

Data quality assurance is the assessment and improvement of the quality of data. It is a process involving identification of errors, inconsistencies and other data anomalies hereto referred as data quality assessment and conducting activities aimed at improving the quality of data and eliminating the errors identified.

Data quality assurance ensures that information collected cumulatively represents the program or project activities. It ensures that information is accurate and reliable; measuring what is intended to be measured and has been collected and measured in the same way (consistently) by all data collection units/programs during all reporting periods. (HIS, 2014)

High quality data and effective data quality assessment are required for accurately evaluating the impacts of public health interventions and measuring public health outcomes.

Data use and data collection process has three dimensions of data quality which need to be assessed. Challenges of DQA include inattentiveness to data use and data collection processes, inconsistencies in the definition of attributes of data quality, failure to address data users concerns and lack of systematic procedures in data quality assessment .(Chen et al, 2014)

1. Reporting Rates

According to HIS annual report 2016, reports' completeness was compared to timeliness. The lowest data set reporting rates was for MOH 505, (IDSR Weekly Epidemic Monitoring Form at 23%) and the highest was for MOH 710, (Vaccines and Immunization at 90%). The lowest timeliness were recorded for MOH 505. (IDSR Weekly Epidemic Monitoring Form at 16%) and the highest was MOH 710, (Vaccines and Immunization at 79%).

The leading causes of morbidity in 2016 among both under and over five year olds were Diseases of the respiratory system followed by Malaria; as shown in figures 1 and 2 below
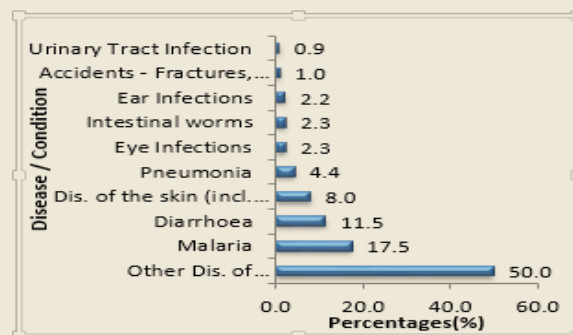

Figure 1 Proportion of leading causes of outpatient morbidity amongst patients under five years (2016) against all cases reported
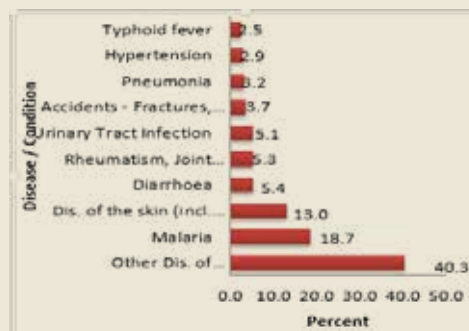*Source HIS Annual report 2016*

Figure 2 Proportion of leading causes of outpatient morbidity amongst patients over five years (2016) against all cases reported
Source HIS Annual report 2016

Conclusions

National level:

A Huge information gap in the review of the KHSSP where the M&E framework did not comprehensively define indicators and the timeline of reporting) was noted.

Monitoring and evaluation is underfinanced and not considered a priority area

There is also Inadequate investment in use of ICT infrastructure in the management of Health Information systems

County level:

The challenges being faced include;

• Inadequate county capacity for analytics and evidence use in producing reports

• Almost all data issues are left to the health records and information officers; in most cases, reports could not be availed in the absence of the health records and information officers

• DQAs are donor driven in many counties

• Inadequate indicators and tools for reporting especially at community level

• Inadequate information sharing and sharing platforms.

• Inadequate investment in priority Health information systems.

Recommendations

 NHIS

• There is need to strengthen capacity in analytics at both county and national levels through training in order to produce better communication products

• Strengthen the utilization of information at all levels of the system, through enhancing the culture and practice of "Data and Information use for Decision-Making" and capacity building at national, county and facility levels.

• Increase funding on ICT and e-heath development in particular at all levels.

• Harmonize Operational definitions of indicators and data capturing and compiling procedures.

• guidelines should be clearly documented and shared to all facilities, including private and faith-based

facilities.

- Regular supervision by Sub-County/County HRIOs/National level to provide technical supports and ensure adherence to standard tools and data management procedures at facility level.

- National and County levels of government to commit resources to avail data collection tools.

- Institutionalize back ups for computerized system for back up at both county and national levels.

- Greater integration and data sharing in a central repository (or Kenya health data observatory) of all health related data, including facility surveys, household surveys, administrative and service provision data is required to enhance data access and reduce fragmentation and duplication.

- Focus needs to be directed towards strengthening health information systems. This will require ICT connectivity, systems redesigning and capacity building of health care workers critical in data generation and management.

- Taking into account the emerging decentralised systems, disease burden, prevention and other epidemiological trends, the system.

References and Useful Resources

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Government of Japan