

**DATA DEMAND AND INFORMATION USE IN THE UPTAKE OF HIV SERVICES:
A CASE STUDY OF PRE-EXPOSURE PROPHYLAXIS (PrEP) AMONG SEX
WORKERS IN NAIROBI COUNTY.**

By


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REG. NO: Q51/7367/2017**

**A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILMENT OF THE
REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF ARTS
IN MASTERS DEGREE IN MONITORING AND EVALUATION OF POPULATION
AND DEVELOPMENT PROGRAMMES**

DECEMBER, 2021

DECLARATION

This research project is my original work and has never been submitted for any other award in any university.

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DEDICATION

This research project is dedicated to my beautiful wife Ephy, my two children Randy and Raquel and my wonderful mother Silpa for their unwavering support in my studies and research. I also dedicate this work to Director of Swop Program, M&E manager, Data clerks and the entire Swop staff.

God bless you all.

ACKNOWLEDGEMENT

First of all, I recognize the favor of God for granting me grace, strength, and wisdom to make and accomplish this project of study, even though in stormy times all hope was lost. I am too grateful to my supervisors Prof. Alfred Agwanda and Dr. Ann Akoya Khasakhala whose encouragement, supervision, support and guidance without which I would not have done this. I acknowledge the University of Nairobi for availing a chance where I could study as I work.

I am so much grateful to the workers at the University of Nairobi. Their substantial foresight opened the way to the challenging academic life that this master's program offers to me. I can't really thank them enough that my academic life was enriched.

My gratitude goes to the Director SWOP program, Data manager Swop program, all the data clerks in all the SWOP facilities in Nairobi County, SWOP management team and all the staff from SWOP Kenya. Surely without you I could not be able to get data for analysis.

Lastly, I would really want to recognize the help of my dear wife Ephy Saronge, my two sons Randy Skeete Saronge and Raguel Mitch Saronge and my Mother Silpa Auma for their support, encouragement and prayers which have given me morale over the course of my education.

ABSTRACT

This study evaluated existing methods for data demand and information usage in the provision of HIV-related care in the County of Nairobi. The core study objective was to examine current practices regarding data request and use of information in the provision of PrEP services in Nairobi County. The specific aim of the research was to assess if the existing practices complied with data request principles and the use of information while offering PrEP services. Questionnaires were administered to data officers and M&E officers, program managers and the management staff from SWOP Kenya. The study established that the current practices conform to principles of data demand and use of information in the process of offering PrEP services in Nairobi County. Some of the practices that were noted include constant review of data during the monthly data review meetings, data cleaning and checking of data completeness. The opinions of the data practitioners and data users on the demand and use of data in implementing PrEP program in Nairobi County showed that staff need to have positive attitude on data demand and use; the need to have well trained staff on data collection, cleaning, analysis and presentation. Data practitioners need to understand the power of data in making informed decisions, also if the information is not well disseminated then users lack enough knowledge and hence low PrEP uptake rate. There is need to educate PrEP users through support groups and inform them the important of taking the pill. The vigor with which data is indicated, collected, analyzed and reported supports uptake of PrEP as a service. The study recommended training of the data practitioners and staff on data analysis, data presentation and in data use (planning and quality improvement) and on the element of data qualities.

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ABBREVIATIONS AND ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
ART	Antiretroviral Therapy
ARV	Antiretroviral
HIV	Human Immunodeficiency Virus
MSM	Men who have sex with men
M&E	Monitoring and Evaluation
PLHIV	People Living with HIV
PrEP	Pre-exposure prophylaxis
UNAIDS	United Nations Organization for AIDS
SWOP	Sex workers outreach program
WHO	World Health Organization

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

No matter how comprehensive the health data or information is, it has no inherent value if it is not put to use to support evidence-based decision-making processes. To realize quality services and efficiency in HIV care, and eventually better health outcomes, proof-informed decision making is crucial. Efficient monitoring and evaluation (M&E) and health information systems (HIS) have resulted in ever expanding and purposeful global commitment to enhance the health systems and health outcomes and therefore provide relevant information for informed decision making (Garner, 2018).

The relationship between quality data, data demand and continuous data usage generally leads to enhanced health treatments and policy. Improvement in data demand and use (DDU) is an important link in order to realize improvement in the manner in which HIV related services are being offered more so in terms of effectiveness and sustainability (Nutley & Reynolds, 2013). The use of information can be understood as the procedure that comprises the reviewing of data in order to design or change a project or strategic plan, come up with a new policy or amend an existing one, advocating for a policy or program, giving resources and reviewing or monitoring programs (Yinger, 2003).

Using data in promoting data-oriented decisions remains inadequate, particularly in non-industrialized countries. Routine Health Information System (RHIS) data is always disregarded and hence not used. RHIS data covers information gathered at public, private and community-level facilities. Individual health records information, records captured from the services that are given to clients together with health resources records are helpful in providing the true status of the health condition, health interventions, and health resources. Higher percentage of these data are collected by the healthcare providers during their day-to-day activities, by healthcare supervisors, and through normal routine of health facility surveys (Abajebel, Jira, & Beyene, 2011).

If health data are not used in decision making, then low quality services, ineffective preventative and control responses, inability to assign trained healthcare workers where they are most required will be the results. Unless and until it is used to inform evidence-based decisions, HIV services related information and data will be deprived of value and meaning. In addition, the ultimate purpose of monitoring and assessment is to use information to make decisions, and thus to collect data that is not used will be a waste of useful resources. Interventions and activities that are targeting to maximize demand for and data use at the grass root will ultimately improve decision making based on evidence. Interventions that are aiming to strengthen data demand and information use (DDIU) are very important and they contribute towards improvement of health system effectiveness (Karuri, Waiganjo, Daniel, & Manya, 2014).

Information refers to data processed or combined in a particular context. Information use is defined as: In one or more policy, program planning, management and service delivery steps, people who make decisions will absolutely consider information, even if their final actions do not depend on this information (MEASURE Evaluation, 2007). Information use can also be used to mean that positive as well as negative results affect the process of making decisions (Marin, Foreit et al. 2005). It is therefore essential to comprehend that the decision makers and the decisions made are two important components of that process. A decision means two or more courses of action.

For the purposes of data-based decision making, awareness of decisions as well as choices includes the definition of use. The decision-maker has to be explicitly aware of his or her decision and of at least two possible conducts or action paths to choose. There are also two other usability aspects: original data are rarely beneficial for making decisions and needs to be malformed into useful information which relates to the question being dealt with. For instance, it is not enough just to have the number of clients who access or received services; It might be necessary to compare the numbers against the set targets; and Data may be collected or generated, transformed into information and used by the same person for decision-making. Though, different people with different levels of awareness of each other's work are more likely to be involved (Yinger 2003).

Data is the raw number, measurements, or text which has been unprocessed. The 'use' of data means analyzing, synthesizing, interpreting, and revising the data, regardless of the data source in a decision-making process. Making decisions based on data refers to proactive processes that take data into account during the program, planning, implementation; monitoring; development, sponsorship; and development and review of policy (Garner, 2018).

For data demand to exist, Stakeholders and decision makers ought to value, encourage or motivate people to use the information. Demand is a notion different from its use and at least reflects the value which stakeholders and decision-makers have put on data regardless of its use. Stakeholders actively and openly request information for the purpose of using it. You can also show that they used information at one of the different stages of implementation of the program. For data to be demanded, the following conditions should exist: stakeholders and people in charge of making decisions specify which information they need to make proper decisions; this kind of information is proactively sought by stake-holders and decision makers (Karen Foreit et al). In practice, the distinction between data requirements and information use can be difficult and can be treated as part of one process. In practice, the data demand evidence could include management or policy guidelines for data gathering, new and increased data gathering and analysis, and special analyses appeals.

Quality data and information is the cornerstone of the entire program as it leads to better program outcomes as observed by (AbouZahr & Boerma, 2005) in the health system, that relevant health data is critical for making sound decisions about certain basic health practices (i.e., provision of service, health care, access to medicines of essential importance, financing, leadership and governance). In order to monitor and to evaluate the success of any development program that is being implemented, it is significant to measure quality data outputs and data use. Definitions of and methods for the monitoring and measurement of improvements in data quality are well developed (i.e., accuracy, reliability, precision, completeness, timeliness, integrity, and confidentiality) (MEASURE Evaluation, n.d.).

However, definitions and methods for monitoring and measuring data use for decision making have proven more challenging. Many data and information users and producers have not agreed on the actions that constitute data use. For example, data sharing, visualization, dissemination,

and review are often considered cases of data use. According to the available literature, measures of data use have included such dimensions as transparency, timeliness, visibility, accessibility, dissemination of information, calculation of key indicators, preparation of information products, and presentation of the achievement of targets (Abajebel, Jira, & Beyene, 2011; Mwencha, Rosen, Spisak, Watson, Kisoka, & Mberesero, 2017). This means that there is no standard approach to defining and measuring data use.

Data is used in two major stages; strengthening the Health Information System (HIS) and enhancing the health programs' performance, with the main objective of enhancing the operation of the health structure and outcomes. Stage one includes the enhancement of HIS; this should include the analysis of data in order to detect data quality issues for improvement; the generation of health statistics that can answer main health questions and the development of client's tailored information products and the dissemination of the findings (Mutale, Chintu, Amoroso, & Sherr, 2013). Stage two of data use involves steps to encourage data-informed decision making for health program improvement. This will require continuous data review in the process of decision making. Data review and interpretation process should lead to evidence-based recommendations that is supposed to be forwarded to the next level of program management or decision makers with the request for actions, the decision to act is made, and the necessary follow-up actions are implemented which lead to improved health outcomes (Nutley, & Reynolds, 2013).

Health Information System (HIS) is designed to produce accurate information that could be used for program monitoring and review steps that are involved in decision making at each stage of health system; program planning and strengthening; advocacy; policy; and planning and implementation of health strategy (Ohiri, Ukoha & Nwangwu, 2016). The HIS has been a priority in Global health. The M&E process and the information generated from it can support the program scale-up process by allowing stakeholders to clearly outline innovation, maintain loyalty when the program reaches out to more people, identify adaptations needed and ensure the desired effect is achieved. Stakeholders will engage and involve new partners as their services expand. Collaborative benchmarking process, process documents and online feedback is needed. These stakeholders can also remain attentive and, as necessary, make mid-range adjustments to ensure that escalation is on track in a changing environment. M&E data can

also verify the effectiveness of developing innovation and provide opportunity to encourage investment and partnerships while establishing debates that strengthen key innovation values (Frieden, 2017).

The PRISM toolbox, supported by MEASURE Evaluation, examines the wide environment within which health information systems (RHIS) function. The framework states that the RHIS performance is a function of RHIS processes and their behavioral, technological and organizational factors as quality information which is constantly employed in decision making. The PRISM toolkit comprises of four tools to thoroughly evaluate the performance of RHIS; Identify technical, performance behavioral and organization factors; conduct multidimensional intervention design and priority design to enhance RHIS performance; and promote ongoing quality of data and use monitoring and evaluation efforts (Shiferaw, Zegeye, Assefa, & Yenit, 2017).

1.2 Description of the Case Study

HIV services related data like information on Pre-exposure prophylaxis (PrEP) service will be important to evaluate uptake, efficient use, safety and forecasting demand, and ensuring a suitable, uninterrupted provision of the commodities required. In addition, active monitoring in early implementation phases could be needed to identify the adverse effects on women and their children, other adults and teenagers who are pregnant and breastfeeding. There is limited experience of delivering PrEP outside small-scale research and demonstration projects in most countries at present. As PrEP services expand, monitoring, and reporting systems along with PrEP services will need to be implemented and their progress regularly assessed. Monitoring and Evaluation (M&E) ensures that PrEP is delivered safely and efficiently, while services focus on those who will benefit most (Sidebottom, Ekström, & Strömdahl, 2018).

Information generated through credible M&E system is useful to service providers, program managers, and policy makers in coming up with decisions that will lead to higher uptake of PrEP in the country. Increase in PrEP uptake and good adherence among the key population will lead to the reduction of new HIV infection. Although, there have been a few studies on the impact of PrEP as a new HIV prevention strategy in Kenya, studies linking M&E

information and uptake of PrEP in Kenya have been very limited (Grant, Anderson & Buchbinder, 2014).

Good health information systems and timely data are crucial to health systems, according to Nutley & Reynolds (2013), by enabling policies that are fully shown. In the lack of precise and obvious measures to enhance information demand and utilization, firms cannot satisfy customers' requests entirely. Quality and timely data from monitoring and evaluation (M&E) systems of health information addresses failures in the use of data found in databases and reports by stakeholders leading to successful health programmes (Schwartz & Ferrigno, 2018). Strategic information is essential for monitoring and measures progress, the impact of programmes, and decision-making while programming is informed by routine data collection and monitoring data. In this way, adequate monitoring and evaluation (M&E) information may influence demand for PrEP products (National AIDS & STI Control Programme, NASCOP/ Ministry of Health, 2017). The information arising from monitoring and evaluation of PrEP uptake is very essential in assessing the state of adherence and also assisting in making decisions to utilize PrEP, hence it is important to examine demand for and use of monitoring and evaluation information on the uptake of (PrEP) among the key population in Kenya especially Sex workers who are prone to HIV/AIDS. Nairobi County host 70 % of the total commercial sex workers in Kenya. This makes public health programs in Kenya like Sex Workers Outreach Program (SWOP) that promotes the health, safety & well-being of key and venerable populations to be establish in Nairobi. Hence Nairobi County is an ideal area to establish the influence of data demand and use of information on the uptake of PrEP among sex workers in Kenya.

1.3 Problem Statement

Significant resources and efforts have been capitalized in Kenya towards development of Health Information System (HIS). The fact is that transaction data are too much mastered and not enough transformed into information and knowledge which can lead to business results, this is one of the most enduring characteristics of the information age (Karuri *et al.*, 2014; Davenport, *et al.*, 2010). In Kenya 43% of data producers don't offer analysis and interpretation of data and 42% analyzes and uses data to influence the process of budget

preparation and clinical service planning (MEASURE Evaluation, 2008). Less than 37% of data collected are analyzed and taken into account when making decisions (MOMs & MOPHs, 2010), thus the ministry does have many data and information that are not turned into knowledge that can translate into results.

MEASURE Evaluation (2016) in the work; Data demand and use in Kenya understanding: while looking at the challenges and successes in the county of Kisumu, Kilifi and Kakamega using Monitoring, Evaluation and Capacity Assessment Tool (MECAT) found that there were no strategies for using data and some of them only had a strategic plan or M&E draft work plans for data use in all counties where the MEASURE evaluation PIMA (MEval-PIMA) was supported during project life. The infrastructure for data utilization was weak at a national level because most national programs lacked guidelines or data use plans. The programs also faced capacity issues with respect to institutionalizing a culture of data use among staff (Garner, 2018).

In Nairobi County, the uptake of HIV services has been low despite the fact that it has the largest population of sex workers. This could be attributed to inadequate data demand and information use in the uptake of pre-exposure prophylaxis (PrEP). Moreover, there has been a gap in information system and M&E capacity assessments. There is need to capture the process of strengthening data use to improve data quality, generation of program intervention statistics, creation of information products and to develop activities to support the use of data for improved program outcomes. The study therefore sought to assess the current practices on data demand and information use with specific reference to PrEP services. The study also sought to assess the factors that may act as barriers to information and data use with specific reference to PrEP services.

1.4 Research Questions

The broad research question was: What are the current practices for data demand and information use with regard to provision of PrEP services in Nairobi County? Specifically, the study sought to answer the following research questions:

- i. What are the relevant data practitioners currently doing with respect to data demand and information use?

- ii. Are the relevant data practitioners doing the right thing with respect to data demand and information use?
- iii. If the relevant data practitioners are not doing the right thing, what are the barriers for data demand and use that are currently existing?

1.5 Objectives of the Study

The study's main objective was to investigate the current practices with regard to data demand and information use in the provision of PrEP services in the County of Nairobi. The study was primarily guided by the following objective:

- i. To assess if the current practices conform to principles of data demand and use of information in the process of offering PrEP services in Nairobi County.
- ii. To assess barriers to data demand and information use in the process of offering PrEP services in Nairobi County.
- iii. To assess the opinion of the current program managers and monitoring and evaluation officers on the demand and use of data in implementing PrEP program in Nairobi County.

1.6 Justification of the Study

Health data are the basis of the overall healthcare system building blocks. In order to strengthen, monitor and evaluate health programs, health care providers would be able to use the same information to improve policy making, plans, execution and evaluation (Karuri et al., 2014).

In Kenya, HIV and AIDS epidemic is a major health and development issue. The government is aiming to provide PrEP to 500,000 persons who are at risk of HIV infection by the year 2020 and at the same time disseminate PrEP information to half of all adults in Kenya. To achieve this, the right data practices that conform to the principles of data demand and use on the uptake and adherence of PrEP must be clearly understood by all the key stakeholders. The study results can go a long way in providing advice to all PrEP program implementers, policy makers and various stake holders and the government. In addition to generating policy inputs for policy makers and stakeholders, it may also add value to the body of knowledge and information in the field of study and create opportunities for further research. The study would augment the

knowledge depth on the current data demand and information practices on the uptake of PrEP among sex workers in Kenya populations.

1.7 Scope and Limitations of the Study

The study was cast around to examine the current practices with regard to data demand and information use in the provision of PrEP services in Nairobi County. The study as well sought to examine the factors that act as barriers to data and information use on the uptake of PrEP services in Nairobi County. The study collected data from the Management staff, Program managers and M&E staff of Swop Kenya in Nairobi County. This study took a period of six months to be completed.

There are other elements that may impact data demand and the use of information, such as political and economic considerations, but this research focused solely on technological, organizational and behavioral variables in the field. The study included only participants during the study period. Those who were absent were not included in the study, despite their contributions being of interest. The study was conducted to only sex workers outreach program (SWOP) clinics in Nairobi County and at the same time the study only concentrated on PrEP program as one of the HIV related services offered by SWOP clinics. The study was also limited to the opinions of program staff, M&E officers and management staff.

1.8 Definition of Terms

Data demand and information use: is a system to discover possibilities as well as restrictions for efficient and strategic data gathering, analysis, access and usage.

Technical barriers and constraints: refer to technical issues like collection of data, data analysis and reporting, human resources and competencies, M&E infrastructure and quality of data.

Behavioural barriers and constraints: Refer to the feelings and perception in using data in making decisions, like perception on information and data, stimulation to consider data in decision making process, inducements and discouragements for data use in decision-making.

Uptake: The start of oral PrEP treatment among the key HIV/AIDS population

Pre-exposure prophylaxis (PrEP) refers to oral administration or daily intermittent of antiretroviral medicinal products intended to prevent infection of people with high-risk HIV.

Use of performance information is defined as specific manner or general manner. The use of performance information is a decision-making behavior

Dissemination of PrEP information is the spreading of the information about the Pre-exposure prophylaxis uptake and adherence

Monitoring and Evaluation (M&E) is a process that contributes to improved effectiveness and success. Its aim is to improve present and future output, results and impact management.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This study is informed by a literature evaluation on data demand and the usage of information from diverse sources for the use of HIV services. Literature was examined with the purpose of building understanding and knowledge regarding the demand for, and usage of the data in HIV-related services.

2.2 Theoretical Perspectives

This is the basic building block around which a research hypothesis may be built. This framework's theory serves to define the fundamental issue and why each theory applies in this investigation.

2.2.1 The Evidence Based Health Information System Theory by Carbone (2008).

The theory was chosen because knowledge of daily routines must be evidence-based in order to be able to formulate plans and policies in all the planning agencies (Carbon, 2008). Researchers have suggested that it is important for an organization to fit in together with technological subsystems and social subsystems. The technical subsystem involves the machinery, tools and techniques needed to make input results to improve the economic performance of the company. While the social system (compliance factors) includes workers (at all levels) and provides them with information, abilities, attitudes, beliefs and needs in the work environment, the award system and organizational structure.

WHO (2016) has stated that the efficacy of the program for identifying, prioritizing, recognizing and allotting resources for health outcomes would be determined by proper data collection, management and utilization in healthcare systems. Moreover, theory has shown that health care environment is managed by health staff, who are also key policy makers (Carbone 2008), These health staff need an incentive for them to influence behavioural change in medical practice.

2.2.2 Program Theory

Program theory was postulated by Bickman (1987). The theory describes how an intervention contributes to a series of outcomes producing the planned or real consequences. It includes numerous proclamations which describe a specific programme, giving an explanation to why, how and under what existing conditions, to anticipate the program results and identify important preconditions to achieve the ideal program effect. The program theory has been used for managing the assessment for a longer period; it reveals the program ability in fixing the problem through considering the need assessment and data management. (Seith & Philippines, 2012)

Program theory manages an assessment by distinguishing key maternal health program components and articulating how these components are relied upon to relate with each other (Donaldson & Lipsey, 2014). Information accumulation designs are then made inside the structure so as to gauge the degree and description of every component's event. Once collected, the information is then analysed. Firstly, information that have been collected through different means or from different sources on same project component are triangulated. Stake (2016) exhibited a model that calls for depicting the planned precursors (whatever should be before a program is operational) exchanges (exercises and yields), and results of a program. The information on the program in task are contrasted with what was planned and to what the benchmarks are for that sort of program.

Program theory is along these lines characterized in assessment practice today as the development of a conceivable and rational model of how a maternal health program should work (Pilcher et al., 2012) or a lot of recommendations in regards to the way in which a terrible circumstance becoming a superior one through treatment contributions is changed in a profit box in the midst of the change to yield contribution. It is likewise taken a gander at as the procedure through which program segments are dared to influence results. Data should be generated in a cost-effective manner. Information provides a basis to feed back into the projects, improve policy analysis and policy development and aid in project and managerial activities. Data use and demand is a key practice that ensures effective decision making for adopting a certain program like Monitoring and Evaluation. This theory assumes a few critical jobs in data use and management for uptake of Pre- Exposure Prophylaxis.

2.3 Evolution of Data Demand and Information Use

Data Demand and Information Use (DDIU) is a way to discover opportunities and challenges for successful data collection, analysis, availability, and use. This approach starts with an evaluation which can assist stakeholders, policy-makers, and M&E professionals to know where to begin from in DDIU intervention. Upon knowing the particular gaps, DDIU main tools can now be used to increase the demand for information, capacity building and improved data based-based decision making (Frieden, 2017). According to Clancy and Cronin (2005), health decisions have been supported by health data and information for centuries. Some developments in the recent past have intensified the undertaking of decision making that is evidence based. They are advances in communication and IT, growth of biomedical knowledge and advancement, growth of the evaluative medical knowledge and the increasing appreciation that decision making that is based on evidence offers a structure for tackling health care policy shortcomings. Explosive development has taken place in medical studies. More than 11,000 open-ended trials have been launched in the United States. This enabled decision-making to be linked to evidence. The requirement for tools that health professionals, the sick and policy makers can utilize to go through the bewildering and sometimes contradictory assortment of evidence was sharpened by the rapid growth of medical studies (Clancy and Cronin, 2005).

Maturation and growth of expertise and methods for carrying out and utilizing systematic reviews enhanced the trustworthiness of evidence for utilization in health care decisions. Transparent and consistent methods were built up for assessing evidence and producing the results of numerous studies. This brought about an extensive collection of dependable and independent sources that can be consulted to complement expert opinion (Clancy and Cronin, 2005). The emergence of a revolution for Health Information Technology (HIT) made it probable to drive evidence to the position of care and to recognize where and why evidence and practice deviate. Reliable evidence addressed the dual imperative of improving quality and controlling costs (Clancy and Cronin, 2005). A lot of consideration was concentrated on inquiries and precise requests that promoted the utilization of evidence in medical decision making in recent decades to minimize redundant or unsuitable practice disparities. Policy

awareness in recognizing plans that can show an obvious association among health care inputs and outputs was sharpened by the changes in practice and unabated increases in health expenditure (Clancy and Cronin, 2005)

2.3.1 Data Demand

Data driven decision based is improved though a high demand for health data, gathering, analysis and availability of data for individuals who make choices and also the enabling of information to be utilized during decision making process. Data refers to raw numbers, measurements, or text that have not been processed. Data is entered for the production of information by the systems. They are raw materials describing individuals, places, things or events occurring or about to occur, and they come in numerous forms, such as numbers, words, and symbols. The three main types of routine data include data on population, health and health status. The information is meant to explain and promote broader function of the health system, including services provision, disease control, initiatives and management of morbidities and service coverage (USAID, *et al*, 2000).

“Data demand” describes the information the parties concerned are requesting actively and openly (MEASURE Evaluation, 2012). The demand for data will be necessitated by the kind of value the stakeholders and decision makers have put on information. Demand is a concept that reflects the level of the value that decision makers and stakeholders has placed on the information. Data demand can therefore be explained as the process where stakeholders and decision makers deliberately, actively and openly request for the information. Data demand requires stakeholders and decision makers to be specific with the kind of information they want so as to guide their decision making, they still need to go ahead and to proactively seek out the kind of information that they are in need of. Signs of data requirements include: managerial or policy directives for the collection of particular data; increase in allocations of resources for collection and analysis of data; items on the budget heading; the establishment or improving of statistical units in ministries or programs.

2.3.2 Information Use

Information refers to data that are processed or combined in a particular context. The use of information shall include deliberate consideration of information by decision-makers and

stakeholders in the course of making decision, even though final decisions or measures are not supported by such information, (MEASURE Evaluation, 2007). According to Frieden (2017), “Information use” It gives examples of the key research findings that have been used during decision made based on evidence and examples of the successful modification of the way information is used by initiatives. “Data collection/analysis” Describes the different methods and tools used only to address knowledge gap and data; “availability of information” illustrates ways in which data and information are disseminated and published in a user friendly and useful format;

According to MEASURE Evaluation (2018), Data use refers to a process which involves data review in order to accomplish the following purposes; creation or revision of project implementation plan, developing and revising policy, requesting for new policy development, allocation of program resources, reviewing or monitoring of the performance of the program and management of the client care. The use of information and data on HIV services is not just the completion of data reporting forms at health facilities and the incomplete distribution of reports and information products. Use of information is achieved when information is considered to provide answers to questions relating to a particular program, policy or customer care which leads to taking the best choice among the options that are available, MEASURE Evaluation (2018).

According to Salestine et al (2007), health data and information can be used in many areas in facilitating uptake of HIV services. The first area is policy and advocacy. Information from health systems can be used to guide designing of new health policies as well as amending the existing ones. Advocacy activities can be carried out using health information. Health information helps health facilities to advocate for additional resources to fund new programmes and interventions that are initiated or to improve the existing ones.

Health information can be used to fill any gap in the health system that is not currently being met. Information will be very useful in coming up with interventions that are aiming at addressing the needs of the key population and the vulnerable in the society. Information will be needed in order to address the training gaps, revision of the training manuals and curriculum and procurement of drugs and supplies (Salestine, *et al*, 2007)

Effective analysis, explanation, and utilization of data in all health system is key in the process of evidence-based decisions. Low utilization of health information has been observed in resource limited countries which requires more of evidence based decision (Shiferaw, *et al.*, 2017). In developing countries, there has been low use of health information, the health information usage has been rated from 10 to 56 percent. In Ethiopia, for instance, the quality of information and use in the health sector for facilitating uptake of HIV services are still weak. Consequently, most managerial decisions are taken without proof and many health programs have been unsuccessful (Shiferaw, *et al.*, 2017)

Programme activities, operations and management decisions is another key role of health information. Information can be utilized during planning for resource allocation. The information can be used to inform the kind of support that is required to conduct programme activities, defining various roles and responsibilities of the program staff, ameliorating infrastructure, upscaling programme activities and hiring of more programme staff (Mutale, Chintu, Amoroso & Sherr, 2013).

Health information is useful in holding people accountable to the stakeholders, program implementers and funders. Health programs receive funding from the government and donors. They need to show clear accountability on how they spend the money they received. Health service providers are also accountable to the program beneficiaries because they have to provide the services that they are supposed to (Salestine et al., 2007).

Data use improves clinical decision making. The availability of the patient medical information electronically improves the manner in which clinicians communicate and make decisions concerning patients, this is because they can see the action that is needed to be taken on a particular patient as well as what was done previously, this supports immediate decision making (Brimmer, 2013). Data use results to better care coordination. The fact that there can be availability of electronic patients' records which can be accessed across the country has improved the way organizations communicate with each other about a patient (Brimmer, 2013). Data and information use can also be used to enhance patient wellbeing. Health workers are able to use patients' available information to track and remind patients to embrace and lead a healthy life style (Brimmer, 2013). Brimmer (2013) noted that cumulating data from diverse areas gives opportunity to organizations to see ahead as well as visualize the bigger picture.

Having a central location where data can be stored makes it possible for the organizations and health service providers to track and see how their organizations are performing on a macro level.

In an assessment that was conducted on the health information system in Zambia, the findings were clear that dissemination of information to potential users was poor and its use in resource allocation was insufficient (Republic of Zambia, 2007). In Malawi, assessment on the health information system revealed overall adequate dissemination and utilization of data. Assessment found a number of major gaps like limited policy and advocacy use of data (Health Metrics Network, 2009). In Namibia, assessment on health information system found general inadequate dissemination and use of data. It was not possible to analyse data and utilize information for decision making as the system did not have features for data analysis. Another issue that was found is the culture of generating, capturing and utilizing information; this was underdeveloped at every level (Republic of Namibia, 2012).

Jackson-Gibson, *et al.* (2021) examined the facilitators and barriers to HIV pre-exposure prophylaxis (PrEP) utilization using community-based intervention strategy among adolescent girls and young women in Seme Sub-County, Kisumu, Kenya. The study collected data from key informant interviews (n = 15) with Pamoja Community Based Organization staff, health care providers and community leaders. The study found that the use of the safe space model in promoting use information, localization of PrEP support and distribution, mentors, successful linkage to nearby health care facilities, creation of awareness to parents and male sexual partners, disclosure of PrEP use by clients, deliberate stakeholder engagement and community involvement all acted as facilitators to PrEP uptake.

2.4 Empirical Evidence

2.4.1 Organizational Barriers

It should be noted from the on-set that the existence of organizational data management support is a key pillar in supporting the use of data in an organization. According to MEASURE Evaluation (2018), Organizational barriers and limitations relate to lack of structures or a fragile organization culture supporting data collection, accessibility and use such as lack of

clear job description, operating processes, guidance and data-enhancing tools; and appropriate financial support for data-use.

Organizational barriers include inadequate human and financial resources capable of fully implementing M&E systems, uncertainty about the role of employees and responsibilities of employees, poor management procedures to support M&E and data usage, inadequate information flow in the organization, infrastructure limitation, including computer infrastructure.

The increase in data availability and accessibility in formats that are friendly to any potential user has led to the increase of the information use. However, this has also brought about challenges to create and maintain an information culture in an organization, MEASURE Evaluation (2018). There are minimum operational policies and procedures concerning data use, which give rise to narrow overall knowledge of what constitute use of data, reasons why the use of data is necessary and whether it is part of the individual job descriptions MEASURE Evaluation (2018).

MEASURE Evaluation, after assessing Data Use of the Malaria Program in the Democratic Republic of Congo recommended developing written protocols to promote information use, as this was not identified. It also recommended development of the overarching plan for improving use of data at all health system levels. A data use plan should include: Data Quality Assessment schedules; data review meetings; data usage for all employees' roles and responsibilities in the health sector; Comprehensive data core competences capacity- building plan; data infrastructure; information how stakeholders can be engaged for information planning, and a repository of data improvement and use facilitation tools, guidance documents and capability-building materials. This kind of comprehensive plan can guide data use activities and help prioritize the use of data so that a strong culture of data use in an organization can be established, MEASURE Evaluation, (2017).

Organizational constraints like lack of clarity regarding roles and functions of staff, inability to encourage the value of data-based decision making, inadequate of quality information standards or norms, and ambiguous data flows within the system, have a significant and negative impact on data use. Without an organization which supports, encourages and values

data collection, it will be almost unbearable to establish the Connections between health information and action on health.

2.4.2 Technical Constraints

Technical barriers and constraints refer to technical issues like collection of data, data analysis and reporting, human resources and competencies, M&E infrastructure and quality of data, MEASURE Evaluation (2018). Technical rigor is clearly required in informational systems; the pillars of an effective and efficient information system on health are these important elements and competences. A framework with no proper technical structure, properly-educated personnel and clear standards cannot give the data necessary to make informed decisions.

Literature review has revealed lack of technical skills in data analysis among the health staff members. Some personnel in health sector are still computer illiterate. There is also lack of enough computers to be used for data analysis. The design of the information system sometimes presents restrictions on the use of the data. Definition of the indicators in some cases may not support the use of data since they may tend to respond to reporting more than the needs of the programme. Some organizations do not have data quality management protocols that can lead to data that the stakeholders do not trust.

Many organizations and many health facilities are still having little capacity to collect, analyse and interpret data. Skills are still lacking that can ensure high quality data is collected. At the same time tools and skills required to analyse and put the analysis into action are also weak in many contexts. Differences in monitoring and evaluation of healthcare personnel at both national and sub- national institutions and poor understanding in the supervision and assessment of certain healthcare workers led to restricted data analysis and use, MEASURE Evaluation (2018).

Technical barriers are one of the key factors which hinder the data use in making decisions: reduced staff, inadequate time and poor data quality. These factors are interconnected because inadequacy affects each other. Staff environment is equally important as following conditions will act as constraints to data use: too little qualified input and reporting staff, limited resources that do not support training of staff on data issues, high turn of staff and frequent staff transfer of staff. MEASURE Evaluation (2018).

2.4.3 Behavioral Constraints

Behavioural barriers and constraints concern the feelings and perception in using data in making decisions, like perception on information and data, stimulation to consider data in decision making process, inducements and discouragements for data use in decision- making (MEASURE Evaluation, 2018)

The use of data in making decision regarding uptake of HIV services will depend on individual behavior, for example, the attitude of the individual making decisions will be vital in establishing if data is put to use. In cases where people who make decisions have less regard for data, they will not consider data in their decisions. Low motivation of staff who are tasked with quality data collection, analysis process and use will hinder the process of data use.

Capacity building generated an increased appreciation and ownership for data-informed decision making. Data user who has been equipped with data collection skills, analysis skills and use are able to appreciate the need for high data quality and they are most likely to see data as a responsibility in their day-to-day work. Capacity-building efforts also contribute to a positive shift in attitudes and ownership of data, this can result to change in focus from data reporting to valuing data quality and analysis, MEASURE Evaluation (2018).

Meaningful interaction between people who use data and people who produces data is essential for improved and strengthened data-informed decision making. Their engagement is likely to facilitate the interpretation of data, discussion about data quality, requests for additional analysis, and the clarification of existing data sources, MEASURE Evaluation (2018).

Information related to HIV services is gathered, analysed and used in the health system by people who perform both professional and personal roles. As capacity building is central to the use of information and data, behavioural capacity aspects are the greatest problematic to classify and interrogate in an expressive way. Behavioural effects on demand for and use of data involve imperceptible concepts such as attitude, motivation, medical information values, work performance, responsibilities and hierarchy. Initiatives that are more than just coaching to enhance the skills and knowledge of data understanding and information is required to inflate and change these behavioural factors, MEASURE Evaluation (2006)

Behavioral factors may give an insight into the use and non-use of information by workers, managers and policy makers. Where the expectations of health professionals at all levels are

unclear regarding data use, their performance and morale to informed decision-making can suffer, MEASURE Evaluation (2006).

It will not be realistic for stakeholders to utilize data unless they have defined the sort of information they require. MEASURE Evaluation has come up with DDIU path which supports information and data collection, that responds to a recognized need, which is vindicated by the decision-making use to which information is used, and thus from the outset, data and information on health can respond to requests (MEASURE Evaluation, 2006).

2.4.4 Uptake of Pre-Exposure Prophylaxis

PrEP is the use of anti HIV medication in order to keep HIV negative people from becoming infected. In 2012 the US FDA first authorized Oral PrE, followed by other nations. The Kenya Pharmacy and Poisons Council authorized oral PrEP usage in Kenya in December 2015. Oral PrEP was licensed, until April 2017, in Australia, Canada, France, Lesotho, Malawi, Peru, South Africa, Scotland, Swaziland, Switzerland, Taiwan, Tanzania, Thai, United States of America, Switzerland and Zimbabwe. (Grant, Anderson & Buchbinder, 2014).

The WHO defines PrEP as the use by HIV negative individuals of antiretroviral medicines before possible HIV exposure to HIV. The Oral PrEP is an initiative for minimizing the risk of HIV based on evidence that can be provided to everyone with an important risk for getting HIV. In the absence of the PrEP, the WHO defines this group as a population at significant risk, as a population with an HIV rate incidence of more than 3 out of 100 individuals. To identify who the PrEP is to be offered, a country must balance the risk of HIV, adverse events, and the resources available (Eaton, Driffin, Bauermeister, Smith & Conway-Washington, 2015).

The WHO recommends that the combination of preventive measures including: HTS, counselling, males or female's condoms, lubricants, HIV-positive partner ART and VMMC should be given to people at high risk of HIV infection as additional prevention alternative. Populations that need to benefit from PrEP services are mostly not reached because of low identification persons who mostly at high risk of HIV infection. (Parsons, Rendina, Lassiter, Whitfield, Starks & Grov, 2017).

During periods of high risk of getting HIV, PrEP should be used daily and it can be discontinued during periods of low risk. Events that mark the start or end of risk periods will differ by region, population group, socio-cultural practices and individual factors. For example, moving to a region where the prevalence of HIV is high or visiting home after working in the mining industry may easily represent significant risk times. The new topic for implementation research is to learn how well to guide PrEP users on starts and stops (Ding, Yan, Ning, Cai, & Wu, 2016).

PrEP is offered in Kenya to persons at considerable ongoing risk of HIV infection, it is part of HIV combination prevention. As part of this program, PrEP is an evidence-based approach in combination of prevention, combined with geographical priority approaches to attain maximum impact on the HIV infections reduction in Kenya and the 2014 Kenya HIV Prevention Revolution roadmap. Although significant progress in reducing new HIV infections has been made, certain populations are still at risk for HIV infections (Ngure, Odoyo, Bulya & Katabira, 2017).

The HIV epidemic in Kenya is still high but shows that the HIV programming has 'a pattern of stabilization.' Therefore, the reversal of the epidemic calls for new intercessions like the PrEP in a strategic and targeted approach. The revised 2016 National ART Procedures describes the priority demographic groups of PrEP in accordance with the epidemiology of new HIV infections in Kenya. Of those among 15 and 24 years old, half of new adult infections are present. Young women in this age group are particularly concerned, with a third of the new infections occurring in 2015. 35 percent of the new infections in Kenya are contributing key populations, comprising sex workers, men having sex with men (MSM) or people injecting drugs (PWID) so they are a target group of PrEP. HIV serodiscordant couples also form other groups (Mugwanya & Ngure, 2016).

2.5 Conceptualization

The framework generally demonstrates how the concept, expectation, belief and theory system informs and promotes research and forms an essential part of design in research. This framework shows how these variables relate to one another diagrammatically. In order to

improve demand and use of routine health information, this study utilized Prism framework that Aquil and colleagues (LaFond&Field, 2010; Aqilet al., 2009) have developed. It recognizes three interconnected mechanisms which are essential for improving routine information systems and utilization of data from the system, namely the Performance of Routine Information System Management (Prisma). These three components include elements of technical, organization and behavior. The technical component pertains to issues like data collection techniques and procedures. Individual component relates to the behavior of data consumers and the way in which data is utilized to address issues and to enhance programs. The organizational aspect pertains to the organization's structure and processes that use the information generated. These three components were utilized to identify possibilities and restrictions for data management and operational strategies based on three criteria for optimizing the use of data.

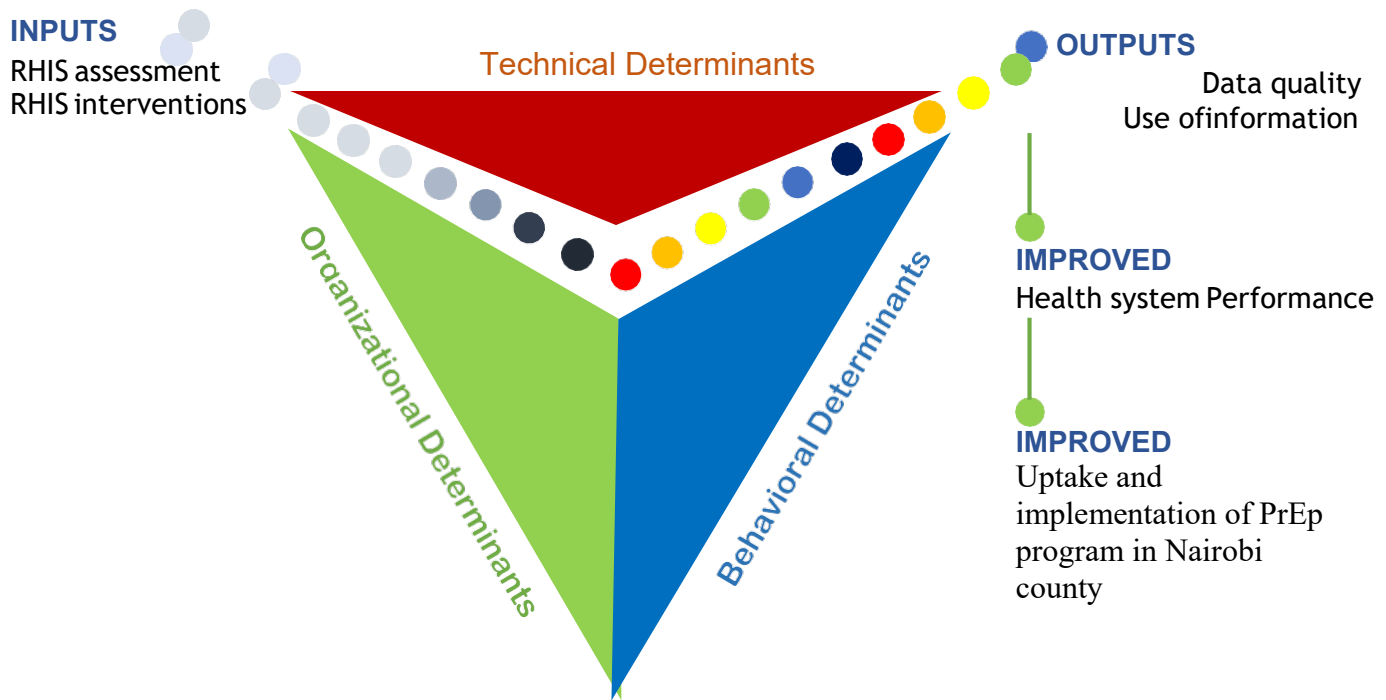


Figure 2. 1: Conceptual Framework

Source: MEASURE Evaluation, 2007

The conceptual framework focuses on routine health information systems (RHIS) assessment and interventions as inputs which results into quality data and its usage when information use barriers are dealt with. Use of information improves the health system performance which enhances the uptake and implementation of PrEp program in Nairobi County.

Moreover, the aspects of technical factors include skills and training, competency and availability and organizational factors include infrastructure, roles and responsibility, supervision, feedback and meetings while behavioral Factors include attitude, values Perception and motivation. Data Demand and Information use aspects include capacity building, creating information culture, facilitative supervision and feedback and discussion of reports during meeting

The conceptual framework will also help to know whether the information flow is working well, it will assist in knowing whether M&E practitioner are able to disaggregate information

for each stakeholder to understand. It will assist in identifying whether the data shared from the M&E department is able help staff to understand their own performance in broader context. Accessing whether there is demand for information, data ownership, awareness of data sources, proper understanding of fundamental issues and scope of dataset, the kind of worth that decision makers have put on data, how the information is collected, infrastructure of the organizational and the technical capacity of the people who create and utilize the data.

The frame work will also focus on organizational infrastructure which supports production of reliable information and the technical capacity of the personnel who generate and put data to use. Right attitude and motivation that encourages the demand and use of information.

Operationalization

The dependent variable, Data demand and information use was measured using PRISM conceptual framework on the system. It was explained as skills and training in data management, competency, data availability, roles and responsibilities, infrastructure, supervision, feedback, meetings, attitude and motivation. These components of the assessment tool were measured using likert scale.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The chapter describes the approaches the researcher utilized to get answers to study problems. Study methodology, research design, target population, sampling process, data collection methodologies and data collection tools has been reported in the order provided: Research design, venue for study, document desk review, target population, sample size and sampling method, data collecting devices, data collecting processes, data analysis methodologies and ethical issues. The section explains how the information required for the study was analyzed. The chapter finally discusses the questions of ethics.

3.2 Research Design

The study used a cross-sectional descriptive research design which employs use of qualitative and quantitative techniques of data collection so as to provide a snapshot of the study populations. In general, study design is simply the way whereby the various circumstances are arranged in order to gather and analyze data for study (Lewis 2015). Furthermore, the research design is a plan which allows easy navigation of different research function, thus achieving the maximum possible efficiency in the research with minimum effort and time and money. The researcher used this design to assess the demand for data and use of information in the uptake of HIV services focusing on a case study of PrEP among sex workers in Nairobi County. This design helped to study the interrelationships between the variables. It is analytical and often identifies and describes a variable factor or individual topic. The characteristics of a population are also fully described in this design (Creswell & Creswell, 2017).

3.3 The study Site

The study was based in Nairobi County. There is an organization called SWOP that has been monitoring uptake and adherence to PrEP among sex workers. In 2008 with support from PEPFAR, the ongoing research initiative operating under two clinics expanded to a broader program covering Nairobi county and its environs seeing the birth of what is now the SWOP program. In 2013 SWOP program transitioned to an NGO (SWOP Kenya) registered under

the NGO's act. Currently Swop Kenya has various facilities that are strategically placed within Nairobi County namely SWOP Majengo, SWOP Donholm, SWOP Langata, SWOP Kawangware, SWOP Korogocho, SWOP Thika Road, SWOP Kariobangi and SWOP City.

3.4 Desk Review of Documents

The desk review of documents aimed at evaluating the extent of demand and use PrEp information. The Desk Review activities included literature scanning, secondary data analysis and the establishment of a reference list. The study looked at journals, reports and other gray literature, laws and regulations linked to M and E system, monitoring and evaluation reports and data demand and information use. The available information was analyzed and presented in prose form.

3.5 Target Population

Population target is the total number of researchers' subjects (Oso & Onen 2005). Based on the Flick (2015) recommendations in explaining the study unit of analysis, the target population targeted in this study was 37 respondents including management staff, program managers and M&E personnel as shown in Table 3.1.

Table 3. 1: Target Population

Categories of the target population	Target Population	Percentage
Management staff	9	24.3
Program managers	13	35.2
M&E staff	15	40.5
Total	37	100

3.6 Sample Size and Sampling Plan

The sample plan provides unit description, the sample structure, the sampling processes and the test size. The sample outline shows the record of all population units from which the sample is picked (Gorard, 2013). As illustrated by Orodho (2012), the sample includes the selection of a certain number of subjects from a considered population to represents all population.

Sampling is a deliberate choice for certain people who produce the findings of a research on some of the larger groups that are represented by these people (Collis & Hussey, 2013). The sample size is a population subset that represents the whole population. The study adopted a census sampling technique where all the targeted respondents were part of the sample. The census sampling technique is the method of statistical enumeration where all members of the population are studied. Hence the sample size was 37.

3.7 Data collection Instruments and Procedures

Primary data is collected by questionnaires administered by the researcher and secondary data was obtained by means of data collection forms. The questionnaire consists of both open and closed questions relating to issues of demand for and use of data in the uptake of HIV services. The open question is used to give room to the interviewee to give comprehensive answer to illuminate any information, without feeling hidden and the closed questions gave the respondent opportunity to answer restricted choices. Open-ended questions allow deep answers from respondents, while closed questions are usually easier to evaluate, as per Saunders, Lewis and Thornhill (2012). The questionnaires are used to minimize expenditure and time, and to make easy analysis as they are readily available.

Researchers received a letter from the university which was presented to the Director of Swop Kenya, this enabled the researcher to collect data from the organization. To provide respondents ample time to make thoughtful comments, questionnaire administration was performed utilizing the drop and pick later approach. Respondents were directly in charge of the research instruments and facilities. The researcher managed to; describe the goal of the study, and explain the significance of things that (Sekaran and Bougie (2010) have not been seen clearly.

3.7.1 Reliability

The researcher ensured reliability of the instrument by using internal consistency method using Cronbach's alpha co-efficient though background information was exempted from this. The Cronbach's alpha co-efficient calculated bit by bit according to research variables. SPSS programme was used. The threshold for reliability was set at reliability index of 0.857. The reliability of the instrument was tested and once it was okay, the researcher continued to use the instruments to collect data. Research questionnaires were pre-tested on 13 persons.

$\alpha = \frac{k}{1 + \sum_{k=1}^k \sigma^2}$ α =Reliability, Alpha Coeffeciencies (Cronbach)

K=Number of items in the instrument

$\sum \sigma^2$ k= Variance of the individual items

σ^2 =Variance of the total instrument

Σ = Summation This according to sekero 2003 was greater than 0.6

3.7.2 Validity

Content Validity Index (CVI) was used in order to check the validity of the instruments. Questionnaires were given to specialists to check the appropriate and inappropriate questions. Questions that were marked relevant by all specialists in every instrument was added and then divided by the number of questions in each instrument. Content validity index was calculated using the formula as shown below:

$CVI = \frac{\text{Number of questions considered appropriate in the instrument}}{\text{Sum of the questions in the instrument}}$

Sum of the questions in the instrument

This should be >0.5 according to Goy (1996). The researcher went ahead to use the instruments if their CVI was 0.7 and above (Amin, 2005). The instruments that gave CVI which was below 0.796 were reviewed accordingly before they could be used in data collection

3.8 Data Analysis Techniques

Statistical Social Science Package (SPSS version 25.0), which is the latest version was employed in analyzing data. The analysis of this study was done using descriptive statistics. In this case, all of the received questionnaires are referenced and the items in the questionnaire are coded for easier entry. The descriptive statistics, like frequencies, percentages, mode, median and coefficient of change, for all of the quantitative variables and the information presented in tables and figures was calculated after data purification involving the inspection of errors in the entry. The qualitative data from the questions were analyzed and presented in prose using a conceptual content analysis.

3.9 Ethical Considerations

The researcher received clearance from the SWOP KENYA Director to proceed with study without National Commission for Science, Technology and Innovation (Nacosti) approval since the study was not going to require personal identifiers. Furthermore, the organization

also has approval being a research based organization. In regard to the rights of those subject to the study, the researcher observed the following standards of behavior: first, the study goal and the confidentiality of the information received was communicated to participants by a letter and this gave participants room to give informed consent. The consent was permitted but the respondents still retained their right, such as the right not to respond to question or questions, declining to supply any requested data, withdrawing from participating in some aspects of the research, as well as withdrawing any data that was provided earlier. Attention was taken to ensure that no participant is compelled to participate and the investigator was able to use least time and resources in obtaining the required information. The study adopted the reliability, objectivity and independence of the researcher through quantitative research methods. The researcher ensured that the ethics of research was followed during the study. Privacy and participant's confidentiality was respected. The aims of the study were explained to the respondents, in order to ensure that the data provided are used only for academic purposes.

CHAPTER FOUR

RESEARCH FINDINGS, ANALYSIS AND PRESENTATION

4.1 Introduction

This section presents findings for the study as per the objectives. The sections in this chapter include: response rate, background information findings and descriptive statistics for data demand and information use in the uptake of HIV services. The findings are presented in Tables.

4.2 Response Rate

The study computed the response rate to ascertain whether it was adequate for analysis. The findings were as shown in Table 4.1.

Table 4. 1: Response Rate

		Response Rate
Response	23	62.2%
Non-response	14	37.8%
Total	37	100

From the findings, 37 questionnaires were administered to the respondents from which only 23 questionnaires were fully filled and returned. This gave a response rate of 62.2%. This was significant response rate for statistical analysis since it is above 50% as per Creswell and Creswell (2017) recommendations.

4.3 Background Characteristics of the Respondents

This part requested the participants to give their general information included gender, job title, and education level and age brackets. The information shown in tables.

Table 4. 2: Background Information of the Participants

		Frequency	Percent
Sex	Male	6	26.1
	Female	17	73.9
	Total	23	100
Job Title	Data officer/M&E officer	11	47.8
	Program manager	3	13
	Management staff	9	39.1
	Total	23	100
Highest Level of Education	Diploma	4	17.4
	Degree	14	60.9
	Masters	5	21.7
	Total	23	100
Age	20-30 years	12	52.2
	31-40 years	6	26.1
	41-50 years	4	17.4
	51 – 60 years	1	4.3
	Total	23	100

According to the findings, most respondents were 73.9% female, while the remainder were 26.1% male. This shows that the study considered the collection of reliable data for all respondents regardless of gender.

Also the respondents indicated that their job title was data officer/M&E officer as shown by 47.8%, management staff as shown by 39.1% and program manager as shown by 13%. This indicates that data was collected from all the targeted respondents in the various departments in the program.

In addition, most of the respondents indicated to have a degree as shown by 60.9%, masters as shown by 21.7% and diploma as shown by 17.4%. This is an indication that the collection of data cut across all the levels of education of the respondents.

Moreover, most participants indicated to be aged between 20 and 30 years as illustrated by 52.2%. Other respondents indicated to be aged between 31 and 40 years as illustrated by 26.1%, between 41 and 50 years as illustrated by 17.4% and between 51 and 60 years as illustrated by 4.3%. The study covered all the relevant age groups which makes the data collected to be reliable.

4.4 Behavioural Factors

Behavioural barriers and constraints concern the feelings and perception in using data in making decisions, like perception on information and data, stimulation to consider data in decision making process, inducements and discouragements for data use in decision- making. The respondents were requested to clarify their agreement level regarding certain aspects of data demand and use in their organization. The results are illustrated in Table 4.3.

Table 4. 3: Level of Agreement Regarding Certain Aspects of Data Demand and Use

	Median	Mode
I am discouraged if the data I collect is not utilized in decision making.	4	4
I find the data collection tedious (that is., monotonous or repetitive)	2	2
I notice that my data collection burden my workload, making it hard for me to perform my other tasks	2	2
Collecting of data is beneficial to me	5	5
I think that the information I collect is essential for the monitoring of health services at my facility	5	5
The supervisors appreciate and value my data collection work	4	4
I have a feeling that it isn't the job of healthcare providers to collect or record data	1	1

As per the results, majority of participants strongly agreed that they think that the information they collect is essential for the monitoring of health services at their facility as shown by a median of 5 and a mode of 5 and that collecting of data is beneficial to them as shown by a median of 5 and a mode of 5. In addition, the respondents agreed that the supervisors appreciate and value their data collection work as shown by a median of 4 and a mode of 4 and that they are discouraged if the data they collect is not utilized for taking actions as shown by a median of 4 and a mode of 4. However, the respondents disagreed that they find the data collection tedious (that is., monotonous or duplicative) as shown by a median of 2 and a mode of 2, that they notice that their data collection burden their workload, making it hard for them to perform their other tasks as shown by a median of 2 and a mode of 2 and strongly disagreed that that they have a feeling that it isn't the job of healthcare providers to collect or record data as shown by a median of 1 and a mode of 1.

The respondents were also asked to give their perception on competence in performing tasks related to data demand and information use. The results are shown in Table 4.4.

Table 4. 4: Perception on Competence in Performing tasks related to Data Demand and Information Use

	Median	Mode
I am able to monitor the accuracy of the data	5	5
I am able to compute percentages precisely	5	5
I can plot a trend on a chart	5	5
I am able to illustrate the results implications of analysis of data	4.5	5
I am able to utilize data for identification of gaps in service performance and performance targets' setting	5	5
I am able to utilize data for making operational decisions (e.g. for service delivery, budget allocation, distribution of roles, and logistic distribution)	5	5

From the findings, most of the respondents specified that they have very strong competence to calculate percentage/rates correctly as shown by a median of 5 and a mode of 5, to plot a trend on a chart as shown by a median of 5 and a mode of 5, to check data accuracy as shown by a median of 5 and a mode of 5 and to utilize data for identification of service performance gaps and setting performance targets as shown by a median of 5 and a mode of 5. In addition, the respondents indicated that they have strong competence in explaining the results implication of analyzed data as shown by a median of 4.5 and a mode of 5 and to use data for making operational/management decisions as shown by a median of 5 and a mode of 5.

The analysis of reliability was then done utilizing Alpha from Cronbach, which also measures internal consistency by determining whether certain elements in a single scale were the same. Table 4.5 presents the outcome for reliability.

Table 4. 5: Reliability Analysis

	Cronbach's Alpha
Behavioural Factors	.881

Behavioural factors had an alpha value of 0.881. This shows it was reliable since its alpha value was greater 0.7 as recommended by Lewis (2015) and that the items describing it needed no changes.

In addition, the respondents were asked to say if they felt that they had the skills to use information to make the kind of choices they were involved in. Table 4.6 shows the findings.

Table 4. 6: Skills Necessary to Use Data

	Frequency	Percent
Yes	12	100

The results showed that the respondents have the skills to use the data to make the decisions they take as illustrated 100%.

The participants were required to specify if they wanted training in different things. Findings are shown in Table 4.7.

Table 4. 7: Training in Various Things

Would you like training in	Yes		No	
	Frequency	Percent	Frequency	Percent
Data collection	3	25	9	75
Data analysis	11	91.7	1	8.3
Data presentation	6	50	6	50
Data use (planning and quality improvement)	8	66.7	4	33.3

Results showed that the respondents specified that they would not need training in data collection as shown by 75%. In addition, respondents indicated that they need training in data analysis as shown by 91.7%, in data presentation as shown by 50% and in data use (planning and quality improvement) as shown by 66.7%.

The researcher required the participants to specify the influence extent of aspects of behavioral determinants for data demand and use of information on the uptake of PrEp in Nairobi County. Findings are presented in Table 4.8.

Table 4. 8: Extent Behavioral Determinants for data Demand and use of Information Influence

	Median	Mode
Attitude/ Values/Perception	5	5
Motivation	4	4

As per the findings, majority of the participants specified that attitude/ values/perception for data demand and use of information influence the uptake of PrEp in Nairobi County to a very great extent as shown by a median of 5 and mode of 5. In addition, most of respondents indicated that motivation for data demand and use of information influence the uptake of PrEp in Nairobi County to a great extent as shown by a median of 4 and mode of 4.

The participants were asked to key in their opinions on how aspects of behavioral determinants for data demand and use of information influence the uptake of PrEp in Nairobi County. They indicated that staffs need to have positive attitude on data demand and use, there is also need to have well trained staff on data collection, cleaning, analysis and presentation. Data practitioners need to understand the power of data in making informed decisions, also if the information is not well disseminated then users lack enough knowledge and hence low PrEp uptake rate.

Respondents indicated the need to educate PrEp users through support groups and inform them the important of taking the pill, it slows down the rate of discontinuation. Responded indicated that the vigor with which data is indicated, collected, analyzed and reported supported uptake of PrEP as a service, that clients who are motivated to take PrEP by a way of packages are very adhered to medication (PrEP) and that some clients fear that peers might confuse their PrEP drugs as ARV'S medication, perception that hinders uptake. The outcome concurs with MEASURE Evaluation (2018) who argued that the use of data in making decision regarding uptake of HIV services like PrEP will depend on individual behavior, for example, the attitude of the individual making decisions will play a key role in establishing if data and information are used. In cases where people who are charged with the responsibility of making decisions have no interest in using data, they will not consider data before making decisions.

4.5 Data Demand and Information Use in the Uptake of HIV related Services.

Data Demand and Information Use (DDIU) is a way to discover opportunities and challenges for successful data collection, analysis, availability, and use. This approach starts with an evaluation which can assist stakeholders, policy-makers, and M&E professionals to know where to begin from in DDIU intervention. The participants were requested to specify if their organization promote the need for information for decision making, priority making, and use of decision-making information, as well as training employees in decision-taking skills. Findings are shown in Table 4.9.

Table 4. 9: Organization Support having the Necessary Information to Make Decisions

	Frequency	Percent
Does your organization promote the decision-making information?	11	100
Does your organization promote decision-making priority-setting and information-use?	11	100
Does your company promote the training of employees in decision-making information?	11	100

From the findings, respondents indicated that the organization promote having the information necessary for decision-making, prioritization, and use in decision-making and personnel training on the using information in decision-making as shown by 100%.

The respondents described process for authorizing research or survey information for dissemination within the organization/agency as always started from the head office to the ground level reaching the responsible individual who were directly involved, the program manager is sent a research or survey request for authorization then he/she informs the relevant people for the participation, availability of funding, that is if research funding is available for your research then you will be required to make formal application through the director who then approves and directs it to the relevant team for action.

The participants were as well asked to specify if the process affect their capability to use information to make decisions. The findings are shown in Table 4.10.

Table 4. 10: Whether the Process affect their Ability to Use Information to make Decisions

	Frequency	Percent
Yes	6	54.5
No	5	45.5
Total	11	100

As per the results, the participants specified that the process influences their ability to use information to make decisions as shown by 54.5% while 45.5% indicated that the process doesn't affect their ability to use information to make decisions. Ekirapa et al. (2013) noticed a general improvement in demand and use of data in the health sector in Central and Eastern Kenya, while also pointing to the presence of a substantial gaps in data demand and data use (DDU). The data refers to raw numbers, measurements, or text that have not been processed.

A questionnaire was sent out to the organization's participants and they were asked if they agreed or disagreed with key elements of data demand and usage in their company. The results are presented in Table 4.11 and 4.12.

Table 4. 11: Agreement with Statements on Data demand and use

In your organization, superiors (managers or higher-level supervisors)	Median	Mode
Seek input from relevant staff	5	5
Illustrate that the compilation and submission of periodic reports Follows procedures in terms of data quality.	5	5
Promote multidirectional feedback mechanism to disseminate Information in the organization and to all cadre in the organization	4	5
Utilize M&E data to achieve, monitor and target service performance	5	5
Stress the desire to utilize M&E data in identification of potential differences in gender I offer or use services	5	5
Conduct routinely checking quality of the data at data collection, processing or aggregation points	5	5
Ensure that regular meetings are held where data and information Are discussed, performance reports are presented and reviewed, decisions are made, follow-up actions are identified,	5	5
Provide the staff responsible for the compiling and reporting of data with regular feedback on the observed data quality (eg. clarity of information collection / documenting)	5	5
Understand or benefit good work performance employees	4	4

As per the results, the participants strongly agreed that in their organization, superiors (managers or higher level supervisors) seek input from relevant staff as shown by a median of

5 and a mode of 5, illustrate that the compilation and submission of periodic reports follows procedures in terms of data quality (e.g. monthly reports) as shown by a median of 5 and a mode of 5 and encourage dissemination of the information in the organization as shown by a median of 4 and a mode of 5. Additionally, most of the respondents strongly agreed that in their organization, superiors (managers or higher level supervisors) utilize M&E data to achieve, monitor and target service performance as shown by a median of 5 and a mode of 5, illustrate the need to utilize M&E information for identification of potential gender disparities in the provision or use of services as shown by a median of 5 and a mode of 5 and conduct routinely checking quality of the data at data collection, processing or aggregation points as shown by a median of 5 and a mode of 5. Additionally, in their organization, superiors (managers or higher-level supervisors) ensure that regular meetings are held where data and information are discussed, performance reports are presented and reviewed, decisions are made, follow-up actions are identified as shown by a median of 5 and a mode of 5 and provide the personnel in charge for the collation and reporting of data with regular feedback on the observed data quality (eg. clarity of information collection / documenting) as shown by a median of 5 and a mode of 5. Clancy and Cronin (2005) argued that the emergence of a revolution for Health Information Technology (HIT) made it probable to drive evidence to the position of care and to recognize where and why evidence and practice deviate. Reliable evidence addressed the dual imperative of improving quality and controlling costs. A lot of consideration was concentrated on inquiries and precise requests that promoted the utilization of evidence in medical decision making in recent decades to minimize redundant or unsuitable practice disparities.

Table 4. 12: Agreement with Statements on Data demand and use

In your organization, staff	Median	Mode
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RHIS tasks are completed in a timely way (that is, fulfilled the relevant deadlines) (report, process / aggregation and/or analysis)	5	5
Show commitment to the RHIS Mission (that is, to provide and use relevant information for proof-based decision-taking, accurate, accomplished, and timely)	5	5
continue pursuing national targets and establish feasible local objectives for the performance of essential services	5	5
feels “individual accountability” for not achieving performance goals	4	4
Use of RHIS data for daily facility management (like delivery of services, financial, commodity and managerial resources)	5	5
use RHIS data to resolve common service delivery problems	4	4
use RHIS data based on sex or gender to identify and/or fix gender problems when providing services	5	5
prepares visual data (charts, graphs, maps) that illustrate progress towards objectives (predictors, geographic and/or time trends or position data)	5	5
can assess whether an initiative has met the objective(s) or target(s)	4	4
have the ability to decide in response to data analysis results (like changes in service provision or management techniques) according to your job descriptions	4	4
are held responsible for unsatisfactory performance (like being unable to meet the set deadline)	4	4
concede errors if they happen and remedy them	5	5

Many participants strongly agreed that staff concede errors if they happen and remedy them as shown by a median of 5 and a mode of 5 and Use of RHIS data for daily facility management (like delivery of services, financial, commodity and managerial resources) as shown by a median of 5 and a mode of 5. In addition, respondents strongly agreed that in their organization staff RHIS tasks are completed in a timely way (that is, fulfilled the relevant deadlines) (report, process / aggregation and/or analysis) as shown by a median of 5 and a mode of 5, Show commitment to the RHIS Mission (that is, to provide and use relevant information for proof-based decision-taking, accurate, accomplished, and timely) as shown by a median of 5 and a mode of 5 and continue pursuing national targets and establish feasible local objectives for the performance of essential services as shown by a median of 5 and a mode of 5. In addition, most of the respondents agreed that in their organization, staff feels “individual accountability” for not achieving performance goals as shown by a median of 4 and a mode of 4, and use RHIS data to resolve common service delivery problems as shown by a median of 4 and a mode of

4and use RHIS data based on sex or gender to identify and/or fix gender problems when providing services as shown by a median of 4 and a mode of 4.

Additionally, many participants strongly agreed that in their organization, staff prepares visual data (charts, graphs, maps) that illustrate progress towards objectives (predictors, geographic and/or time trends or position data) as shown by a median of 5 and a mode of 5, can assess whether an initiative has met the objective(s) or target(s) as shown by a median of 5 and a mode of 5, have the ability to decide in response to data analysis results (like changes in service provision or management techniques) according to your job descriptions as shown by a median of 5 and a mode of 5 and are held responsible for unsatisfactory performance (like being unable to meet the set deadline) as shown by a median of 5 and a mode of 5.

The analysis of reliability was then done utilizing alpha (α), from Cronbach, which also measures internal consistency by determining whether certain elements in a single scale were the same. Table 4.13 indicates the results for reliability.

Table 4. 13: Reliability Analysis

	Cronbach's Alpha
Data demand and information use	0.783

The findings show that data demand and information use had an alpha value of 0.783. This shows it was reliable since its alpha value was greater 0.7 as recommended by Creswell and Creswell (2017) and that the items describing it needed no changes. According to Clancy and Cronin (2005), health decisions have been supported by health data and information for centuries. Some developments in the recent past have intensified the undertaking of decision making that is evidence based. They are advances in communication and IT, growth of biomedical knowledge and advancement, growth of the evaluative medical knowledge and the increasing appreciation that decision making that is based on evidence offers a structure for tackling health care policy shortcomings.

4.6 Organizational Determinants

Organizational determinants relate to lack of structures or a fragile organization culture supporting data collection, accessibility and use such as lack of clear job description, operating

processes, guidance and data-enhancing tools; and appropriate financial support for data-use. The participants were asked to provide an indication on the extent to which various aspects of organizational determinants for data demand and use of information influences the uptake of PrEp in Nairobi County. The results are showed in Table 4.14.

Table 4. 14: Organizational Determinants for Data Demand and Use of Information

	Median	Mode
Infrastructure	4	4
Roles and responsibility	4	4
Supervision	5	5
Feedback	4	4
Meetings	4	4

As per the findings, majority of the participants specified that supervision as shown by a median of 5 and a mode of 5 affect the demand and use of PrEp data in Nairobi County to a large extent. Moreover, most of the participants agreed that feedback as indicated by a median of 4 and a mode of 4 affect the demand and use of PrEp data in Nairobi County to a higher extent. Additionally, many of the respondents agreed that roles and responsibility as shown by a median of 4 and a mode of 4 and that infrastructure as shown by a median of 4 and a mode of 4 affect the demand and use of PrEp data in Nairobi County. Moreover, the participants showed that meetings as shown by a median of 4 and a mode of 4 affect the demand and use of PrEp data in Nairobi County.

The analysis of reliability was then done utilizing alpha (α), from Cronbach, which also measures internal consistency by determining whether certain elements in a single scale were the same. Table 4.15 shows the results for reliability.

Table 4. 15: Reliability Analysis

Cronbach's Alpha

Organizational determinants

0.775

The findings show that organizational determinants had an alpha value of 0.775. This shows the data and information was reliable because values surpassed the recommended threshold of 0.7 as stated by Creswell and Creswell (2017) and that the items describing it needed no changes

The respondents indicated that aspects of organizational determinants for data demand and use on the uptake of PrEP in Nairobi County are essential in monitoring the use of commodity. Infrastructure, constant supervision and accurate data are necessary in supporting decision making based on reliable information. Furthermore, supervision and feedback help in identifying any gap in the use of data, this can help in coming up with action points that can help in addressing the identified gaps in the process of PrEP uptake or continuity.

4.7 Technical Factors

Technical factors refer to technical issues like collection of data, data analysis and reporting, human resources and competencies, M&E infrastructure and quality of data. The participants were required to explain if they had ever had experience with making policies or programs in relation to the quality of the information they were using. The findings re shown in Table 4.16.

Table 4. 16: Whether they have ever had issues with the quality of data while making decisions during policy or program related issues

	Frequency	Percent
Yes	8	72.7
No	3	27.3
Total	11	100

Many participants indicated that they had issues with the quality of information they used in the process of making program or policy related issues as shown by 72.7%. It may be deduced that policy and program managers have ever worried about the quality of information utilized while making a choice on a policy or program.

The participants were requested to specify if there are multiple information sources or statistics for important matters and whether having different estimates has been posing challenges to them. The results are indicated in Table 4.17.

Table 4. 17: Whether there are Multiple Sources of Information or Statistics

	Frequency	Percent
Yes	8	72.7
No	3	27.3
Total	11	100

Many participants indicated that there are multiple information sources or statistics for important matters and that they have ever experienced problems caused by having different estimates as shown by 72.7%. This implies that there are several sources of information or statistical issues of interest and concern to them.

The respondents were also asked to specify if over the past 6 months when attempting to use health data or information, they encountered the following obstacles. The results are illustrated in Table 4.18.

Table 4. 18: Barriers when Trying to Use Health Data

	Yes		No	
	Frequency	Percent	Frequency	Percent
Incomplete data	8	72.7	3	27.3
Poor quality data	6	54.5	5	45.5
Late or no production of data	7	63.6	4	36.4
Information was not well presented	4	36.4	7	63.6

As per the findings, majority of the participants specified that they have faced the following barriers during the past 6 months when trying to use health data or information; incomplete data as shown by 72.7%, poor quality data as shown by 54.5% and late or no production of data as shown by 63.6 and also Information was not well presented as shown by 36.4%.

The participants were requested to specify if they have provided feedback about these barriers to the monitoring and evaluation team systems/records management team. The results are indicated in Table 4.19.

Table 4. 19: Feedback Provided about these Barriers

	Frequency	Percent
Yes	10	90.9
No	1	9.1

Total	11	100
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As per the findings, majority of the participants specified that they have provided feedback about these barriers to the monitoring and evaluation team systems/records management team as shown by 90.9%. They also indicated that the feedback was addressed. The participants were as well asked to specify the degree to which aspects of technical factors for data demand and use of information influences the uptake of PrEp in Nairobi County. The research findings are illustrated in Table 4.20.

Table 4. 20: Technical Factors for Data Demand and Use of Information

	Median	Mode
Skills/ Training	4	4
Competency	4	4
Availability	5	5

From the study outcomes, most of the participants also specified that competency will influence the use of PrEP data as shown by a median of 5 and a mode of 5 and availability as shown by a median of 5 and a mode of 5 influence the uptake of PrEP in Nairobi County to a very greater extent the respondents specified that skills/ training as shown by a median of 4 and a mode of 4 influence the uptake of PrEP in Nairobi County to a very great extent.

Analysis of reliability was then conducted utilizing Cronbach's alpha (α) that also measures internal consistency by determining whether certain items are the same construct in a scale. The findings for reliability are illustrated on Table 4.21.

Table 4. 21: Reliability Analysis

	Cronbach's alpha (α),
Technical factors	0.874

The findings show that technical factors had an alpha value of 0.874. This shows it was reliable since the value was greater than 0.7 as recommended by Creswell and Creswell (2017) and that the items describing it needed no changes.

On influence of technical factors for data demand and use of information on uptake of PrEP in Nairobi county, the respondents indicated that it affects program managers especially when they need to evaluate and see the PrEP commodities that are required on the ground hence delays in the process of delivery of resources, that lack of proper training on PrEP affects the quality of data being produced , eventually affecting decision making and that uptake of PrEP is greatly influenced by skilled and competent staff who are responsible for giving the information to help program managers and management staff to make informed decision.

4.8 Data Demand and Information Use

Data demand describes the information the parties concerned are requesting actively and openly. The demand for data will be necessitated by the kind of value the stakeholders and decision makers have put on information. The participants were requested to specify if the county government have a designated person responsible for entering data/compiling reports from health facilities. The outcome is given in Table 4.22.

Table 4. 22: Whether the County Government have a Designated Person Responsible for Entering Data

	Frequency	Percent
Yes	10	90.9
No	1	9.1
Total	11	100

Most of the respondents indicated the county government have a designated person responsible for entering data/compiling reports from health facilities as shown by 90.9%.

The participants were requested to specify if there are written guidelines on RHIS information display, use, and feedback. The outcome is given in Table 4.23.

Table 4. 23: Written Guidelines on RHIS Information Display

	Frequency	Percent
Yes	10	90.9
No	1	9.1
Total	11	100

Most of the respondents indicated that there are written guidelines on RHIS information display, use, and feedback as shown by 90.9%.

The participants were as well asked to specify the degree to which different aspects of demand and use of data influence the uptake of PrEp in Nairobi County. The results are illustrated in Table 4.24.

Table 4. 24: Extent to which various aspects of Data Demand and Information use influence the Uptake of PrEp in Nairobi County

	Median	Mode
Capacity building	4	4
Creating information culture	4	4
Facilitative supervision and feedback	5	5
Discussion of reports during meeting	5	5

As per the findings, the participants specified that capacity building as shown by a median of 4 and a mode of 4 and creating information culture as shown by a median of 4 and a mode of 4 influence the Uptake of PrEp in Nairobi County to a great extent. Additionally, most of the respondents showed that facilitative supervision and feedback as shown by a median of 5 and a mode of 5 and discussion of reports during meeting as shown by a median of 5 and a mode of 5 influence the Uptake of PrEp in Nairobi County to a great extent.

On influence of data demand and information use on the uptake of PrEp in Nairobi County, the respondents indicated that motivating staff and capacity building them will increase the use of data since one will be dedicated to his/her work, lack of motivation and training affects data processing and uptake, there is need for constant training and capacity building of staffs in order to ensure reliable.

The respondents indicated that current practices conform to principles of demand for and use of information in the process of offering PrEP services in Nairobi County. Some of the practices that were noted include monthly data review meetings, data cleaning and checking of data completeness.

The respondents' opinion on demand and use of data in implementing PrEP program in Nairobi County were that it helps in visualizing the trend on PrEP uptake, PrEP is still new in the county and has a long way to go in terms of data demand and use, it should be one of those key objectives, there is need for more capacity building of staffs and care providers and the demand and use of data is not yet huge and so the demand is low.

4.9 Uptake and Implementation of PrEP Program

The participants were requested to specify the trend on the Uptake and implementation of PrEP program in Nairobi County for the last 5 years. The results are shown in Table 4.25.

Table 4. 25: Trend on the Uptake and Implementation of PrEP Program

	Frequency	Percent
Greatly decreased	1	9.1
Decreased	1	9.1
Constant	4	36.4
Improved	3	27.3
Greatly Improved	2	18.2
Total	11	100

As per the findings, majority of the participants specified that the Uptake and implementation of PrEP program in Nairobi County for the last five years was constant as shown by 36.4%, improved as shown by 27.3%, greatly improved as shown by 18.2%, greatly decreased as shown by 9.1% and decreased as shown by 9.1%.

The respondents were also asked to indicate how many people are currently on PrEP in Nairobi County. Findings are indicated in Table 4.26.

Table 4. 26: Number of People are currently on PrEP in Nairobi County

	Frequency	Percent
Less than 1000 people	1	9.1
1000 to 5000 people	6	54.5
More than 5000 people	4	36.4
Total	11	100

Most of the respondents indicated that there are 1000 to 5000 people currently on PrEP in Nairobi County as shown by 54.5%, More than 5000 people as shown by 36.4% and less than 1000 people as shown by 9.1%. This is an indication that uptake of PrEP is high in Nairobi County.

To improve Uptake and implementation of PrEP program in Nairobi County, the respondents indicated that there is need for capacity building and more support, coming up of strong PrEP support groups, constant sensitization of PrEP champions, motivation of the staffs to initiate clients on PrEP, introduction of a monthly PrEP injection to increase uptake and adherence and give the right information to the target groups. The respondents also indicated that there is need for educating and training more health care workers and PrEP packaging should be changed, many people shy away from PrEP since the packaging is similar to the ARV'S.

Table 4. 27: Desk Review

	Completely	Partly	Not at All
Guidelines, normal procedures or protocols describe measures for aggregating, analyzing or manipulating the data at each reporting system level are available.	100%	0%	0%
There are guidelines, normal operating methods and protocols outlining how data synthesis products can be developed and disseminated to a range of stakeholders..	100%	0%	0%
There are guidelines that describe federal regulations, deadlines and guidelines on how to compete with data collection and reporting formulas/tools for a protection of individuals that report routinely data.	0%	0%	100%
There are guidelines on how to manage data to ensure quality in the case of a health service entity which routinely collects and reports data..	100%	0%	0%
A training schedule is present. Probe: If yes, discuss whether the subjects of education include: information management, analyzes of data, interpretation of data and use of data.	0%	0%	100%

Staff can present analysis of information from two to six months or two quarters in table, graph, map or other format. Probe: If yes, comment on the data analysis staff position(s).	100%	0%	0%
Staff can prove that the analysis results have been shared with district or institutional managers (use of minutes of meeting, activity report, e-mail, etc.).	100%	0%	0%
Particular data review meetings are held to present and discuss the analytical findings. Probe: If yes, comment as to whether the staff can share the timeframe, meeting minutes, advocacy make data references, or other such evidence in strategic planning or budget reports.	100%	0%	0%
Data visuals (such as a chart, graph, or map) are displayed in the office. Probe: If yes, identify the sources of data.	100%	0%	0%
A map of the catchment area is displayed in the office. Probe: If yes, identify the data sources.	Document shown to researcher		
An approximate summary of population groups by target group is shown in the office in the catchment area. Probe: If yes, identify sources of the data. Probe: If yes, indicate when last updated.	100%	0%	0%
Information reports on the exactness, correctness and validity of the information reported are available. Probe: If yes, specify the reports dates.	0%	0%	100%
Program performance feedback reports are present. Probe: If yes, specify the source of the reviews (e.g. national, regional, provincial or other institution).	100%	0%	0%

Probe: If yes, specify reports the dates			
.			
A travel report or checklist from the recent M&E visit is available.	100%	0%	0%
Probe: If yes, the review tour report or checklist to see if support for decision-making included training or coaching in the use of data.			
Probe: If yes, indicate report date.			
A district or national report containing HMIS routine data and recommended activities is presented.	100%	0%	0%
Probe: If yes, give opinion on report source.			
Probe: If yes, specify date of report.			
A press release or report by staff during the last 12 months is presented A copy is available	100%	0%	0%

From the desk review, researcher observed the following in all targeted SWOP clinics in Nairobi County:

- i. Guidelines, normal procedures or protocols that describes measures for aggregating, analyzing or manipulating the data at each reporting system level are available (100%) and there is complete guidance, standard operating procedures or protocols describing how stakeholder’s data synthesis products are developed and disseminated (100%).
- ii. There are no guidelines that describes National government regulations, deadlines and guidelines on how to complete data collection and reporting formulas/tools at the health facility (100%), but guidelines that describe how to manage data to ensure quality is present (100%).
- iii. A training schedule is not present (100%) and particular data review discussions are scheduled to present and discuss findings (100%).
- iv. Staff can present analysis of information from two to six months or two quarters in table, graph, map or another format (100%).
- v. The office displays visual data (e.g., chart, chart, map, etc.) (100%; a map of the catchment zone in the office displays and was shown to the researcher (100%) and an

average attendance summary is shown in the office by objective group in the catchment area (100%)

- vi. Feedback reports are fully available on the accuracy, completeness and timeliness of reported information (100%), feedback reports on program performance are completely present (100%) and there is an entire travel report or a checklist of a recent M&E visit (100%)
- vii. Sub-county or national report containing routine HMIS information and suggested actions is not present (100%), also there is no copy of the newsletter or report published on the website by staff during the last 12 months (100%).

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents summary, conclusion and recommendations. These are based on the study findings.

5.2 Summary

The research study was carried out to find the current practices for data demand and information use with regard to provision of PrEP services in Nairobi County. The study's main objective was to examine the current practices with regard to data demand and information use in the provision of PrEP services in Nairobi County and the specific objectives of the study were; to assess if the current practices conform to principles demand for data and use of information in the process of offering PrEP services in Nairobi County, to assess barriers to demand for data and use information in the process of offering PrEP services in Nairobi County, to assess the opinion of the current program managers and monitoring and evaluation officers on the demand and use of data in implementing PrEP program in Nairobi county.

Questionnaires were administered to data officers and M&E officers, program managers and the management staff. A total of eleven data officers and M&E officers responded, nine management staff and three program managers also responded. The findings of the research showed that there is positive perception and attitude of the data practitioners and data users on data demand and information use as most data officers were ready to collect and use PrEP data. The supervisors also appreciated their work which is an indication that the data they collected was being put to use by the program managers and management staff. Data officers are competent in data collection but they still need training in data analysis, in data presentation and in data use (planning and quality improvement). Attitude/ values/perception and motivation for data demand and use of information influence the uptake of PrEP in Nairobi County to a higher level.

The survey findings showed that there is organizational aid on the use information as shown by an overall mode of 4. There is also a clear process of approving research or survey data for

dissemination as shown by a mode of 4. From the results, the respondents strongly agreed that in their organization, superiors (managers or higher-level supervisors) seek input from relevant staff as shown by a mode of 5. The process of compiling and submitting periodic reports always follow data quality procedures (e.g. monthly reports) and there is promotion of multidirectional feedback mechanism of disseminating information in the organization, and among different team members. Superiors (managers or higher-level supervisors) utilizes M&E data to monitor service performance targets, there is emphasis on the importance of using M&E data to know potential gender-related imbalances in service delivery or use and carry out routine quality checks of the data at data collection, processing or aggregation points. Additionally, in their organization, superiors (managers or higher-level supervisors) ensure that regular meetings are held where data and information are discussed, performance reports are presented and reviewed, follow-ups are done based on the decisions that were made.

The respondents strongly agreed that in their organization staff concede errors if they happen and remedy them and Use RHIS data for daily facility management (like delivery of services, financial, commodity and managerial resources) as shown by a mode of 5. In addition, respondents strongly agreed that in their organization staff RHIS tasks are completed in a timely way (that is, fulfilled the relevant deadlines) (report, process / aggregation and/or analysis), Show commitment to the RHIS Mission (that is, to provide and use relevant information for proof-based decision-taking, accurate, accomplished, and timely) and continue pursuing national targets and establish feasible local objectives for the performance of essential services as shown by a mode of 5. In addition, the respondents agreed that in their organization, staff feels “individual accountability” for not achieving performance goals and use RHIS information in solving service delivery challenges and use RHIS data based on sex or gender to identify and/or fix gender problems when providing services as shown by a mode of 4.

Additionally, the respondents agreed that in their organization, staff are able to make data visuals to show progress toward targets, they also assess whether an initiative has met the objective(s) or target(s), they have the ability to decide in response to data analysis results (like changes in service provision or management techniques) according to their the job descriptions and are held responsible for unsatisfactory performance (like being unable to meet the set deadline) as shown by a mode of 4. The findings showed the need for organizational

infrastructure that supports data demand and information use, constant supervision and need for accurate data so that informed decision can be made based on them and that it is only through supervision and feedback whereby someone can get information on the existing gaps and this can help in identifying the action points that can be useful in addressing the identified gaps in addressing PrEP uptake or continuity.

The results showed that program managers have had problems with the quality of data that they are given to use in order to make policy or programming decisions. The managers and management staff do experience problems caused by different estimates

The findings showed the ability of the organization of having the technical capacity for the generation of reliable information and access and availability of reliable data without much external technical assistance. However, the results indicated that poor data quality is posing a challenge to the program managers and management staff to use information in making a decision

The results showed barriers when trying to use health data, the barriers is brought by incomplete data, poor quality data, and data being produced late as well as poor data presentation. The data users always provide feedback about these barriers to the monitoring and evaluation team systems/records management team and the feedback are always addressed. Further the findings showed that lack of proper training on PrEP affects the quality of data being produced, eventually affecting decision making and that uptake of PrEP is greatly influenced by skilled and competent staff who are responsible for giving the information to help program managers and management staff to make informed decisions.

The findings indicated that capacity building and creation of information culture influences the Uptake of PrEP in Nairobi County to a great extent. The facilitative supervision, feedback and discussion of reports during meeting influence the Uptake of PrEP in Nairobi County to a great extent. Lack of motivation and training affects data processing and uptake.

There are guidelines, standard operating procedures or protocols that describe how data-synthesis products are developed and disseminated to a variety of parties involved and how to manage data to ensure quality. There are no guidelines present that describe reporting

requirements, deadlines, and instructions on how to complete data collection and reporting forms/tools. A training schedule is not present but there is specific date for data review meetings where findings can be presented and discussed. Data visuals are displayed in the office and a map of the catchment zone with estimated summary of populations by target group are displayed in the office. Feedback reports on data quality and reports on program performance are completely present and the evidence of M&E supportive supervision visit were seen. Sub-county report containing routine HMIS information and recommended measures is not available. There is also no copy of an on-site staff newsletter or report published over the last 12 months.

5.3 Conclusion

The current practices conform to principles of data demand and use of information in the process of offering PrEP services in Nairobi County. Some of the practices that were noted include constant review of data during the monthly meetings, data cleaning and checking of data completeness.

The opinions of the data practitioners and data users on the demand and use of data in implementing PrEP program in Nairobi County showed that staff need to have positive attitude on data demand and use; that there is also need to have well trained staff on data collection, cleaning, analysis and presentation. Data practitioners need to understand the power of data in making informed decisions, also if the information is not well disseminated then users lack enough knowledge and hence low PrEP uptake rate. There is need to educate PrEP users through support groups and inform them the important of taking the pill, this will slow down the rate of PrEP discontinuation. The vigour with which data is indicated, collected, analysed and reported supports uptake of PrEP as a service, that clients who are motivated to take PrEP by a way of packages are very adhered to medication (PrEP) and that some clients fear that peers might confuse their PrEP drugs as ARV'S medication, perception that hinders uptake. Data helps in visualizing the trend on PrEP uptake. PrEP is still new in the county and has a long way to go in terms of data demand and use, it should be one of the key objectives of the County. There is need for more capacity building of health staffs and care providers. Demand

and use of data is not yet huge. The Uptake and implementation of PrEP program in Nairobi County for the last five years has been somehow constant.

5.4 Recommendations

5.4.1 Recommendations for Policy and Programmes

There should be constant training of the data practitioners and staff on data analysis, data presentation and data use (planning and quality improvement) and on the element of data qualities such as; validity, completeness, consistency, verifiability and timeliness, this will ensure data reliability. A training schedule that include topics on; data management, data analysis, data interpretation, and/or data use should be prepared and shared by all the facilities. Ensure that data officers are aware of the data sources and that they have realistic workload.

The data collection tools to be standardize and be used in all the facilities, they should contain clear indicators. Encourage staff at the facility level to publish a report on the program performance at the end of each financial year.

Formation of strong PrEP support groups, identification of PrEP champions and doing constant sensitization to them. Educating and training of more health care workers and motivating staffs to initiate clients on PrEP, and giving of the right information to the target groups.

Changing of PrEP packaging as currently many people shy away from PrEP since the packaging is similar to the ARV'S. Introduction of a monthly PrEP injection to increase uptake and adherence.

5.4.2 Recommendations for Future Research

This assessment looked at the current practices for data demand and information use with regard to provision of PrEP services in Nairobi County, it also assessed the opinion of the current program managers and monitoring and evaluation officers on the demand and use of data in implementing PrEP program in Nairobi County. Further studies should be carried out to determine how the M&E information can be used to influence the uptake of HIV related services like PrEP.

The results showed that the Uptake and implementation of PrEP program in Nairobi County for the last five years has been somehow constant and that the demand for data on PrEP is still low. Research can be carried out to determine factors that are leading to PrEP uptake stagnation and to determine factors that can facilitate high data demand on PrEP. Further research can also be done to find out how to achieve adherence of PrEP clients.

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APPENDICES

Appendix I: Letter of Transmittal

Dear Respondent,

Re: Request Questionnaire Responses

I am a Master student at University of Nairobi, I am carrying out a research study on DATA DEMAND AND INFORMATION USE IN THE UPTAKE OF HIV SERVICES: A CASE STUDY OF PrEP AMONG SEX WORKERS IN NAIROBI COUNTY

You have been identified as one of the people that could be of assistance with the research and I thus request your participation in the research. Essentially, you would be required to complete a questionnaire. You will be treated anonymously and your responses will be treated with utmost confidentiality. The information you provide will be used only for academic purposes.

The questionnaire is strictly for academic purposes and any information given shall be treated with strict confidentiality; please give the information as accurately as possible. Thank you very much.

Yours faithfully,

JOSEPHAT SARONGE

Appendix II: Research Questionnaire for Data Officers and M&E officers

This questionnaire is to collect data for purely academic purposes. All information will be treated with strict confidence. Do not put any name or identification on this questionnaire.

Answer all questions as indicated by either filling in the blank or ticking the option that applies.

Section A: Background Information

1) Please indicate your gender:

Female Male

2) Please indicate your job title

Data officer/M&E officer Program manager Management staff

3) State your highest level of education

Certificate Diploma Degree Masters PhD

4) Please Indicate your age bracket

20-30 years 31-40 years

41-50 years 51 – 60 years

Behavioral Factors (Data officers and M&E officers)

- 5) I would like to know your opinion (how strongly you agree or disagree) regarding certain aspects of Data demand and use in your organization. There is no right or wrong answer, only an expression of your opinion based on a scale.

The scale assesses the intensity of your belief and ranges from “strongly disagree” (score of 1) to “strongly agree” (score of 5).

1. To what extent, do you agree with the following statements, on a scale of 1-5?						
No.	Personal feelings:	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
1	I am discouraged if the data I collect is not utilized for taking actions (either for monitoring or decision making)	1	2	3	4	5
2	I find the data collection tedious (that is., monotonous or duplicative)	1	2	3	4	5
3	I notice that my data collection burden my workload, making it hard for me to perform my other tasks	1	2	3	4	5
4	Collecting of data is beneficial to me	1	2	3	4	5
5	I think that the information I collect is essential for the monitoring of health services at my facility	1	2	3	4	5
6	The supervisors appreciate and value my data collection work	1	2	3	4	5
7	I have a feeling that it isn't the job of healthcare providers to collect or record data	1	2	3	4	5

This part of the questionnaires is about how you perceive your competence in performing tasks related to data demand and information use. A high perception of competence suggests that you can perform the task, while a low perception of competence could indicate a need for improvement or training. I am interested in knowing how competent you feel in performing data related tasks. Please be frank and rate your competence honestly.

Please rate your competence in accomplishing various data activities on a scale from 0-5, where 0 is “no competence” and 5 is “very strong competence”

1	I am able to monitor the accuracy of the data	0	1	2	3	4	5
2	I am able to compute percentages precisely	0	1	2	3	4	5
3	I can plot a trend on a chart	0	1	2	3	4	5
4	I am able to illustrate the results implications of analysis of data	0	1	2	3	4	5
5	I am able to utilize data for identification of gaps in service performance and performance targets' setting	0	1	2	3	4	5
6	I am able to utilize data for making operational decisions.	0	1	2	3	4	5

2) Do you feel that you have the skills necessary to use data to make the kinds of decisions in which you are involved? Yes No

3) Would you like training in [read list]?

a. data collection Yes No

b. data analysis Yes No

c. data presentation Yes No

d. data use (planning and quality improvement) Yes No

5) To what extent do the following aspects of behavioral determinants for data demand and use of information influence the uptake of PrEP in Nairobi County?

	Very great extent	Great extent	Moderate extent	Low extent	Very low extent
Attitude/ Values/Perception					
Motivation					

6) In your own opinion, how do the above aspects of behavioral determinants for data demand and use of information influence the uptake of PrEP in Nairobi County?

.....

.....

Thank You for Your Participation

Appendix III: Research Questionnaire for Program managers and Management Staff

This questionnaire is to collect data for purely academic purposes. All information will be treated with strict confidence. Do not put any name or identification on this questionnaire.

Answer all questions as indicated by either filling in the blank or ticking the option that applies.

Section A: Background Information

1) Please indicate your gender:

Female Male

2) Please indicate your job title

Data officer/M&E officer Program manager Management staff

3) State your highest level of education

Certificate Diploma Degree Masters PhD

4) Please Indicate your age bracket

20-30 years 31-40 years

41-50 years 51 – 60 years

Section B: Data Demand and Information Use in the Uptake of HIV related Services.

(Program managers and management staff)

Organizational Factors

5) Does your organization support having the necessary information to make decisions?

Yes No

6) Does your organization support the prioritization and use of information in decision making?

Yes No

7) Does your organization support training of staff in skills for using information in decision making?

Yes No

8) Can you describe the mechanism or process within your organization/agency for approving research or survey data for dissemination?

.....
.....

9) Does this process affect your ability to use information to make decisions?

Yes No

10) I would like to know your opinion (how strongly you agree or disagree) regarding certain aspects of Data demand and use in your organization. There is no right or wrong answer, only an expression of your opinion based on a scale.

The scale assesses the intensity of your belief and ranges from “strongly disagree” (score of 1) to “strongly agree” (score of 5).

To what extent, do you agree with the following statements, on a scale of 1-5?						
Number	In your organization, superiors (managers or higher level supervisors)	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree

1	Seek input from relevant staff					
2	Illustrate that the compilation and submission of periodic reports follows procedures in terms of data quality (e.g. monthly reports)					
3	Promote multidirectional feedback mechanism to share or present information within the team, and to lower and upper level of the organization					
4	Utilize M&E data to achieve, monitor and target service performance					
5	Stress the desire to utilize M&E data in identification of potential differences in gender I offer or use services					

To what extent, do you agree with the following statements, on a scale of 1-5?						
Number	In your organization, superiors (managers or higher level supervisors)	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
6	Conduct routinely checking quality of the data at data collection, processing or aggregation points					

7	Ensure that regular meetings are held where data and information are discussed, performance reports are presented and reviewed, decisions are made, follow-up actions are identified, and their implementation is monitored					
8	Provide the staff responsible for the compiling and reporting of data with regular feedback on the observed data quality (eg. clarity of information collection / documenting)					
9	Understand or benefit good work performance employees					

To what extent, do you agree with the following statements, on a scale of 1-5?

Number	In your organization, staff:	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
10	RHIS tasks are completed in a timely way (that is, fulfilled the relevant deadlines) (report, process / aggregation and/or analysis)	1	2	3	4	5
11	Show commitment to the RHIS Mission (that is, to provide and use relevant information for proof- based decision taking, accurate, accomplished, and timely)	1	2	3	4	5
12	Continue pursuing national targets and establish feasible local objectives for the performance of essential services	1	2	3	4	5

To what extent, do you agree with the following statements, on a scale of 1-5?						
Number	In your organization, staff:	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
13	Feels “individual accountability” for not achieving performance goals	1	2	3	4	5

14	Use of RHIS data for daily facility management (like delivery of services, financial, commodity and managerial resources)	1	2	3	4	5
15	Use RHIS data to resolve common service delivery problems	1	2	3	4	5
16	Use RHIS data based on sex or gender to identify and/or fix gender problems when providing services	1	2	3	4	5
17	Prepares visual data (charts, graphs, maps) that illustrate progress towards objectives (predictors, geographic and/or time trends or position data)	1	2	3	4	5
18	Can assess whether an initiative has met the objective(s) or target(s)	1	2	3	4	5

To what extent, do you agree with the following statements, on a scale of 1-5?						
Number	In your organization, staff:	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree

19	Have the ability to decide in response to data analysis results (like changes in service provision or management techniques) according to your job descriptions	1	2	3	4	5
20	Are held responsible for unsatisfactory performance (like being unable to meet the set deadline)	1	2	3	4	5
21	Concede errors if they happen and remedy them	1	2	3	4	5

11) To what extent do the following aspects of organizational determinants for data demand and use of information on the uptake of PrEp in Nairobi County?

	Very great extent	Great extent	Moderate extent	Low extent	Very low extent
Infrastructure					
Roles and responsibility					
Supervision					
Feedback					
Meetings					

12) In your own opinion, how do the above aspects of organizational determinants for data demand and use of information on the uptake of PrEP in Nairobi County?

.....
.....
.....

Technical Factors

13) Have you ever had an experience while making a policy- or program-related decision when you were concerned about the quality of the information being used?

Yes No

14) Are there multiple sources of information or statistics for issues of importance to you, and have you experienced any problems caused by having different estimates?

Yes No

15) Does your agency have the technical capacity to produce reliable information without a lot of external technical assistance?

Yes No

16) Does your agency have the technical capacity to ensure access to and availability of reliable data?

Yes No

17) Has there been an occasion when data quality or local technical capacity made it difficult for you to use information in making a decision?

Yes No

18) Over the past 6 months, have you encountered any of the following barriers when trying to use health data or information?

a. Incomplete data Yes No

b. Poor quality data Yes No

c. Data was produced late or not at all Yes No

information was not well presented Yes No

e. Other:

19) Have you provided feedback about these barriers to the monitoring and evaluation team? systems/records management team?

Yes No

a. If yes, was the feedback addressed? Yes No

20) Do you feel you have the skills necessary to use data to make the kinds of decisions in which you are involved? Yes No

21) To what extent do the following aspects of technical factors for data demand and use of information influence the uptake of PrEp in Nairobi County?

	Very great extent	Great extent	Moderate extent	Low extent	Very low extent
Skills/ Training					
Competency					
Availability					

22) In your own opinion, how do the above aspects of technical factors for data demand and use of information influence the uptake of PrEp in Nairobi County?

.....

.....

.....

23) What specific challenges have you experienced among your staff when it comes to using data? (mark all that applies)

Awareness of data sources technical skills motivation time and workload
lack of incentives or knowledge of the benefit to using data for policy change and program management

Data Demand and Information Use

24) Does the county government have a designated person responsible for entering data/compiling reports from health facilities?

Yes No

25) Are there any written guidelines on RHIS information display, use, and feedback?

(OBSERVE)

Yes No

26) To what extent do the following aspects of data demand and information use influence the uptake of PrEP in Nairobi County?

	Very great extent	Great extent	Moderate extent	Low extent	Very low extent
Capacity building					
Creating information culture					
Facilitative supervision and feedback					
Discussion of reports during meeting					

27) In your own opinion, how do the above aspects of data demand and information use influence the uptake of PrEP in Nairobi County?

.....

.....

.....

28) Please indicate the current practices conform to principles of data demand and use of information in the process of offering PrEP services in Nairobi County.

.....

.....

.....

.....

.....

29) What is your opinion on demand and use of data in implementing PrEP program in Nairobi county?

.....
.....

Uptake and Implementation of PrEP Program

30) What is the trend on the Uptake and implementation of PrEP program in Nairobi County for the last five years?

- Greatly decreased
- Decreased
- Constant
- Improved
- Greatly Improved

31) How many people are currently on PrEP in Nairobi County?

- Less than 1000 people 1000 to 5000 people More than 5000 people

32) In your own opinion, what is your recommendation on what should be done to improve Uptake and implementation of PrEP program in Nairobi County?

.....
.....

Thank You for Your Participation

23. The checklist for the desk review

This check list will be filled by the researcher himself. The researcher will visit all the swop clinics in Nairobi county. The researcher will speak to the facility head or manager. When possible, copies or photographs of the items being assessed (such as policies, maps, and graphs) should be collected as appendices

Name of the researcher: Josephat Saronge

Health Facility:

Date of Site Visit:

Instructions:

- A. For each observation, the researcher circles an answer code that corresponds with the extent to which an activity or document is present: 1) Completely, 2) Partly, 3) Not at All, or 4) N/A
- B. For all answer codes other than “1) completely”, the interviewer provides detailed comments to justify and explain the situation.
- C. If the respondent shows a physical copy of a requested document, then place an X in the box labeled “Document shown to researcher”

Observations	Answer Code	Comments
1. Guidelines, standard operating procedures or protocols are present that describe steps to aggregate, analyze, or manipulate data for each level of the reporting system.	1) Completely 2) Partly 3) Not at All 4) N/A	
	Document shown to researcher	
2. Guidelines, standard operating procedures, or protocols are present that describe how to develop and disseminate data synthesis products to a variety of stakeholders.	1) Completely 2) Partly 3) Not at All 4) N/A	
	Document shown to researcher	
3. For a healthcare entity that routinely reports data, there are guidelines present that describe reporting requirements, deadlines, and instructions on how to complete data collection and reporting forms/tools.	1) Completely 2) Partly 3) Not at All 4) N/A	
	Document shown to researcher	

Observations	Answer Code	Comments
4. For a healthcare entity that routinely collects and reports data, there are guidelines present that describe how to manage data to ensure quality.	1) Completely 2) Partly 3) Not at All 4) N/A	
5. A training schedule is present. Probe: If yes, comment on whether training topics include: data management, data analysis, data interpretation, and/or data use.	1) Completely 2) Partly 3) Not at All 4) N/A	
6. Staff are able to present analyzed data displayed using a table, graph, map, or another format from the previous two to six months, or two quarters. Probe: If yes, comment on staff position(s) responsible for data analysis.	1) Completely 2) Partly 3) Not at All 4) N/A	
7. Staff are able to show evidence that analyzed data were shared with facility or district managers (using meeting minutes, activity report, email, or other information product).	1) Completely 2) Partly 3) Not at All 4) N/A	
8. There are specific data review meetings where analyses findings can be presented and discussed. Probe: If yes, comment on whether staff are able to share meeting schedule, meeting minutes, an advocacy document, data references in a strategic planning or budget report, or other similar form of evidence.	1) Completely 2) Partly 3) Not at All 4) N/A	
Observations	Answer Code	Comments
9. Data visuals (such as a chart, graph, or map) are displayed in the office. Probe: If yes, identify the data sources.	1) Completely 2) Partly 3) Not at All 4) N/A	
	Document shown to researcher	

10. A map of the catchment area is displayed in the office. Probe: If yes, identify the data sources.	1) Completely 2) Partly 3) Not at All 4) N/A	
	Document shown to researcher	
11. An estimated summary of populations in the catchment area by target group are displayed in the office. Probe: If yes, identify the data sources. Probe: If yes, indicate when last updated.	1) Completely 2) Partly 3) Not at All 4) N/A	
	Document shown to researcher	
12. Feedback reports on the accuracy, completeness, and timeliness of reported data are present. Probe: If yes, indicate the dates of the reports.	1) Completely 2) Partly 3) Not at All 4) N/A	
	Document shown to researcher	
13. Feedback reports on program performance are present. Probe: If yes, indicate the source of the feedback (such as national, district, province, or other organization). Probe: If yes, indicate the dates of the Reports.	1) Completely 2) Partly 3) Not at All 4) N/A	
	Document shown to researcher	
Observations	Answer Code	Comments
14. A trip report or checklist from a recent M&E supportive supervision visit is present. Probe: If yes, review trip report or checklist to verify whether the support provided incorporated training or coaching in the use of data for decision making. Probe: If yes, indicate report date.	1) Completely 2) Partly 3) Not at All 4) N/A	
	Document shown to interviewer	
15. A report is present from either the district or national level which contains routine HMIS data and recommended actions. Probe: If yes, comment on source of	1) Completely 2) Partly 3) Not at All 4) N/A	
	Document	

report. Probe: If yes, indicate report date.	shown to interviewer	
16. A copy is present of a newsletter or report published by staff site in the last 12 months.	1) Completely 2) Partly 3) Not at All 4) N/A	
	Document shown to interviewer	

Thank You for Your Participation