http://jmscr.igmpublication.org/home/
ISSN (e)-2347-176x ISSN (p) 2455-0450
crossref DOI: https://dx.doi.org/10.18535/jmscr/v8i2.154

IGM Publication
Journal Of Medical Science And Clinical Research
An Official Publication Of IGM Publication

Patients' Perception of Quality Laboratory Service in Kenyan Laboratories

Author
Wachuka Gathigia Njoroge[1]
[1]Kenyatta University, School of Medicine, Nairobi, Kenya
*Corresponding Author
Wachuka Gathigia Njoroge
P.O Box 43844 – 00100, Nairobi, Kenya

Abstract
Introduction: *Provision of quality laboratory services in Kenya has been a key part of national health care strategy. The Kenya Medical Laboratory Technicians and Technologist Board which is mandated with supervision and surveillance to ensure quality services are offered across all laboratories in the country has little reliable information on the perception of patients. This study addressed the gap by collecting information on how patients perceived the services they receive in various laboratories in the country.*
Method: *A total of 416 participants were enrolled in the study. An observational and descriptive approach was utilized in a cross-sectional design. Laboratories in Nairobi, Mombasa, Kisumu and Nyeri were sampled and patients in these facilities interviewed on what they thought about the quality of services they were accorded in the laboratories.*
Results: *According to the participants interviewed, private low class laboratories provided the best quality of services to the satisfaction of the patients $p < 0.039$, ($p=0.05$). Besides the good quality of services that are provided by health professionals in the laboratories, it was also found out that most laboratories in the country lack proper quality management systems in place.*
Conclusion: *In order to ensure that the quality services provided in laboratories is maintained and improvements made on any shortcomings, it was highly recommended that all laboratories embrace installation of quality management systems to monitor internal and external quality assays of results.*
Keywords: *Quality laboratory service, patient perception, quality management system.*

Background

Laboratory medicine plays an integral role in diagnosis and successful management of a disease. Recognition of a disease is the foundation of disease control and prevention[1]. Most developing countries have not been systemic in implementing quality laboratory services[2]. Due to this questionable implementation of quality laboratory services across Kenya, there is a resultant variation in the quality of service offered by laboratories in different areas. The World Health Organization (WHO) initiated the development of a program that will help developing nations with diagnosis in their primary health care facilities in 1979[3]. A study carried out following this implementation showed the capacity of medical laboratories in Kenya and has since been the basis of recognition of the importance of laboratory medicine by Ministry of

Health (MOH) and other health service provision stakeholders[3-7].

Inadequate and mismanagement of funds together with poor infrastructure have been main contributing factors to inefficient provision of health services in developing countries all over the world. Health was one of the ambitious development goals for Kenya at independence and the government has spent an immense amount of money on various medical programs since then. Although the government is dedicated to achieving better health, it has not yet realized its health objectives[5]. The National Public Health Laboratory Service (NPHLS) has reiterated the need to have improved working environment that meets the WHO standards of quality. A surveillance team to ensure quality laboratory services is offered was instituted by the Kenya Medical Laboratory Technicians and Technologists Board (KMLTTB) whose main emphasis was to ensure requirements for accreditation were met and enabling application for and issuance of licenses by the government[7,8]. The board's standards were applicable to private laboratories and government hospital laboratories operating in Kenya.

Method

The study was carried out in Nairobi, Mombasa, Kisumu and Nyeri counties in Kenya. According to statistics, 75% of the Kenyan population is concentrated in the agricultural belt northwest from Nairobi to the Uganda border[9]. The four counties selected were densely populated and, therefore, purposively selected as study areas. A cross section study design was adopted.

Laboratories in the four counties were selected purposively based on the feasibility study for primary health care laboratories in Kenya[3]. A total of 416 patients were interviewed on their perception of the quality of laboratory service in the facilities. The sampling technique was based on the study of health laboratories in Tanga region of Tanzania[2]. Patient's perception on the quality of services rendered in the laboratory was based on blood collection technique, timeliness, affordability of services, respecting cultural values, reliable results and good smelling of the laboratory. Data was collected through structured interviews using semi-structured standard questionnaires and structured primary observation. Structured face to face interviews minimize weaknesses such as low questionnaires return rates, misinterpretation of questions and other limitations inherent in mailed survey questionnaires[10]. Validation of the research instruments was done through a pilot study using randomly selected laboratories in Nakuru County. The participants who took part in the pilot study did not form part of the main sample frame of the study in order to avoid bias. Validity was achieved through organization of questions around central themes of the research and by triangulation [11,12]. Other steps taken to ensure validity were that the questionnaires were taken back to the participants during the three subsequent visits and the questions were organized around the four major themes of the research.

Kenyatta University Ethics Committee gave ethics clearance for the study with assurance that the results will be used only for study purposes. This was presented to each head of the laboratory to increase the chances of participation. Only laboratories where the service provider willingly cooperated and agreed that the patients be interviewed were used in this study.

Results

All patients valued good sample collection and being provided with information as factors in quality services rendered in the laboratory. One hundred and six patients in Kisumu rated good sample collection almost as important as timeliness and information provided. Eighty seven patients in Mombasa valued respect for cultural values almost as highly as reliability of results. One hundred and sixteen patients in Nairobi valued affordability of services and reliability of results while one hundred and seven patients in Nyeri valued affordability of services most.

The highest need for consumers in Kisumu County was affordability and timeliness. Good laboratory smell was also rated highly in Kisumu County. In private and dispensary laboratory patients, good laboratory smell ranked as high as reliable results. Some Kisumu County patients valued respect for cultural values; particularly private low class and dispensary patients. Nyeri County patients valued affordable services the most important quality factor. For provincial and dispensary patients, affordable services were more important than reliable results. Private middle class laboratory consumers viewed timeliness to be just as important as reliable results. Timeliness was an important quality criterion for all Nyeri County patients. Nairobi County patients valued most reliability of results, next information provided and affordability of service. Information provided as well as affordable services were important needs in Nairobi County patients. Reliable results ranked highest as a need for Nairobi County consumers of dispensaries, faith based and private laboratories. In Mombasa, patients valued respect for culture by the practitioner and good smelling laboratory. Patients in provincial, district and private high class laboratories most valued the good smell of laboratories. Respect for cultural values was a main quality value for patients in district, dispensary and faith based laboratories in the County. Mombasa County patients of middle class laboratories valued good sample collection most. Reliable results as a quality need was ranked second, together with respect for cultural values for provincial laboratory patients. For Mombasa County patients in district laboratories, reliable results ranked fifth after laboratory smelling good, good sample collection, respect for cultural values and information provided. Reliable results ranked highest as a quality need for private high class patients.

Discussion

Pioneering contribution in the area of managing quality includes Cozby's idea on the definition of quality as meeting the customer's requirement[13]. In order to facilitate being sensitive to the consumer's needs one method is using the complaints or suggestion box in order to monitor patient's views. In this study it was found out that no category of laboratory took this mode of customer care seriously yet according to Kenya Standards Quality management systems monitoring of customer satisfaction requires the evaluation of information relating to customer perception as to whether the requirements are met [14]. Quality service is the degree of fit between what customers expect and their perception of the service [15, 16]. Similarly to a study in Egypt, this study noted the patients' demographics such as sex, marital status and others so that they are representatives of population of interest[17]. About 55% of the Kenyan population visiting laboratories include the age categories of 15 up to 34 years[18]. This concurred with the fact that the age ratio of the youth was larger in this study implying that many patients were likely to be patients from the age group of 15 – 34 years.

Findings in this study were in agreement with what was found out in a study carried out in Egypt regarding the state of demographics of patients visiting laboratories[17]. The practice quality needs varied with the differences in laboratory category visited by the patient. Majority of patients in this study valued non-tangible practice characteristics like the laboratory smell, accessibility and affordability. A similar study in Egypt found that patients based quality of service on the hospitality of the staff, attentiveness, responsiveness, the rooms being visually appealing and clean plus the information provided.

Patients interviewed in this study had varied analytical process requirements depending on their geographical locations. Kisumu patients valued most highly the laboratory smelling good, cleanliness and good sample collection technique. Nyeri patients valued the affordability more than even the reliability of the results. Nairobi patients valued reliable results first then information

provided. Mombasa residents placed the greatest importance on respect for cultural values.

Conclusion

In conclusion, this study shows that different consumers have different quality needs when visiting laboratories. Depending on the type of facility that they are visiting, patients base their perception on different factors that satisfy their needs. This study also recommends that laboratories should have mechanisms of monitoring patient satisfaction as this ensures that patient needs are met. Generally, laboratory services need to embrace efficiency as all quality service indicators by patients aim at efficient service delivery at the laboratory.

References

1. Saliki JT. The Role of Diagnostic Laboratories in Disease Control. *Annals of the NewYork Academy of Sciences.* 2000:916**(**1): 134-138
2. Ishengoma DR, Rwengshora RT, Mdira KY, Kamugisha ML, Anga EO, Ronn AM, Magesa SM, Bygbjerg IC. Health laboratories in the Tanga region of Tanzania: the quality of diagnostic servicess for malaria and other communicable diseases. *Annals of Tropical Medicine and Parasitology*. 2009: 103(5): 441-453
3. Ministry of Health, African Medical and Research Foundation. Essential Laboratory Program Pilot Study. A Feasibility Study for Primary Health Care Laboratories in Kenya 1992-1994 Ministry of Health, Nairobi, 1996
4. Kenya E, Muturi M, Gould C. An Assessment of the capacity of Research and Diagnostic Laboratories in Nairobi, 2012
5. Ministry of Health (MOH). Health Management Information Systems. Report for the period 1996-1999, Kenya. 2001: 20-21
6. Ministry of Health (MOH). The Kenya Medical Laboratory Technicians and Technologists Board. Medical Laboratory Standards Manual. First Edition, 2002
7. Ministry of Health/The Kenya Medical Laboratory Technicians and Technologists Board (MOH/KMLTTB). Pre-Registration General Procedures Inspection and Evaluation Check List for Bachelor of Science Medical Laboratory Sciences Training Institutions KMLTTB/ELC/BSc. MLS: 2005: Vol.1 p 5-9
8. Ministry of Health, Health Sector Reform Secretariat, Ministry of Health. The National Health Sector Strategic Plan, 1998-2004. Government Printers, Nairobi, 1999: 10-13
9. Kenya National Bureau of Statistics, Population distribution in Kenya. Government Printers, Nairobi, 2006
10. Saunders M, Lewis P,Thornbill A. Research Methods for Business Students (3rd ed). Harlow: Prentice Hall, 2003: 99-230
11. Creswell JW. Research Design: A qualitative, quantitative and mixed method approaches. 2nd Ed. Sage Publications, 2003
12. Mugenda OM, Mugenda AG. Research Methods: Quantitative and Qualitative Approaches, Acts Press, Nairobi, 1999
13. Cozby PC. Methods in Behavioral Research 8th Ed. McGraw Hill, New York, 2004
14. Kenya Bureau of Standards (KEBS) Management Systems Handbook, Nairobi, Kenya, 2007
15. Feeny AR, Zairi M. Best Practice Quality Management in Pathology: Results of a Benchmarking Study. *Benchmarking for Quality Management and Technology* 1994: 1(2): 64-68. doi: 10.1108/14635779410063347
16. Parasuraman A, Zeithani VA, Berry LL. A Conceptual Model of Services

Quality and its Implications for future Research. *Journal of Marketing.* 1985:49 (4): 41-50. Doi: 10.2307/1251430

17. Elhoseeny TA, Mohammad EK. Quality of the clinical laboratory department in a specialized hospital in Alexandria, Egypt. *Eastern Mediterranean Health Journal.* 2013:19
18. Kenya National Bureau of Statistics (2007) Kenya Facts and Figures, Ministry of Planning and National Development.