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EVALUATION OF THE DETERMINANTS OF CLINICAL MEDICINE TRAINING OUTCOMES IN WESTERN KENYA

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Abstract:-

Study Objective: *To analyze the learner – lecturer / instructor interaction process within the context of theory learned during training put into clinical / medical practice. This was in order to generate limitation in both the teaching institutions that address Clinical Medicine training outcomes.*

Study Design*: Across- sectional study*

Study Setting*: This study was carried out in Lake Basin Region of Kenya. The area includes Kisumu and its surrounding counties of Vihiga and Nandi.*

Study Subjects / Participants*: Sixty six (66) Clinical Medicine students from various MTIs in Lake Basin Region of Kenya, 58 health workers, 3 heads of departments from KMTCs, and 5 heads of departments in the clinical placement sites that was visited for this study and 4 lecturers of MTIs.*

Study Results*: Analysis from observations of student / lecturer / infrastructure / leadership / linkage engagements were obvious and more so the absence of libraries in all RHTCs. In both the county Hospital and the referral Hospital (JOOTRH) there were libraries which were inaccessible to Clinical Medicine students. There were linkages and networking processes in all the training health facilities that were used as clinical placement sites. This was evident in the many students who were present from different MTIs in Kenya. Students for clinical placements came from all MTIs in Kenya among who were all KMTCs, GLUK, Uzima University College, Mt Kenya University, Moi University and others. There were evident interactions in many ways both academically and socially, and with the presence of ICT services, these students were linked together nationally regionally and internationally*

Study Conclusion*: This study therefore provides a tool to guide MTIs and clinical placement sites in Kenya on the best practice in linking theory based learning with clinical practice in achieving quality, competent, effective, and efficient Clinical Medicine training outcomes.*

INTRODUCTION

Competency of graduates in Clinical Medicine practice is compromised nationally. In a Performance Needs Assessment report of 2011 by USAID / Kenya it was discovered that there was a gap in the desired competencies by the health workers in different health facilities among whom are graduates in Clinical Medicine. This could be due to poor system linkages (KHTS-PNA, 2011). The real cause of this is not known but could emanate from exposure to training in both MTIs and clinical placement sites. There could be more factors associated with clinical placements that make the sites not performing to professional expectations. These MTIs and clinical placement sites (the training health facilities) must follow the national standards guideline for institutional compliance to offer Clinical Medicine training in Kenya. There must be determinants that influence provision of acceptable infrastructure, responsible governance, enough human resource, available equipment, drugs and supplies and linkages and networking with partners. These should specifically include Lecturers with PhD, Master degrees in various health related areas, Bachelors in Medicine and Bachelors in Surgery, Bachelors in Clinical Medicine, and Higher National Diploma in Clinical Medicine, Surgery and Community Health or their equivalents. They should also be registered by their different regulatory boards that they can teach the different subjects as per the curriculum (MOMS, 2010). The board that registers Clinical Officers and Clinical Medicine training is the Clinical Officers Council.

The quality of training of any professional is key to the provision of quality service to humanity. This is more so for Clinical Officers who play an important role in the provision of health care in the country. They form the face of the hospitals being the first technical persons to come face to face with patients and clients, as they listen to their complaints, needs and concerns in health matters and seek ways of addressing them. They serve with minimal supervision in all health facilities. So the quality of Clinical Medicine training cannot be overemphasized (MMS / COC, 2010).

Skilled training to students in clinical placement sites is of utmost importance in the development of a student's carrier as a clinician. As a matter of practice and as required by various regulatory bodies, students must undergo training in health facilities for exposure in their clinical rotations to include community health and development, health service management and research. This improves the relationship between health system building blocks and health outcomes (Mildmay Kenya, 2013). So, clinical placements of Clinical Medicine students aim at providing a conceptual blueprint with which to analyze clinical exposure, training and mentoring in clinical practice among students from Medical Training Institutions. Among the skills involved include preceptorship, clinical instructorship and mentorship of students posted for clinical placements to the training health facilities.

Other areas of focus are staffing, professional guidance, institutional leadership and management, adequacy in spacing, patient visits, availability of diagnostic accessories, pharmaceuticals and related wares, infrastructure, linkages and networking.

Clinical placements develop educational needs to the student. It requires grants to help finance the placement and prepares these students to travel to the clinical placement sites and get accommodation.

These students need insurance and malpractice cover. The Kenya Health Training System Performance Needs Assessment conducted recently identified a major area as a gap and highlighted it as emanating from clinical placement sites (KHTS-PNA, 2011). This gap in knowledge could be why placement of Clinical Medicine students is not performing in producing intended graduates. This gap is majorly linked to training translated to practice. This report is despite of the existing policy framework for assessing Clinical Medicine students by use of logbooks for signing at the end of clinical placements, class attendance sheets, end of clinical placement examinations and end of trimester or semester exams both in theory and clinical practice (COC, 2011). At the end of training, students are exposed to the Final

Qualifying Examination which they must pass and later the Clinical Officers' Council National

Examination. These are usually recognized evaluation tools for assessing the students' competency, efficiency and effectiveness.

Medical Training Institutions, Universities and Colleges of Higher Learning are involved in training health care providers in their different areas of health professions to include systems linkages, care, curriculum development, mentorship, coaching and continuous professional development. This eventually leads to increase in production of well-trained health workforce from Medical Training Institutions, improvement of innovative training systems, efficient and effective health service provision and ultimately increase competency of members of health workers in different areas of medical professions such as Clinical Medicine.

Worldwide practice in clinical placements of students should involve high supervision in all clinical situations that include teaching in hospitals, private hospitals, clinics, community or rural health attachments, health centers and specialist areas such as drug and alcohol, early childhood and women's health services (NHS, 2013). They help to reflect on whether or not one acquires experiments in work / life balance, pace of work, variety of work, and contacts with people, and take part in hospital audit (NHS, 2013). These students learn many invaluable skills, professionalism, teaching for a career e.g. history taking from patients, physical examination, practical procedures, laboratory investigations, diagnosing, treatment, health education, community health, health systems management, research and communication among others. Medical clerkship that entails training as a doctor / clinician and working in an accredited

facility under supervision within the limits of a well-defined scope prepares the professional for independent, competent, ethical medical practice (Ni ni S, Tumbo JM, 2012).

In Kenya, a most recent report by the World Bank indicated that graduates lack key skills and that education system is not producing graduates with knowledge, skills and competencies crucial for securing Vision 2030 (World Bank, 2015). Several different issues continue to obstruct desired outcomes. This is so also for Clinical Medicine training. The KMTC training output for selected cadres of Clinical Medicine, Nursing officers, Pharmaceutical Technologists and Enrolled Nurses accounted to an average of 2163 per year (MOMS / MOPHS, 2012). These officers must be very well trained to provide a holistic service in their specific professional areas. To make sure learning is grounded in the real world of clinical practice, Medical Training Institutions work closely with a range of different health care organizations and facilities that train students in their clinical placements (NHIS, 2013). Among the health facilities that was initially identified for clinical exposure in training Clinical Medicine students among others on clinical placement sites in Kenya were the Rural Health Training Centers built in each region, formerly provinces, apart from North Eastern Region. These health facilities had trained personnel whose duties included instructing the student and to model the role of a working professional like a Clinical Officer. It is therefore important to identify determinants that influence training outcomes for Clinical Medicine students in Kenya.

MATERIALS AND METHODS

Study Design: This was a mixed cross -sectional study design that aimed at collecting and comprehending qualitative and quantitative data to determine training outcomes for students of Clinical Medicine in the MTIs and in clinical placement sites in the Lake Basin Region of Kenya. The study shall put into consideration all information obtained that determined training outcomes for Clinical Medicine students. ***Study Area***: This study was carried out in Lake Basin Region of Kenya. This area includes Kisumu and its surrounding counties of Vihiga and Nandi. Various training health facilities were visited at the time of student placements between the months of August and November, 2016. Five health facilities had been identified for this study through purposive sampling. These are one teaching and referral hospital, one county hospital and three rural health training centers. The facilities in Kisumu are Jaramogi Oginga Odinga Teaching and Referral Hospital (JOOTRH) formally New Nyanza Provincial General Hospital (NNPGH), Kisumu County Hospital (formerly Kisumu District Hospital), Mbale Rural Health Training Center, Mosoriot Rural Health Training Center and Chulaimbo Rural Health Training Center. These health facilities in the Lake belt region were selected for this study because of their high morbidity and mortality rates, their proximity and easy accessibility to Kisumu as a hub for the Lake Basin Region, GLUK where the researcher is based in this study, Uzima University where the researcher works and lastly the high number of students from various MTIs who are posted for clinical placements in these training sites. These statistics of morbidity and mortality in health facilities within the lake belt region especially Kisumu are as found in many researches by the NGOs and the government such as the second NHSSP of Kenya (NHSSP, 2012). These health facilities in the four distant places were selected purposively for this study because they have been offering clinical placements to Clinical Medicine students for many years since their inception. These are also the health facilities where students from many Medical Training Institutions in Kenya are posted for their clinical placement experiences. These five health facilities differ in terms of distance from each other, terrain, climate, population, types and numbers of MTIs and economies. This study covered both urban and rural set ups so as to have a representation of the two different environments. The researcher identified useful resources and the help of information professionals to assist in this process, the result of which is highly desirable (NHSCRD, 2013).

Study Population:

The study population consisted of the health facility administrators, heads of various departments in the identified MTIs and health facilities, all available health workers in the teaching health facilities, and all students present in clinical placement sites from different Medical Training Institutions in Kenya.

Study Participants:

Those who participated in this study were 66 Clinical Medicine students, 58 health workers and 4 lecturers of MTIs from various MTIs in Kenya, 3 heads of departments from KMTCs and 5 heads of departments in the clinical placement sites that were was visited for this study. There was total of 197 Clinical Medicine students on clinical placements from six MTIs distributed in the three RHTCs for practical experiences at different times during the study period. The Clinical Medicine students' study participants were derived from among those that were present at the time of study in the study area.

Inclusion Criteria:

Information was collected from HODs, members of staff and Clinical Medicine students in the training health facilities in clinical placement sites. Also to be included were lecturers and administrators from Medical Training Institutions; all who consented to participate in the study and were present at the time of the study. Was included in this study. Additional information was sought from other members of staff working in the health facilities where students are placed.

Exclusion criteria:

Health workers and students who were absent at the time of the study, and those who were unwilling to participate in the study, or did not work in the targeted health facilities at the time of the study. Also excluded were other students who

were not in Clinical Medicine training but were present at the time of study or Clinical Medicine students who were not posted in the clinical placement sites at the time of the study. This included all Clinical Medicine students and staff who were not available due to any reason at the time of research.

Sample Size Determination and Sampling Techniques

All the information received from the three categories of the health facilities were converted into data. This included information from health care workers and students present in the clinical placement sites, and lecturers from MTIs. Areas of study, study subjects for FGDs, and key informant interviews were selected through purposive sampling technique. Students present were selected by using a random sampling technique. All present and willing health workers from various departments and appeared voluntarily for FGDs were interviewed. Heads of departments and lecturers in MTIs who appeared for KIIs were selected through purposive sampling technique. They were from GLUK, Uzima University College, and KMTC in Kisumu. Proportional population equal to size sampling technique for all Clinical Medicine students from the three selected MTIs in the clinical placement sites were employed across board. These techniques went on till all the respondents were covered for this study on operational factors focusing on health care training system that affects Clinical Medicine training outcomes in the MTIs and clinical placement sites.

Pre-testing of research questionnaires was done outside the research areas, health facilities and MTIs in Kisumu before commencement of the study. This study adopted a qualitative approach to research. There was a constant expansion of the collected data. Convenient data collection and analysis were employed in order to measure insight and clarify parameters of existing challenges. In order to obtain data that were approximate, questions were directed to the relevant sample population through KIIS, FGDs, questionnaire filling and observations. Semi-structured interview protocols were used as a guide (see appendix III sections IV and V).

Data collection: A variety of tools were developed to gather the qualitative data. These tools included health provider surveys, self-administered questionnaires, facility audits, focus group discussions, KIIS, and observation checklists. All these tools aimed at covering five thematic areas in the study which were: Human Resource; Drugs, equipment and supplies; Infrastructure; Linkages and Coordination; and

Leadership and Governance.

Some of the study information were captured by use of a Likert scale in applying a numerical score in each item in the scale and later get an overall score by adding up all the scores of each item. This shall helped in the collection of qualitative data ranging from 1(strongly disagree) to 5(strongly agree). The study shall use a comparing approach of those scored as Yes and those scored as No for items in a check list. A prepared itemized checklist shall was also be used to collect information from KIIs on availability of drugs, equipment and supplies. The checklist will have had a score sheet ranging between 0 to 1; where 0 means not present and 1 means present.

Data collection methods were interviews and observation that were used in line with a qualitative research approach. The interviews in this research were used to validate the observations through constant comparative analyses during the process. Data were collected from five different types of subjects in three different phases.

Phase 1 – Interviews and observations with students, lecturers, leadership / staff in the MTIs. Five sessions was were conducted in this phase with each session lasting 10 minutes. Those to be included in the interviews will be were students, heads of MTIs leaders / Administration, lectures through FGDs and health workers KIIS.

Observation included were what activities was were taking place which contributed to student learning. KIIS and FGDs shall explored professionalism/qualifications, relationships with the students. A checklist was used as a guide in monitoring standards of skills laboratory, diagnostic laboratory, diagnostic laboratory, presence of lecturers, presence of learning, numbers of class rooms, numbers of students in class, availability of library, presence of IT / computer class, accommodation, clean latrines in use, playing ground, nearness to a teaching and / or referral hospital, security or nearness to a police station. Students from GLUK, Uzima University College and KMTC Kisumu appeared for the interview.

Phase 2 – Interviews with respondents in RHTCs- the clinical placeman sites.

Interviews and observations with heads of Rural Health Training Centers. Interviews with students in these clinical placement sites, lecturers, those in leadership / governance and staff / health workers. Each of these five teams will have had its own session lasting 20 minutes. All respondents who shall who appeared for the interviews and have consented to take part in this study were included. They were derived from a total of 3 heads of RHTCs, health workers in Musoriot RHTC, Mbale RHTC and Chulaimbo RHTC took part in the study.

Clinical Medicine Students for this study were from 3 RHTCs, 3 MTIs and 5 clinical placement sites. Interviews were conducted on different dates.

Phase 3 – Interviews with respondents (who were the respondents?) in the major health facilities in

Kisumu. The major health facilities identified for this research study was Kisumu County Referral

Hospital formerly Kisumu District Hospital and the Jaramogi Oginga Odinga Teaching and Referral Hospital (JOOTRH).

A total of 3 different interviews was were conducted in each of these government health facilities, where the 2 heads of departments of Clinical Medicine shall attended and give gave their responses. These health workers (who are these?) shall appear for the interviews of whose information shall also come from the mentors, preceptors, clinical instructors and examiners of the Clinical Medicine students. This information through FGD was collected before, during and at the end of the examination during briefing. The FGD shall take one hour while KIIs shall take 15 minutes each.

The procedure for data collection started with self-introduction of the researcher to the leadership of all the institutions involved in this study and all participants, then introduction of all participants led by the heads of the various institutions. The interviews were carried out in English. All communication were also in English right from introduction. The

objectives of the interview were explained to the study participants by the researcher, and consent obtained before each observation or interview session. The researcher explained the purpose, benefits and risks of the research. Each research participant was provided with a consent form (See Appendix III) which required participants' filling and signing after reading and familiarizing with the explained research objectives. The consent form of the research study was given to the study participants for clarification or consultation.
All the data collected were typed and stored using a word processor that was later followed by data analysis process. Data collection was controlled by a systematic approach applied across board in all MTIs and clinical placement sites visited. The results were not at all based on preconceived ideas but on a scientific research study.

Data analysis:
Data collected were analyzed using constant comparative method of qualitative data analysis with constant comparison of collected information, confirming throughout the data analysis process. Data analysis process was compared with data from literature for comparative purposes. This constant comparison of data sampling technique through reflective note writing was done concurrently through the process of data analysis so that no information was left out. The researcher took into consideration all the information generated from the study that clarified and defined its relevance to the study objective. Each specific objective was validated along the research findings with each attribute providing the best insight to the objective. Empirical references were quoted in defining and demonstrating other findings. All statements from the data were analyzed to determine their validity and what relationship they had to the research study. This way, the process determined if the statements given by respondents was useful, informative or logical (Walkder, Avant; 2005).
Ethical considerations
Approval for the research was sought from the Jaramogi Oginga Odinga University of Science and Technology admission and ethical approval committee through the Deputy Vice Chancellor Academics. The researcher assured the research participants of strict confidence with information they gave since their identity was concealed and never to be revealed. They were informed that they were also free to withdraw from the study without any repercussion prior to the start of the study.

RESULTS
All clinical placement sites had almost all cadres of health workers though they were few and created a shortage in staffing thereby affecting both health service delivery and clinical training. The Clinical
Medicine students' study participants were derived from an equal number in distribution from the MTIs represented in the study area. The Clinical Medicine student participants were selected randomly until a population equal to size sampling from each MTI was attained. These students were distributed as follows, 19 from GLUK, 20 from Uzima University College, 16 from Mt Kenya University, 18 from St Mary's school of Clinical Medicine, 15 from Siaya KMTC, 12 from Kapkatet school of Clinical Medicine. The health workers study participants were derived from across various cadres and numbers. The willing participants were distributed as follows:
5 Consultants in different specialties, that is Obs / Gynae, Surgery, Paediatrics, Medicine and Health Service Management / Community Health, 7 Medical Officers who was general practitioners
12 Clinical Officers, 11 Nurses, 5 Laboratory Technologists, 5 Public Health Officers, 4 Lecturers from MTIs, 5 Health Records and Information Officers and 8 Others who shall come from other cadres in health care service, that is social workers, M&E officers, supply chain management, biomedical engineering and accountant.
A total of 100 Clinical Medicine students out of 197 in the clinical placement sites took part in the study, where a total of 59 health workers of different health professions working in JOOTRH and Kisumu county Hospitals, as well as in the RHTCs were also involved in FGDs. The 8 HODs and 4 lecturers were identified for KIIs on the basis of their direct links with students and their leadership in the departments of Clinical Medicine.
This study on determinants of Clinical Medicine training outcomes in Kenya revealed that there were leadership and governance structures in all MTIs and clinical placement sites. However, though there were structures in the name of heads of departments in the Department of Clinical Medicine, there were no Deputies to the HODs in MTIs apart from KMTC. Instead of the deputy HODs one MTI created posts of coordinators. Also there were no positions of section heads as stipulated in the COC requirements (MMS/COC, 2010).
In some MTIs some HODs were underqualified to head the Department of Clinical Medicine. Many only had HNDs and never furthered their studies for academic, professional or personal developments. There were those who had higher qualifications but were not considered for the position of HOD, while others with as high as a Master's degree only served as acting HOD for a long period without a promotion while remaining as Assistant Lecturers, a position equivalent to tutorial fellows.

Table 1: Showing respondents to FGDs in the county and referral Hospital

Health Workers		JOOTRH	Kisumu County Hospital	Total
Consultants	2	35		
Medical Officers		3	3	6
Clinical Officers		3	3	6
Nurses 2	2	4		
MLTs 1	1	2		
PHOs 1	1	2		
HRIOs1	1	2		
Total 13	14	27		

The respondents for the FGDs in the referral and teaching hospital (JOOTRH), and Kisumu county hospital was health workers drawn from different cadres as shown in table 1.

There were a total of 27 respondents in the two major hospitals in the Lake Basin Region of Kenya that provide clinical placements to Clinical Medicine students. These hospitals were JOOTRH and Kisumu county hospital. The respondents were derived from various cadres of health workers within the hospitals with Medical Officers and Clinical Officers who are both clinicians being on the lead and responding in equal numbers with a total response of 12(44.4%). This was followed by a total of 5 consultants in various fields of specialty and then 4 nurses. The first four grou ps with a total of 21(77.8%) are usually the ones involved, in most cases, in the supervision and training of students in clinical areas.

Table 2: Showing respondents to FGDs in the 3 RHTCs

Health Workers	MbaleRHTC	MosoriotRHTC	ChulaimboRHTC	Total
Medical officers	0	0	1	1
Clinical officers	1	2	2	5
Nurses	1	3	2	6
MLTs/Lab Tech	1	1	1	3
PHOs	1	1	1	3
HRIOs	1	1	1	3
All others	2	2	2	6
TOTALS	7	10	10	27

FGDs were held in the three RHTCs with most of the health worker respondents representing their departments appearing for the discussions. The others who appeared for the FGDs were the
Supply chain Management officers, M and E officers, Accountants, Biomedical Engineer and Social Workers.

The FGDs from RHTCs was drawn from various cadres of health workers as shown in table 2.

In these FGDs, there was 13 respondents in Mbale RHTC, 8 respondents in Mosoriot RHTC and 10 respondents in Chulaimbo RHTC totaling to 31 respondents in this study area. The majority of health workers who gave information in the RHTCs was Clinical Officers (7) and nurses (7) out of all respondents in attendance. There was one Medical Officer (Doctor) who was also a respondent making total number of respondent clinicians to be 8. Other responses of FGDs shall come form 8 other cadres of health workers. Of all the 3 HODs of Clinical Medicine in the selected MTIs who was all Clinical Officers
2 of them are graduates of BSc in Clinical Medicine. The study investigated areas of interactions among Clinical Medicine students, lecturers, infrastructure, classes, library, linkages and networking, and leadership and governance in the MTIs and in clinical placement sites since they relate to the Clinical
Medicine training outcomes.

In general responses shall come from the following groups of people:

a) HODs of Department of Clinical Medicine in MTIs who responded to KIIs.

b) Consultants, Medical Officers, and Clinical Officers from Kisumu county hospital and JOOTRH, and Lecturers and staff of MTIs who all responded to FGDs.

c) The HODs of Clinical Medicine in the county hospital and JOOTRH clinical placement sites, and three heads of RHTCs clinical placement sites who are all Clinical Officers also responded to KIIs. A total of 66 Clinical Medicine students was selected from among all students from different MTIs and on clinical placement sites at the time of the study. There was five males and 6 female students undertaking diploma Clinical Medicine in Mbale RHTC but from GLUK, 8 males and 3 females also in Mbale RHTC but from Mt Kenya University were to be included in the study as respondents. In Mosoriot those selected was 22 Clinical Medicine students in total of which 9 was males and 13 was females. There were 11 students was from Siaya KMTC and 11 from Kapkatet mission MTI who was selected for this study. These were all undertaking diploma in Clinical Medicine and Surgery training. The Clinical Medicine students in Chulaimbo RHTC selected for the interview was 11 from Uzima university college and undertaking a BSc degree in Clinical Medicine and Surgery of which 4 was females and 7 was males together with 11 Diploma in Clinical Medicine students who was from St Mary's school of Clinical Medicine of who 4 was females and 7 was males. These Clinical Medicinestudents form a core category of MTI trainees in this research had a prime function of integrating theory to practice (Glaser, 1978). This makes a total of 36 (54.55%) male students in and 30 (45.45%) female students who gave their responses in the RHTCs clinical placement sites. The students interviewed was therefore those who was present at the time of this research study. Information by responses touched on health professionals whose work relate with Clinical Medicine students, the knowledge they impact in the Clinical Medicine students, their part in ensuring the students attend to classes and clinical rotation and factors that are a hindrance to the students in general. Different responses were captured in the KIIs question guide. Respondents in the three Rural Health Training Centers (RHTCs) which are used for clinical placements of Clinical Medicine students as training health facilities, preferred introduction of class attendance registers in clinical placement sites both in class and in practical areas for all students and supervisors to sign on daily basis daily to ensure presence of students is routinely monitored by supervisors, preceptors and instructors. These officers are also involved in the training of Clinical Medicine students while in their clinical placement sites. It was also revealed that the preceptors, mentors and clinical instructors are not paid or compensated for the extra workload in teaching the Clinical Medicine students.

Clinical examination rooms in all the OPDs of the health facilities visited ranged from three to six and were reported to be ideal with enough chairs and forms and a waiting bay. All OPD departments have injection rooms with nursing staff present. There are a few stretchers available for ambulation of immobile patients and are not sufficient. Major operating theatres was only found in the Kisumu county hospital and JOOTRH, but the RHTCs only have minor theatres. The presence of the type of theatres signifies the related type of operations that take place in a health facility whether major or minor. On average major theatres operated 20 different types of surgeries and 50 minor surgeries in a month while minor theatres operate between 30 and 40 minor surgeries per month. All students reported of being involved in minor surgical operations and only a few are involved in major surgeries.

All the clinical placement sites have a functional source of piped water and a well. They all have incinerators for possiblewastes, dumping sites for garbage disposal and a placenta disposal pit. There was VIP toilets in all health facilities that were visited.

Many students struggle to pay the clinical placement fees to include meals and avoid being sent away due to non-payment. All students loved being in the clinical placement sites and said it was very educative such that they would recommend it to any other student who is willing. Usually it is the MTIs who determine where a student goes for the placement. Students said they was treated very well by the staff and colleagues in all the health facilities. Clinical placement fees are paid in cash to the clinical placement sites by parents or guardians, or paid directly by the MTIs in cheques covering many students.

The amount paid per month in RHTCs for accommodation and meals was said to be an average of Ksh 20, 000/= for 8 weeks, while in the Kisumu county hospital and JOOTRH was said to be Ksh 3000/= per month. This amount of pay is charged to take care of breakables with replacements. The only extra curricula activity available in all the rural health training facilities is volleyball with the presence of a volleyball pitch in each RHTC. The 2 major hospitals do not have facilities for physical activities for trainees.

All the learners felt happy about their clinical attachments.

Clinical Medicine students said they are taught by all skilled health professionals who are also preceptors in all departments at the time of clinical rotations in those departments for their exposures, although they are specifically mentored by Doctors/Medical Officers or Clinical Officers. Most of the Clinical Medicine students spend 2 to 3 hours with their mentors daily while in their clinical rotations. On recording of a Likert scale measuring up to 5, the majority 42 (64%) of students marked their mentorship at 5 while the rest shared the remaining 36%.

The best knowledge to Clinical Medicine students was by provided by Clinical Officers. There was many linkages and networking among the students most of which was from different MTIs and others from universities and colleges within or in abroad. Means of communication included internet, telephoning and emails, newspapers, and journals. Other linkages were through training of various students from willing MTIs both nationally and internationally. The researcher found out that there are no joint activities that exist between MTIs and other related training institutions other than the clinical placements.

At the end of clinical placements, the Kisumu county hospital and JOOTRH sometimes evaluate Clinical Medicine students practically at the end of clinical rotations when the MTIs lecturers make arrangements with the clinical instructors in the hospitals. In the RHTCs not all provide assessments to the students at the end of their clinical preceptorship. The only assessment done is through clinical practice and signing of the logbooks at the end of every procedure for all students. Evaluation is usually done by the facility in-charges, supervisors and clinical instructors.

The researcher gathered that the students do not formally evaluate the preceptors, mentors and clinical instructors. Of all students 41 (62%) gave an overall assessment of the clinical placement sites as good in a Likert scale of 5, 16 (24%) as very good, 5 (8%) as fair, 4 (6%) as poor and non for very poor; where 1=Very poor, 2= Poor, 3= Fair, 4=Good and 5=Very good. The other stakeholders who play a role in clinical placements apart from MTIs are the Government through funding and ultimate support and the communities around who are the beneficiaries. In all students 53 (80%) noted that what motivated them to pursue Clinical Medicine course was to save lives. Others (14%) noted to give service to the needy and the rest (6%) noted to be proud as clinicians.

All the HODs in the clinical placement sites said there was existing policy guidelines in place that regulated Clinical Medicine training in the health facilities. The policy document in place was set by the

Government through the Ministry of Health. One HOD gave names of donors who financethe students in their clinical placement sites as JPiego, JICA and CIDA. The heads are also involved in the classroom and clinical training of the students in all departments whenever they are allocated for the teaching.

The researcher found that majority of students who sit for the MTIs Final Qualifying Examinations pass the examination well only for a good number to fail in the National Clinical Officers' Council Examinations. Those who fail wait to reseat the examinations when they are next offered. Declaration of the examination is not done in the private and faith based MTIs and so invitation for the declaration was not as well done. Behavior that was said to be retrogressive in the students' performance in their studies is lack of concentration and hyperactivity to many suspected of being drugs and substance abusers.

Majority (88%) of respondents in the clinical placement sites mentioned that they were sure Clinical Medicine students attended to classes and clinical rotations by seeing them in their clinical placement sites.The relationship between the different carders of health providers and Clinical Medicine students was said to be good in 80% of the responses. Knowledge imparted to the students of Clinical Medicine by the trained health workers ranged from classroom lectures, learning about management of health facilities in its triad, time management, procurement and supplies, diagnosing

various medical and surgical diseases, treatment of patients and referrals, community diagnosis, assisting the communities and research. All these included theory and hands on practice. The experience also included records keeping, retrieving and use; health systems management; M&E; Management of Antenatal, labor and postnatal care services; family planning; immunizations; community diagnosis in the field; transparency and accountability of funds; proper use of medical equipment; counseling and communication skills; laboratory diagnosis and investigations; clinical diagnosis and management of diseases; entrepreneurship; mentorship and clinical instructorship. .

Clinical Medicine students was said to disappear from their clinical rotation areas especially when they reported immediately or soon after the ward rounds. Almost all respondents in the three RHTC clinical placement sites cited insufficient monitoring of students, laxity by MTIs in following up of the students, family and social problems, absence of lecturers, lack of guidance, negligence with lack of cooperation by students, and bad attitude of students on clinical instructors as areas that make a Clinical Medicine student not to attend class or appear for their clinical rotations. There were no class attendance registers in some clinical placement sites but was found in all MTIs.

When the researcher explored presence of various equipment in the clinical placement sites, all of them was found not to have sufficient requirements conducive for training Clinical Medicine students. The departments are OPD, maternity, MCH/FP, pharmacy, laboratory, CCC, administration and public health/community health. Many (80%) OPDs in both types of health service delivery points where Clinical Medicine students go for their clinical placements did not have thermometers in their consultation rooms, and clinicians in the name of Clinical Officers are very few and involved in other duties as well. In 60% of the clinical placement sites mothers presenting for deliveries was asked to bring with them gloves supply.

Though MCH/FP services were in high demand staffing was a hindrance and some types of FP pills and methods were missing. Important drugs to include antibiotics and analgesics as well as anti-snake venom, anti-malarias and anti-helminths were missing in some health facilities and those who had them did not have enough to last three months. Laboratories were well functional but with the little required assistance, hence they cannot do many relevant laboratory investigations such as LFTs, and culture and sensitivity tests. The CCC clinics were found to offer the much required services but only for the staff shortage. Ambulances was present but few with most 3(60%) health facilities having 2 ambulances and only one in each health facility was functioning. The administration worked hard in all health facilities trying to ensure success but with minimal resources especially skilled staff and finances. The Public Health Department within the clinical placement sites seemed to be unaware of the surrounding environments which could easily become a health hazard given the dirt, dust and poor drainage systems present in all the five clinical placement sites.

There was many patients seeking various health services in all departments and there was no department Without a patient or client. Presence of lecturing was witnessed in all the MTIs and health facilities both in the RHTCsclinical placement sites and training hospitals.

The 3 heads of the RHT health facilities indicated that their lecturers for Clinical Medicine students was a mixture of those with Diploma in Clinical Medicine and Surgery, Higher National Diploma, Bachelor in Clinical Medicine and Master degrees in health related fields of specialization. At least there was a qualified clinician with some area/s of specialization. The health facilities had incharges who was qualified with either a HND, a Bachelor degree in Clinical Medicine and Surgery or a Master degree in Public Health.

The majority of respondents indicated that those students who go for clinical placements are identified and chosen as a routine after a 2nd year end trimester promotional exam, but there was those who was denied to go for the clinical placements due to lack of payment of tuition and accommodation fee as reported by the respondents. Others was denied to go for the clinical placements because of failing in their 2nd year end trimester promotional examination. There are students who was said to be financed by donors and other funding organizations through loans such as Funzo Kenya, CDF, and Jpiego.

Data collected revealed presence of learning in MTIs and the clinical placement sites. Though there was learning in RHTCs, accommodation was not available for all Clinical Medicine students due to the ever expanding student population from many MTIs countrywide. This forced some of the Clinical Medicine students to seek for accommodation in the precincts outside the health facilities, and convert dining halls to be their classes wherever meals were not served. There were no libraries in some clinical placement sites especially the RHTCs. There was no enough accommodation for the students within the health facilities and within the MTIs. In some MTIs the heads of departments (HODs) was found to have lesser specifications where BSc in Clinical Medicine and surgery students trained. In the Medical Training Institutions that offer Bachelor of Science in

Clinical Medicine degree, respondents reported that some lecturers' qualifications were below the CUE requirements. Some of the lecturers had Bachelors' degrees and others had higher national diploma in various specializations such as Anaesthesia, paediatrics, Reproductive health/obstetric gynecology etc.

Many trainers and lecturers qualify to teach diploma classes and below, but they were instead found to teach BSc in Clinical Medicine and Surgery classes. There are no external examiners especially in theory examinations in the department of Clinical Medicine in all the MTIs.

There were no libraries in the clinical placement sites and there available with few books did not allow he students to make use of them.

Other researcher's observations revealed that in all MTIs there was adequate spaces for playgrounds but not in the clinical placement sites, there was enough equipment and supplies as observed. The leaderships in the clinical placement sites was aware and conversant with the negative regional politics that kept on coming and thereby affecting clinical

placements of students undergoing Clinical Medicine training. Administration and managers of the clinical placement sites expressed their dissatisfaction in the staff shortages.

Table 3: Showing respondents in the 3 KIIs and FGDs in the MTIs

Health workers	Uzima University college	GLUK KMTC Kisumu	Total
HODs 1	1	1	3
Lecturers	2	1	1	4
Others0	00	0	
Total 3	2	2	7

All the 3 HODs and Lecturers was derived from the Department of Clinical Medicine in the three MTIs. All (100%) the heads of training institutions and clinical placement sites are involved in the training of Clinical Medicine students, both in class and clinical placement sites. All the clinical placement sites conduct assessment of students at the end of their clinical rotations, but those who assess them do it through supervision in practical areas during clinical ward rounds, by observations, and question and answer sessions.

The final qualifying examinations at the end of Clinical Medicine training are set by the individual

Lecturers in their respective units as internal examiners without invitation and inclusion of external examiners. All set examinations are not sent to external examiners for counter marking hence there are no checks and balances, or referring but instead are moderated by the Heads of Departments in the MTIs. The FQEs papers are also not forwarded to external examiners for remarking or counter marking but are marked only by the lecturer who set his/her particular units. This was supported by the examination's cumulative mark sheet which confirmed no presence of a signature by an external examiner. This was said to be a tradition over time. In one of the MTI the HOD sets and marks the FQEs alone for all the six examinable units even those that he did not teach.

In releasing of the FQE results, private and faith based universities do not do declaration of results for the reason that it is funds consuming, and they have meager resources.

After every clinical rotation covered by a student, log books are filled and signed for by the students and later by the respective clinical instructors, preceptors, mentors and/or supervisors or ward/departmental in charges. At the end of the students' attachment to the clinical placement sites in the health facilities they are subjected to an evaluation about their experiences by use of their filled in logbooks that are signed at the end of each rotation in their areas of clinical exposure by the departmental in-charges. However not all clinical placement sites assess these students by subjecting them to examinations at the end of their clinical rotations.

Commenting on the overall performance of students in clinical placement sites, many respondents noted that students had an average performance because of much theory and minimal practical experience. A general view of other respondents was that the Clinical Medicine students exemplified a good performance in the Rural Health Training Facilities. In JOOTRH it was noted that students' had a fair performance while in the Kisumu county hospital it was noted as good. It was also noted that during one of the MTIs clinical/practical examinations for final qualifying examination in the clinical areas some students (10%) would not tell who was the in-charges of the clinical set ups or names of consultants in the units they were being examined for.

Though libraries existed in all MTIs many text books for references and assignment was missing while in the Rural Health Training Facilities, there were no libraries at all. This was not supportive to the studies and performance of the Clinical Medicine students, coupled with lack of accommodations for all the students and a single classroom in each RHTC which is also used by other students thereby causing confusion due to lack of space. Accommodations that were available are now taken over by KMTCs, after starting nursing training in those facilities.

In the Kisumu County Hospital and JOOTRH, libraries have very few text books and could not be accessed by the students but by a few members of staff. In the opinion of the Heads of Departments, and the heads of health facilities, there was need for close supervision and monitoring of students by according them attendance registers and abrupt visits in the facilities. Almost in all clinical placement sites this study was carried out there was no simulation learning given to students. This type of learning is very important because it actively involves health professions and students in learning, allows practice without harm to patients and used to expose learners to learn more.

Although Libraries were found in all MTIs, there were many textbooks that were missing yet those

That were found for Clinical Medicine were few on the shelves, according to the requirements by the COC.

In some clinical placement sites information obtained revealed that due to lack of enough space in the health facilities some dining halls were used as classes for lecturing of students in Clinical Medicine. This also followed that these students were not accommodated within the health facility and hence interfered with students learning environment. However other areas of physical infrastructure were commendable.

DISCUSSION

CONCLUSION

In conclusion this study found out that there are determinants that influence Clinical Medicine training outcomes when students undergo training in both the MTIs and in clinical placement sites. Some of the determinants as reported by respondents truly affected and compromised Clinical Medicine training in the MTIs and clinical placement sites.

RECOMMENDATIONS

We therefore recommend five thematic areas that affect practice in Clinical Medicine.

1. Capacity of human resource in clinical placement sites and MTIs
2. Availability of Drugs, Equipment and supplies
3. Status of infrastructure and presence of learning
4. Functional leadership and governance
5. Linkages and Networking with other MTIs, Partners and collaborators

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APPENDIX I

CONSENT FORM FOR THE RESPONDENTS IN CLINICAL PLACEMENT SITES AND ON DETERMINANTS OF CLINICAL MEDICINE TRAINING OUTCOMES IN THE LAKE BASIN REGION OF KENYA

Interview protocols

These are the interview protocols used for the data collection. These protocols was arrived at after subsequent version so as to reject the highest development of details required. They was later aligned to portray the required information from the consumers' data collection and comparative analysis.

Introduction

Hello! My name is Samuel KagoiyoNjeru. I am a student at JaramogiOgingaOdinga University of Science and Technology undertaking a Doctor of Philosophy (PhD) degree in Community Health and

Development. I am interested in carrying out a research study on Determinants of Clinical Medicine training outcomes in Kenya. Please provide me with any relevant information that shall assist me meet my interest as a PhD student carrying out this study for my thesis.

I would like to interview you about your role in training of Clinical Medicine students. My research study includes asking you questions by interviewing, observations on what is happening and recording all information and activities that are relevant to this study.

Consent form

I ……. agree to participate in the research study after a detailed
Explanation of what the study wishes and my role in the study. My participation is entirely voluntary and I am allowed to refuse to take part or withdraw at any time of the study without any penalty. I am assured of privacy and confidentiality of the information that I shall provide.
Do you have any questions before we start?

Signature of respondent…….
Signature of investigator……
Date ……

ASSESSMENT TOOL FOR DETERMINANTS OF CLINICAL MEDICINE TRAINING OUTCOMES IN KENYA
SECTION 1:
CLINICAL PLACEMENT HODS/ADMINISTRATION INTERVIEW GUIDE
Provisional code: _____
Placement institutional code: _____
Name of clinical placement site: _____
MTI at the health facility: _____
Number of Clinical Medicine students present: _____
Year of study of the Clinical Medicine students: _____
Date: _____

1. How many trained Health workers do you have in the following cadres:
   - Medical officers _____
   - Clinical officers _____
   - Nursing officers _____
   - Public health officers _____
   - Occupational health officers _____
   - Laboratory technologist _____
   - Pharmacist _____
   - Health administrative officer _____
   - Physiotherapist _____
   - HRIO _____

Any other (please specify) _____
2. Who among the above named officers assist the Clinical Medicine students in their clinical placement sites? (Please specify) _____
3. Up to what highest level of professional education is the officer in-charge _____
4. Up to what highest level of professional education are the Lecturers? _____
5. Are Lecturers, preceptors, mentors and clinical instructors compensated for the extra workload of teaching Clinical Medicine students? _____
   If yes, how much are they paid? _____
   If no, why? _____
6. Does your health facility have a library? _____
   If yes, are Clinical Medicine students entitled to use the library services? _____ If no, why _____
7. Do you have enough accommodation for students in Clinical Medicine placement? _____
   If yes, how many rooms? _____
   If no, where do they get accommodated? _____
8. Do you have enough classes for Lecturing? _____
   If yes, how many? _____ If no, where do you give them lectures? _____
9. Do you have enough drugs and supplies? _____
   If yes, who supplies them? _____
   If no, how do you get them? _____
10. Do you have linkages with other stakeholders and well-wishers? _____
    If yes, with who? _____
    If no, why? _____

11. Do you have any other relevant information to this study? _____
Please explain, if any _____
_____
_____

AN ASSESSMENT TOOL FOR DETERMINANTS OF CLINICAL MEDICINE TRAINING OUTCOMES IN KENYA
SECTION II:
MTI STUDENT
CLINICAL MEDICINE STUDENT INTERVIEW GUIDE

Provisional code: _____
Placement institutional code: _____
Name of clinical placement site: _____
MTI at the health facility: _____
Number of Clinical Medicine students present: _____
Year of study of the Clinical Medicine students: _____ Date: _____

PART A: INFRASTRUCTURE
1. Is the health facility permanent, semi-permanent or temporary?
Permanent ( ) Semi permanent ( ) Temporary ( )
2. How many departments does the health facility have? _____
Which are these departments? _____
3. How many wards does the health facility have? _____
4. How many are you allocated in a room? _____ 5. How many classrooms are there in this health facility? _____
6. Is there available safe water supply? _____
7. What is the source of this water? _____
8. Tell me about appropriate disposal; containers for medical waters? _____
9. Tell me about placenta disposal site _____
10. Where is a functional incinerator for putrescible substance? _____
11. How are VIP toilets within the compound? _____
12. How many clinical examination rooms does this facility have? _____
13. Are chairs or forms for patients in the waiting bay enough? _____
14. Are chairs or forms for patients in the waiting bay enough? _____
15. How many stretchers for carrying patients do you have? _____
16. Where are the functional ambulances? _____ 17. Where is the operating theatre? _____
a) How many patients are operated per month on average? _____
b) What types of surgical operations have been carried out in the last 6 months?
_____
18. Tell me about your involvement in surgery? _____

PART B: GOVERNANCE AND LEADERSHIP
1. Who majorly pays for your clinical placement at this health facility? _____
2. Tell me about clinical placement fee and whether it includes accommodation _____

3. Tell about clinical placement fee and whether it includes meals _____
4. How is your clinical placement here? _____
5. How did you get posted here for your clinical placement? _____
a) How would you recommend this place to another person? _____
6. How do the health workers or staff treat you? _____
7. How do your colleagues treat you? _____
8. How do you pay your clinical placement fees? _____
9. How much do you pay for your clinical placement? Kshs. _____
10. How easy do you find it to pay for your clinical placement fee_____
11. How easy do you find it to pay your clinical placement? _____
12. Where are you accommodated? _____
13. How much do you pay for the accommodation? _____
14. What outdoor/extra curricula activities are in this training health facility? _____

PART C: HUMAN RESOURCE

1. Do Lecturers accompany you in reporting to your clinical placements?

a) How do you get lecturers in the health facility during your clinical placement?

_____

b) In which areas are you taught (record as many as are mentioned)

_____

_____

2. Which professional cadres/preceptors teach you? _____
3. Tell me about mentorship in your clinical area _____
4. Who is your mentor by profession? _____ 5. How many hours in a day do you spend with your mentor? _____
6. In a Likert scale of 5 where would you place your mentorship? _____
7. How are mentors compensated? _____
8. How many students of your cadres are in this rotation from your institution? _____
9. How many other students does your preceptor have in this health facility from other mils? _____
10. Who provide resources/equipment necessary for clinical placements? _____
11. Which mentor by rank/professional provided you with the best knowledge?

_____

SECTION D: LINKAGES AND NETWORKING

1. Tell me about linkages and networking in this clinical placement site _____

a) Which are the linkages? (Record as many linkages as possible? _____

b) How does the facility network _____

2. Which other linkages are there between MTIs and other related training institution?

_____ a) who evaluated you? _____

b) When was you evaluated? _____

3. How do you evaluate the preceptors? _____
4. How do you evaluate the clinical instructors? _____
5. How do you evaluate mentors? _____
6. What is your overall assessment of this clinical placement? _____
7. Who are the other stakeholders who play role in clinical placements? _____
8. How would you rate the entire placement in different departments during your using a scale of 1 to 5? _____
9. What type of evaluation do you undergo at the end of your clinical placement? _____
10. What evaluation do Clinical Medicine students undergo at the end of their training?

_____

11. What motivated you to do this course? _____
12. What recommendations would you make to assist in the support of training and clinical placement?

_____

_____

_____

AN ASSESSMENT TOOL FOR DETERMINANTS OF CLINICAL MEDICINE TRAINING OUTCOMES IN KENYA

SECTION III:
HEADS OF MTIs
HODS TOOL/INTERVIEW GUIDE
Provisional code: _____
Training institutional code: _____
Name of MTI: _____
Number of Clinical Medicine students present: _____ Date: _____

1. What are the professional qualifications of your lecturer in lessons of Diploma and Degree? _____

a) (Please specify specializations) _____

b) How many are they? _____

2. Which are the existing policy guidelines in place that regulates clinical placement of studentts? _____

3. Show me the policy document that is in place _____

4. Who sets the policy for clinical placement? _____

5. How does the MTI you lecture identify those to go for clinical placement? _____

6. Who are those denied to go for clinical placement? _____
Why, (explain) _____

7. Which donor finances the students in their clinical placements? _____

8. Which unit are you involved in the training of Clinical Medicine students? _____

9. Under which department do you train them? _____

10. How do you assess the students at the end of their rotation? _____

11. Which type of students are exempted from the end rotational assessment? _____

12. Who sets final qualifying exams in this MTI? _____

13. Who marks the final qualifying examinations? _____

14. Who does the institutional examination moderation?

a) If not why? _____

15. What was this MTIs percent pass mark per year in the last three years in FQEs?
2014 _____ 2015_____2016 _____2017 _____

16. What do you do you do to those students who fail in some units? _____

17. After marking of FQEs how do you do declaration of results done? _____

a) Who are invited to attend? _____

b) If not, why? _____

18. After every clinical ward rotation covered by students how does the department check to see whether student's logbooks are signed for by their respective ward supervisors, preceptors, mentors or clinical instructors? _____

a) The researcher confirms by checking several log books _____

b) If not, why? _____

19. In your view what is your comment on the Clinical Medicinestudents' overall performance?
(Please explain) _____

20. What could have led to this performance? _____
_____
_____

21. What behavior have you noticed from the students that may be retrogressive to their studies? _____
_____

22. What in your opinion can improve Clinical Medicine training outcomes of students? _____
_____

SECTION IV: KEY INFORMANT INTERVIEWS WITH HODs AND LECTURERS

Guidelines

a. Welcome the group
b. Introducing the Group members and the research team
c. Explain the purpose of the discussion
d. Explain the process to be followed

Number invited for KIIs_____
Number in attendance _____
Time session begins _____

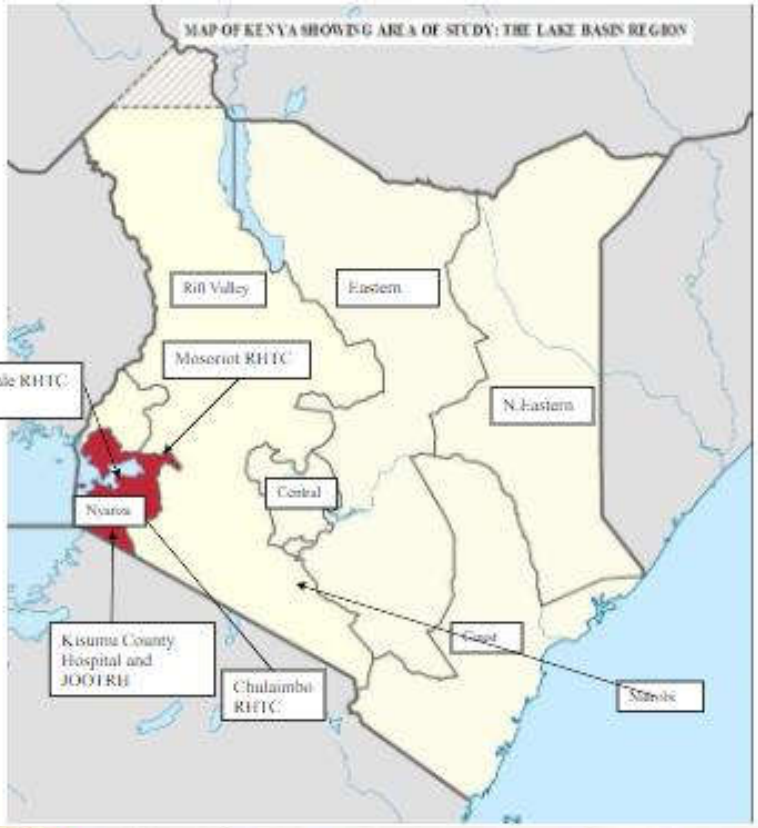
(A) General Questions

i. What is your profession?

ii. How do you relate to Clinical Medicine student in this health facility? iii. What knowledge have you imparted to the Clinical Medicine students? iv. How do you ensure that students in Clinical Medicine attend to their classes and clinical rotations?

v. From your experience what makes a Clinical Medicine student not to attend to their class and Clinical rotations?

(B) Explore – The respective explores and writes who or the investigation done
Different clinical rotation sites
Patients attending the health facility
Presence of lecturers, preceptors, clinical instructors
Presence of learning
Number of adequate classrooms
Availability of library
Presence of clean rooms for accommodation
Presence and use of clean toilets
Presence of playing grounds
Nearness to a police station
Time session ends _____
SECTION V: FOCUS GROUP DISCUSSION WITH HEALTH WORKERS
Guidelines
a. Welcome the group
b. Introducing the Focus Group members and the research team
c. Explain the purpose of the discussion
d. Explain the process to be followed
Number invited for FGD _____
Number in attendance _____
Time session begins _____
(A) General Questions
i. What is your profession?
ii. How long have you been lecturing Clinical Medicine students?
iii. How do you relate to Clinical Medicine students in this health facility? iv. What units do you lecture to the Clinical Medicine students?
v. What ensures Clinical Medicine students attend to their classes and clinical practice?
vi. From your experience what makes a Clinical Medicine student not to attend to their classes and Clinical rotations?
(B) Explore – The researcher explores and writes notes on the investigations done
Presence of a standard well equipped skills laboratory
Presence of a standard diagnostic laboratory
Presence of lecturers
Presence of learning
Number of adequate classrooms
Number of students in a class
Availability of library
Presence of an IT/Computer class
Presence of clean rooms for accommodation
Presence and use of clean toilets
Presence of playing grounds
Nearness to a teaching and/or a referral hospital
Time session ends _____-



GREAT LAKE UNIVERSITY OF KISUM
(GLUK)

17Th January 2011

Mr. Samuel Kagoiyo Njeru

Department of Clinical Medicine,

Faculty of Health Science,

Great Lakes University of Kisumu.

Dear Samuel K.Njeru,

RE: ADMISSION INTO DOCTOR OF PHILOSOPHY (PhD) PROGRAMME.

Following your application to be admitted into the above programme and successful defense of your proposal titled: **Determinants of Clinical Medicine Training Outcomes in Kenya**; on behalf of the postgraduate studies committee, I wish to inform you that you have been admitted into the above programme wef January 2011.

I take this opportunity to congratulate and wish you well in your study.

Professor Jack Kamiruka
Deputy Vice Chancellor Academic Affairs /
Head of Postgraduate Studies
Great Lakes University of Kisumu.

CC: Dean Faculty of Health Science

Dean Faculty of Community Health and Development

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