

# Kenya Preservice Training for Long-Acting and Permanent Methods of Contraception: Assessment Report

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The **RESPOND** Project, in collaboration with the  
Kenya Ministry of Public Health and Sanitation,  
Division of Reproductive Health

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# ACRONYMS AND ABBREVIATIONS

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BTL	bilateral tubal ligation
COC	Clinical Officers Council
CPR	contraceptive prevalence rate
DMOH	District Medical Office of Health
DRH	Division of Reproductive Health
FP	family planning
GOK	Government of Kenya
IUCD	intrauterine contraceptive device
KMTC	Kenya Medical Training College
LA/PM	long-acting/permanent method
MOMS	Ministry of Medical Services
MOPHS	Ministry of Public Health and Sanitation
MTC	medical training college
NCK	Nursing Council of Kenya
NGO	nongovernmental organization
OSCE	Objective Structured Clinical Examination
RH	reproductive health



# EXECUTIVE SUMMARY

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Kenya's Division of Reproductive Health (DRH) recognizes that increasing the contraceptive prevalence rate (CPR) and ensuring a full range of contraceptive choices is an enormous challenge. In 2008, the Government of Kenya articulated a national strategy to increase access to and use of long-acting and permanent methods of contraception (LA/PMs) (MOPHS, 2008). A number of international partners are helping to implement that strategy, including by providing in-service training. Missing from these efforts, however, is a targeted, systematic, comprehensive attempt to better prepare *future* family planning (FP) providers to offer LA/PM services as part of a full method mix.

The DRH's training plan identifies strengthening of preservice training as one of its key objectives. As an initial step, the DRH requested support from the RESPOND Project (1) to gather in-depth information about the state of preservice LA/PM training in Kenya and (2) to make recommendations for improving that training. This report presents the findings of that assessment and recommendations for next steps.

The purpose of the nationwide assessment was to help the DRH and preservice institutions define the strengths and weaknesses of efforts to prepare future health cadres to provide LA/PMs, so that they can improve those efforts. The assessment sought to answer four questions:

1. What is the current status of preservice education for LA/PMs?
2. How prepared are skills labs to provide students with quality LA/PM practice?
3. Are students trained for the LA/PM tasks they are expected to perform?
4. What recommendations can be made to improve preservice training for LA/PMs?

In Kenya, nurses, nurse-midwives, and clinical officers with appropriate basic training may provide the full range of short- and long-acting FP methods, and they can provide counseling for permanent methods. Medical officers, medical specialists, and registered clinical officers with relevant post-basic training may provide permanent methods as well as other FP methods. This assessment examined preservice training for nurses, nurse-midwives, clinical officers, and medical officers.

Data were collected from relevant national public health regulatory bodies that are responsible for policy guidance for the medical professions related to FP. The assessment gathered information from administrators, lecturers, preceptors, students, and newly qualified staff associated with public and private universities and medical training colleges (MTCs). In addition, the assessment examined skills labs and health facilities used for preservice clinical practice.

Between November 2011 and March 2012, the joint DRH/RESPOND team conducted interviews with 192 stakeholders, including representatives of regulatory bodies, training institutions, the Ministry of Public Health and Sanitation (MOPHS), the Ministry of Medical Services (MOMS), and collaborating partners, as well as students and graduates. The team asked informants about the FP tasks of recent graduates, preservice preparation for those tasks, the balance of theoretical and practical training, the application of the latest reproductive health (RH) curriculum, and other topics relevant to student preparation to provide LA/PMs.

Major findings from the assessment are summarized below.

### **What is the current status of preservice education for LA/PMs?**

- Attention to FP in general and to skills acquisition in particular varies significantly across institutions; time allocations are not standardized.
- Too little time is allocated for skills labs and clinical practice.
- Clinical instructors have little incentive to work with students in skills labs.
- Few instructors are available to work with students in skills labs.
- Throughout the system, student-to-instructor ratios are very high, exceeding recommendations by organizations such as the Nursing Council of Kenya and the Clinical Officers Council.
- The supply of skilled and motivated lecturers and preceptors is inadequate.
- During clinical practice, there is little communication between preceptors and students, and preceptors often do not provide adequate follow-up.
- Preservice training programs do not use a competency-based training approach. The system does not recognize that the number of procedures needed to master clinical skills depends on each trainee's skill level.
- Assessment focuses on students' knowledge, not on skills acquisition
- Preservice training programs do not ensure that the contraceptives, anatomical models, medical equipment, instruments, and expendable supplies necessary for students to practice the provision of LA/PMs are available.

### **How prepared are skills labs to provide students with quality LA/PM practice?**

- Skills labs are not able to provide sufficient practice for students.
- Some training institutions do not have functional skills labs. For those with them, the labs are in general poorly maintained, too small for the number of students being trained, and ill-equipped for instruction in LA/PMs.
- Supplies and equipment are a serious concern at both medical technical colleges and university schools of medicine. The supplies needed for practice are available in only limited quantities. In some cases, samples of contraceptives [e.g., intrauterine contraceptive devices (IUCDs) and hormonal implants] were available for demonstration and practice, and the skills labs had some expendable supplies (e.g., gloves, linens, dressings, syringes, disinfectants, hand soap), but the available equipment and supplies were not adequate for ongoing training and practice. Anatomical models are lacking. Moreover, insertion and removal kits for IUCDs and implants are in short supply and incomplete.
- Print and audiovisual teaching resources appear to be lacking.
- The number of workstations is too limited to support effective teaching and practice. In addition, little time is allocated to the skills lab rotation.
- Training institutions lack computers in skills labs, and the computer skills of instructors are limited. Thus, the institutions cannot take advantage of computer-based learning approaches.
- Training institutions vary in their commitment to skills labs in general and to their use for LA/PM instruction.

### **Are students trained for the LA/PM tasks they are expected to perform?**

There is a disconnect between what is expected and what graduates are able to do as a result of preservice training. This lack of competence results in delays for clients, an overburdening of experienced medical personnel, and a backlog of work. Most importantly, it can affect the extent to which providers can assist clients to achieve their reproductive intentions.

#### ***Nurses and nurse-midwives***

Recent graduates and final-year students expressed a lack of confidence in their ability to provide IUCDs and implants. Supervisors reported that few recent graduates could perform IUCD- and implant-related procedures.

#### ***Clinical officers***

Most clinical-officer students expect to become proficient in the provision of long-acting methods. A perception persists, however, that FP is “not the clinical officer’s job”; consequently, clinical medicine departments have focused principally on theoretical FP knowledge with little skills building. While long-acting methods are sometimes demonstrated in skills labs, MTCs do not assess students’ ability to perform procedures for long-acting methods. As a result, only three out of 10 final-year students felt confident to insert IUCDs. Only those students who participated in FP outreach or took the initiative to seek out clients interested in long-acting methods felt proficient in IUCD and implant skills. Also, FP clinical practice sites typically have few preceptors who are clinical officers. As a result, instructors with nursing backgrounds mentor clinical-officer students; this arrangement is a source of discomfort for clinical-officer students.

#### ***Medical officers***

The norms and standards for health service delivery (Ministry of Health, 2005) and the national FP guidelines (MOPHS, 2010) clearly state that medical officers are to provide permanent methods of contraception. According to interviews with department heads and teaching staff, medical students may seek to practice female and male sterilization procedures during internship, depending on their interest. They are not, however, required to master these procedures. Preservice institutions do not currently prepare medical students to provide either bilateral tubal ligation (BTL) by minilaparotomy or male sterilization.

#### ***All cadres***

One finding about expected performance applied to all cadres examined. The assessment team concluded that the opinions and expertise of department heads may influence the importance given to FP by preservice administrators. Key issues are whether the department heads feel that FP is an appropriate instructional topic for a particular cadre, their level of knowledge about FP, and whether they believe that the school can effectively train students in FP.

### **What recommendations can be made to improve preservice training for LA/PMs?**

This report makes recommendations in three areas:

- Updating the knowledge and skills of supervisors, faculty, and preceptors
- Emphasizing skills acquisition for LA/PMs
- Improving and updating student assessment

Currently, skills acquisition for LA/PMs is limited for all of the preservice training cadres. Given the job expectations upon graduation and certification, the assessment team highly recommends a greater emphasis on a competency-based approach to preservice training. In addition, preservice institutions need to increase and improve the medical equipment, anatomical models, instruments, and expendable supplies needed for LA/PM training. Finally, assessment of students during preservice training should address both theoretical knowledge and skills.

## BACKGROUND

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Population growth affects the ability of countries to achieve their development goals, just as the inability to achieve desired family size affects the health of families and the ability of women and couples to achieve economic, educational, and other goals. Recognizing this, the Government of Kenya (GOK) established *Vision 2030* (MOH, 2005), which calls for an increase in the country's modern contraceptive prevalence rate (CPR) from 39% of married women in 2008–2009 to 70% of married women by 2015. If this increase is to be achieved, the number of modern method users must *triple* by 2030, given the projected growth in Kenya's population of women of reproductive age.

To meet both current unmet need (26% of married Kenyan women) (KNBS & ICF Macro, 2010) and future need, Kenya's family planning (FP) program will have to be both robust and, given limited resources, cost-effective. Among other things, it will have to ensure that clients have a full range of contraceptive choices to meet their changing fertility needs over a lifetime. The choices will need to include not only the more easily attainable short-acting methods (oral contraceptives, condoms, injectables) but also the underutilized yet safe, effective, and cost-effective long-acting and permanent methods (LA/PMs)—hormonal implants, the intrauterine contraceptive device (IUCD), BTL, and male sterilization.

As Kenya's CPR has risen, its method mix has shifted over time toward injectables. Yet the proportion of LA/PMs in the method mix has actually decreased, from 60% of methods used in 1984 to just 19% in 2008–2009 (KNBS & ICF Macro, 2010).

Kenya's Division of Reproductive Health (DRH) recognizes that increasing the CPR and ensuring a full range of choice is an enormous challenge. The Ministry of Public Health and Sanitation (MOPHS), the Nursing Council of Kenya (NCK), and the Clinical Officers Council (COC) have all issued guidelines and standards regarding FP, including LA/PMs. In 2008, the GOK articulated a national strategy to increase access to and use of LA/PMs, and a number of international partners are helping to implement this strategy, including by providing in-service training (MOPHS, 2008). Missing from these efforts, however, is a targeted, systematic, comprehensive attempt to better prepare *future* FP providers to offer LA/PM services as part of a full method mix.

In its training plan for 2011–2016, the MOPHS/DRH noted that preservice institutions offer limited LA/PM training for future nurses, nurse-midwives, clinical officers, and medical officers. Drawing on programmatic knowledge and experience, the plan noted a number of shortcomings in preservice training, including:

- Limited time is allocated to train medical students in LA/PM services; thus, many graduates have not mastered LA/PM service delivery skills.
- Student enrollment has continued to increase, but the teaching infrastructure has not expanded accordingly.
- Students have limited exposure to practical skills at both medical technical colleges and medical schools.
- Internships for medical officers do not routinely include LA/PM services.
- The physical infrastructure is limited.
- Standardized training materials are lacking.

- Linkages between clinical training sites and medical faculty are lacking.
- Lecturers and clinical instructors may not communicate effectively.
- Preceptors at clinical training sites may not have the necessary LA/PM training skills.

In the training plan, the DRH identified strengthening of preservice training as one of its key objectives. As an initial step, the DRH requested support from the RESPOND Project (1) to gather in-depth information about the state of preservice LA/PM training in Kenya and (2) to make recommendations for improving that training. This report presents the findings of that assessment and recommendations for next steps.

# THE ASSESSMENT DESIGN

The purpose of the nationwide assessment was to help the DRH and preservice institutions define the strengths and weaknesses of efforts to prepare future health cadres to provide LA/PMs, so that they can improve those efforts. The assessment addressed four questions:

1. What is the current status of preservice education for LA/PMs?
2. How prepared are skills labs to provide students with quality LA/PM practice?
3. Are students trained for the LA/PM tasks they are expected to perform?
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In Kenya, nurses, nurse-midwives, and clinical officers with appropriate basic training may provide the full range of short- and long-acting FP methods, and they can provide counseling for permanent methods. Medical officers, medical specialists, and registered clinical officers with relevant post-basic training may provide permanent methods as well as other FP methods. This assessment examined preservice training for nurses, nurse-midwives, clinical officers, and medical officers.

In Kenya, university schools of medicine are principally responsible for training medical officers (doctors); two of them also train clinical officers in a diploma course. A third university school of medicine offers a nursing program for a B.Sc. degree, as opposed to a diploma program. The medical training colleges (MTCs) generally train clinical officers and nurses. In addition, one training institution affiliated with a nongovernmental organization (NGO) trains clinical officers, and one private institution trains nurses.

## Methodology

Data were collected from relevant national public health regulatory bodies that are responsible for policy guidance for the medical professions related to FP. The assessment gathered information from administrators, lecturers, preceptors, students, and newly qualified staff associated with public and private universities and MTCs. In addition, the assessment examined skills labs and health facilities used for preservice clinical practice. Table 1 presents information on the facilities and institutions visited.

**Table 1. Facilities and institutions visited**

Location	Facilities and institutions visited
Nairobi	NCK, COC, Kenya Medical Training Centre (head office and Nairobi Kenya Medical Technical College [KMTC]), University of Nairobi (Department of Obstetrics and Gynaecology), Kenya Methodist University, Kenyatta National Hospital, Karuri Health Centre, Kenyatta University Medical School, Kenya Obstetrical and Gynaecological Society, Kenya Medical Association, Clinical Officers Association, collaborating agencies, other development partners
Mombasa	Mombasa KMTC, Coast General Hospital, provincial health offices
Kakamega	Kakamega KMTC, Kakamega Provincial Hospital, provincial health offices, District Medical Office of Health (DMOH), St. Mary's Hospital Mumias
Kisumu	Kisumu KMTC, New Nyanza Provincial Hospital, provincial health offices
Kisii	Kisii KMTC, Kisii Level 5 Hospital, Oresi Health Centre, DMOH
Nakuru	Nakuru KMTC, Rift Valley Provincial Hospital, provincial health offices, DMOH
Eldoret	Eldoret KMTC, Moi Teaching and Referral Hospital, DMOH, Moi University School of Medicine
Nyeri	Nyeri KMTC, Nyeri Provincial Hospital, provincial health offices, Mathari Mission Hospital
Meru	Meru KMTC, Methodist University
Embu	Embu KMTC, provincial health offices
Machakos	Machakos KMTC

## **Data Collection**

A team comprised of four DRH members and two RESPOND Project staff conducted the assessment, which included (1) a desk review, (2) stakeholder interviews and focus groups, and (3) an assessment of skills labs and clinical practice sites.

### ***Desk Review***

The team reviewed background documents, including:

- Curricula for preservice reproductive health (RH)
- Job descriptions for health service providers
- FP and LA/PM guidelines and performance standards
- Objectives for FP and LA/PM clinical preceptors
- Situational analyses of preservice training from Kenya and elsewhere
- National and institutional training evaluation reports
- National policies and plans for human resources for health
- National health and institutional strategic plans
- The national LA/PM training plan developed by MOPHS/DRH for 2011–2016
- Relevant meeting and conference reports

### ***Stakeholder Interviews and Focus Groups***

Between November 2011 and March 2012, the joint DRH/RESPOND team interviewed and conducted focus groups with 192 stakeholders, including representatives of regulatory bodies, training institutions, the MOPHS, the Ministry of Medical Services (MOMS), collaborating partners, students, and graduates (Table 2). The team asked informants about the FP tasks of recent graduates, preservice preparation for those tasks, the balance of theoretical and practical training, the application of the latest RH curriculum, and other topics relevant to student preparation to provide LA/PMs.<sup>1</sup>

### ***Assessment of Skills Labs and Clinical Practice Sites***

The team used EngenderHealth's updated LA/PM equipment and supplies list (Cagatay, Cordero, & Jacobstein, 2010) to assess the availability of contraceptives, medical equipment, instruments, and expendable supplies needed to provide LA/PMs at skills labs and clinical practice sites.

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<sup>1</sup> As agreed to by the DRH and the preservice training institutions, the focus of this assessment was on the *nationwide* state of preservice training for LA/PMs in Kenya. When reporting specific findings, this report does not name institutions or informants.

**Table 2. Stakeholders who participated in the assessment**

Type of stakeholder	Stakeholders
Representatives of regulatory bodies and professional associations	3 representatives from regulatory bodies, 2 from professional associations
Department heads at public, private, and faith-based training institutions	25 department heads from MTCs and universities
Trainers/lecturers at training institutions (public, private, faith-based)	11 lecturers from 11 KMTCs; 16 lecturers from 3 private and faith-based institutions; 2 lecturers from 4 schools of medicine
Preceptors at health facilities used for clinical practice	5 preceptors
Students at MTCs/schools of medicine and in clinical practice rotation	73 community health nursing students, 18 nurse-midwifery students, 21 clinical officer students, 8 medical students
Recent graduates of MTCs	3 graduates of 3 MTCs (all from the registered nurse cadre)
Representatives of MOPHS and MOMS: human resources departments, provincial directors of health services within MOPHS, provincial directors of medical services within MOMS, district medical officers, district public health nurses, provincial RH coordinators	4 MOPHS and MOMS representatives from provincial, district, and facility levels
Partners supporting in-service and preservice training in FP/RH or those providing overall support to the preservice program	1 representative of partner agencies supporting preservice training



# FINDINGS

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## Question 1:

### What Is the Current Status of Preservice Education for LA/PMs?

This section outlines the current status of preservice training for LA/PMs with regard to:

- The balance between teaching theory and practice
- Student assessment

It examines the main cadres of professionals responsible for providing FP services: nurses, nurse-midwives, clinical officers, and medical officers.

Department heads at university medical schools and at MTCs recognize the importance of preparing students to offer the full range of FP services (including LA/PMs), as stipulated by the national FP guidelines (MOPHS, 2010) and the national norms and standards for service delivery (MOH, 2005). This preparation should include a balanced approach between RH theory and the acquisition of practical skills for service delivery.

To understand the amount of time devoted to the theoretical study of FP, team members reviewed the hours devoted to FP in preservice curricula and discussed FP study requirements with regulatory agencies. To understand how time was divided between theoretical study and skills practice (including both skills labs and clinical practice), the team interviewed lecturers, department heads, supervisors, and students enrolled at MTCs and university schools of medicine.

#### Registered Nurses and Nurse-Midwives

The NCK, a statutory body that regulates nursing practice in Kenya, sets minimum requirements for achievement in theoretical education as well as in clinical experience and practice (for example, NCK provides logbooks that specify the minimum number of procedures for students to observe and perform during clinical practice; preceptors use these logbooks to assess students' performance). All nurses, including nurse-midwives, must complete the basic nursing diploma program, including the course on community health nursing, which includes general FP and postpartum FP. As part of the training objectives, graduates are expected to be able (1) to demonstrate proficiency in general nursing, community health, and RH and (2) to teach student nurses in clinical settings.

The preservice nursing curriculum includes an RH module that was revised in 2008 (NCK, 2009a). During the assessment, most institutions were not aware of the revised RH module or the revised FP guidelines (MOPHS, 2010), and the lecturers had not been oriented to their use. Some trainers were using current information and resource materials; others were using FP resources dating back to 1998. A few nursing lecturers, clinical instructors, and preceptors had been trained as trainers in long-acting methods. Only a few were aware of the LA/PM curriculum under development by the MOPHS's DRH and partners.

The *Kenya Registered Community Health Nursing (Basic) Programme Syllabus* (NCK, 2005) states that the purpose of training is to provide a theoretical and practical basis for achieving the standard minimum requirements of nursing. According to the syllabus, training institutions should provide adequately

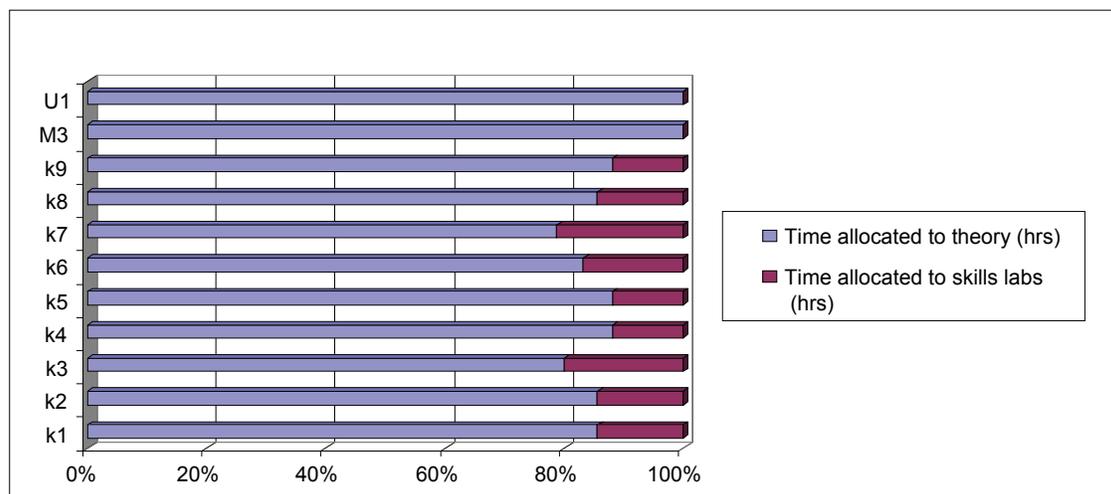
supervised clinical practice. All registered nurses and nurse-midwives must complete this foundational course. Interestingly, according to the NCK, while the syllabus does not specify a time allocation for FP, FP is clearly included in the RH module. Time allocation for FP is left up to department heads within the MTCs and varies considerably.

During the three and one-half years of training for the nursing diploma, students are exposed to theory, practice in the skills lab, and clinical practice at a hospital. During the assessment, MTC department heads and RH lecturers described how time was allocated to these three types of instruction for FP (Table 3). Figure 1 compares the time allocated to theory and to the skills lab.

**Table 3. Time allocated to FP theory, skills lab, and clinical practice among nursing students at MTCs**

MTC (coded for anonymity)	Time allocated to theory (hrs.)	Time allocated to skills labs (hrs.)	Time allocated to clinical practice (wks.)
k1	24	4	6
k2	24	4	8
k3	24	6	6
k4	30	4	12
k5	30	4	24
k6	20	4	12
k7	30	8	8
k8	24	0	4
k9	30	4	6
M3	28	0	6
V1	90	0	8

**Figure 1. Time allocation comparison for nursing students: Theory vs. skills lab**



Two findings need to be highlighted here:

1. The time allocated for FP training for nurses varies widely across institutions.
2. The time allocated to theory vs. practice varies widely across institutions.

Clearly, a standardized approach to time allocation is lacking.

### ***Theoretical Study: FP***

According to all nursing students and lecturers interviewed, all teaching institutions adequately cover FP theory (including LA/PMs); such training typically takes 24–30 hours (Table 3). All institutions used lectures, and students referred to textbooks, contraceptive technology updates, manuals, wall charts, and the Internet to supplement lecture notes. When lecturers used information technology (e.g., PowerPoint presentations), they did so on their own initiative and without institutional support. A few lecturers were aware of computer-based learning programs, but they had received no orientation to these resources.

In all nursing schools, department heads and lecturers were concerned about the student-lecturer ratio. “We always have a shortfall of trainers,” one department head reported, citing a student-lecturer ratio of 50:1. “Overall we have four lecturers trained on LA/PMs for a total of 350 students.”

### ***Skills Labs***

All informants were concerned about skills acquisition. Nursing lecturers described the ways in which skills labs are used: Students have a two-week rotation during which they learn a full range of clinical procedures before they move to the clinical area to interact with and participate in the management of patients. The time allocated for learning FP procedures in skills labs ranged from zero to eight hours (Table 3). According to lecturers and students, the time for skills labs is not adequate to learn FP procedures. Unfortunately, because of time limitations and the large number of students, lecturers reported that they were able to routinely observe a return demonstration only among a few volunteer students after a practice period.

Practicing clinical FP procedures on models (the Zoe model for the IUCD and the arm model for implants) is an essential component of establishing competency among new providers. However, very few MTCs have these models; of those that do, many models are in disrepair, rendering their usefulness in clinical demonstration and practice questionable. Thus, skills labs pay no attention to practice on anatomic models.

### ***Clinical Practice***

Nurses typically have 6–12 weeks of clinical practice at preceptor sites (Table 3). Clinical placement is coordinated between colleges and health facilities, and students are provided with a logbook that spells out what is expected of them by every department. While there was some planning and coordination of clinical placements, more than one training institution might place students at the same site, creating competition for FP clients. Private universities reported that they make special arrangements with facilities for student placement, leading to more specialized attention.

Clinical practice can be costly for preceptor sites. They must provide contraceptives, medical equipment, and medical supplies. To some extent, these costs are passed on to students in the form of fees.

All interviewed said that students worked with FP preceptors at health facilities, although they had varying views about the availability and effectiveness of these preceptors:

- “[Preceptors] assist, but they have a lot of shortcuts. Orals and injectables should be set up separately; however, in practice, the trays are all set up together.”
- “There is one staff [nurse] allocated to coordinate student learning, known as the Minister for Education. . . . In every placement area, there is someone to assist students.”
- “[Preceptors are] not always available because they are overwhelmed with other tasks.”
- “[Some preceptors] look down upon KMTC students and prefer students from private/public universities and colleges.”

Table 4 describes what is expected of nurses and nurse-midwives in terms of skills acquisition during clinical practice, as defined in logbooks.

**Table 4. FP procedures to be observed and performed by nursing students at MTCs**

Procedure	No. of procedures	
	Observed	Performed*
Counseling	10	10
Pelvic examination	0	15
Pap smear	0	2
Insertion of IUCD	5	2
Removal of IUCD	5	1
Insertion of implants	5	2
Removal of implants	5	1

\* Logbooks prepared by the NCK state the minimum required number of counseling sessions and clinical procedures; nevertheless, training institutions may have different requirements.

### ***Student Assessment***

Students’ ability to provide long-acting methods is not assessed in skills labs before students proceed to their clinical rotation. FP is, however, included in short practical assessments [objective, structured clinical examinations (OSCEs)] in skills labs; such assessments typically look at counseling a client for a short-acting method or preparing to give an injection.

As mentioned above, practice on models in skills labs is an essential component of establishing competence among new providers. Yet the logbooks used for assessment do not mention model practice.

At clinical practice sites, students are supervised either by an instructor from the training institution or by a designated staff member at the site. For instance, some students reported that the nursing officer in charge at the health facility supervised their clinical practice.

The supervisor of the clinical practice uses a logbook to document the student’s clinical experience, as well as other observational forms to assess student performance. Informants reported that the supply of logbooks was adequate. Logbooks, however, are not competency-based; they merely record the number of tasks observed or performed. Furthermore, achieving competence in the provision of long-acting methods is not a prerequisite for academic progress after clinical practice. According to nursing

lecturers responsible for teaching FP, at one time IUCD-insertion skills were assessed during clinical rotations; however, this practice has been discontinued.

At the end of preservice education, nursing students take their college examinations; according to department heads and lecturers, these tests cover FP, including counseling and LA/PMs. After successfully completing those exams, students sit for the Nursing Council's certification examination. However, neither the college exams nor the certification exam assess skills in the provision of LA/PMs.

### **Clinical Officers**

The COC was established by an act of Parliament to coordinate and regulate the training, registration, and licensing of clinical officers. It reviews and approves curricula and clinical manuals for clinical officer training, registers students enrolled at approved training institutions, inspects training institutions to ensure that they meet COC standards, and gives practicing licenses to qualified clinical officers.

In 2011, the COC revised its national curriculum guide to include new technologies and updated content (COC, 2011). The document is currently being adopted by all medical training institutions in Kenya. The purpose of the guide is to facilitate the training of competent clinical officers who can contribute to the improvement of curative, preventive, and rehabilitative services. The curriculum guide has five training objectives that are all, to some degree, relevant to FP services.

#### ***Theoretical Study: RH/FP***

The study of FP is covered under the RH course. During theoretical sessions, lecturers first review human reproductive physiology, then provide students with an overview of FP methods. According to the curriculum guide (COC, 2011), topics to be covered include LA/PMs: insertion and removal of implants, insertion and removal of IUCDs (both interval and postpartum), BTL by minilaparotomy, and male sterilization. The guide does not mention implants. Specific objectives include:

- Taking a complete RH history and performing a physical examination
- Describing and explaining the various FP methods, including emergency contraception

All MTCs reported that FP was generally covered under RH and community health subjects during theoretical sessions. Although time allocation is meant to be standardized, the time spent on theory ranges from 20 to 30 hours, according to lecturers and department heads. DRH representatives suggested that individual lecturers may make their own decisions about how to apportion time for various topics. Respondents in the field noted that the time allotted to FP was on the decline, but the majority thought that the time spent on FP theory was adequate.

#### ***Skills Labs***

According to representatives of the COC, registered training institutions should have skills labs that enable students to learn these procedures through the use of models.

Many lecturers reported that, after theoretical sessions, they demonstrate LA/PMs in the skills labs; students then have an opportunity to practice providing the methods. One clinical instructor stated that students are expected to observe and assist with the provision of all FP methods, but not master service provision; in particular, students are not expected to achieve competence in the delivery of LA/PMs. Future clinical officers are not required to master the removal of implants or IUCDs on anatomic models before clinical practice.

Time allocated to the skills labs ranged from two to six hours. All lecturers and department heads reported that this was not enough time for skills acquisition. One informant said, “This time is not adequate, given the number of students.” He noted that some students often cannot see the demonstrations because of the large number of students in the skills labs. In addition, most skills labs lack the equipment and supplies needed to demonstrate and practice the insertion and removal of implants and IUCDs.

### ***Clinical Practice***

According to representatives of the COC, all students are issued logbooks to be used during clinical practice. The logbooks require them to perform a minimum number of IUCD and implant insertion and removal procedures during clinical practice.

During the senior clinical clerkship, students are required to spend 25 hours per week for eight weeks rotating through each clinical department of obstetrics and gynecology. Respondents reported that most students spend between six and eight weeks in these clinical placements.

Table 5 describes the number of FP procedures that future clinical officers must observe, assist with, and perform as part of the degree requirements.

**Table 5. LA/PM procedures to be observed, assisted, and performed by clinical officer students at MTCs**

Procedure	No. of procedures		
	Observed	Assisted	Performed
Insertion of IUCD	2	0	5
Removal of IUCD	0	0	0
Insertion of implants	2	0	5
Removal of implants	0	0	0

It is noteworthy that future clinical officers are required neither to observe nor to perform implant or IUCD removals during training. Kenya’s national FP guidelines (MOPHS, 2010) stipulate that clinical officers can perform these procedures, yet the MTC logbooks do not require that these skills be performed.

Clinical practice can be costly for preceptor sites. They must provide contraceptives, medical equipment, and medical supplies. To some extent, these costs are passed on to students in the form of fees.

### ***Student Assessment***

Clinical officer students are continuously assessed by lecturers and preceptors, logbooks (signed by lecturers and preceptors), and final examinations developed at the central level, where the examinations are also reviewed. Logbooks, however, are not competency-based; they merely record the number of tasks observed or performed.

After the skills labs, students take the Objective Structured Clinical Examination (OSCE). However, the OSCE does not assess long-acting FP methods. This assessment is supposed to cover all skills learned in the labs, but because of time constraints, examiners prefer to assess skills that can be demonstrated quickly (e. g. , counseling about a short-acting method, offering a short-acting method, preparing to give an injection).

After passing the examinations given by their preservice training institutions, students sit for the certification examination given by the COC. This test includes questions on FP, according to COC representatives. As with the nurses' certification examination, the COC's examination includes multiple-choice and short-answer questions, but it does not assess skills.

### **Medical Officers**

Department heads and lecturers at university schools of medicine reported that two of their training goals for medical officers are (1) to provide basic knowledge of LA/PMs, and (2) to give students an opportunity to observe and assist with all LA/PM procedures. One department head said, "I am the greatest promoter of family planning," while a lecturer stated, "Family planning has not been a priority, but now we need to emphasize [it]." One respondent reported, "Family planning has been delinked from the mainstream medical health service and has been left to the nursing domain."

#### ***Theoretical Study: RH/FP***

According to one of the curriculums used by the University School of Medicine, the reproductive and urinary system is allocated five units in both years 2 and 3 of training; the junior clerkship in obstetrics and gynecology is allocated five units in Year 4; the senior obstetrician-gynecologist clerkship is allotted six units in Year 6. The curriculum does not indicate how many hours are allotted to FP.

Of the three institutions interviewed about theoretical study, one was unable to specify how much time was allocated to FP theory; one reported that FP theory was covered in two hours; the third reported that 11 weeks were allocated to FP. One lecturer indicated that the time allotted to FP theory was inadequate, while another, from a different institution, felt that it was adequate.

#### ***Skills Labs***

Respondents from two of the three institutions reported that they did not allocate time for a skills lab rotation. In one case, the lab was under construction; in the other, medical students were not expected to rotate through the skills lab. One institution had a skills lab rotation for medical students, but the lab was not equipped for LA/PM practice. Furthermore, logbooks do not permit documentation or assessment of practice with models; they only record clinical rotations. In other words, medical students do not currently use skills labs to acquire LA/PM skills.

In general, the assessment team found that medical students had less access to skills labs for LA/PMs than did postgraduate students. Teachers at two universities said that labs were used to teach FP procedures, but that those labs were only for postgraduate students.

The lack of skills labs and support from logbooks clearly affects what occurs during clinical practice. According to best practices, to gain proficiency in LA/PMs, new providers should first master a skill on anatomic models and then work with supervision on clients (Schaefer, 2005; The ACQUIRE Project, 2008; Implants Toolkit Working Group, 2010).

#### ***Clinical Practice***

Respondents from two institutions reported that two weeks were allocated to FP clinical practice; they both recommended that this time be increased to four weeks. The respondent from the third institution could not recall how much time was allocated to FP clinical practice but felt that the gap between training and clinical practice was large, given the large number of students and the limited number of clients seeking LA/PMs; the respondent reported that students sometimes compete for opportunities to insert IUCDs and implants.

Teaching staff from all three institutions reported that students receive logbooks in which to document clinical practice. Students from at least one institution are expected, at minimum, to observe, assist, and perform FP procedures under supervision, as per Table 6. The logbook of another institution allows students to rotate and observe procedures, but not to perform FP procedures under supervision.

**Table 6. FP procedures to be observed, assisted, or performed by medical students**

Procedure	No. of procedures		
	Observed	Assisted	Performed
Speculum examination	2	0	5
Pap smear	2	1	3
Insertion of IUCD	2	0	3
Removal of IUCD	2	0	3
Insertion of implants	1	0	0
Removal of implants	1	0	0
Minilaparotomy, BTL	4	1	0
Laparoscopy, BTL	1	0	0

As can be seen in Table 6, the logbook does not require students to assist with most LA/PM procedures, but they are expected to perform three IUCD insertions and three removals. While medical students are expected to observe one implant insertion and one removal, they are not required to assist with or perform implant insertions or removals. Further, students are to assist with just one BTL by minilaparotomy and to perform no BTLs. No provision is made for male sterilization.

Department heads and lecturers feel that most students are exposed to LA/PMs but that many do not have the chance to practice the related skills. Students who gain practical LA/PM skills, according to several lecturers, are those with interest and initiative. In many cases, lecturers are not themselves skilled in providing LA/PMs; also, they may not have up-to-date information on contraceptive technologies. When asked how newly qualified doctors would acquire FP skills, one respondent suggested that medical officers spend part of their internship at an FP clinic.

Students said they expected to be competent to provide a range of FP methods when they qualified. These expectations, however, are not being met, because most medical students are only expected to observe procedures.

Clinical practice can be costly for preceptor sites. They must provide contraceptives, medical equipment, and medical supplies. To some extent, these costs are passed on to students in the form of fees.

### ***Student Assessment***

According to the curriculum for medical students developed by Moi University (2002), human anatomy, pharmacology, and medical physiology are examinable subjects for Year 2, each with a three-hour written examination, a 15–20 minute oral examination, and a lab-based practical assessment; there is no focus on FP. In Year 6, examinations in RH and non-RH specialties include a three-hour written examination, a 15–20-minute oral examination, and a one-hour clinical examination, where students are given time to assess a client and make a management plan before discussing the case with a team of internal and external examiners.

Procedures identified in logbooks are continuously assessed, and students must meet logbook requirements before they can sit for annual examinations. Logbooks, however, are not competency-based; they merely record the number of tasks observed or performed. Furthermore, logbooks do not address practice with models. Despite all of this assessment, none of the institutions assess student competence in LA/PMs.

## **Conclusions**

The team's assessment visits and interviews highlighted a number of challenges that preservice institutions face in balancing theoretical inputs with practical skills building. These conclusions apply to students training to be nurses, nurse-midwives, clinical officers, and medical officers:

- Attention to FP in general and to skills acquisition in particular varies significantly across institutions; time allocations are not standardized.
- Too little time is allocated for skills labs and clinical practice.
- Clinical instructors have little incentive to work with students in skills labs.
- Few instructors are available to work with students in skills labs.
- Throughout the system, student-to-instructor ratios are very high, exceeding recommendations by councils such as the NCK and the COC.
- The supply of skilled and motivated lecturers and preceptors is inadequate.
- During clinical practice, there is little communication between preceptors and students, and preceptors often do not provide adequate follow-up.
- Preservice training programs do not use a competency-based training approach. The system does not recognize that the number of procedures needed to master clinical skills depends on each trainee's skill level.
- Assessment focuses on students' knowledge, not on skills acquisition.
- Preservice training programs do not ensure that the contraceptives, anatomical models, medical equipment, instruments, and expendable supplies necessary for students to practice the provision of LA/PMs are available.

## Question 2: How Prepared Are Skills Labs to Provide Students with Quality LA/PM Practice?

According to best practices, skills labs are an important component of preservice FP education because they provide hands-on experience before students interact with clients (Schaefer, 2005; The ACQUIRE Project, 2008; Implants Toolkit Working Group, 2010). This kind of practice is particularly important for LA/PMs, since these FP methods involve invasive procedures. During the assessment, representatives of two regulatory bodies acknowledged the importance of skills labs and recognized that their agencies play an important role in ensuring that such labs are available and well-equipped.

The team visited 12 MTCs and five university schools of medicines. One purpose of those visits was to examine the extent to which skills labs were well-equipped for FP and for LA/PM clinical practice.

It is important to note that the skills labs at both the MTCs and the medical schools are designed for teaching a range of medical procedures, not just those related to FP.

Table 7 summarizes the findings regarding skills labs.

**Table 7. Availability of skills labs at selected MTCs and university schools of medicine**

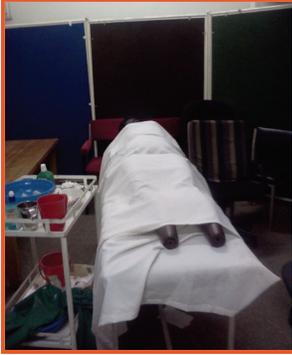
Type of Institution	No. visited	No. with skills lab	No. with functional skills lab	No. reporting use of skills labs for FP and LA/PM training
<b>MTCs</b>				
Public	9	8	8	7
Private/NGO	3	2	2	1
<b>University schools of medicine</b>				
Public	4	4	3	2
Private/NGO	1	1	1	1

### MTCs

Skills lab training is gaining importance at MTCs. In the new MTC curriculum guide for the diploma in clinical medicine and community health (COC, 2011), the skills lab has been adopted as an educational strategy to encourage active learning. The guide states that skills labs are an integral part of training, augmenting hospital-based bedside teaching and apprenticeship as students are introduced to clinical skills. According to the MTC curriculum guide, the role of the skills lab is to:

- Create a base from which students can learn and experience in a patient-free environment the virtual feeling of performing various clinical procedures
- Provide an opportunity to practice and master clinical skills without ethical and medico-legal implications
- Enhance teaching and learning by providing multimedia facilities and facilities for small-group, student-centered, computer-assisted learning
- Enhance peer teaching by students
- Introduce OSCEs into student assessment

Despite this new emphasis on skills labs, many lecturers reported that neither examinations nor logbooks cover student skills related to LA/PM procedures. At the same time, however, OSCEs do include FP procedures for short-acting methods.



**Skills lab set up for a demonstration**  
Photo: Ominde Japhet Achola/EngenderHealth

### ***Status of Skills Labs at MTCs***

Ten of the 12 MTCs visited for this assessment had functional skills labs; only eight of the 12 were using these labs for training in FP, including LA/PMs. Some facilities had both a skills lab and a separate demonstration room where some RH interventions were taught. Nearly all MTC labs reported having the capacity to set up four workstations. In general, skills labs are to be shared by students from both the clinical medicine and the nursing departments.

One challenge for MTCs is the limited capacity of the skills labs. Seven of the labs visited were small, with insufficient staff to support the number of students per class. One lecturer stated, “The facility is small for up to 60 students rotating in the lab.... This makes it difficult for them to see what is really happening.” In such situations, students have difficulty following the steps of the procedure being demonstrated. One lab was reportedly so small for the number of students being trained that students had to move to an open field outside the building for demonstrations. At one site, the demonstration room was spacious and had good natural lighting; however, it was cluttered with equipment and furniture that were being stored there temporarily. The assessment team noted that four labs needed renovation because of water damage or other structural problems.

### ***Supplies and Equipment in Skills Labs***

Skills labs in MTCs face a number of challenges related to supplies and equipment, especially for LA/PMs. There are inadequate contraceptives, medical equipment, instruments, and expendable supplies to ensure that procedures can be effectively demonstrated, practiced, and mastered by students.

In addition, access to anatomical models is severely insufficient. Of the nine public-sector MTCs that participated in the assessment, only five had one or two models for IUCD insertion and removal. One student reported, “The model is plastic, and it is now torn; you can’t practice on it.” Public facilities that did not have models reported that they borrow them from a nearby decentralized training center. Only one of nine public-sector MTCs had an appropriate arm model for implant insertion and removal. None of the NGO training institutions had a model for IUCD insertion and removal or an arm model for implant insertion and removal.



**Arm model used at one of the skills labs**  
Photo: Mercy Wahome and Humbule Mohamed/EngenderHealth

IUCD insertion and removal kits were available at seven of nine public MTCs. However, most facilities have just one kit. One had two kits, and another had three. Only one of the nine public-sector institutions had an implant insertion and removal kit. Other MTCs reported that they usually borrow kits from staff in the nearby clinical area. Because the number of kits is inadequate, only a limited number of workstations can be set up. The number of students rotating through the labs ranges from 20 to 60; however, the lack of IUCD and implant insertion and removal kits limits the labs' ability to operate at capacity. While samples of contraceptives and other supplies are available at most skills labs, none had instruments for practicing permanent methods. One student reported that they received only written handouts about permanent methods.

No training materials were observed in any labs, apart from a few posters, only one of which related to FP. However, lecturers reported that checklists and other resources were available to students elsewhere—for example, in a clinical procedure manual for nursing. None of the skills labs had access to or used computer-based learning programs.

## University Schools of Medicine

### *Status of Skills Labs at University Medical Schools*

Functional skills labs were available at three university schools of medicine, under construction at a fourth, and not available at a fifth. At the three universities with functional skills labs for medical students, the basic infrastructure was adequate, since they were recently established. Two of the



institutions had spacious labs with several workstations, good ventilation, natural lighting, and at least one source of running water. According to a representative of one of the institutions that had a functional lab, the lab has the capacity for four workstations at one time.

#### **Orderly storage in a skills lab**

Photo: Ominde Japhet Achola and Jones Abisi/EngenderHealth

### *Supplies and Equipment in Skills Labs*

Each of the institutions with functional skills labs had one or two Zoe pelvic models for practicing (1) IUCD insertions and removals and (2) BTL. All of the Zoe models observed at the medical schools were in good condition. Only one institution had arm models for practicing implant insertion and removal, and those two models were in good condition. Overall, the number of models was very few compared with the number of students rotating through the skills lab. None of the institutions had a model for male sterilization.



#### **Pelvic model in a skills lab**

Photo: Mercy Wahome/EngenderHealth

Importantly, there were also not enough insertion and removal kits for practicing the provision of long-acting methods of contraception. IUCD insertion kits were observed in only one skills lab, and they were incomplete. Two labs had implant insertion and removal kits, but they were incomplete. Some respondents reported that when they train students in FP, they borrow kits from clinical sites at a nearby hospital. None of the four institutions with functional labs had instrument trays for BTL and male sterilization.

Only a few of the university medical schools had other types of training tools. Two institutions had both audiovisual equipment, such as televisions and video equipment, and computers for student use in a computer lab. However, none of the observers reported seeing videos or DVDs about FP or LA/PMs that students could use. Observers also did not note any print training materials, such as checklists for FP procedures, at any institution, although lecturers may bring such materials with them on practice days. Students would like to have greater access to audiovisual tools; for example, final-year students from the institution that does not allow medical students to use the skills labs identified the lack of models and videos as one of the challenges.

## Conclusions

The assessment highlighted a number of challenges with skills labs. These conclusions apply to students training to be nurses, nurse-midwives, clinical officers, and medical officers:

- Skills labs are not able to provide sufficient practice for students.
- Some training institutions do not have functional skills labs. For those that do have them, the labs are, in general, poorly maintained, too small for the number of students being trained, and ill-equipped for instruction in LA/PMs.
- Supplies and equipment are a serious concern in both MTCs and university schools of medicine. The supplies needed for practice are available in only limited quantities. In some cases, samples of contraceptives (e.g., IUCDs and implants) were available for demonstration and practice, and the skills labs had some expendable supplies (e.g., gloves, linens, dressings, syringes, disinfectants, hand soap), but the available equipment and supplies were not adequate for ongoing training and practice. Anatomical models are lacking. Moreover, insertion and removal kits for IUCDs and implants are in short supply and incomplete.
- Print and audiovisual teaching resources appear to be lacking.
- The number of workstations is too limited to support effective teaching and practice. In addition, little time is allocated to a skills lab rotation.
- Training institutions lack computers in skills labs, and the computer skills of instructors are limited. Thus, the institutions cannot take advantage of computer-based learning approaches.
- Training institutions vary in their commitment to skills labs in general and to their use for LA/PM instruction.

### Question 3: Are Students Trained for the LA/PM Tasks That They Are Expected to Perform?

Kenya's norms and standards for health care (MOH, 2005) require that qualified staff provide FP at all levels of the health system. According to these norms, short- and long-acting methods can be offered in level 2–6 facilities. Nurses, nurse-midwives, and clinical officers with appropriate basic training may provide the full range of short- and long-acting FP methods, and they can provide counseling for permanent methods. Permanent methods may be provided only by medical officers and medical specialists (ideally at Level 4 facilities and above) and by registered clinical officers with post-basic training in RH. Table 8 describes the levels of facilities within Kenya's health system.

**Table 8. Levels of facilities within Kenya's health system**

Level	Description of facilities
1	Community facilities
2	Dispensaries
3	Health centers, maternity homes, nursing homes
4	Subdistrict hospitals, some district hospitals
5	Provincial and regional referral hospitals, including some district hospitals
6	National referral hospitals

Source: MOH, 2005

This section explores the extent to which preservice training prepares nurses, nurse-midwives, clinical officers, and medical officers to provide FP services. The assessment team examined the following:

- Official expectations, as defined by regulatory bodies, national norms and standards, and training curricula
- Expectations of students held by preservice administrators and lecturers in regard to FP
- The opinions of students about their preparedness to provide FP
- The opinions of supervisors and clinical preceptors from facilities that receive recent graduates about the graduates' ability to provide expected FP services

#### **Nurses and Nurse-Midwives**

##### *Scope of Practice*

In *Scope of Nursing Practice* (2007a), the NCK establishes a minimum acceptable level of practice. According to its manual of clinical procedures (2009b), NCK expects nursing graduates of MTCs to:

- Provide comprehensive FP services (e.g., provide counseling, offer all relevant methods, provide follow-up, as needed)
- Discuss cultural, social, and psychological factors that affect FP use
- Apply FP counseling skills
- Describe all FP methods
- Give instructions for each method
- Assist clients to make informed choices
- Recognize the contraindications and side effects associated with each method

NCK's *Scope of Nursing Practice* further defines the scope of practice for the three types of nurses addressed here:

- **Registered nurses:** Registered nurses provide FP services, including short-acting methods (such as the pill, injectables, and condoms) and long-acting methods (hormonal implants and IUCDs). Registered nurses participate in clinical teaching and training of health personnel; they develop and implement education and training programs for nursing and other students.
- **Registered nurse-midwives:** In addition to their duties as birth attendants and as managers of emergency obstetric care, registered nurse-midwives counsel clients about FP methods and provide both short-acting and long-acting methods.
- **Registered community health nurses:** Community health nurses provide FP services, including short- and long-acting methods. They implement primary health care activities, including health promotion and counseling. They participate in clinical teaching and training of nurses, other health personnel, and nursing students at hospitals and rural health facilities.

According to NCK (2009b), the term *clinical procedures* refers to all procedures that a nurse performs at a health facility or in the community, as specified by NCK's scope of practice (2007a). Interviews with an NCK representative confirmed that students who receive a basic nursing diploma are expected to be competent in the provision of short- and long-acting FP methods, as expressed in its curriculum (NCK, 2009a) and in national guidelines (MOPHS, 2010).

The assessment team interviewed 12 department heads for nursing from public and private MTCs and universities. They unanimously reported that one of the aims of the basic nursing diploma is for students to gain competence in the provision of *all* short- and long-acting FP methods. However, not all methods receive the same level of attention (as indicated by the logbooks used for assessment). As one department head noted, "We want the students to be competent—for example, in the insertion of IUCDs.... We have a mannequin in the lab. However, implants are still a challenge."

### ***Expectations for Nurses and Student Preparedness***

By the time they receive their diplomas, nursing students should have acquired skills for providing short-acting methods; according to our investigation, graduates are comfortable providing those methods. Whether they acquire skills for long-acting methods depends on many factors. Most student respondents stated that they did not feel confident providing long-acting methods because they lacked experience with models. Furthermore, their clinical practice was inadequate. According to one final-year student, "Clients prefer qualified staff to insert the IUCD"; in other words, clients are reluctant to receive long-acting methods from nursing students. Two of 10 students reported having inserted a hormonal implant during clinical practice; only one of 10 had inserted an IUCD.

In focus group discussions, a majority of final-year students stated that they expected to be able to provide health education about FP to clients and community. In addition, several stated that they expected to be competent to offer all short- and long-acting methods. However, a majority of final-year students reported that they were not fully competent to provide all short- and long-acting methods. While they felt confident about providing the pill, injectables, and condoms, only three out of 10 reported that they felt confident about offering hormonal implants, and only two out of 10 felt confident about inserting IUCDs. When asked why they lacked confidence, a number mentioned that the procedures were not common and that they had not had a chance to practice. Others mentioned that sounding of the uterus, which is required for IUCD insertion, is difficult to master.

Students had a mixed reaction as to whether preservice training prepared them to provide a full range of short- and long-acting methods. A few students said their expectations were met, but the overwhelming majority stated that their expectations were only partially met:

- “The theory covered on family planning and then our practical attachment at the clinical area has made us ready.”
- “In certain instances, family planning methods such as the IUCD are not that frequent, so you end up getting out there without doing any IUD insertions or removals.”

Two of three newly recruited nurses interviewed reported that they could not offer any long-acting methods. One of these two further stated that her supervisor knew she could not offer those methods. Her supervisor reported that when a client requested a long-acting method, she would refer them to “more experienced colleagues.” The nurse who could offer long-acting methods had attended a post-basic RH course before placement.

According to the four supervisors interviewed, newly qualified staff should be able to provide all long-acting methods; clients expect that the provider who counsels them can also provide the FP method. However, one supervisor noted that most recent graduates are unable to provide long-acting methods. She indicated that, during the first three months of the graduates’ rotation in the maternal and child health/FP clinic, supervisors try to provide on-the-job training in long-acting methods, since graduates leave preservice institutions lacking competency. Another supervisor stated that “they come, and it’s like we start afresh.”

## **Clinical Officers**

### ***Scope of Practice***

Regulations for clinical officers (COC, [no date]) state that clinical officers may perform appropriate invasive surgical procedures in accordance with their training and area of specialization; these regulations encompass both IUCDs and hormonal implants. COC representatives reported that they expect clinical officers to acquire the knowledge, skills, and attitudes necessary to long-acting method provision, and the COC’s curriculum (2011) includes these methods.

COC representatives welcomed the idea of clinical officers providing permanent methods; they believed that with proper training, clinical officers would be equal to the task. However, a 2008 circular from the MOH listed surgical procedures that clinical officers could perform; it included neither BTL by minilaparotomy nor male sterilization.

### ***Expectations for Clinical Officers and Student Preparedness***

Interestingly, department heads for clinical medicine at MTCs reported varying FP expectations of clinical officers. Several of them said that they expect graduates to be able to provide the full range of short- and long-acting FP methods. However, one department head said that FP procedures requiring surgery received limited attention in the clinical officer course. Another department head said that FP received little attention; the various methods were only “touched on.” This last statement, which is contrary to the requirements of the national curriculum guide (COC, 2011), indicates the low level of importance that this particular college places on FP. Such views are likely to negatively influence the expectations of students. According to COC representatives, faculty members often believe that FP is the “business” of nurses; some clinical officer students interviewed for this assessment reflected this attitude.

Lecturers interviewed said that they preferred for clinical practice to be mentored by clinical officers or medical doctors. Most FP clinics, however, are in outpatient facilities managed by providers with nursing backgrounds. Lecturers believed that few clinical officers are posted to FP clinics; thus, they have few opportunities to practice FP skills. Lecturers also reported that newly graduated clinical officers are not expected to rotate through the FP clinic during their one-year internship.

Most clinical officer students who participated in the focus groups said that they expected to become competent in the provision of all short- and long-acting FP methods. Yet preservice training did not meet their expectations. Students across institutions reported that most FP methods were covered in theory only, with little or no practice. In several focus groups, students cited time as a major constraint. Only three out of 10 students reported that they felt competent to insert IUCDs. Of those who felt competent, some stated that they achieved competency by becoming involved in an outreach session or that they made time outside their normal schedule to go the clinic to seek clients. When asked to describe how to insert a hormonal implant, these more confident students correctly delineated the steps.

Some clinical officer students share the attitude that FP is the province of nurses. One of them stated that students “find it difficult to insert IUCDs because it is not really a clinical officer’s job.”

No newly qualified clinical officer was interviewed.

## **Medical Officers**

### ***Scope of Practice***

The curriculum for bachelor’s degrees in medicine and surgery developed by Moi University (2002) states that graduates of the program “should be able to apply knowledge of physical, chemical, biological, psychological, social, developmental, and environmental mechanisms in diagnosis, management, and prevention of illnesses, and apply the process of clinical reasoning in health among others.” FP is covered (1) under reproductive and urinary systems in years 2 and 3 and (2) in junior and senior clerkships in obstetrics and gynecology in years 4 and 6.

In years 2 and 3, the main objective is to equip students with knowledge of basic pathological sciences. In Year 4, the main objective of obstetrics and gynecology clerkships is to develop basic skills and attitudes relevant to history taking, physical examination, and investigation of common obstetric and gynecological conditions; students are expected to observe and participate in simple obstetric and gynecological procedures, including FP procedures. During the final year, medical students are expected to acquire competency in several areas, including FP provision.

The public sector expects that, upon completion of their internships, medical officers will post to health facilities (levels 4 and above) and will be competent to offer all FP methods, including LA/PMs (MOPHS, 2010).

### ***Expectations for Medical Officers and Student Preparedness***

Staff from medical schools and departments of obstetrics and gynecology had varying opinions and expectations about how medical students gain expertise in LA/PMs. Some department heads expected students to observe and practice the provision of permanent methods during obstetrics and gynecology internships. Others felt that LA/PMs should be addressed in postgraduate obstetric and gynecological training. A representative of the Kenya Medical Association noted that newly qualified graduates do not need to be competent in LA/PM procedures, since they receive more exposure to them during internships.

The assessment team reviewed logbooks used to assess newly qualified medical officers. Neither BTL by minilaparotomy nor male sterilization was listed among the procedures that medical officers must learn during internship. While the logbooks did specify that medical officers should assist with laparoscopies during internships, tubal ligation by laparoscopy is not commonly provided at Level 4 health facilities, where most doctors intern.

At one university, lecturers noted that FP content during internship varies, depending on an individual's level of interest. They reported that at one time, each student learned how to perform BTL by minilaparotomy during internship and performed (under supervision) at least 10 BTLs with local anesthesia; there was no focus on male sterilization. This training strategy was undertaken in the mid-1980s through a project initiated by a development partner, in collaboration with the MOH; once the project ended in the late 1990s, however, the strategy was not sustained, and the focus shifted to other priorities.

In focus group discussions, final-year students at two schools of medicine stated that by the end of their training, they expected to become competent in various FP methods; some felt that they would also be able to advise clients on FP methods. Medical doctors pursuing a postgraduate degree in obstetrics and gynecology at one school of medicine said that they were competent to offer BTL only under general anesthesia, not under local.

Like some clinical officer students, some medical students considered FP a nursing responsibility; in general, medical students did not pay much attention to FP unless they hoped to pursue a career in RH.

No newly qualified medical officer was interviewed.

## **Conclusions**

There is a disconnect between what is expected and what graduates are able to do as a result of preservice training. This lack of competence results in delays for clients, an overburdening of experienced medical personnel, and a backlog of work. Most importantly, it can affect the extent to which providers can assist clients to achieve their reproductive intentions.

### ***Nurses and Nurse-Midwives***

Recent nursing graduates and final-year students expressed a lack of confidence in their ability to provide IUCDs and implants. Supervisors reported that few recent graduates could perform IUCD- and implant-related procedures.

Some lecturers believed that nurses gain skills in long-acting methods in postgraduate settings. One lecturer stated, "Lecturers believe that students may undertake more training after they qualify, which is a negative attitude. As for me, I believe, why not equip them now and let the future [training involve] updates and new knowledge?"

### ***Clinical Officers***

Most clinical officer students expect to become proficient in the provision of long-acting methods. A perception persists, however, that FP is "not the clinical officer's job"; consequently, clinical medicine departments have focused principally on theoretical FP knowledge, with little skills building. While long-acting methods are sometimes demonstrated in skills labs, MTCs do not assess students' ability to perform procedures for long-acting methods. As a result, only three out of 10 final-year students felt

confident about inserting IUCDs. Only those students who participated in FP outreach or took the initiative to seek out clients interested in long-acting methods felt proficient in IUCD and implant skills. Also, FP clinical practice sites typically have few preceptors who are clinical officers. As a result, instructors with nursing backgrounds mentor clinical officer students; this arrangement is a source of discomfort for these students.

### ***Medical Officers***

The norms and standards for health service delivery (MOH, 2005) and the national FP guidelines (MOPHS, 2010) clearly state that medical officers are to provide all FP methods and handle complicated FP cases referred by other cadres. According to interviews with department heads and teaching staff, medical students may seek to practice female and male sterilization procedures during internship, depending on their interest. They are not, however, required to master these procedures. Preservice institutions do not currently prepare medical students to provide either BTL by minilaparotomy or male sterilization.

### ***All Cadres***

One finding about expected performance applied to all cadres examined. The assessment team concluded that the opinions and expertise of department heads may influence the importance given to FP by preservice administrators. Do department heads feel that FP is an appropriate instructional topic for the particular cadre? What is their level of knowledge about FP? Do they believe that the school can effectively train students in FP?



# RECOMMENDATIONS

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## Updating the Knowledge and Skills of Supervisors, Faculty, and Preceptors

- Update clinical skills and training skills at all training institutions to include LA/PMs.
- Conduct “positive change” workshops to address attitudes and values; investigate why the preservice system is not meeting LA/PM training needs, and create action plans to address those needs.
- Hire more lecturers and preceptors with updated FP skills to teach both theory and skills labs.

## Emphasizing Skills Acquisition for LA/PMs

- Increase attention to LA/PMs in MTCs and university schools of medicine.
- Incorporate permanent methods of contraception into the syllabus at schools of medicine.
- For all cadres, increase practice time in skills labs, clinical practice, and internships.
- Equip skills labs with adequate anatomical models, LA/PM kits, contraceptives, instruments, and supplies. Preservice institutions and the DRH should join forces to enable medical supply units, such as the Kenya Medical Supply Agency, to include MTCs in their distribution lists. Partnerships with existing RH programs could also increase resources.
- Ensure that skills labs are large enough to accommodate students who are observing and practicing.
- Ensure appropriate student-to-lecturer ratios (e.g., 5:1) in skills labs.
- Standardize the time allocated to skills labs, clinical practice, and internships across training institutions.
- Establish partnerships with providers of mobile outreach FP services; establish clinical practice programs for students within mobile outreach services.
- Address gaps between expectations of facility supervisors and what is being taught at training institutions.

## Improving and Updating Student Assessment

- Adopt a competency-based training and assessment approach (i.e., the number of procedures required to master LA/PM procedures depends on each trainee's skill level).
- Assess students' ability to competently perform LA/PM procedures.
- Instead of relying only on logbooks, use skills checklists to assess skills and competency and to record observations and practice.
- Link skills to be practiced in skills labs and clinical practice with an enhanced preservice FP curricula, examination requirements, and logbook check-offs.
- Test students on all FP methods, including the required skills.
- Include skills assessments in final student examinations through logbooks, checklists, return demonstrations, or performance at preceptor sites.



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