



# **ZAMBIA COLLEGE OF MEDICINE & SURGERY**

*Advancing Specialist Care & Professional Growth*

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Specialty Training Programme

Curriculum & learning guide

for

**FAMILY MEDICINE**

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## GENERAL INTRODUCTION

This Curriculum and Learning Guide describes the work and competence-based professional training programme for the Specialty Training Programme (STP) in Family Medicine (FM) in Zambia. The intended readership for the curriculum and guideline include the following:

- ✦ Trainees, host departments and managers of FM healthcare services;
- ✦ STP FM trainers, which includes all those involved in supervising, coordinating, assessing and delivering specialist education and training in Family Medicine;
- ✦ Academic, administrative and professional staff within Higher Education Institutions (HEIs), the Higher Education Authority (HEA), and the Zambia Qualifications Authority (ZAQA);
- ✦ Strategic partners involved in supporting FM care and the training of healthcare practitioners in its various related fields.

Zambia College of Medicine and Surgery (ZACOMS) advances professional training of medical specialists using the professional competence-based certification model beyond traditional university-based specialist training. It promotes specialist training as a vital pursuit for a successful professional medical career. The ZACOMS also promotes the increase of universal health coverage (UHC) by promoting equitable access to cost-effective quality specialist care as close to the family as possible for people in Zambia at all levels of socioeconomic status and geographical location. The ZACOMS certifies and admits members and/or fellows as specialists in a medical and/or surgical specialty in any of the various specializations of medicine and surgery.

The Zambia College of Medicine and Surgery (ZACOMS) oversees the training of Family Medicine specialists working through the Association of Family Physicians of Zambia (AFPZ).

Family Medicine encompasses the diagnosis, assessment and management of various medical and surgical disorders of the human systems. The STP FM training provides specialist training in Family Medicine. This is a relevant programme because research has shown that compared to other medical specialists, physicians who are given specialty training in primary care achieve better health outcomes for their patient populations at lower costs. In countries with higher percentages of practicing primary care physicians (e.g. Family Medicine physicians) this translates into longer lives and less health expenditures.

The STP FM will equip trainees with core competencies reflecting the wide array of medical and surgical specialties. They will be trained in critical areas of knowledge such as obstetrics, gynaecology, geriatrics, paediatrics, surgery, and internal medicine, to name a few. This will mean for every trainee who completes this programme, the population they serve will have gained access to a physician with various medical and surgical competencies. The population can also expect a physician with a holistic approach to their healthcare because Family Medicine as a specialty places an emphasis upon the patient as a unit member of a larger group including families, neighbourhoods, tribes, or communities. Accordingly, a graduate of this programme will not just treat the disease; instead she/he will treat the whole person. By doing this, the Family Medicine doctor imparts a thoughtful and specific cure that imbues wellness in ways beyond the patient's immediate health complaints; it often extends into behaviour changes or environmental awareness that can assist against recurrence. Given all this, a graduate of this programme will therefore be uniquely qualified to offer support to various medical and surgical specialties, improving outcomes in the management of a broad spectrum of pathology.

Graduates of the STP FM will be competent to meet the health needs of society at or below the district hospital level. They will have received advanced training in health sector leadership, administrative responsibilities, and education for fellow clinicians, so as to be of value to the promulgation and continued development of

the health sector for years to come. They will be lifelong learners committed to providing high-quality, evidence-based care to patients of all ages in the scope of primary care.

Additionally, because of their advanced competencies, STP FM graduates will be able to recognize complicated patient cases earlier and will be able to more effectively facilitate the transfer of these complex patients in a timely manner. In this way, they will help in reducing the number of patients pressing upon limited resources at tertiary care centres and by referring patients in need of those scarce resources in a timely manner. The overall efficiencies and effectiveness of the health system will therefore improve.

## **VISION**

Our vision is to be innovative in providing a teaching and support structure that will empower every trainee to excel in Family Medicine knowledge, skills and research through internal and external collaboration so as to be able to provide excellent clinical care for people across the entire spectrum of their lives. Additionally, by advocating for those who cannot advocate for themselves, we will call attention to disparities and inequities within the Health System and work to redress them. Ultimately, these actions will reduce the burden of morbidity and mortality.

## **MISSION STATEMENT**

The mission of the STP FM training in Zambia is to train specialists who shall endeavour to improve Primary health care services to all by providing safe, evidence based, humanistic, excellent specialist clinical care and leadership in primary care in the field of Family Medicine in an efficient and proficient manner to meet the needs of the Zambian community, and contribute to the field of Family Medicine in the region and globally. We will aspire to set the standard by which other programs are measured. Our graduates will value lifelong learning, and they will practice high-quality, compassionate, full-spectrum primary care which embodies Family Medicine.

## OUR VALUES

In line with our vision and mission, we affirm the following values:

- Professional excellence
- Integrity
- Sensitivity to reproductive health needs
- Interdisciplinary, inter institutional collaboration
- Continuous professional development
- Innovation
- Academic Excellence
- Self and peer review
- Service to the community with respect to Family Medicine
- Evidence-based medical practice
- Mentorship of fellow clinicians
- Leadership in primary care

## RATIONALE FOR THE SPECIALTY TRAINING PROGRAMME IN FAMILY MEDICINE

The STP FM aims to train specialists in Family Medicine in order to prepare them for specialist service in the healthcare system. The STP FM aims to bridge the critical shortage of Family Physicians by advancing professional training of Family Physicians using the competence-based certification model beyond traditional university-based specialist training. Simply put, this model works on the principle that every health facility equipped well enough to support a Family Medicine practice has the basic requirements to train a Family Physician. The STP FM curriculum is therefore informed by the training requirements of the Health Professions Council of Zambia (HPCZ), the professional creed of the Association of Family Physicians of Zambia (AFPZ) and is alive to the unique opportunities obtaining across the various training sites. The training programme encourages

self-directed, life-long learning, and student-centred training approaches while providing robust and structured guidance.

This curriculum provides a framework for the four year postgraduate specialty training and educational curriculum in Family Medicine. Trainees who successfully complete the requirements and meet the minimum standards set out in this curriculum should be expected to demonstrate competence in Family Medicine at specialist level.

### **AIMS**

The aim of the programme is to train clinically competent physicians who can care for people of all ages and provide comprehensive primary health care for the individual and family. The family physician will be equipped to provide high-quality care for patients of all genders and manage diseases of all parts of the body. This will be performed in the context of the patient's family and community, while also emphasizing disease prevention and health promotion. Through this training, the trainees will be equipped to manage district-level health systems, to educate fellow clinicians, and to provide leadership which will empower them to lead community-based research efforts.

### **Objectives of the Programme**

- Manage patients in the inpatient and outpatient settings in all primary care disciplines.
- Apply clinical methods and develop communication, counseling and consultation skills relevant to each phase of the consultation.
- Recognize, analyze and solve ethical dilemmas using ethical theories, principles, legislation, medico-legal rules and professional values.
- Apply evidence-based medicine and acquire skills for clinical decision making as well as reading and critical appraisal of the medical literature.
- Apply principles of community and family-oriented primary care.
- Apply principles of health care management and administration

The key outcomes are twofold as stipulated in Outcomes 1 and 2 below:

**Outcome 1. Show Mastery of and Apply the Sound Scientific Principles in the Practice of Family Medicine**

1. The graduate should be able to apply to Family Medicine practice biomedical scientific principles, method and knowledge relating to anatomy, biochemistry, cell biology, genetics, immunology, microbiology, nutrition, pathology, pharmacology and physiology. The graduate should be able to:
  - a) Explain normal human structure and function to the extent that it is relevant to Family Medicine.
  - b) Explain the scientific basis for common diseases and conditions' signs, symptoms and treatment to the extent that it is relevant to Family Medicine.
  - c) Justify and explain the scientific basis of common investigations for diseases and conditions to the extent that it is relevant to Family Medicine.
  - d) Demonstrate knowledge of drugs, drug actions, side effects, and interactions to the extent that it is relevant to Family Medicine.
  
2. Apply Behavioural and Sociology Principles to the Practice of Family Medicine
  - a) Explain normal human behaviour to the extent that it is relevant to Family Medicine.
  - b) Discuss psychological and social concepts of health, illness and disease to the extent that it is relevant to Family Medicine.
  - c) Apply theoretical frameworks of psychology and sociology to explain the varied responses of individuals, groups and societies to the extent that it is relevant to Family Medicine.
  - d) Explain psychological and social factors that contribute to illness, the course of the disease and the success of various medical and surgical interventions to the extent that it is relevant to Family Medicine.
  
3. Apply Population Health to the Practice of Family Medicine
  - a) Discuss population health principles related to determinants of health, health inequalities, health risks and surveillance to the extent that it is relevant to Family Medicine.
  - b) Discuss the principles underlying the development of health and health service policy, including issues related to health financing, and clinical guidelines to the extent that it is relevant to Family Medicine.



- c) Evaluate and apply basic principles of infectious and non-communicable disease control at community and hospital level to the extent that it is relevant to Family Medicine.
  - d) Discuss and apply the principles of primary, secondary, and tertiary prevention of disease to the extent that it is relevant to Family Medicine.
4. Apply Scientific Method and Approaches to Research at the Primary healthcare level.
- a) Evaluate research outcomes of qualitative and quantitative studies in the medical and scientific literature to the extent that it is relevant to Family Medicine.
  - b) Formulate research questions, study designs or experiments to address the research questions to the extent that it is relevant to Family Medicine.
  - c) Discuss and apply appropriate research ethics to a research study to the extent that it is relevant to Family Medicine.

## **Outcome 2. Competence, at mastery level, in Family Medicine Clinical Practice**

On successful completion of the work-based Family Medicine STP:

1. The trainees should have clinical and specialist expertise in Family Medicine, underpinned by broader knowledge, skills, experience and professional attributes necessary for independent practice;
2. The trainees should be able to undertake complex clinical roles, defining and choosing investigative and clinical options, and making key judgements about complex facts and clinical situations.
3. The trainees should contribute to the improvement of Primary Healthcare services in the context of the national health priorities, by means of outstanding scientific research and application of safe, high quality, cost effective, evidence based Family Medicine practice within the Zambian health system.
4. The trainees should possess the essential knowledge, skills, experience and attributes required for their role and should demonstrate:
  - ✦ A systematic understanding of clinical and scientific knowledge, and a critical awareness of current problems, future developments, research and innovation in Family Medicine practice, much of which is at, or informed by, the forefront of their professional practice in a healthcare environment;
  - ✦ Clinical and scientific practice that applies knowledge, skills and experience in a healthcare setting, places the patient and the public at the centre of care prioritizing patient safety and dignity and reflecting outstanding professional values and standards;

- ✦ Clinical, scientific and professional practice that meets the professional standards defined by the Health Professions Council of Zambia (HPCZ);
  - ✦ Personal qualities that encompass self-management, self-awareness, acting with integrity and the ability to take responsibility for self-directed learning, reflection and action planning;
  - ✦ The ability to analyse and solve problems, define and choose investigative and scientific and/or clinical options, and make key judgments about complex facts in a range of situations;
  - ✦ The ability to deal with complex issues both systematically and creatively, make sound judgements in the absence of complete data, and to communicate their conclusions clearly to specialist and non-specialist audiences including patients and the public;
  - ✦ The ability to be independent self-directed learners demonstrating originality in tackling and solving problems and acting autonomously in planning and implementing tasks at a professional level;
  - ✦ A comprehensive understanding of the strengths, weaknesses and opportunities for further development of Family Medicine as applicable to their own clinical practice, research, innovation and service development which either directly or indirectly leads to improvements in clinical outcomes and scientific practice;
  - ✦ Conceptual understanding and advanced scholarship in their specialism that enables the graduate to critically evaluate current research and innovation methodologies and develop critiques of them and, where appropriate, propose new research questions and hypotheses;
  - ✦ Scientific and clinical leadership based on the continual advancement of their knowledge, skills and understanding through the independent learning required for continuing professional development.
5. Once registered as a specialist in Family Medicine, a range of career development options will be available including sub-specialist training. Alternatively, others may opt to undertake further career development in post, as specialist, through structured Continuing Professional Development (CPD), provided by Accredited CPD providers. Specialist Family Physicians who have successfully completed the STP FM will be eligible to compete for available Consultant positions in Family Medicine.

The outcomes of the STP FM training are affiliated to the following curriculum outcome categories:

### **Category I: Scientific foundations**

**Goal 1:** Understand the normal structure and function of the human body, at levels from molecules to cells to organs, to the whole organism.

**Goal 2:** Understand the major pathological processes and their biological alterations.

**Goal 3:** Understand how the major pathologic processes affect the organ systems.

**Goal 4:** Analyse the relationship between social determinants of health and population health.

**Goal 5:** Understand the principles of scientific method and evidence-based public health including critical thinking.

### **Category II: Prevention**

**Goal 6:** Develop knowledge, skills, and attitudes to practice the basic principles of disease prevention.

**Goal 7:** Practice custom-made public health planning for long-range goals for the population.

**Goal 8:** Understand the planning for the health of communities and societies.

### **Category III: Communication and Interpersonal Skills**

**Goal 9:** Develop the knowledge, skills, and attitudes needed for culturally-competent care for communities and society.

**Goal 10:** Create and sustain a professionally and ethically sound relationship with communities in which one operates.

**Goal 11:** Work effectively with other providers in the health system.

**Goal 12:** Clearly communicate public health information in spoken and written form.

#### **Category IV: Information Management**

**Goal 13:** Use information and educational technology to facilitate research, education, and patient care.

#### **Category V: Ethics, Humanities, and the Law**

**Goal 14:** Develop a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to diversity.

**Goal 15:** Develop a critical understanding of the multiple factors that affect the practice of public health and research.

**Goal 16:** Incorporate ethical principles in public health practice and research.

#### **Category VI: Professionalism**

**Goal 17:** Develop healthy self-care behaviours and coping skills.

**Goal 18:** Responsiveness to the needs of communities and society.

**Goal 19:** Understanding of legal and regulatory requirements, as well as the appropriate role of the public health practitioner.

**Goal 20:** Accountability to communities, society and the profession.

#### **Category VII: Leadership & Management**

**Goal 21:** Develop interpersonal and communication skills that result in leadership in public health service delivery and health human resource management.

### **COMPETENCIES**

By the end of this training, it is expected that the trainees will acquire at a minimum the following overall competencies:

- Manages patients in the inpatient and outpatient settings in all primary care disciplines.

- Applies clinical methods and develops communication, counselling and consultation skills relevant to each phase of the consultation.
- Recognizes, analyzes and solves ethical dilemmas using ethical theories, principles, legislation, medico-legal rules and professional values.
- Applies evidence-based medicine and acquires skills for clinical decision making as well as reading and critical appraisal of the medical literature.
- Applies principles of community and family-orientated primary care.
- Applies principles of health care management and administration

## **ADMISSION CRITERIA TO THE SPECIALTY TRAINING PROGRAMME IN FAMILY MEDICINE**

All applicants to the STP FM must possess a primary qualification in medicine, that is, Bachelor of Medicine and Bachelor of Surgery (MB ChB) or equivalent, from a recognized university. Additionally they must have completed internship and retain full registration and a practising licence issued by the Health Professions Council of Zambia. Other Ministry of Health policies and directives, for example, completion of rural posting, may also apply.

In addition to the above guidelines, for one to be admitted into the STP FM of the Zambia College of Medicine and Surgery offered in conjunction with the Association of Family Physicians of Zambia (AFPZ), candidates will either follow the direct or indirect entry pathway—depending on their prior qualifications as outlined below:

### **A. Direct Entry:**

Candidates, who possess a basic medical degree (MBChB) and seek to be admitted into the Family Medicine Specialist Training Programme, will be required to:

- Have completed internship with successful rotations in all the four major clinical disciplines (Internal Medicine, Paediatrics and Child Health, Obstetrics & Gynaecology and General Surgery)

- ii. Have worked at least for one year at the level of Senior House Officer (SHO)/SRMO
- iii. Have met all other Ministry of Health requirements for undertaking post-graduate training (e.g. have served the required number of years post qualification and have successfully completed rural posting or attachments)

#### **B. Indirect Entry:**

Candidates who wish to be admitted to the STP FM Programme through the indirect entry pathway will be required to:

1. Hold a Postgraduate qualification in any Family Medicine related field at Masters or PhD level or their equivalents which the Zambia College of Medicine and Surgery will deem equivalent to a given component of the STP FM programme. These candidates will not be required to take the respective courses during the training on the STP FM programme.
2. Be clinical Post-Graduation training Candidates (MMed or STP in other disciplines) that show proof of prior experience and/or exhibit demonstrated skill in certain disciplines for which upon successful admission they can be considered for exemption for that component.

### **CURRICULUM DESIGN/MODEL OF THE SPECIALTY TRAINING PROGRAMME IN FAMILY MEDICINE**

The STP FM Curriculum is a work and competence-based professional training situated in an accredited training facility managed by Family Medicine specialists with oversight by the Zambia College of Medicine and Surgery (ZACOMS) working through the Association of Family Physicians of Zambia (AFPZ). This curriculum is based on a process model of curriculum and is designed to be flexible and open ended rather than predetermined; maximizing the potential for growth and development.

During the STP FM programme the specialty registrar is an integral member of the clinical work of the Primary Healthcare team in which they are training to gain the required clinical experience and competence. The STP FM programme is a work based professional competence-based training leading to the award of the Certificate of Completion of Specialty Training (CCST) by the Zambia College of Medicine and Surgery (ZACOMS). Graduates are then eligible to apply to the Health Professions Council of Zambia to enter the Specialist Register in Family Medicine.

### **TEACHING METHODS IN THE SPECIALTY TRAINING PROGRAMME IN FAMILY MEDICINE**

The STP FM training is a work-based professional competence-based programme and should encompass diverse teaching and learning approaches that are appropriate for the target educational domain, i.e., cognitive (knowledge), psychomotor (practical), or affective (attitude) domain. The teaching methods may include, but not limited to, the following: expository lectures, tutorials, seminars, practical classes, skills laboratories, clinical demonstrations, clinical clerkships (bedside teaching, ward rounds, ambulatory care teaching, operating theatre experience, post-mortem, and on-call duties), field and community based learning, and ICT supported learning experiences.

The Health Professions Specialty Training Guidelines for Zambia and Zambia College of Medicine and Surgery Society Objectives and By-Laws provide detailed guidance to the trainee about the STP and ZACOMS, respectively.

## SPECIALTY TRAINING PROGRAMME IN FAMILY MEDICINE CURRICULUM STRUCTURE AND MAP

Below is the structure of the training program showing the course titles, course codes and duration of time to be spent in each clinical rotation. The course codes have the abbreviations FAM, which represents the unit, Family Medicine, under which the program will be offered.

### Curriculum Map for the STP FM Programme

| Year  | Clinical rotations/Family Medicine modules                          |                              |                       |                             |                              |                             |                                       |                             |                            |                       |
|---|---|------------------------------|-----------------------|-----------------------------|------------------------------|-----------------------------|---------------------------------------|-----------------------------|----------------------------|-----------------------|
| 1   | Fundamentals of Family Medicine - FAM 8010                          |                              |                       |                             |                              |                             |                                       |                             |                            |                       |
|   | Obstetrics and Gynaecology (12 weeks)                               |                              |                       | General Surgery (12 weeks)  |                              |                             | Internal Medicine (12 weeks)          |                             | Paediatrics (12 weeks)     |                       |
|   | Basic Sciences in Family Medicine<br>Foundations of Family Medicine |                              |                       |                             |                              |                             |                                       |                             |                            |                       |
| 2   | Principles and Practice of Family Medicine - FAM 8020               |                              |                       |                             |                              |                             |                                       |                             |                            |                       |
|   | Internal Medicine (12 weeks)  |                              |                       | Paediatrics (12 weeks)      |                              |                             | Obstetrics and Gynaecology (12 weeks) |                             | General Surgery (12 weeks) |                       |
|   | Principles and Practice of Family Medicine                          |                              |                       |                             |                              |                             |                                       |                             |                            |                       |
| 3   | Specialty Care in Family Medicine - FAM 8030                        |                              |                       |                             |                              |                             |                                       |                             |                            |                       |
|   | Paediatrics (8 weeks)   | Emergency Medicine (4 weeks) | Neurology (2 weeks)   | Internal Medicine (8 weeks) | Infectious Disease (4 weeks) | Orthopaedics (2 weeks)      | General Surgery (8 weeks)             | Psychiatry (4 weeks)        | OBGYN (8 weeks)            |                       |
|   | Specialty Care in Family Medicine                                   |                              |                       |                             |                              |                             |                                       |                             |                            |                       |
| 4   | Leadership in Family Medicine - FAM 8040                            |                              |                       |                             |                              |                             |                                       |                             |                            |                       |
|   | OBGYN (6 weeks)   | Paediatrics (6 weeks)        | Elective #1 (4 weeks) | District Rotation (8 weeks) | General Surgery (6 weeks)    | Internal Medicine (6 weeks) | Elective #2 (4 weeks)                 | Ear, Nose, Throat (4 weeks) | Ophthalmology (2 weeks)    | Dermatology (2 weeks) |
|   | Healthcare Management in Family Medicine                            |                              |                       |                             |                              |                             |                                       |                             |                            |                       |
| <p><i>Trainee chooses 2 of the following electives*:</i></p> <ul style="list-style-type: none"> <li>• Geriatrics in Family Medicine</li> <li>• Advanced Point-of-Care Ultrasound</li> <li>• Adult Critical Care</li> <li>• Principles and Practice of Rural Health Care</li> <li>• Palliative Care in Family Medicine</li> <li>• Sports Medicine</li> <li>• Neonatology/NICU</li> </ul> <p>* While trainees may choose 2 of the above electives, they may also choose to reinforce their understanding of a previously-completed rotation</p> |   |                              |                       |                             |                              |                             |                                       |                             |                            |                       |

### Legend

|                           |                        |                         |
|---------------------------|------------------------|-------------------------|
|                           |                        |                         |
| <i>Clinical rotations</i> | <i>Modular courses</i> | <i>Elective courses</i> |



## **DURATION OF THE PROGRAMME**

This will be a four-year programme. Trainees will be expected to study the following clinical domains:

1. Internal Medicine, including Infectious Disease (HIV/AIDS, TB, STIs, malaria, etc.)
2. Child Health/Pediatrics
3. Women's Health/Obstetrics and Gynecology
4. General surgery
5. Anesthesia
6. Ear, nose, throat (ENT)
7. Ophthalmology
8. Dermatology
9. Orthopedics/Sports Medicine (non-operative orthopedics)
10. Emergency Medicine
11. Mental Health/Psychiatry

In addition, the STP in Family Medicine will cover the following components:

1. Applied basic sciences
2. Clinical practice/rotations in the various disciplines that make up the mainstay of Family Medicine practice
3. Educational activities in the field of Family Medicine
4. The development of General Professional Skills.

## **PROFESSIONAL EXPERIENCE**

The trainees will be required to work in a trainee post in an HPCZ-accredited training facility for the 4-years of the program. The initial training sites will be based at district-level hospitals in Lusaka, with the future goal of expansion to facilities in other provinces of Zambia. During these 4-years, the trainees will rotate between other facilities as necessary in order to achieve competency in the clinical skills expected of a Family Physician. The specific rotations will be finalized at the

particular training complex and with regard to the specific STP student's learning needs.

At the accredited training facilities, the trainee will work under the supervision of a Family Physician and/or partnering specialists. Trainees are expected to participate in calls at their hospital and to participate in a continuity clinic for the duration of their studies.

### **PORTFOLIO OF CLINICAL FAMILY MEDICINE TRAINING AND EXPERIENCE**

A portfolio will be completed for each year of the program that records the clinical training and experience. This must be submitted during the contact session of the subsequent year.

The portfolio has sections that focus on:

- Verification of professional experience at different departments and facilities
- Record of educational meetings between student and supervisor
- Evidence of workplace-based learning
- Audit of clinical competency in core clinical skills
- Report on students' performance during the year or rotation

## Course outline

**Table 1 Roadmap of the Family Medicine Curriculum**

| YEAR   | Course Description/code/breakdown                                   | Credits |
|--------|---|---------|
| Year 1 | Fundamentals of Family Medicine - FAM 8010                          | 218     |
|        | A. Taught: Foundations of Family Medicine                           |         |
|        | B. Taught: Basic Sciences in Family Medicine                        |         |
|        | C. Introduction to Clinical Practice in Family Medicine (Rotations) |         |
| Year 2 | Principles and Practice of Family Medicine - FAM 8020               | 218     |
|        | A. Taught: Principles and Practice of Family Medicine               |         |
|        | B. Clinical Practice in Family Medicine (Rotations)                 |         |
| Year 3 | A. Specialty Care in Family Medicine - FAM 8030                     | 218     |
|        | B. Taught: Specialty Care in Family Medicine                        |         |
|        | C. Specialty Practice in Family Medicine 1 (Rotations)              |         |
| Year 4 | A. Leadership in Family Medicine - FAM 8040                         | 218     |
|        | B. Taught: Healthcare Management in Family Medicine                 |         |
|        | C. Specialty Practice in Family Medicine 2 (Rotations)              |         |
|        | D. District Rural Clinical Rotation                                 |         |
|        | E. Elective Courses*  |         |
|        | Potential Clinical Elective courses* (any two)                      |         |
|        | 1. <i>Principles and Practice of Rural Health Care</i>              |         |
|        | 2. <i>Palliative Care in Family Medicine</i>                        |         |
|        | 3. <i>Sports Medicine</i>   |         |
|        | 4. <i>Neonatology/NICU</i>  |         |
|        | 5. <i>Geriatrics in Family Medicine</i>                             |         |
|        | 6. <i>Advanced Point-of-Care Ultrasound</i>                         |         |
|        | 7. <i>Adult Critical Care</i>                                       |         |

## Delivery method

The didactical approach for the program is based on student-centred learning and requires internal motivation and a pro-active attitude from trainees, who will be guided by tutors/moderators for optimizing learning experiences. Innovative teaching and learning methods, including small group discussion and student driven presentations are combined with more traditional methods like lecturing. The trainees are expected at some point to teach undergraduate students, supervise interns and acquire and further develop communication, teamwork, leadership and management skills, as appropriate for a medical specialist.

## ASSESSMENT IN THE SPECIALTY TRAINING PROGRAMME IN FAMILY MEDICINE

Progression to the next level of training is NOT automatic and is dependent on the trainee satisfying all the competency requirements of each defined level as per this curriculum and learning guide. Progression is based on passing both clinical and written examinations. The assessment framework is designed to provide a coherent system of assessing both formative and summative assessment which are workplace based and in examination settings.

Each training site must ensure that they use valid, reliable and appropriate methods for assessing the knowledge, clinical skills and attitude domains. The continuous assessments and final annual assessments are weighted at 40% and 60% of the final mark of Annual Review of Competence Progression, respectively. Assessment methods may include, but are not limited to, the following: Log of experiences and procedures completed, case reports, portfolios, project reports, multiple choice questions, essay questions, short answer questions, modified essay questions, short and long cases, objective structured clinical examinations (OSCE), practical examinations, objective structured practical examinations (OSPE), Mini-clinical Examination (MiniCEX), and Viva Voce, etc.

It is emphasized that marks from theory examinations **may not** compensate for poor scores in the clinical examinations; Students **MUST** pass the clinical examinations in order to progress to the next stage of training or completion.

### **End of year examinations**

Progression from year 1 to year 4 is based on satisfactory continuous assessments and achieving the pass mark at the end of year examination.

### **Final examinations**

Final examinations will be taken at the end of each year.

## Continuous assessment

Continuous assessment constitutes 60% of the overall mark of the final examination. The progress will be recorded in a portfolio, including the following: rotational evaluations, multiple choice questions (MCQs) at end of each term, viva voce examination per term, clinical medicine monthly tests (data interpretation, spot diagnoses, clinical scenarios, long case, short cases, MCQs) and instructor evaluations.

## Examinations

The final examination carries 40%. The structure of the examination will be as follows:

- Written paper comprising MCQs, clinical scenarios and data interpretation, OSCE, traditional long and short cases, picture tests, etc.

| Assessment   | Knowledge, Skill and Attitude Domain | Examining Body                           |
|--|--------------------------------------|--|
| Formative Workplace Based Assessments (every 4 to 6 months)                              | Outcome 1 & 2                        | Training Site                            |
| Annual Review of Competence Progression (annually, at the end of each academic year)     | Outcome 1 & 2                        | Training Site in conjunction with ZACOMS |
| ZACOMS Part 1 Examination (end of year 1)  | Outcome 1                            | ZACOMS                                   |
| ZACOMS Certificate of Completion of Specialist Registration Examinations (end of year 4) | Outcome 2                            | ZACOMS                                   |

A candidate shall be allowed a maximum of three attempts for ZACOMS Part 1 and/or Part 2 Examinations. Candidates must have submitted a completed log book to be eligible to attempt the ZACOMS Part 2 Examination.

For ease of tracking progress and planning for General Surgery care, all STP GS trainees will be registered with ZACOMS and AFPZ for the duration of their training.

### GRADING SCHEME

The STP FM Curriculum and Guide are the basis for all specialty training which contextualize the standards of proficiency set down by the Zambia College of Medicine and Surgery (ZACOMS) in consultation with the Association of Family Physicians of Zambia (AFPZ) in a way that is accessible to the profession and the public. The Certificate of Completion of Specialist Training (CCST) is not graded. Separate assessments and examinations may be graded to show the level of achievement of the trainee in a particular course or assignment

#### Assessment of Attainment of Competence in an Academic Subject

| Status & Level    | Description of Competence Features   | % Range       |
|-------------------|--|---------------|
| Outright Fail [D] | <ul style="list-style-type: none"> <li>Has poor and inaccurate command of the subject vocabulary</li> <li>Has poor and inaccurate command of the concepts (knowledge, skills and attitudes) of the subject across a broad range of topics.</li> </ul>  | 44.9% & Below |
| Bare Fail [D+]    | <ul style="list-style-type: none"> <li>Has the basics of subject vocabulary</li> <li>Has the basics of concepts (knowledge, skills and attitudes) of the subject across a broad range of topics</li> <li>Unable to transfer and apply knowledge, skills and attitudes of the subject in a range of situations.</li> <li>Unable to exercise independent judgement in a range of situations</li> </ul> | 45 – 49.9     |

|                         |  |             |
|-------------------------|--|-------------|
| Clear Pass<br>[C]       | <ul style="list-style-type: none"> <li>• Has sound command of subject vocabulary</li> <li>• Has sound command of concepts (knowledge, skills and attitudes) of the subject across a broad range of topics</li> <li>• Able to formulate responses and demonstrate skill and exhibit appropriate attitude in well-defined and abstract problems/professional settings across a broad range of topics of the subject</li> </ul> | 50 – 64.9   |
| Meritorious Pass<br>[B] | <p>All of above in level 3 and:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Able to transfer and apply knowledge, skills and attitudes and exercise significant independent judgement in a broad range of topics of the subject</li> </ul>   | 65 – 74.9   |
| Distinction Pass<br>[A] | <p>All of the above in level 4 and:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Displays mastery of complex and specialised areas of knowledge, skills and attitudes in a broad range of topics of the subject.</li> </ul>   | 75% & Above |

## COURSE CONTENT

### Year 1

**Course Code**        **FAM 8010**

**Course Title**        **Fundamentals of Family Medicine**

### RATIONALE

This course will span the first year of STP training and will help provide the foundation upon which the Family Medicine trainee will begin to acquire the competencies necessary to function independently within the clinical setting. The lecture curriculum is designed to introduce trainees to the medical knowledge necessary for sound clinical decision-making as a family physician. In the clinical teaching setting, the trainee will be part of a multidisciplinary team dedicated to developing and advancing the patients' care plans.

### COURSE AIM

The overall goal of the Fundamentals of Family Medicine course will be for the Family Medicine trainees to be introduced, through both classroom education and clinical experience, the skills necessary to independently diagnose and manage common medical problems in both the inpatient and outpatient settings.

### OBJECTIVES

By the end of the Fundamentals of Family Medicine course, the trainee will be able to:

1. Perform a thorough, complete, accurate, and reproducible Biopsychosocial history and physical exam.
2. Demonstrate broad based knowledge and understanding of the basic sciences relevant to the principles and practice of family medicine.
3. Develop a complete differential diagnosis and a reasonable diagnostic impression for both inpatient and outpatient settings.
4. Design an appropriate management plan for patients in both inpatient and outpatient settings.



5. Demonstrate basic skills in ability to build rapport with patients and use effective doctor-patient communication
6. Demonstrate the ability to effectively problem-solve in clinical scenarios
7. Demonstrate skill in performing basic point-of-care ultrasound scans in the acute care setting

# COURSE CONTENT

## YEAR 1

### 1. FOUNDATIONS OF FAMILY MEDICINE

#### a. Internal Medicine

- i. Cardiology: HTN urgency, HTN emergency; Shock (types, management); Deep Venous Thrombosis (DVT), Part 1; DVT, PE Part 2 with anticoagulation; DVT, PE Part 3 with anticoagulation; EKG Part 1; EKG Part 2; Atrial fibrillation; Valvular heart disease; Hypertension; Peripheral arterial disease; Abdominal Aortic Aneurysm; Common arrhythmias; Congestive Heart Failure; Coronary artery disease; Reading Chest X-rays; Dyslipidaemia; Syncope
- ii. Gastroenterology: Pancreatitis; Non-alcoholic fatty liver disease; Celiac disease; Epigastric pain (GERD, PUD, functional dyspepsia); Viral hepatitis; Upper and lower GI bleed; Cholecystitis and cholelithiasis; Irritable Bowel Syndrome; Cirrhosis; Inflammatory Bowel Disease
- iii. Pulmonary: Interpretation of PFTs (spirometry); Chronic Obstructive Pulmonary Disorder; Asthma and status asthmaticus; Sleep disorders; Pulmonary Hypertension; Restrictive lung disease; Acid/base disorders
- iv. Endocrine: Diabetes mellitus, chronic care 1; Diabetes mellitus, chronic care 2; Hyperthyroidism, hypothyroidism, and thyroid nodules; Pituitary, hypothalamic, and adrenal disorders; Obesity
- v. Genitourinary: Acute kidney injury; Potassium disorders; Male and female sexual disorders; Incontinence and voiding dysfunctions; Chronic kidney disease; Benign prostatic hypertrophy; Sodium disorders; Acute cystitis/pyelonephritis; Renal colic/nephrolithiasis; HPV and Cervical Disease
- vi. Haematology: Bleeding disorders and coagulopathies; Blood products and transfusions; Thrombocytopenia and thrombophilia; Cancers of men, including prostate and testicular; Leukaemia, lymphoma, and multiple myeloma; Oncologic emergencies; Anaemia and polycythaemia; Sickle cell disease; Cancers of women, including breast, ovarian, and endometrial
- vii. Rheumatology: Rheumatoid arthritis; Systemic Lupus Erythematosus; Fibromyalgia; Crystal arthropathies; Vasculitides; Spondyloarthropathies

#### b. Paediatrics

- i. Neonatology: The sick neonate (respiratory distress and jaundice)

- ii. General Paediatrics: Paediatric diarrhoea; Febrile infant/child, including fever without a source; Paediatric respiratory illnesses (asthma, bronchiolitis, croup, PNA, airway obstruction)
- c. Obstetrics/Gynaecology
  - i. General OBGYN: Obstetrical Emergencies; First trimester bleeding; Preterm labor, including tocolysis; Hypertensive disease of pregnancy; Contraception Basics; Management of Unintended Pregnancies; Infertility; Chronic Pelvic Pain including endometriosis and fibroids; Diabetes in pregnancy; Amenorrhea; Menopause and Hormone Replacement Therapy
- d. The Practice of Family Medicine 1: Family physician, part 1; Family physician, part 2; Patient-centered medical home; Clinical Problem Solving; Interpreting Laboratory Tests; Preventive Healthcare; Interpreting the Medical Literature: Applying Evidence-based medicine in practice

## **2. BASIC SCIENCES IN FAMILY MEDICINE:**

- a. Anatomy of the abdominal wall and digestive tract;
- b. Physiology and Histology of the digestive tract;
- c. Liver and bile ducts; Liver function tests;
- d. Electrical system of the heart; Arrhythmias; Pumping function of the heart; control of BP; Coronary circulation; Practical use of cardiac markers in myocardial infarction and cardiac failure;
- e. Anatomy of the thorax; Mechanism of breathing and lung function; Control of breathing; Pulmonary circulation and transport of respiratory gases; Interpretation of blood gases and oxygen homeostasis;
- f. Pathology of the Hypophysis and adrenal cortex;
- g. Practical approach to CHO metabolism;
- h. Practical approach to lipid metabolism;
- i. Calcium, phosphate, and magnesium homeostasis;
- j. Structure of the kidney; Urinary functions of the kidney; Laboratory approach to renal function; Non-urinary functions of the kidney;
- k. Anatomy of the pelvis; Pregnancy-related physiology;
- l. Orientation regarding the structure of the hematopoietic system; Blood groups and blood coagulation; Anaemia; Iron Metabolism;
- m. Immunology and HIV;
- n. Axial skeleton; Appendicular skeleton; Laboratory investigations: muscle and joint pathology;
- o. Water and electrolyte disturbances;
- p. Cerebral hemisphere and specialization; Somatic nervous system--motor and sensory system; Cerebral blood flow and CSF formation; Clinical pathology of the CSF

## Teaching and learning methods

- |   |                      |
|---|----------------------|
| 1. Didactic Sessions  | 8 hours/week         |
| Lectures, Tutorials, Case Presentations, Journal Clubs, etc.  |                      |
| 2. Consultant-led rounds and outpatient clinics   | 18 hours/week        |
| 3. Skill workshops  | 12 hours/quarter     |
| 4. Morning reports  | 2 hours/week         |
| 5. Joint Specialty Grand Rounds   | 4 hours/month        |
| 6. Self-learning  | minimum 4 hours/week |
| <ul style="list-style-type: none"><li>• Textbooks</li><li>• Journal articles</li><li>• Online databases</li></ul> |                      |

## Assessment Methods

|   |     |
|---|-----|
| Continuous assessment   | 60% |
| <ul style="list-style-type: none"><li>• Log book/Portfolio (20%)</li><li>• Rotational evaluations (10%)</li><li>• Professionalism (10%)</li><li>• Quarterly Tests (20%)</li></ul> |     |
| Final examination   | 40% |

## Prescribed Readings

- Rakel's Textbook of Family Medicine 9<sup>th</sup> Ed.
- American Family Physician articles
- Ganong's Review of Medical Physiology

## Recommended Readings

- Kumar & Clark Internal Medicine
- Obstetrics in Southern Africa (Visser, Grobler)
- Bailey & Love Short Practice of Surgery
- Nelson's Paediatrics
- Handbook of Family Medicine (Oxford)
- South African Manual of Family Medicine

## **YEAR 2**

**Course Code**            **FAM 8020**  
**Course Title**           **Principles and Practice of Family Medicine**

### **Rationale**

This course will span the second year of STP training and will build on the foundation upon which the Family Medicine trainee will continue to develop the competencies necessary to function independently as a clinician. The lecture curriculum is designed to further educate trainees with the medical knowledge necessary for sound clinical decision-making as a family physician. In the clinical teaching setting, the trainee will continue to be part of a multidisciplinary team dedicated to developing and advancing the patients' plans of care.

### **Course aim**

The overall goal of the Principles and Practice of Family Medicine course will be for the Family Medicine trainees to further develop, through both classroom education and clinical experience, the skills necessary to independently diagnose and manage medical problems of increasing complexity in both the inpatient and outpatient settings.

### **Objectives**

By the end of the Principles and Practice of Family Medicine course, the trainee will be able to:

1. Utilize principles of basic science knowledge and physical exam skills in the management and care of patients.
2. Develop a complete differential diagnosis and an accurate diagnostic impression for both inpatient and outpatient settings.
3. Design a more comprehensive management plan for patients in both inpatient and outpatient settings.
4. Demonstrate the ability to apply the principles of patient-centred medical care and effective doctor-patient communication, based on the Biopsychosocial model, during patient encounters

5. Demonstrate ability to take responsibility for patients under his/her care
6. Recognize medical errors when they occur

## Course content

### 1. PRINCIPLES AND PRACTICE OF FAMILY MEDICINE

#### a. Internal Medicine

##### i. Infectious Disease:

HIV/AIDS introduction; HIV opportunistic infections/management; HIV treatment; Tuberculosis;  
Trop Disease 1: Malaria;  
Trop Disease 2: Schistosomiasis;  
Trop Disease 3: Vector borne (YF, dengue, etc.);  
Trop Disease 4: Helminths;  
Trop Disease 5: other tropical diseases of Zambia (Human African Trypanosomiasis, LF, non-tuberculous Mycobacteria, trachoma, etc.);  
Sepsis and septic shock;  
Skin and Soft Tissue Infections/MRSA;  
Sexually Transmitted Infections (include syphilis, PID);  
Influenza, seasonal and pandemic;  
Infective Endocarditis; Fecal coliforms (E. coli, Salmonella, etc.);  
Pneumonias (include bacterial, viral);  
Osteomyelitis;  
Meningitis, encephalitis, and other CNS infections;  
Typhoid fever;  
Routine immunizations

**b. Paediatrics**

- i. Neonatology: Routine care of the newborn; Sudden infant death syndrome & apnea, including apparent life-threatening event
  - ii. General Paediatrics: Severe acute malnutrition/Failure to Thrive; Common Cancers in children; Paediatric Urinary Tract Infection/Pyelonephritis (include vesicoureteral reflux); Childhood infectious exanthems and common skin diseases; Adolescent counselling; Developmental screening, delay, early intervention services (including learning disabilities); Paediatric physical abuse (burns, bruises, fracture, head trauma, abdominal trauma);\_Paediatric sexual abuse and Sexually Transmitted Infections; Metabolic disorders (paediatric obesity); Hypertension in children; Micronutrient deficiencies
- c. Surgery: Acute Abdomen: Recognition, differential diagnosis, initial surgical evaluation;\_Preoperative Risk assessment; Hernias; Hydrocele; Cholecystitis; Appendicitis; Bowel obstruction; Compartment syndrome; Gas gangrene/ Fournier's gangrene
- d. Miscellaneous: Chronic pain and opiate prescribing; Intimate partner violence / gender-based violence; Top 10 POEMS of the year; Environmental and Socioeconomic Determinants of Health; Major drug interactions; Medical care of patients with disabilities; Female Genital Mutilation; Antibiotic stewardship; Healthcare in Rural Zambia
- e. The Practice of Family Medicine 2: Family-oriented and community-oriented primary care; The Biopsychosocial Model in Patient Care; Establishing Rapport Part 1; Establishing Rapport Part 2: Doctor-patient communication; Communication skills: The difficult patient; Interviewing skills workshop

## Teaching and learning methods

- |  |         |                  |
|--|---------|------------------|
| 1. Didactic Sessions   |         | 8 hours/week     |
| • Lectures, Tutorials, Case Presentations, Journal Clubs, etc. |         |                  |
| 2. Consultant-led rounds and outpatient clinics                |         | 18 hours/week    |
| 3. Skill workshops   |         | 12 hours/quarter |
| 4. Morning reports   |         | 2 hours/week     |
| 5. Joint Specialty Grand Rounds                                |         | 4 hours/month    |
| 6. Self-learning   | minimum | 4 hours/week     |
| a. Textbooks   |         |                  |
| b. Journal articles  |         |                  |
| c. Online databases  |         |                  |

## Assessment Methods

|                          |       |     |
|--------------------------|-------|-----|
| Continuous assessment    |       | 50% |
| • Log book/Portfolio     | (10%) |     |
| • Rotational evaluations | (10%) |     |
| • Professionalism        | (10%) |     |
| • Quarterly Tests        | (20%) |     |
| Final examination        |       | 50% |

## Prescribed Readings

- Rakel's Textbook of Family Medicine 9<sup>th</sup> Ed.
- American Family Physician articles
- Prescribed lecture notes

## Recommended Readings

- Kumar & Clark Internal Medicine
- Obstetrics in Southern Africa (Visser, Grobler)
- Bailey & Love Short Practice of Surgery
- Nelson's Paediatrics
- Handbook of Family Medicine (Oxford)
- South African Manual of Family Medicine
- The Harriet Lane Handbook of Paediatrics



## **YEAR 3**

**Course Code**                      **FAM 8030**  
**Course Title**                    **Specialty Care in Family Medicine**

### **Rationale**

This course will span the third year of STP training and will build on the knowledge and experience gained from the first two years of training. The Family Medicine trainee will continue to consolidate the competencies necessary to function independently as a clinician, but he/she will also be introduced to some sub-specialties as well. In light of this additional training, the lecture curriculum will focus towards sub-specialty topics, which will provide trainees with a more well-rounded experience.

### **Course aim**

The overall goal of the Specialty Care in Family Medicine course will be for the Family Medicine trainees to gain a broader experience by developing skills in an array of sub-specialties. This will be achieved by clinical rotations in various sub-specialties as well as a lecture schedule oriented towards sub-specialty topics.

### **Objectives**

By the end of the Specialty Care in Family Medicine course, the trainee will be able to:

1. Gain experience in managing a private primary care practice
2. Gain knowledge and practice in sub-specialties relevant to Family Medicine
3. Provide mentorship to junior trainees, interns, and clinical students
4. Demonstrate the ability to teach both in lecture via regular presentations
5. Demonstrate the ability to effectively provide bedside teaching with minimal supervision

6. Demonstrate the ability to manage conditions in sub-specialties relevant to primary care and identify cases appropriate for referral
7. Understands the basis of health promotion and disease prevention recommendations to patients with the goal of shared decision-making

## **Course content**

1. Specialty Care in Family Medicine
  - a. Emergency Medicine: Care of snakebite; Trauma: Acute management 1; Trauma: Acute management 2; Airway management; Acute fracture management; Burn care; Diabetic emergencies (Diabetic Ketoacidosis, etc.); Altered mental status
  - b. Psychiatry: Depression; Anxiety; Somatoform disorders; Bipolar disorder; Personality disorders; Psychotic disorders; Alcoholism and substance abuse; Post - traumatic stress disorder; Attention deficit hyperactivity disorder; Child Behavioural and Adjustment disorders
  - c. Neurology: Stroke and TIA; Seizure disorders, management; Parkinson's disease and other movement disorders; Peripheral neuropathies; Headache including migraine; Concussion / mild traumatic brain injury; Lesions of the Central Nervous System: Malignancies, benign masses, HIV-related (cryptococcoma, HIV lymphoma, etc.), TB, parasitic (neurocysticercosis, etc.)
  - d. Orthopaedics/Sports Medicine: Neck pain evaluation and injuries; Hip pain evaluation and injuries; Foot pain evaluation and injuries; Ankle pain evaluation and injuries; Low back pain evaluation and injuries; Shoulder pain evaluation and injuries; Knee pain evaluation and injuries; Hand and wrist pain evaluation and injuries; Elbow pain evaluation and injuries
  - e. The Practice of Family Medicine 3: Chronic disease overview/prevention; Behavioural Change and Patient Empowerment; Integrative Medicine; Information Technology;

Psychosocial influences on health; Care of the Elderly Patient;  
Palliative Care

### Teaching and learning methods

- |   |                      |
|---|----------------------|
| 1. Didactic Sessions  | 8 hours/week         |
| 2. Lectures, Tutorials, Case Presentations, Journal Clubs, etc. |                      |
| 3. Consultant-led rounds and outpatient clinics                 | 18 hours/week        |
| 4. Skill workshops  | 12 hours/quarter     |
| 5. Morning reports  | 2 hours/week         |
| 6. Joint Specialty Grand Rounds                                 | 4 hours/month        |
| 7. Self-learning  | minimum 4 hours/week |
| a. Textbooks  |                      |
| b. Journal articles   |                      |
| c. Online databases   |                      |

### Assessment Methods

|                          |       |
|--------------------------|-------|
| Continuous assessment    | 50%   |
| • Log book/Portfolio     | (10%) |
| • Rotational evaluations | (10%) |
| • Professionalism        | (10%) |
| • Quarterly Tests        | (20%) |
| Final examination        | 50%   |

### Prescribed Readings

- Rakel's Textbook of Family Medicine 9<sup>th</sup> Ed.
- American Family Physician articles
- Prescribed sub-specialty notes

### Recommended readings

Fracture Management for Primary Care (Patrice & Hatch)

Procedures in Primary Care (Pfenninger and Fowler)

Rosen's Emergency Medicine: Concepts and Clinical Practice 7<sup>th</sup> ed.

## **YEAR 4**

**Course Code**        **FAM 8040**

**Course Title**        **Leadership in Family Medicine**

### **Rationale**

This course will span the fourth year of STP training and will consolidate the knowledge and experience gained from the first three years of training. The Family Medicine trainee will master the competencies necessary to function independently as a clinician, while completing sub-specialty experiences and a rural district rotation. During this time, the trainee will gain experience in healthcare management and continue to provide mentorship to junior clinicians. Finally, the trainee will have the opportunity to further explore areas of interest through elective rotations.

### **Course aim**

The overall goal of the Leadership in Family Medicine course will be for the Family Medicine trainees to be fully competent and ready to begin independent practice as a specialist-level Family Physician. In addition to consolidating the material learned from the first three years of the program, the trainee will also be gain leadership experience by working alongside healthcare leaders at the district level. This will be achieved by a rural district rotation, which will combine both clinical duties and managerial activities.

### **Objectives**

By the end of the Specialty Care in Family Medicine course, the trainee will be able to:

1. Lead care teams to consistently and appropriately manage patients in complex clinical situations
2. Recognizes the effect of an individual patient's conditions on families and populations

3. Explains the basis of health promotion and disease prevention recommendations to patients with the goal of shared decision-making
4. Provide mentorship to junior trainees, interns, and clinical students
5. Demonstrate competence performing clinical duties at a first-level facility in a rural setting
6. Demonstrate the ability to perform clinical leadership and managerial roles in a first-level healthcare facility
7. Demonstrate competence in managing a private primary care practice

### **Course content**

1. Healthcare Management in Family Medicine
  - a. Ear, Nose, Throat (ENT): Dizziness (including vertigo); Otitis media, pharyngitis, sinusitis
  - b. Ophthalmology: Common eye problems (cataracts, glaucoma, macular degeneration, trachoma); Eye emergencies (penetrating & corrosive eye injuries, acute glaucoma)
  - c. Dermatology: Acne and rosacea; Atopic dermatitis, contact dermatitis, eczema, psoriasis; Other skin exanthems 1; Other skin exanthems 2; Other skin exanthems 3; Skin cancers
  - d. Dental: Adult & Ped Oral Health and Prevention; Common acute dental problems
  - e. Allergy/Immunology: Food allergies; Chronic allergic and non-allergic rhinitis; Hypersensitivity and anaphylaxis
  - f. Geriatrics: Dementia, including Alzheimer's; Geriatric Assessment; Geriatric falls; Medications in the Elderly—The Basics (Beer's criteria); Pressure ulcers; Delivering bad news; Acute delirium; Basics of Palliative Care / Prognosis of terminal illness
  - g. The Practice of Family Medicine 4: Quality improvement in the healthcare setting; Healthcare management and administration; Care of the Self/Burnout Prevention; Lifelong learning and mentorship; Medicolegal considerations; Ethics in Family Medicine

## 2. District Rural Clinical Rotation

- a. Trainees will be expected to understand the unique aspects of providing full-spectrum care in the rural healthcare setting
- b. Duration: 2 months

## 3. Elective Courses

### a. Geriatrics in Family Medicine

- i. Trainees will complete a rotation providing direct clinical care to elderly patients in both the outpatient and inpatient settings
- ii. Self-study topics: Geriatric hospital care, Geriatric outpatient consultations, Geriatric rehabilitation, Geriatric psychiatry, Care of elderly in a community outreach setting, Geriatric palliative care, Medications in the Elderly--Advanced
- iii. Duration: 1 month

### b. Advanced Point-of-Care Ultrasound

- i. Trainees will complete a rotation which will provide them dedicated scanning time, both supervised and unsupervised, in order to build upon their pre-existing ultrasound knowledge and skill. Trainees will also serve as ultrasound tutors for junior trainees.
- ii. Self-study topics: Online instructional ultrasound videos, Ultrasound textbook readings regarding echocardiogram, pulmonary ultrasound, ultrasound in shock, ultrasound for extrapulmonary tuberculosis, ocular ultrasound, thyroid ultrasound
- iii. Duration: 1 month

### c. Adult Critical Care

- i. Trainees will complete a rotation providing increased knowledge and clinical skills in evaluation and treatment of the critically-ill adult patient

- ii. Self-study topics: Ventilator management, Respiratory failure, Cardiogenic shock, Sepsis, Stroke, and procedures related to critical care
  - iii. Duration: 1 month
- d. Principles and Practice of Rural Healthcare
- i. This course is intended for trainees who are interested in observing and participating in family medicine in the rural setting. They will observe the close interrelationship between the practicing physician and the community.
  - ii. Self-study topics: Healthcare systems in Rural Zambia, Compare/contrast healthcare needs in rural vs. urban settings, Development of culturally sensitive healthcare practices for working with diverse rural populations, Rural workforce challenges, Interdisciplinary role of health professionals in rural Zambia
  - iii. Duration: 1 month
- e. Palliative Care in Family Medicine
- i. The trainee will complete a rotation in which they will be introduced to multidisciplinary care for dying patients and their families. Special attention is placed on the symptomatic care of dying patients including physical pain and emotional suffering.
  - ii. Self-study topics: Basic principles of palliative care, Physical/psychological/social/spiritual aspects of dying patients and their families, Symptom/pain management of the dying patient, Types of pain and management of each, Facilitating goals of care conversations, ethicolegal differences between treatment withdrawal and withholding, physician-assisted suicide, euthanasia, palliative sedation, prescribing opiates appropriately and side-effects
  - iii. Duration: 1 month

f. Sports Medicine

- i. The trainee will complete a rotation obtaining experience in outpatient non-operative orthopaedics, becoming familiar with diagnosis/management/rehabilitation of musculoskeletal conditions in this setting.
- ii. Self-study topics: Physical exam of musculoskeletal conditions, Imaging modalities in sports medicine, indications for physiotherapy, differential diagnoses of various musculoskeletal conditions, procedures in sports medicine
- iii. Duration: 1 month

g. Neonatology/NICU

- i. The trainee will complete a rotation obtaining experience in perinatal and neonatal medicine. Emphasis will be focused on neonatal resuscitation, neonatal sepsis, neonatal jaundice, neonatal respiratory failure, and post-natal management of preterm infants.
- ii. Self-study topics: Evidence-based neonatal resuscitation, complications of prematurity, common congenital anomalies, management of neonatal sepsis, low birth weight management, management of neonatal jaundice, differential diagnosis and management of neonatal respiratory failure
- iii. Duration: 1 month

**Teaching and learning methods**

|   |                  |
|---|------------------|
| 1. Didactic Sessions  | 8 hours/week     |
| 2. Lectures, Tutorials, Case Presentations, Journal Clubs, etc. |                  |
| 3. Consultant-led rounds and outpatient clinics                 | 18 hours/week    |
| 4. Skill workshops  | 12 hours/quarter |
| 5. Morning reports  | 2 hours/week     |
| 6. Joint Specialty Grand Rounds                                 | 4 hours/month    |



7. Self-learning 4 hours/week at least
- a. Textbooks
  - b. Journal articles
  - c. Online databases

### **Assessment Methods**

|                          |       |
|--------------------------|-------|
| Continuous assessment    | 50%   |
| • Log book/Portfolio     | (10%) |
| • Rotational evaluations | (10%) |
| • Professionalism        | (10%) |
| • Quarterly Tests        | (20%) |
| Final examination        | 50%   |

### **Prescribed readings**

- Rakel's Textbook of Family Medicine 9<sup>th</sup> Ed.
- American Family Physician articles
- Prescribed sub-specialty notes

### **Recommended readings**

- Fracture Management for Primary Care (Patrice & Hatch)
- Procedures in Primary Care (Pfenninger and Fowler)
- Rosen's Emergency Medicine: Concepts and Clinical Practice 7<sup>th</sup> ed.
- Manson's Tropical Diseases 23<sup>rd</sup> ed.

