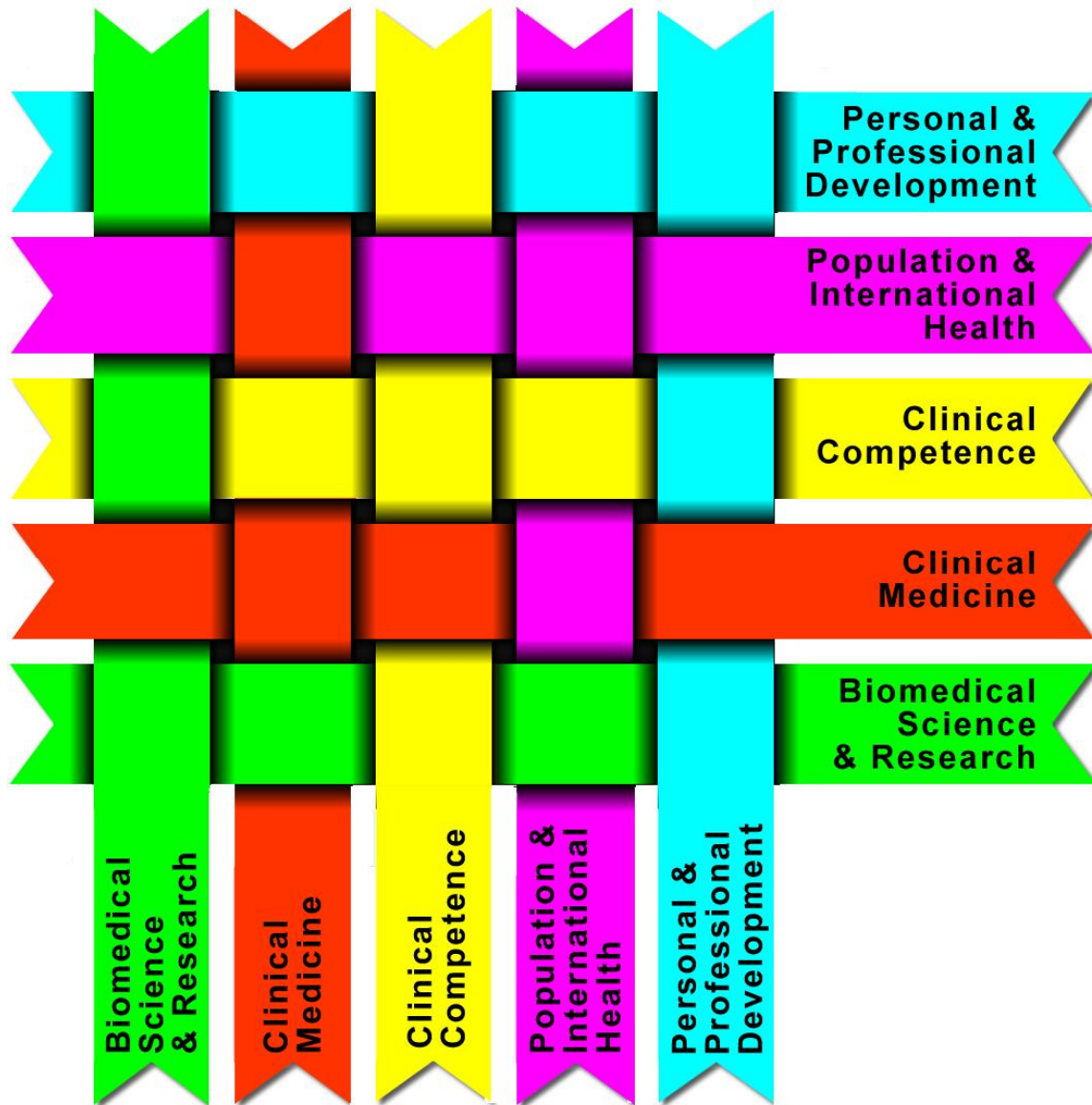


# RCSI Medical Graduate Profile



## **1. Biomedical Science and Research.**

### **1.1. Understands the scientific basis of health and disease.**

- 1.1.1. Understands the molecular, cellular, tissue, organ and system organisation of the human body.
- 1.1.2. Understands the relationship between structure and function of cells, tissues, organs and systems.
- 1.1.3. Understands the scientific underpinnings for use of common therapeutic interventions in health care.
- 1.1.4. Demonstrates the ability to observe and interpret aberrant structure and dysfunction of cells, tissues, organs and systems.

### **1.2. Understands the relevance of basic science to the clinical setting.**

- 1.2.1. Demonstrates knowledge of the applicable basic science in common clinical presentations.
- 1.2.2. Demonstrates an understanding of the evolution of the scientific and evidence-based approach to clinical practice.
- 1.2.3. Demonstrates knowledge of the scientific underpinnings of common laboratory tests and other investigative technology.

### **1.3. Understands the role of technology in medicine.**

- 1.3.1. Demonstrates understanding of role of technology utilised in laboratory and other investigational methods.
- 1.3.2. Demonstrates understanding of technology used in patient monitoring and eliciting clinical signs.
- 1.3.3. Understands the role of information technology as a resource for diagnosis, prescribing and monitoring within clinical practice.
- 1.3.4. Can select and interpret appropriate diagnostic investigations

### **1.4. Understands the limitations to scientific knowledge.**

- 1.4.1. Understands that medical science knowledge is rapidly evolving and requires frequent critical review.
- 1.4.2. Understands the current limitations in the scientific understanding of disease processes and therapeutic approaches.

### **1.5. Understands the quantitative and qualitative methods that underlie Biological and Translational Research, Evidence-based Clinical Research, and Health Service Research.**

- 1.5.1. Demonstrates an ability to critically review scientific and clinical literature and apply it to patient care.
- 1.5.2. Know the common types of research designs used in medicine, their strengths and weaknesses.
- 1.5.3. Understand the issues in measurement of biomedical and clinical endpoints, including scale type, error, bias, precision and accuracy.
- 1.5.4. Be able to summarise quantitative data using numbers and graphs.
- 1.5.5. Understands the use of anthropological and social science techniques of qualitative research.
- 1.5.6. Understands the ethical issues involved in doing medical research.
- 1.5.7. Understands the scientific underpinnings of Medical Research including Biological and Translational Research, Clinical Research and Health Service Research

## **2. Clinical Medicine.**

### **2.1. Understands the pathogenesis of disease.**

- 2.1.1. Describes the pathogenesis and clinical manifestations of a range of diseases.

### **2.2. Demonstrates the ability to interpret and prioritise clinical symptoms and signs.**

- 2.2.1. Demonstrates the ability to take a systematic, and problem-focused medical and surgical history and interpret the relevant clinical findings.
- 2.2.2. Identify the patient in need of emergency surgical or medical intervention.

### **2.3. Demonstrates the ability to develop, in consultation, an age-appropriate patient-centred management plan in primary, secondary and tertiary care settings.**

- 2.3.1. Interprets and integrates the history, findings of physical examination, results of laboratory tests and imaging studies and other relevant data to arrive at an appropriate diagnosis or differential diagnosis.
- 2.3.2. Outlines appropriate medical and surgical interventions for a variety of patient presentations, in various clinical settings.
- 2.3.3. Enunciates the extent of contributions by other health professionals to the management of a given patient.
- 2.3.4. Integrates hospital discharge, referral, investigations, rehabilitation planning, and patient review into patient management plans as appropriate.
- 2.3.5. Creates and defends reasonable, situational, cost-effective investigation plans for a variety of patient presentations.
- 2.3.6. Understands the principles of evidence-based healthcare.

### **2.4. Understanding of therapeutics.**

- 2.4.1. Understands the evidence basis for and use of common pharmacological interventions and their associated side effects.

### **2.5. Understands the various roles of the doctor in health promotion, health maintenance & disease prevention.**

- 2.5.1. Understands the role of doctors in treating individual patients and understands the difference in approach between curative, health maintenance and palliative treatment.
- 2.5.2. Understands the evidence base for assessing and changing behaviour in patients.
- 2.5.3. Understands the role of doctors in health promotion and disease prevention at the individual patient level.

### **2.6. Demonstrates an understanding of the psychological, social, political, economic, environmental, cultural and spiritual factors that impact upon the health of individuals.**

- 2.6.1. Understands the psychological and social determinants of health maintenance, health-seeking behaviour, processing of health advice, and self-management of health problems.
- 2.6.2. Appreciates the relationship between orthodox and other models of health care practice.
- 2.6.3. Understands the socio-cultural perspectives of health and health care needs of different communities.
- 2.6.4. Understands how the geographical and cultural context of the health care setting influences clinical practice.

### 3. Clinical Competence.

#### 3.1. Demonstrates the ability to systematically elicit and interpret clinical symptoms and signs.

3.1.1. Demonstrates the ability to examine a patient on both a regional and a systems basis.

#### 3.2. Demonstrates the ability to perform clinical procedures, especially those required in life saving situations.

3.2.1. Demonstrates the ability to perform core clinical procedures:

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| i. Radial pulse                                  | xxvi. Wound care and basic wound dressing  |
| ii. Peripheral pulses                            | xxvii. Preparation of drugs for parenteral administration                        |
| iii. Blood pressure                              | xxviii. Administration of intravenous, intramuscular and subcutaneous injections |
| iv. Body temperature                             | xxix. Prescription of insulin sliding scale                                      |
| v. Peak expiratory flow rate                     | xxx. Manage volumetric pump for IV infusion                                      |
| vi. Blood glucose                                | xxxi. Take nose, throat and skin swabs   |
| vii. Urinalysis using Multistix                  | xxxii. Cervical smear  |
| viii. Faecal occult blood testing                | xxxiii. Vaginal examination  |
| ix. Pregnancy testing                            | xxxiv. Writing drug charts and prescriptions                                     |
| x. Performance and interpretation of an ECG      | xxxv. Requesting a cross-match   |
| xi. Calculation of BMI                           | xxxvi. Setting up a blood transfusion  |
| xii. Interpretation of growth charts             | xxxvii. Fundoscopy   |
| xiii. CVP measurement                            | xxxviii. Visual field testing  |
| xiv. Transcutaneous O <sub>2</sub> saturation    | xxxix. Otoscopy  |
| xv. First aid                                    | xl. Assessment of visual acuity  |
| xvi. Basic life support                          | xli. Assessment of pupillary reflexes  |
| xvii. Administration of oxygen therapy           | xlii. Assessment of eye movements  |
| xviii. Venepuncture                              | xliii. Rectal examination  |
| xix. Blood culture                               | xliv. Arterial blood gas sampling  |
| xx. Set up IV giving set                         | xlv. Administration of nebulised and volumatic medication                        |
| xxi. Urinary catheterisation                     | xlvi. Insert a nasogastric tube  |
| xxii. Collection of MSU                          | xlvii. Insert IV cannula   |
| xxiii. Scrub up and gown for surgical procedures |  |
| xxiv. Handwashing technique                      |  |
| xxv. Skin suturing                               |  |

3.3. Demonstrates appropriate communication skills for groups with different communication requirements including colleagues & other medical professionals, patients & their families, carers, advocates and interpreters.

3.3.1. Demonstrates the ability to accomplish the specific tasks of an effective consultation;

- 3.3.1.1. Establishing and building a relationship
- 3.3.1.2. Initiating the consultation and setting the agenda
- 3.3.1.3. Establishing, recognising and meeting patient needs
- 3.3.1.4. Gathering information
- 3.3.1.5. Explaining the diagnosis and planning and negotiating management plans
- 3.3.1.6. Structuring, and prioritizing.
- 3.3.1.7. Closing the consultation and establishing future plan

3.3.2. Demonstrates the ability to recognise and deal with specific issues and situations including;

- 3.3.2.1. Cultural and social diversity
- 3.3.2.2. Mistakes and complaints
- 3.3.2.3. Age-related issues
- 3.3.2.4. Difficult emotional responses
- 3.3.2.5. Breaking bad news
- 3.3.2.6. Sensitive issues (e.g. sexuality, child abuse, HIV, mental illness)
- 3.3.2.7. Communication impairment (intellectual, hearing, visual, verbal)
- 3.3.2.8. Specific clinical contexts (psychiatry, emergency medicine)
- 3.3.2.9. Specific explanations (informed consent, risk management, health promotion, behaviour change)

- 3.3.3. Demonstrates the ability to access, record, organise and present information appropriately using a range of media including:
  - 3.3.3.1. Verbal; one-to-one and one-to-many
  - 3.3.3.2. Telephone
  - 3.3.3.3. Written; Patient records, discharge and referral summaries, research materials,
  - 3.3.3.4. Computers
- 3.3.4. Appreciates the necessity of providing timely and comprehensive communications to GPs, liaison nurses and colleagues in institutions as appropriate to the patient's journey in the health system and beyond.
- 3.3.5. Demonstrates an understanding of the evidence base for communication and the ability to interpret and act upon it appropriately.

#### **4. Population & International Health.**

##### **4.1. Understands – at a national and global level – the distribution of disease, the factors that determine health and disease, and the major population health responses.**

- 4.1.1. Understands basic psychological processes and concepts of psychosocial development across the lifespan, as a framework for understanding health, illness and healthcare.
- 4.1.2. Understands the historical, social, demographic, political, economic, environmental, cultural and genetic factors that impact upon the health of populations nationally & internationally.
- 4.1.3. Understands health needs at the population level and in vulnerable and diverse populations.
- 4.1.4. Applies epidemiological principles and an understanding of health information systems to the measurement of health and disease.

##### **4.2. Understands risk and can apply epidemiological principles and public health approaches so as to reduce and prevent disease and improve the health of populations.**

- 4.2.1. Understands concepts of risk and causation and can apply them to the design of population and targeted public health prevention and health promotion programmes.
- 4.2.2. Applies the above principles and concepts to the control of:
  - Occupational health and disease.
  - Environmental health exposures and diseases.
  - Diseases common in low-income countries and vulnerable populations
  - Conditions specific (e.g. infectious diseases, diseases of the cardio-respiratory system, diseases of the gastrointestinal system & cancers).
- 4.2.3. Understands the principles and application of population screening programmes.
- 4.2.4. An understanding of the principles and application of hygiene programmes (including hand washing) in the detection, monitoring and control of infectious diseases.

##### **4.3. Understands the characteristics of a range of health systems and population health responses and the merits and problems associated with each.**

- 4.3.1. Understands the principles, values and strategies that underpin population health approaches and different health service systems to major burden of disease in wealthy and poor countries .
- 4.3.2. Understands how health systems and services are organised, financed, managed, staffed and delivered in one's own country and the main models used in other high, middle and low-income countries.
- 4.3.3. Understands how the principles of epidemiology, economics and policy analysis contribute to making optimal choices for the use of limited resources within the health services.
- 4.3.4. Demonstrates the ability to participate in a team in writing a population health situation analysis and management plan for control of a health problem.

## **5. Personal & Professional Development.**

### **5.1. Understands and respects the patient-doctor relationship.**

- 5.1.1. Understands and manages issues of boundaries between patient and doctor.
- 5.1.2. Demonstrates respect for patients' differing cultures and values and understands how these affect the therapeutic relationship.
- 5.1.3. Understands and applies concepts of patient confidentiality.
- 5.1.4. Understands the importance of the role of doctor as patients' advocate.
- 5.1.5. Demonstrates the ability to explore their own reactions to patients with physical and mental disability, social disadvantage, ageing and death in terms of the normative aspects of health and their own personal value system.

### **5.2. Demonstrates the ability to work collaboratively with colleagues in the healthcare team setting.**

- 5.2.1. An understanding of the roles and functions of other members of the inter-professional/multidisciplinary team including managers.
- 5.2.2. Demonstrates the ability to work in a multi-disciplinary team.
- 5.2.3. Understands theoretical concepts of leadership and recognise their own performance and those of others in terms of this concept.
- 5.2.4. Demonstrates the ability to communicate appropriately with colleagues, members of the law enforcement and legal professions, the coroner and the media.

### **5.3. Demonstrates the ability to recognise ones own strengths and weaknesses and to be open to assistance from others when needed.**

- 5.3.1. Demonstrates the ability to critique their own performance and fairly critique a team member's performance.
- 5.3.2. Demonstrates the ability to recognise the limitations of their own expertise and take advice from others as appropriate.

### **5.4. Understands the legal and ethical responsibilities of a medical practitioner.**

- 5.4.1. Demonstrates consistent probity, honesty, ethical commitment and adherence to the RCSI '*Fitness to be a Medical Student*' policy document.
- 5.4.2. Demonstrates the ability to analyse a clinical case drawing upon both legal and ethical responsibilities.
- 5.4.3. Understands and applies the concept of duty of care.
- 5.4.4. Demonstrates an understanding of the role of the medical practitioner in forensic medicine.
- 5.4.5. Demonstrates an understanding of and the ability to gain informed consent for medical procedures.
- 5.4.6. Demonstrates an understanding of the role of ethics committees and ethical guidelines in clinical and medical research.

### **5.5. Demonstrates personal, organisational and time management skills.**

- 5.5.1. Understands concepts of stress and the need for self care strategies as well understanding how to appropriately support peers and other team members.
- 5.5.2. Understands and applies time management skills.
- 5.5.3. Demonstrates problem solving skills and knowledge integration.

### **5.6. Demonstrates a commitment to lifelong learning, self-appraisal and reflection.**

- 5.6.1. Understands and applies concepts of reflective practice and continuous professional development.
- 5.6.2. Demonstrates ability to define their own learning needs in a given situation.

### **5.7. Demonstrates information literacy skills.**

- 5.7.1. Recognizes the need for information in given situations.
- 5.7.2. Demonstrates the ability to find, critically evaluate, manage and synthesise new information with existing information to create new understanding.
- 5.7.3. Demonstrates an understanding of the ethical issues involved in information retrieval and management including the concepts of plagiarism and confidentiality.

**5.8. Understands the principles of healthcare management.**

- 5.8.1. Demonstrates an understanding of the role of doctors in the managerial process e.g. in Clinical Directorates/Clinical Governance.
- 5.8.2. Understands the concepts of, and standards regarding, open disclosure and safety and quality principles in terms of trust, ethics and systems.
- 5.8.3. Demonstrates the ability to undertake quality improvement activities (e.g. clinical audits).