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**A Protocol for Developing and Integrating Communication Skills Curricula  
for Undergraduate Health Professions Programs  
at the School of Medicine and Health Sciences (SMHS),  
University of Papua New Guinea (UPNG)**

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**Abstract**

A Protocol for Developing and Integrating Communication Skills Curricula for Undergraduate Health Professions Programs at the School of Medicine and Health Sciences, University of Papua New Guinea.

The University of Papua New Guinea's School of Medicine and Health Sciences is currently transitioning into a stand-alone university and one of the new academic programs proposed for immediate implementation is the *Medical and Health Sciences Foundation Year* program with *Communication Skills* being one of the courses to be taught. *Communication skills* is a cross-cutting component taught throughout the undergraduate medicine program. Other undergraduate health professions programs are yet to develop and implement one as a core curriculum. The creation of a new course for a new program provides an opportunity to develop a core communications curriculum for each undergraduate health professions program and integrate them into the existing programs.

Expertise from all the different health care professions programs that are offered by the School will be invited to participate in the curriculum development process which will be split into five broad phases. Phase 1 will involve needs assessment and literature review conducted by faculty to assess current state of communication education in each undergraduate health professions program. Literature review will explore various instruments used in developing, integrating, teaching and assessing communication in health care. It will also involve analyzing existing communication curricula, guidelines, and research on effective communication skills training in healthcare and identify best practices and identifying specific communication competencies expected of graduates, such as explaining diagnoses and providing patient education. In phase 2, both internal and external experts/stakeholders will be identified and invited to take part in curriculum development. In phase 3, information collected will be synthesized to develop draft communication curricula for each undergraduate health professions program. In phase 4, Delphi technique will be used to make refinements and finalize the curricula. Phase 5 will involve implementation and evaluation of the curricula.

The Papua New Guinea *National Human Resources for Health Strategic Plan 2021-2030* has identified, among others, two challenges relevant for this discussion – '*competency of health workers not aligned to population and health service needs*' and '*curriculum for health professions training are not standardized.*' The identified priority intervention is to *develop competency-based standardized curricula and educational resources.*

Therefore, the purpose of this protocol is to outline a curriculum development process that will guide the development and integration of communication skills curricula for each undergraduate

health professions program. The finalized curricula are anticipated to serve as models in setting the stage towards achieving standardized communication skills curricula for health professions programs at SMHS and also the new Papua New Guinea University of Medicine and Health Sciences.

### **Key Words**

Communication skills curriculum, undergraduate health professions programs, core communication curricula, curriculum development process

### **Introduction**

The School of Medicine and Health Sciences of the University of Papua New Guinea is the country's leading higher education institution in educating and training different cadres of health care professionals ranging from Dental Technologists to Doctors of Medicine. The School is currently in the transition phase to becoming a stand-alone university – The Papua New Guinea University of Medicine and Health Sciences. As such the School is progressing very well at many different fronts, from improvements in current physical infrastructure and development of new infrastructure, to management and staffing restructure, to introduction of new academic programs. One of the new academic programs proposed for immediate implementation is the *Medical and Health Sciences Foundation Year* program. This program consists of eight (8) courses that will be taught over two semesters and one of the proposed courses is *Communication and Life Skills*. The program is designed to provide a pathway for students who want to pursue careers in the health professions. It aims to equip students with the foundational knowledge and skills needed for advanced studies in medicine and other health-related degree programs. Successful completion of the foundation year program will allow students to progress to relevant degree programs within the health sciences field.

Currently, *communication skills* is a cross-cutting component that is delivered both as a seminar (lecture) and practical class under the *Professional Skills Domain* (course) and taught throughout the undergraduate medical education program unlike the other undergraduate health professions programs. Specific contents related to communication in health care are not taught as it is not a core component in the other undergraduate health professions programs. The communication skills taught are often related to reading and writing skills in which students apply the skills in writing essays, reading research articles and writing literature reviews, research proposals and reports or writing laboratory reports which are also essential skills in health care practice.

But when one examines the literature, he or she will find that there is great importance placed on *patient centeredness* in health care practice. Patient-centered care necessitates that communication skills be integrated throughout the undergraduate curricula for all health professions and not just at the foundation year level. While foundational communication skills are important, ongoing practice and refinement throughout the curriculum are necessary to address the diverse communication needs of patients and various healthcare settings.<sup>1-2</sup>

Hence, the creation of a new *Communication and Life Skills* course for the new *Medical and Health Sciences Foundation Year* program provides an opportunity to develop a core communication skills curriculum for each health professions program and integrate it throughout the program and not just for the medicine program. This is a valuable and increasingly recognized opportunity for the School and also the new university to contribute in a significant way to the development of well-rounded, competent and compassionate health care professionals.

Furthermore, the transitioning of the School of Medicine & Health Sciences into a stand-alone university requires that the new university meets the national standards for institutional registration that are stipulated in the Papua New Guinea National Standards for Higher Education Institutional Registration for PNG Higher Education Institutions, 2024. The specific standard to meet that is relevant for this discussion is *Standard 6: The Institution's Programs, Teaching and Assessment are Adequate to Achieve the Expected Student Learning Outcomes* with special focus on the *Curriculum Development Policy*.<sup>3</sup> This policy requires higher education institutions to outline comprehensive procedures for the design, review, and revision of academic programs to ensure alignment with the Papua New Guinea National Qualifications Framework (PNGNQF), stated learning outcomes, industry standards, and emerging trends in the field.<sup>3</sup> The PNGNQF outlines stringent operational procedures for program and institutional accreditation that the new foundation year program will need to follow.<sup>4</sup>

A meticulously planned and coordinated collaboration with key stakeholders, in this case, the health sector and the new university in planning, developing, implementing and evaluating health workforce education and training programs ensures the national standards and procedures are met. Compliance to national policies and procedures ensures quality assurance of the academic programs which in turn guarantees quality educational and training outputs for the local health workforce needs. This then, is the purpose of this protocol – to outline the curriculum development process that will guide the development and integration of communication skills curricula for each undergraduate health professions program at the School of Medicine and Health Sciences, University of Papua New Guinea.

From the outset, a protocol as this can assure comprehensiveness of an academic program which is a key factor in attracting students who seek a well-rounded and robust academic experience. It can also attract a diverse and talented faculty, leading to a more vibrant and engaging learning environment. Attracting students and talented faculty are crucial factors in a highly competitive higher education landscape.<sup>5</sup>

### **Methodology**

To develop communication curricula for the undergraduate health professions programs, a systematic academic approach and the Delphi technique will be used. The Delphi technique is a systematic iterative method for gathering and refining expert opinions to achieve consensus on specific issues.<sup>5</sup> Achieving consensus on communication curricula for the undergraduate health professions programs is vital because it ensures broad agreement among experts (experts from across all health care professions who are practicing in both the industry and academic spaces) on essential communication skills or skills needed by graduates from each health care profession in Papua New Guinea. Furthermore, involving experts from each health profession helps create

a standardized curriculum that can be adapted and implemented across each program, not only at the School of Medicine and Health Sciences but also at other higher education institutions offering the same programs. This reduces variability in training and ensures that all students receive a consistent foundation in communication skills. The input of diverse experts from various health professions also ensures that communication curricula are evidence-based, relevant, consistent and collaborative, ultimately contributing to better patient care and improved healthcare outcomes.<sup>5-7</sup>

The curriculum development process is certainly a huge undertaking, therefore, the process will be split into five (5) phases. These phases are explained below.

**Phase 1: Needs Assessment and Literature Review:**

The purpose of the needs assessment is to identify gaps in the current curriculum and determine the specific communication skills needed by future health professionals.<sup>8-9</sup> The needs assessment involves defining the specific undergraduate health professions programs for which the curriculum is intended and which health professions will be involved in the curriculum development.<sup>10</sup> The undergraduate programs outlined below are currently offered by the School of Medicine and Health Sciences so faculty with expertise in teaching communication skills from each program will be involved in curriculum development. They will assess the current state of communication education by reviewing the existing syllabi, learning materials, and assessment tools to identify areas for improvement and integration of communication skills into their respective programs.

- Bachelor of Medicine & Bachelor of Surgery (MBBS)
- Bachelor of Medical Science
- Bachelor of Biomedical Science
- Bachelor of Pharmacy
- Bachelor of Medical Imaging Science
- Bachelor of Medical Laboratory Science
- Bachelor of Dental Surgery
- Bachelor of Oral Health
- Bachelor of Nursing
- Bachelor of Clinical Nursing
- Diploma in Dental Technology
- Diploma in Anesthetic Science.<sup>11</sup>

Key areas for the literature review will include exploring various instruments that are used to assessing the extent of curriculum development and integration in health professions education; analyzing existing communication curricula, guidelines, and research on effective communication skills training in healthcare and identify best practices; identifying specific communication competencies expected of graduates, such as explaining diagnoses and providing patient education; exploring different curriculum models used in integrating communication skills into the curriculum such as horizontal integration (across different courses) and vertical integration (across different years); examining various methods used in assessing communication skills and

examining how integrated curricula contribute to the development of well-rounded healthcare professionals with strong interpersonal skills.<sup>12-14</sup>

### **Phase 2: Expert and Stakeholder Consultation and Input**

In this phase, both, internal and external experts and stakeholders will be identified and invited to take part in curriculum development. Internal experts and stakeholders will include faculty with expertise in teaching communication skills or communication in healthcare and administrators within the School. External experts and stakeholders will include practicing clinicians, practitioners from other health care professions, community members, professional organizations, employers and regulatory bodies such as the Papua New Guinea Medical Board that approves practitioner licenses. Understanding expert and stakeholder perspectives on communication needs and expectations, and using this information to inform curriculum development can ensure that communication curricula are relevant, effective, and prepare students to meet the diverse communication demands of healthcare practice. The stakeholder engagement methods will include mainly surveys and interviews to gather diverse perspectives and will ensure there is fair representation from all health professions programs offered by the School.<sup>15-17</sup>

### **Phase 3: Synthesizing Information from Needs Assessment, Literature Review, Expert and Stakeholder Input and Drafting the Initial Curriculum**

The information collected from the needs assessment, literature review and expert and stakeholder consultation will be synthesized to identify the specific communication skills that are most relevant and align them with the learning outcomes for each health professions program; select and adapt teaching methods that are effective in promoting communication skills development; choose assessment methods that are appropriate for evaluating the identified learning outcomes and align them with the chosen teaching strategies and tailor the curriculum to the specific context of each undergraduate health professions program, taking into account the program's goals, resources, and the needs of the students and faculty. In this phase, an initial draft of the communication curriculum will be developed for each health professions program which will be further refined after the Delphi study.<sup>18-19</sup>

### **Phase 4: Delphi Technique (Study)**

The Delphi technique is a structured approach that provides a systematic and organized way of gathering and refining expert and stakeholder opinions through multiple rounds. Here's how the Delphi technique will be applied.

#### **1. Expert and Stakeholder Panel Selection**

The same experts and stakeholders who participated in phase 2 will be invited again to review their suggested communication needs and expectations which are the communication competencies (not necessarily the whole draft curriculum) that graduates should have acquired upon graduating from each health professions program. Snow ball technique will also be used to ask participants if they know of anyone else with expertise in health communication who could be invited to review the draft competencies and/or provide more inputs.<sup>20-23</sup>

#### **2. Subsequent Rounds (Refinement)**

Facilitators will analyze the responses and create a summary of key communication competencies and present it to the participants in subsequent rounds to rate or rank the importance of the different competencies, using Likert scales or other quantitative methods. Participants will also be given the opportunity to provide further comments and justify their ratings. The process will be iterative, with the facilitator providing feedback on the group's responses in each round and refining the competencies based on the consensus or divergence of opinions.<sup>20-23</sup>

### 3. Reaching Consensus or Defining Divergence

The Delphi technique aims to reach a consensus among experts, but it can also be used to identify and understand divergent opinions. Consensus is typically defined by a pre-determined level of agreement which is 70% or 80% on the competencies. This study will aim to reach the required level of agreement. However, if consensus is not fully achieved, the process helps to clarify the range of expert and stakeholder opinions on the competencies so they can still be used to inform the design of the curriculum.<sup>20-23</sup>

### 4. Curriculum Design

The final set of communication competencies, whether representing consensus or a range of views, will be used to inform the design of the communication curriculum. The draft curricula developed in phase 3 for each health professions program will be reviewed and finalized for implementation. The main focus area for review will include learning objectives, content areas, teaching methods, and assessment strategies. The curricula will then be integrated into the respective existing undergraduate health professions program, ensuring it is aligned with other relevant courses and clinical experiences.<sup>20-23</sup>

## **Phase 5: Implementation and On-Going Refinement**

The integrated curricula for each health professions program will be implemented and evaluated to determine its effectiveness through ongoing assessment and feedback. The on-going assessment and refinement of the curricula will be done every three to five years based on information collected through the following feedback mechanisms to ensure it remains relevant and effective.

### 1. Student feedback

Faculty involved in teaching communication will collect and analyze student feedback to identify areas for improvement and ensure the curriculum remains relevant to students' needs.<sup>24</sup>

### 2. Faculty Input

Faculty members who teach communication skills will be involved in the review process and provide insights into the challenges and successes of the integrated curriculum.<sup>25</sup>

### 3. Expert and Stakeholder Input

Practicing healthcare professionals, including the experts and stakeholders who participated in the curriculum development process will be invited to provide feedback on the

communication skills required in real-world settings. Their input will help align the curriculum with current best practices and address gaps in training

#### 4. Incorporating new research findings

New research findings will be incorporated and the curriculum adapted to address emerging challenges and communication needs in healthcare.<sup>7</sup>

### Discussion

In the 21<sup>st</sup> century health practice, the role of all health care professions has been expanding in a patient-centered way making communication between patients and the community a vital component of daily practice. Effective communication skills are needed for complex activities such as medical interviews and reviews, motivating people to adhere to prescribed treatment and health promotion.<sup>26</sup> Besides, frontline health professionals such as medical officers, nurses and dentists are often confronted with chronic diseases more frequently now than in the past. Behavioral support, facilitated by effective communication skills of all clinicians, is needed to ensure adequate management of such diseases.<sup>27</sup> The need to support lifestyle changes through communication is also emphasized in many areas of health care such as smoking cessation, glycaemic control in diabetics, behavior change in oral hygiene, dietary interventions and so on. All health care professionals must, therefore, adapt their communication to the wide variety of patient needs and achieve patient-centered communication.<sup>26-27</sup>

Communication skills of the different cadres of health care professionals can be cultivated and honed through education and training. Communication skills courses can be introduced in undergraduate health professions education programs and taught through the entire duration of the programs to assess continuous demonstrated improvements in students' communication skills. Internationally, the teaching and assessing of interpersonal and communication skills are now accepted as an integral component of medical and related health education programs.<sup>28</sup>

For example, there is widespread acceptance of behavioral sciences and in particular, communication skills as an important component of dental education in the UK, US, Canada and New Zealand. In the United States, communications skills training is an important cornerstone of dental education.<sup>29</sup> In India, most dental schools are reported to have added health communication in their curricula which helps in teaching and assessing competencies in communication skills among dental students.<sup>30</sup>

Across Europe, 121 communication experts from 15 professional fields and 16 European countries participated in developing a health professions core communication curriculum framework, known as 'the HPMCC' for all undergraduate European health care education through a consensus process. This framework is currently used as a guide for teaching communication inter and multi-professionally in undergraduate education in health care across Europe.<sup>7</sup> These and many similar initiatives undertaken by other countries are often in response to policy directives from either their national governments or international organizations such as the World Health Organization. One such document is the *WHO Global Strategy on Human Resources for Health: Workforce 2030* which emphasizes the critical role of education and training in strengthening the health workforce to meet current and future health system needs. A policy option suggested for WHO member states to consider is the '*adoption of transformative strategies in the scale-up of health worker education*' which requires a coordinated approach to

link human resources for health (HRH) planning and education and encourage inter-professional education and collaborative practice.<sup>31</sup> In response to this policy option, Papua New Guinea's National Department of Health, an island WHO member state in the Western Pacific region has developed a national document titled *National Human Resources for Health (HRH) Strategic Plan 2021-2030*.<sup>32</sup> The Plan has six (6) strategic objectives with strategic challenges and proposed interventions clearly outlined for each strategic objective. The strategic objective relevant for this discussion is *objective 5: improve the capacity of the education institutions to produce competent health professions*. This strategic objective focuses on the need to up-scale the production of competent health workforce by adopting a common competency-based education framework to ensure that graduates are fit for practice. It also focuses on improving efficiency in instructional design and teaching, allow implementation across the nation, facilitate curriculum assessment and allow response to change. Among other strategic challenges identified under this strategic objective, two relevant challenges for this discussion are '*competency of health workers not aligned to population and health service needs*' and '*curriculum for health professions training are not standardized*.' The identified priority intervention to address these challenges is to *develop competency-based standardized curricula and educational resources*.<sup>32</sup>

Therefore, the purpose of this protocol is to outline the curriculum development process that will guide the development and integration of a communication skills curriculum for each undergraduate health professions program. The finalized curricula are anticipated to serve as model curricula in setting the stage towards achieving standardized communication skills curricula for all undergraduate health professions programs at the School of Medicine and Health Sciences and also for the new Papua New Guinea University of Medicine and Health Sciences.

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