Article

Integrating the primary health care approach into a medical curriculum: a programme logic model

James Irlam, *BSc, BSc (Med) Hons, MPhil*

Mpoe Johannah Keikelame, *RGN, BSocSci, MPhil*

Lauraine Vivian, *BSc Hons, MSc, PhD*

Primary Health Care Directorate, Faculty of Health Sciences, University of Cape Town

Corresponding author: *James Irlam (James.Irlam@uct.ac.za)*

Background

Primary health care (PHC) is an equity-driven approach to health care[1] that formed the foundation of South African national health policy under the new democratic government in 1994.

In August 1994 the Faculty of Medicine (later renamed the Faculty of Health Sciences) at the University of Cape Town (UCT) adopted a policy on the PHC approach in order to equip its graduates with the values and skills necessary to meet the changing demands of the new national health system. This policy committed the Faculty to make the PHC approach central to its teaching, research, clinical service, and engagement with communities.[2]

The PHC Lead Theme: key principles and sub-themes

The following key principles of the PHC approach have guided the PHC Directorate in leading the development of a cross-disciplinary PHC Lead Theme in transformed health sciences curricula for multi-professional learning:[3,4]

1. Promoting equity and human rights in health care.
2. Displaying bio-psychosocial and cultural sensitivity towards the patient.
3. Practising health promotion at the individual and population level.
4. Promoting evidence-based health care.
5. Treating patients at the appropriate level of care.
6. Promoting multi-professional health care.
7. Promoting broad inter-sectoral collaboration.
8. Encouraging communities to assert their rights and interests.
9. Monitoring and evaluating the effectiveness, efficiency and equity of health services.

The authors each carry primary responsibility from within the PHC Directorate for teaching and assessing principles 2 - 4 above, which are central to the PHC sub-themes of culture, psyche and illness (CPI); health promotion (HP); and evidence-based practice (EBP) in the 6-year medical (MB ChB) curriculum. The first cohort of students under the transformed MB ChB curriculum graduated in December 2007.

Culture, psyche and illness

CPI encompasses the disciplines of psychology, psychiatry, social science, and medical anthropology. Cultural competence and the bio-psychosocial aspects of patient care are being integrated into medical education internationally,[5] and are recognised as core competencies in South Africa, with its diversity of languages, cultures, customs, belief systems, and family structures. The culturally prescribed forms in which patterns of disease and illness symptoms present and are interpreted and treated add to this complexity. Biomedicine and traditional healing practices also have their own culturally prescribed forms of communication, behaviour and roles.[6]

Medical students are introduced to the social science and psychological theory that underpins CPI by means of supported problem-based learning (PBL) group sessions in the first 3 years of their 6-year training. They discuss how the cultural, psychological and social context in the case scenarios affects the pattern of disease, while being encouraged to reflect on their own culture and the culture of biomedicine and the health system.

Student learning about CPI is carried through to the clinical rotations in the latter half of the curriculum by means of teaching ward rounds. In the 4th-year general medicine ward round, for example, a medical anthropologist (LV) joins the consulting physician and selects a number of appropriate cases for students to interview. Students then participate in a tutorial with LV to explore their insights into the bio-psychosocial history and cultural context of the selected patients.

An annual multi-disciplinary portfolio-based exam is used to assess student knowledge about clinically relevant bio-psychosocial information, multi-professional teamwork and correct referral procedures, as well as testing skills in professional communication, and in anthropological observation and analysis.

Health promotion

Students learn to apply behaviour change theories and HP approaches in patient consultations during the first 3 years of the curriculum. In the 4th-year public health rotation they are placed at different community-based learning (CBL) sites to assess public health problems identified by community stakeholders and to plan and implement HP projects to address the prioritised health needs.

These placements aim to develop awareness of the importance of community participation as a health right, the application of HP ethics, the planning cycle process, teamwork and critical reflection. Students learn skills in planning, organising, facilitation, presentation, and developing and pre-testing mass media. It is anticipated that they will learn to use advocacy, mediation and enablement as long-term strategies in addressing the health needs of the patients and communities that they serve.

Table I. A programme logic model for evaluating sub-themes of the PHC Lead Theme in the medical curriculum of the University of Cape Town

Sub-theme	Learning objectives	Teaching and learning activities	Learning outcomes	Outcome indicators	Methods
CPI	Understand cultural and bio-psychosocial aspects of health Understand complementary and traditional health practices Understand the role of the multi- professional team Understand principles of equity Understand mechanisms for appropriate referrals	Supported PBL Portfolio tasks Medical ward round tutorials	Demonstrate cultural and bio-psychosocial competence Demonstrate observational skills Apply principles of multi-professional teamwork Apply principles of equity Make appropriate referrals	Portfolio tasks Multi-disciplinary portfolio (MDP) OSCE	Student evaluation Student interviews Review of portfolio tasks
HP	Understand behaviour change theories and approaches Understand the planning cycle process	Group projects Seminars Reflective journals Written assignments	Apply behaviour change theories and approaches Develop and implement a health promotion project	Marks for group projects, assignments, and reflective journals Multi-disciplinary portfolio (MDP) OSCE	Review of group projects Student evaluation Interviews with course convenor, site facilitators, students, community stakeholders Structured observations of community-based learning
EBP	Formulate structured clinical questions Access current research evidence Critically appraise validity of evidence	Class lectures Structured office oral (SOO) exam Self-reflection on SOO	Formulate a well-structured clinical question Search for the evidence Appraise the validity of the evidence Understand the statistical, clinical, and public health significance of research results	Marks for written exam and SOO Marks on standard test of EBP competence	

Evidence-based practice

EBP has been defined as the practice of integrating skills in retrieving, appraising, and applying valid research evidence with clinical expertise in making health care decisions in the best interests of patients.[7] Wide variations in the use of clinically proven interventions, often to the detriment of patient care, highlight the many gaps between current research and clinical practice.

Students are taught in their 4th-year public health rotation how to formulate focused clinical research questions and to critically appraise journal papers with regard to study validity and clinical applicability. This teaching builds on prior learning about epidemiological study design and the concepts of validity, bias and confounding. The critical appraisal sessions complement student work in undertaking a literature review and developing a research protocol for an epidemiological field survey at the CBL sites. Students are assessed on their ability to appraise a journal paper by means of a written exam at the end of the rotation.

At the end of the 6th-year family medicine rotation, students are assessed on their ability to clearly communicate evidence about the benefits and risks of treatments to role-playing patients in a primary care consultation, and to reflect afterwards on their personal evidence-based learning needs.

A programme logic model

Programme logic models are tools used by programme managers and evaluators to clarify the structure and internal logic of programmes at

various stages of their development. Table I presents a model to clarify the learning objectives for each of the sub-themes of CPI, HP, and EBP, as well as the teaching and learning activities used to deliver course content, the short-term learning outcomes, the indicators for assessing student performance, and the methods to be used for data collection.

This programme logic model will provide a useful framework for future monitoring and evaluation of the PHC sub-themes of CPI, HP, and EBP within the medical curriculum of the University of Cape Town.

Ethics Committee approval: none required.

Conflict of interest: none.

References

1. World Health Organization. Declaration of Alma-Ata. International Conference on Primary Health Care, Alma-Ata, USSR, 6 - 12 September 1978. Geneva: WHO. http://www.who.int/hpr/NPH/docs/declaration_almaata.pdf (accessed 1 September 2009).
2. UCT Faculty of Medicine. The primary health care approach and the University of Cape Town Medical School. www.primaryhealthcare.uct.ac.za (accessed 1 September 2009).
3. Mayers P, Alperstein M, Duncan M, Olckers L, Gibbs T. Not just another multi-professional course! Part 2: nuts and bolts of designing a transformed curriculum for multi-professional learning. *Medical Teacher* 2006; 28(2): 152-157.
4. Duncan M, Alperstein M, Mayers P, Olckers L, Gibbs T. Not just another multi-professional course! Part 1. Rationale for a transformative curriculum. *Medical Teacher* 2008; 28(1): 59-63.
5. Astin JA, Sierpina VS, Forys K, Clarridge B. Integration of the biopsychosocial model: Perspectives of medical students and residents. *Academic Medicine* 2008; 83(1): 28-36.
6. Boutin-Foster C, Foster JC, Konopasek L. Physician, know thyself: The professional culture of medicine as a framework for teaching cultural competence. *Academic Medicine* 2008; 83(1): 106-111.
7. Sackett DL, Rosenberg WMC, Muir Gray JA, Haynes RB, Richardson WS. Evidence based medicine: what it is and what it isn't. *BMJ* 1996; 312: 71-72.