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THE CANMEDS PROJECT: THE ROYAL COLLEGE OF PHYSICIANS AND SURGEONS OF CANADA MOVES MEDICAL EDUCATION INTO THE 21ST CENTURY

Jason Frank

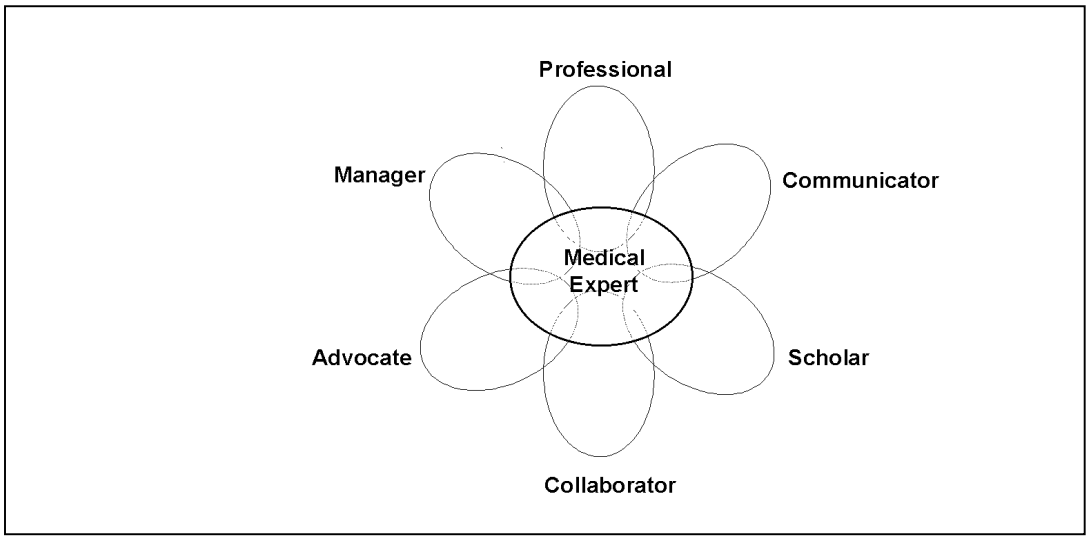

Figure 1: The ñCanMEDS cloverleaf.ò Schematic representation of the CanMEDS competency framework. Copyright 2001 RCPSC, used by permission.

ñIf professionals are to be equipped better to meet the needs of modern health care systems and the standards of practice required, significant educational change requires leadershipé ò

– Spencer & Jordan, 2001[1]

Introduction

Medical practice in all specialties continues to change at an unprecedented rate. Recent times have witnessed the impact of major societal forces on medicine. How can medical education best prepare emerging generations of physicians for this environment? This is the central challenge that confronted the Royal College of Physicians and Surgeons of Canada at the beginning of the 1990s. Arising in response to the dynamic changes in healthcare and education, the Royal College CanMEDS Project has quietly become a Canadian triumph. The College undertook a fundamental re-examination of the core competencies of physicians. The resulting ñCanMEDS Roles frameworkò was the product of an extraordinary collaboration by Fellows and other experts over several years.

Today, the CanMEDS competencies have not only reshaped the educational standards of the College, but are also recognized around the world. In responding to the healthcare needs of the new millennium, the CanMEDS Project has become a global pillar of medical education. This essay describes the development of this remarkable endeavour, now in its fourth phase, from its origins through to 2004.

The Challenge

ñIt has been said that while medicine has changed dramatically in the last half-century, medical education has changed littleé There is increasing recognition in medical schools, in the profession, and by the public that medical education, and the physicians of the future be responsive to the changing needs of societyé ò

– John Wade, address to Council, 1993

The impetus for the CanMEDS Project began as a groundswell across many areas of the College at the beginning of the 1990s. Education committees reported on evolving issues and trends in medical education. Fellows wrote to the Office of Fellowship Affairs to highlight their concerns with the new healthcare environment and offer suggestions for how physicians could best be prepared for it. They identified such forces as patient consumerism, government regulations, financial imperatives, medical information on the Internet, litigation, technology and the explosion in medical knowledge. The Fellowship reflected the concerns of contemporary medical literature.[2 3 4 5 6 7 8 9] Dr. John Wade, former Dean at the University of Manitoba and Chair of the Collegeøs Health and Public Policy Committee (HPPC) recognized these increasing pressures for change and recommended in 1993 that his committee ñlead a review of medical specialization and postgraduate medical education in Canada.ò[10] Council recognized the implications of the shifting landscape and supported the HPPCøs recommendation. This paralleled a worldwide reform movement in medical education, influenced by individuals such as Harvard President Derek Bok.[11 12] In this way, CanMEDS paralleled the creation of the groundbreaking EFPO (Educating Future Physicians for Ontario) Project.[13] Given the rise in consumerism and calls for accountability and professionalism, there was great interest in the idea of social responsiveness in medicine.[14 15] Thus, Dr. Wadeøs committee championed the creation of a special task force, one that would embed societal needs as the central conceptual framework for the renewal of specialty medicine in Canada. The medical education implications were tasked to the Societal Needs Working Group (SNWG) under Dr. Peter Tugwell, then Chair of the Department of Medicine in Ottawa. Committed to this endeavour, the College funded the initial activities of the SNWG; this was later matched by a one-time grant from Associated Medical Services Inc. The endeavour became ñCanadian Medical Education Directions for Specialistsò or the ñCan.M.E.D.S. 2000 Project.ò[i]

CanMEDS Phase I: Framework Development (1993-1996)

The CanMEDS group was given a demanding task: ñé To identify the core competencies generic to all specialists to meet the needs of society.ò

The SNWG explored a number of approaches to this task. ñCompetenciesò ï important observable knowledge, skills and attitudes ï were chosen as the central concept in planning medical education. They reflected the ultimate aims of the project: to develop the abilities needed to provide the highest quality care. A nucleus working group of volunteers was assembled, including Drs. Jeff Turnbull, Mona Jabbour and Josée Labrosse. Dr. Jason Frank was research associate/project coordinator. Mme. Danielle Fréchette in the office of the Executive Director shepherded the process at the College. Fellows from all specialties and provinces volunteered to serve on subcommittees to examine themes in background material. Some of these volunteers are listed in Table 1. The work of identifying the core competencies was extensive, extending over three years. The methodology used was elaborate and systematic (Table 2). Materials and the physician ñRolesò concept provided by the groundbreaking EFPO Project, led by Drs. Vic Neufeld, Robert Maudsley, Richard Pickering, Don Wilson, and others, aided these efforts immensely. The SNWG decided to validate the resulting framework by conducting a complex survey of two cohorts of Fellows.[16] To our knowledge, no other organization has yet endeavoured to validate a physician competency framework. CanMEDS Phase I culminated in the adoption of the CanMEDS competency framework by Council in 1996.[17] With that decision, the College responded to the new healthcare environment highlighted by Fellows, and demonstrated medical leadership by endorsing a competency framework that incorporated societal needs.

[i] The Project was bilingual. In French, it was called *ProMEDS*, but this was not an acronym. Both names were developed by Danielle Fréchette and I in 1994. By 2004, the acronym and *ProMEDS* were dropped in favour of CanMEDS as the flagship moniker for the Project.

Table 1. Some Volunteers of the CanMEDS Societal Needs Working Group
(Note: a complete list of participants can be found in: Societal Needs Working Group. 1996. Skills for the new millennium. Ottawa: Royal College of Physicians and Surgeons of Canada.)

Jason Frank	Jacques Des Marchais
Mona Jabbour	K. Mary Lampe
Peter Tugwell (chair)	George Goldsand
Doug Boyd	David Hollomby
Josée Labrosse	Jack Laidlaw
John MacFadyen	Ann-Marie MacLellan
Meredith Marks	Victor Neufeld
Victor Neufeld	Nicholas Busing
Alasdair Polson	John Atkinson
Beverly Shea	Jean Gray
Jeff Turnbull	Ian Hart
Guido van Rosendaal	John Seely
Danielle Fréchette	Keith Brownell

Table 2. The CanMEDS Project Methodology for the Development of the Competency Framework in Phase I

Consultation with Fellows from many specialties
Expert input (e.g., MD-patient communications)
Consultation with other healthcare organizations (e.g., CMPA)
Systematic literature search (incorporating the extensive EFPO bibliography)
Input from public focus groups done in Ontario

↓

Qualitative analysis of themes in the data
CanMEDS Roles Working Groups (including hundreds of Fellows)

↓

Modified Delphi Process
Identification of the core competencies
Assembly into the CanMEDS Roles Framework

↓

Survey of two cohorts of RC Fellows: validation of the framework

The Results: The CanMEDS Framework

The SNWG identified a framework of core competencies for all specialties. These were organized into themes or ñmeta-competenciesò and called the CanMEDS Roles. The seven CanMEDS Roles are displayed in Figure 2. Overall, the framework was designed to reflect the abilities of ñthe modern competent physicianò who provides high-quality care. The elements were not new; physicians displayed these already. Many residency programs have always addressed them. However, some did not, and existing approaches lacked consistency across the country. CanMEDS made the entire framework explicit

for the first time. There was a renewed emphasis on competencies that are traditionally difficult to measure and often neglected. Details of the framework are explained further elsewhere.[18 19 20] The College had created a validated guide for specialties and programs to plan the training needed to prepare physicians for the new and ever changing healthcare environment.

The Royal College of Physicians and Surgeons of Canada

CanMEDS

A Framework of Essential Competencies for Canadian Specialist Physicians

Medical Expert / Clinical Decision Maker
The specialist must be able to ...
Å demonstrate diagnostic and therapeutic skills for ethical and effective patient care
Å access and apply relevant information to clinical practice
Å demonstrate effective consultation services with respect to patient care, education and legal opinions

Communicator
The specialist must be able to ...
Å establish therapeutic relationship with patients/families
Å obtain and synthesize relevant history from patients/families/communities
Å listen effectively
Å discuss appropriate information with patients/families and the health care team

Collaborator
The specialist must be able to ...
Å consult effectively with other physicians and health care professionals
Å contribute effectively to other interdisciplinary team activities

Manager
The specialist must be able to ...
Å utilize resources effectively to balance patient care, learning needs, and outside activities
Å allocate finite health care resources wisely
Å work effectively and efficiently in a health care organization
Å utilize information technology to optimize patient care, life-long learning and other activities

Health Advocate
The specialist must be able to ...
Å identify the important determinants of health affecting patients
Å contribute effectively to improved health of patients and communities
Å recognize and respond to those issues where advocacy is appropriate

Scholar
The specialist must be able to ...
Å develop, implement and monitor a personal continuing education strategy
Å critically appraise sources of medical information
Å facilitate learning of patients, house staff/students and other health professionals
Å contribute to development of new knowledge

Professional
The specialist must be able to ...
Å deliver highest quality care with integrity, honesty and compassion
Å exhibit appropriate personal and interpersonal professional behaviours
Å practise medicine ethically consistent with obligations of a physician

Figure 2. The 1996 CanMEDS Competency Framework. Copyright 1996 Royal College of Physicians and Surgeons of Canada. Used with permission.

CanMEDS Phase II: Pilot Projects **(1996-1997)**

Drs. J-P DesGroseilliers (then Director of the Office of Training and Evaluation) and Mona Jabbour, Research Associate, took over the initial implementation process in 1996. A number of small pilot projects were commissioned to study methods to ensure incorporation of the CanMEDS Roles in medical education, especially postgraduate medical education (PGME). These took place in Faculties of Medicine

across the country, and involved various competencies. The most successful were arguably the bioethics modules created by the team led by Drs. Keith Brownell and John Seely.[21] Many residency programs in Canada have since used those modules as the basis of ethics teaching. Accreditation data demonstrated that bioethics was rapidly incorporated into Canadian residency education.[22] While the success of the pilot projects varied, they provided evidence that effective educational programs could be developed to implement the CanMEDS framework.

CanMEDS Phase III: Implementation (1997-2002)

ñI see the CanMEDS Roles as the pillars that hold up the Royal College building. The framework has the potential to be our guiding principle for all our future endeavours.ò

– Dr. Gary Cole, Educational Research and Development Unit, RCPSC[23]

This phase coincided with the arrival of Dr. Nadia Mikhael as the new director of the consolidated Office of Education in 1997. Dr. Mikhael set out to ensure that the CanMEDS competencies were incorporated into all the standards of residency education. Each specialty was engaged in a five-year process to rework the CanMEDS standards specifically for that specialty or subspecialty. Table 3 lists the types of standards that were revised. This in itself was an incredible Canadian achievement. Medical organizations worldwide continue to struggle with implementing small changes to their standards and incorporating innovations. Here, the College was uniquely positioned to facilitate this change across 59 specialties and subspecialties. Therefore, in addition to the framework, this feat made CanMEDS a source of envy internationally.

Table 3. Standards revised during CanMEDS Phase III
General accreditation (ñBlue Bookò)
Credentials (ñGreen Bookò)
Specialty-specific accreditation standards
Specialty-specific credentials standards
Objectives of training
Final in-training evaluation reports (FITERs)
Exam blueprints

CanMEDS Phase IV: Faculty Development (2002-present)

In 2001, the Director of the Office of Education commissioned an outcome evaluation to provide a snapshot of the state of CanMEDS in Canada.[24] There were several important findings, including:

- CanMEDS incorporation across the country was surprisingly extensive, not only in PGME, but also in undergraduate and continuing medical education.
- Residency programs varied considerably with respect to their adoption of training for all the CanMEDS Roles.
- The Roles stratified into three tiers, with Medical Expert, Scholar and Professional recognized as especially successful. Health Advocate and Manager were described as the most challenging in the surveys. These results are displayed in Figure 3.

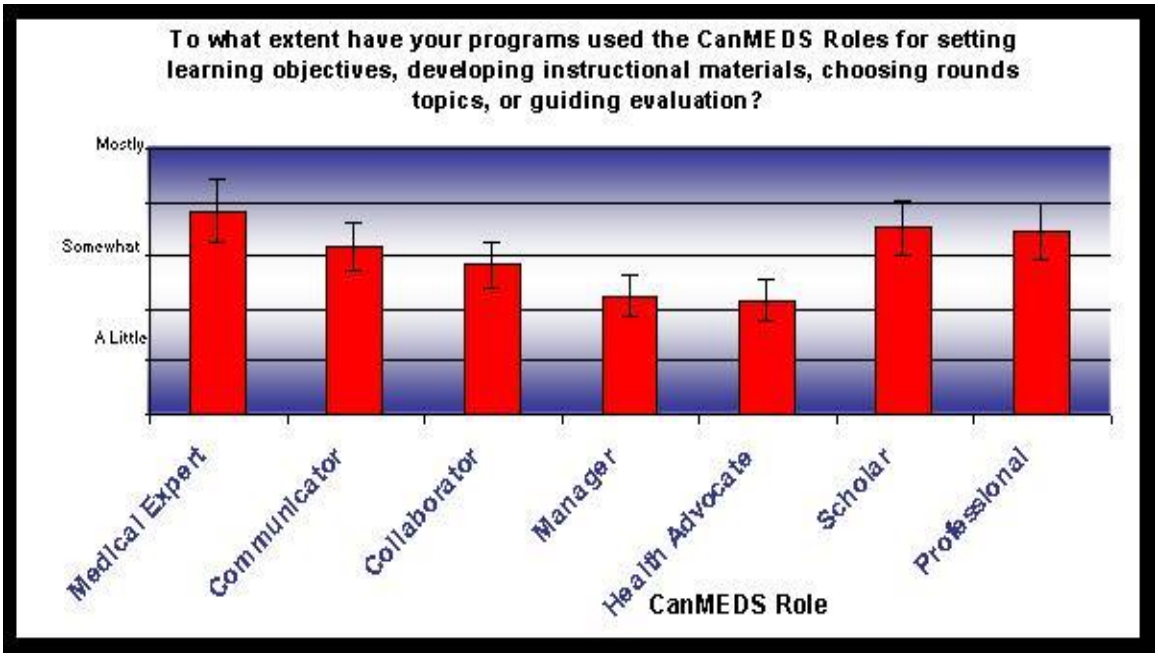

Figure 3. Results from the 2001 RCPS CanMEDS survey. Copyright 2001 RCPSC. Used with permission.

Program directors and educational leaders asked the College to provide more support in terms of teaching, learning and assessment resources for implementing CanMEDS. This stimulated the creation in 2002 of the current stage, Phase IV: Faculty Development. Phase IV is designed to meet the stated needs of educators for further support.

The overall goals of CanMEDS Phase IV are:

- the complete incorporation of the CanMEDS competencies into all Canadian specialty PGME program curricula
- the development and incorporation of effective evaluation methods of the CanMEDS competencies into all specialty PGME programs in Canada
- the complete incorporation of CanMEDS into Royal College policies, structures, programs and staff development.[25]

CONCLUSIONS

The CanMEDS enterprise is a recognized example of College leadership and Fellowsô innovation. This chapter describes the unique developments of the celebrated RCPSC CanMEDS Project from its beginnings to the present. Arising in response to dramatic changes in health care, CanMEDS learned from other projects such as EFPO and developed a unique needs-based competency framework. The CanMEDS Roles are now used around the world. Canadians can feel proud that their framework, designed for a national scope, is now used by jurisdictions in the U.K., the Netherlands, Denmark, Australia, New Zealand and the U.S. Not only did Fellows create the CanMEDS Roles, they also helped adapt them to the standards of 59 specialties and subspecialties ï an enormous achievement. The College remains committed to ongoing development, refinement and implementation of CanMEDS. The need remains to support the ongoing educational work of Fellows and ensure the highest quality of healthcare for the patients we serve. CanMEDS has truly become a quiet Canadian triumph of medical education.

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