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Beyond the Stethoscope

Ontario's Human Resource Requirements
in a Reformed Health Care System

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INTRODUCTION

Let there be no mistake: our cherished health care system simply won't be there to preserve our health tomorrow if we don't take steps to make it sustainable today.

— *The Honourable George Smitherman, 2004*

In recent months, national discussion on the need to reform Canada's health care system has taken on new urgency as First Minister meetings have taken place and evidence of the medical, economic, and social effects of the current system mounts. The increasing costs of human care services and new technologies, combined with an aging population and changing roles of health care providers, are creating unprecedented pressures on our health care system.

In terms of human resources, the public has been focused on an acute shortage of physicians and nurses. In Ontario, efforts to improve supply through innovative projects such as Ontario's International Medical Graduate program (IMG) and CARE bridging program for internationally trained nurses are meeting with some success.

However, what has yet to be addressed in any comprehensive way is the growing labour market demand for practitioners in other areas of health care such as medical imaging, laboratory technology and radiation therapy. This demand stems not only from existing shortages but also future needs for service to support increases in the supply of physicians and nurses. Concern has been expressed that action must be taken before shortages in these other areas of health care reach the crises proportions faced in our medical and nursing professions.

Part One of this report presents a snapshot of human resource issues facing a reformed health care system in Ontario. Part Two demonstrates the importance of involving the colleges in meeting the system's needs.

PART ONE

Driving Forces of Change

There are several forces driving widespread change in Ontario's health care system. A rapidly growing elderly population is increasing demand for services. At the same time, shorter hospital stays, earlier discharge, and greater use of outpatient services have transferred care of many patients to community care agencies. This has changed the physical distribution of people requiring health care services and has created demand for community care givers to provide new, more complex services in clients' homes, long-term care residences, and community facilities such as elderly persons' centres. The types of skills required by hospital and non-hospital staff are also changing in areas of human care and the use of new medical technologies. Family members and volunteer organizations are under pressure to perform increasingly more and demanding health care functions without, some argue, adequate preparation. With fewer resources, health care organizations report that they have reduced program eligibility criteria, and eliminated programs and services, both of which have a negative impact on quality of care.

The challenges created by these forces are particularly acute in Northern Ontario, where geographic and physical isolation impacts health care practice, and in Aboriginal communities, where training and partnerships are needed to increase the number of Aboriginal health care providers.

An Information Deficit

The Canadian Institute for Health Information (2001) reports that doctors and nurses make up 42% of Canada's health care workforce, the remainder being comprised of a range of health care occupations. Statistics Canada estimates that Ontario has a workforce of 286,000 health care workers (2001). This workforce includes 50 major occupations (see Appendix A), including 14 educated and trained at universities and 36 educated and trained at colleges (including registered nurses, who may be educated and trained collaboratively by colleges and universities). The following occupations are the focus of this report:

Ontario Health Care Occupations - College Trained (incl. Michener Institute)

Ontario Health Care Occupations - College Trained	
Athletic Therapist	Medical Imaging Ultrasonographer
Cardiovascular Technician	Medical Laboratory Assistant
Chiropracist	Medical Laboratory Technologist
Chiropractic Health Assistant	Medical Radiation Technologist
Communicative Disorder Assistant	Occupational Health and Safety Technician
Dental Assistant	Occupational Therapist Assistant
Dental Hygienist	Ophthalmic Dispenser
Dental Technologist	Orthotic/Prosthetic Clinician
Denturist	Orthotic/Prosthetic Technician
Diagnostic Cardiac Sonographer	Paramedic
Dialysis Technician	Personal Attendant
Emergency Telecommunicator	Personal Support Worker
Gerontologist (Activation)	Pharmacy Technician
Health Information Management	Physiotherapist Assistant
Hearing Instrument Practitioner	Registered Nurse (joint training with universities)
Massage Therapist	Registered Practical Nurse
Medical Diagnostic Ultrasonographer	Rehabilitation Assistant
Medical Imaging Radiographer	Respiratory Therapist

(Source: Employment Profiles, MTCU)

Data on the size and distribution of Ontario's health care workforce is incomplete. The Canadian Institute for Health Information (CIHI) has data on several occupations and the Ontario District Health Council's most recent labour market survey (2002) provides useful information on demand for occupations. Some associations have human resource data based on membership and employer surveys. However, there is little or no research on the implications of projected labour shortages or changes to the health care system on education and training programs. Neither do we have information on which occu-

pational training programs should be expanded as a result of recently projected increases in the supply of doctors. Although the need for educational program content and design adjustments have been mentioned in several studies on health care reform, there appears to be little or no research on what these operational changes should be. Since Ontario's colleges are primary deliverers of training in both regulated and unregulated health care occupations, there is a need to eliminate this information deficit.

Human Resource Issues Facing Ontario's Health Care System

Analysis of the issues identified by governments, health care employers and occupational organizations indicates that in moving forward with reform, they share a common challenge to provide necessary services of acceptable quality within realistic financial frameworks.

Without exception, reports on issues facing health care organizations in Canada and Ontario identify human resources as an area of particular concern. The issues with the greatest implications for education and training are:

- the inadequate supply of labour and skills;
- the need for interdisciplinary service delivery models instead of the traditional model in which practitioners are trained and required to practice in occupational silos; and
- the need to increase availability of up-to-date health care technology and workers with related skills.

Inadequate Supply of Labour and Skills

National and provincial reports acknowledge an inadequate supply of workers in a few health care occupations through passing references. However, when human resource reports of individual occupations and regional health organizations are synthesized, there appears to be an unfulfilled demand for workers in several health care occupations, both nationally and in Ontario. Two of the most publicized areas of demand are medical laboratory technology and radiation therapy, but other areas also appear to be in need.

For example, the Northwestern Ontario District Health Council Health Hu-

man Resources Study (2000) reported recruitment and retention of health care workers as a significant problem for northern employers. The greatest shortages are in the occupations of personal support worker, primary care paramedic and mental health worker. The study is unusual in that it identifies barriers to realizing the full potential of education and training in health care for the region. Increasing the availability of health care education programs, expanding clinical placements for students, enhancing professional development opportunities and increasing access to education and training through partnerships were among the recommendations made by the Council.

Occupational associations express concern about the future quality of health care. In a 2002 human resource study, the Canadian Association for Community Care noted several trends in home care and recommended the following actions: identifying core competencies for home support workers and developing new educational curriculum; promoting basic education for all workers, including skills required by new home care technologies; integrating home care into health and social service education programs and interdisciplinary program and practicum opportunities; and working with postsecondary institutions, including colleges, to increase seats, offer prior learning assessment and schedule accessible programming.

Long-term care organizations also express concern about labour supply. The number of long-term beds in Ontario has risen from 57,000 in 2000 to 70,850 in 2004, increasing demand for workers and new skills to accommodate the needs of new client groups.

In its recent report, the Expert Panel on SARS and Infectious Disease Control (2004) noted a severe shortage of infection control health care workers and formal training programs in infection control in Ontario.

One of the most striking and urgent issues raised in our Initial Report related to human resource shortages, especially in public health. As such, we endorsed a comprehensive public health human resource revitalization strategy, including increased capacity for education and training, promotion of public health careers, and improved recruitment and retention strategies for Medical Officers of Health and their staff.
— Expert Panel on SARS and Infectious Disease Control, 2004

The panel's recommendations included developing an increased capacity for

the education and training of public health workers; developing and supporting a provincially funded training and education program for existing public health staff with special emphasis on cross-training between public health, acute care, long-term care; the development, in partnership with HRSDC and educational institutions, of a comprehensive campaign to promote public health careers; and the development of bridge programs designed to update skills and qualifications of skilled individuals with previous public health experience.

The Need for Interdisciplinary Service Delivery Models

There is a growing trend toward interdisciplinary/multidisciplinary team health care that builds on the experience of other industries in which team work is associated with increased job satisfaction and productivity. Several reports from health care organizations indicate an interest in moving in this direction as a means of improving quality of care. Included are the report to the Minister of Health and Long-term Care in Ontario (2004), by Parliamentary Assistant Monique Smith, and the Romanow report (2002), which recommended that education programs be changed to focus more on integrated approaches for preparing health care teams.

The implications of team health care for colleges lie in adjustments that may be needed in curriculum and interdisciplinary program delivery designs. Ontario's health regulatory bodies have also developed quality assurance programs that include continuing education to maintain the competence of their members. The role that colleges currently or could play in supporting this agenda is beyond the scope of this report but will be important to explore.

The Need to Increase Availability of Technology and Workers with Related Skills

The development of new technologies in many health care occupations has placed pressure on workplaces to find workers with increasingly complex sets of skills. Employer surveys indicate this is a recruitment problem not only because of a shortage of these skills among their traditional labour pools but also due to the unavailability of accessible training.

In response to this demand, the Kirby Report (2002) called for an increase in

the availability of new health care technologies and associated training programs. Romanow (2002) also argued for funds to be used ‘not only for purchasing technology but also for training and hiring the necessary staff and technicians to operate and maintain equipment and interpret the results.’

Federal Action

In response to concerns about our national health care system, the First Ministers have commissioned a number of task forces and studies that address the need and priorities for health reform: including primary health care, home care, access to diagnostic/medical equipment, and information technology. The 2003 First Ministers Accord on Health Care Renewal committed the First Ministers to undertake collaborative strategies to strengthen the evidence base for national planning, promote interdisciplinary provider education, improve recruitment and retention and ensure the supply of needed health providers. A strategy for improving patient safety is also considered critical. The Accord includes a \$1.5-billion Diagnostic/Medical Equipment Fund to assist provinces and territories with the purchase and installation of medical/diagnostic equipment. In 2003, the Ministers agreed to support specialized staff training to improve access to publicly funded diagnostic services.

The federal government has also established the Pan-Canadian Health Human Resources Planning Initiative aimed at identifying health workforce issues and delineating a process for collaborative decision-making. Although there are no education representatives on the Initiative’s national partnership roster, at least two sub-initiatives relate directly to colleges. The first is a set of recruitment and retention activities designed to, among other things, increase interest in health careers and increase the supply of health care providers. The second is a strategy on Interprofessional Education for Collaborative Patient-Centred Practice (IECPCP). It is difficult to assess what role colleges might play in the development of this strategy, since no college educators are on its expert committee and links, if any, between the Ontario Ministry of Health and Long-term Care (which is on the Committee) and the Ontario Ministry of Training, Colleges and Universities are unclear.

PART TWO

Health Care Reform

The Ontario Minister of Health and Long-term Care has expressed support for health reform and has signaled the direction of change in the province's health care delivery system:

Hospitals are expensive places to treat patients. Yet, far too many hospital days are taken up by patients who don't need to be there at all. Institutional long-term care and home care supports are two examples of alternatives that can facilitate safe and appropriate early discharge from hospital. Furthermore, community and home supports can help keep people out of institutions in the first place.

— The Honourable George Smitherman, 2004

The Ministry acknowledges that in the long-term care sector, cost reduction pressures have resulted in the elimination of training budgets and, as a result, 'facility staff sometimes lack the knowledge, experience and skills to do what is expected of them' (MOH Learning Series - Booklet 4). In her report to the Minister of Health and Long-term Care (2004), Parliamentary Assistant, Monique Smith recommended increasing professional development, making minimal training a requirement for personal support workers, and requiring training regarding abuse, communication skills, dementia, and palliative care for all staff using a number of community and occupational training programs. Expanding geriatric training in all relevant curricula was recommended to the Ministry of Training, Colleges and Universities.

In his 2004 Budget Speech, the provincial Minister of Finance focused on two areas: the need to transform the health care system and the need to invest in education. The evidence noted throughout this report suggests that further investments in the education and training of health care workers would meet both Government objectives.

The budget committed the government to nine new MRI and CT sites for Ontario, 36,000 additional cardiac services, home care for 95,700 additional Ontarians, 12,000 new bed lifts for hospitals and long term care facilities,

3,700 new long term care beds, and the development of around-the-clock primary care by teams of doctors, nurse practitioners and other health care providers over the next four years. The training implications of these developments appear to be significant.

Role of Ontario's Colleges in Health Care

Colleges of Applied Arts and Technology play a critical role in the preparation of health workers in Ontario. In 2003, colleges received 91,000 applications and delivered education and training to almost 20,000 students in 277 health programs, representing 13% of total college enrolments. Graduate employment rates average 96% and employer satisfaction rates are high. Colleges are responsible for postsecondary education and training of over 70% of Ontario's major health care occupations (see Appendix A).

From 1999-2000 to 2003-04, almost 33,000 students graduated from college health programs. The following table presents graduation statistics by program over this five-year period.

Ontario College Health Graduates by Program, 1999-2000 through 2003-04

Number of Graduates					
Health Programs	1999-2000	2000-01	2001-02	2002-03	2003-04
Health Technology	1,716	1,499	1,728	1,649	1,591
Nursing-related	3,478	4,174	4,564	4,964	5,753
Health (Misc)	362	383	249	415	455
Total Grads	5,556	6,056	6,541	7,028	7,799

(Source: Employment Profiles, 1999-2003, MTCU)

College Partnerships

Ontario's colleges are adept at responding to labour market needs, often through partnerships with employers and occupational associations. The following are examples of recent innovations in health care education and training.

- Mohawk College in Hamilton has collaborated with Six Nations Polytechnic to offer a unique two-year Practical Nursing Program. The pro-

gram is a significant first step in helping address the shortage of health-care professionals in Aboriginal communities. Students will attend classes at Six Nations Polytechnic, conduct their lab work at the Mohawk-McMaster Institute for Applied Health Sciences in Hamilton, and perform their clinical work at a variety of sites in First Nations communities across Canada.

- The School of Health and Community Services at Thunder Bay's Confederation College has initiated a program to train new Practical Nurses in communities throughout northwestern Ontario. This "fast-track" program allows students from any of the college's regional campuses to participate in the program from their home location (Kenora, Fort Frances, Dryden, Sioux Lookout, Marathon and/or Geraldton) through video-conferenced classes and lab and clinical learning activities in their own communities, without having to travel to a larger centre.
- Centennial College in Toronto is leading a unique research project in tele-home care with hospitals and community health-care providers. The project uses technology to link 200 homes to health care and community care professionals to enable patients with chronic diseases such as congestive heart failure, diabetes and chronic lung disease to access health-care services 24 hours a day without leaving their homes. As part of the research, the project will assess whether tele-home care provides better outcomes and less overall costs to the health-care system.
- Each year, Sheridan College in Oakville holds a Palliative Care Conference to increase the knowledge and understanding of palliative care issues among service providers, including physicians, nurses and social workers. In May, the college hosted its eighth annual conference, 'Keys to Caring: Opening Doors in Palliative Care.' The conference looked at specific ways to help a dying person experience the best quality of life.
- Fleming College in Peterborough uses its new state-of-the-art long-term care facility, the Institute for Healthy Aging, to provide training in geriatric care and develop new models of care. The Institute for Healthy Aging co-ordinates learning and clinical practice opportunities for students, develops new curriculum, and promotes healthy aging in the community. It will pilot new-technology initiatives with its partners and provide development, research and educational opportunities for professionals.

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- Paramedic students at Northern College in Timmins offer a Vial of Life service to seniors that can potentially save lives. In this free program, paramedic students assist seniors to complete a special form designed to inform emergency personnel of medical conditions and medications taken should they not be able to speak in a medical crisis. The completed form is placed inside an empty pill bottle attached to a shelf in the patient's refrigerator. A special sticker on the door to the dwelling alerts emergency personnel to the Vial of Life information.

CONCLUSIONS

The human resource conditions under which health care occupations operate in Ontario are complex. Research in some areas is non-existent. In other areas, the evidence indicates that roles and responsibilities of health care workers and service deliverers are changing in important ways. These changes have an impact on labour supply and demand, required skills, training standards, curriculum requirements, and delivery designs.

Colleges have a strong history of responding effectively to labour market needs. The colleges are well positioned to assist the Government of Ontario in addressing short-term training issues and longer-term educational shortages by contributing to the following:

- Educational program content and delivery designs that respond to changes in professional knowledge and skill requirements of hospitals and community health care services;
- Partnerships with universities and other training providers;
- Research to determine future demand for health care workers;
- Continuing professional development of health care workers;
- Consultation on key health care human resource issues related to learning; and
- Identifying supports required to increase college capacity to respond to changes in the health care system.

The Ontario Government has indicated its continuing commitment to high quality health care, health care reform and high quality postsecondary education. However, the evidence suggests that the impact of health care reforms on the education and training of a range of health occupations has not yet been addressed. Colleges are virtually absent from discussions taking place at both the national and provincial levels despite the significant contributions they make to health care education. Our findings suggest that in order for colleges to respond strategically and operationally to the changing health care needs of Ontarians, it will be necessary to participate more fully in the research, consultations, delivery and decision-making processes of health care reform.

APPENDIX A:

MAJOR HEALTH OCCUPATIONAL EDUCATION AND TRAINING

Based on information from the National Occupational Classification (NOC) system, the Ontario College Application Service (OCAS), the Council of Ontario Universities (COU), MTCU employment profiles, and the Canadian Institute for Health Information, education and training for the following health care occupations are provided by colleges and universities in Ontario. (Minor variations in terminology occur across institutions).

UNIVERSITIES	COLLEGES
1. Audiologist/Speech Language Pathologist	1. Athletic Therapist
2. Dentist	2. Cardiovascular Technician
3. Dietician/Nutritionist	3. Chiroprapist
4. Doctor	4. Chiropractic Health Assistant
5. Midwife	5. Communicative Disorder Assistant
6. Music/Art/Dance Therapist	6. Dental Assistant
7. Naturopath	7. Dental Hygienist
8. Nurse Practitioner	8. Dental Technologist
9. Registered Nurse	9. Denturist
10. Occupational Therapist	10. Diagnostic Cardiac Sonographer
11. Optometrist	11. Dialysis Technician
12. Osteopath	12. Emergency Telecommunicator
13. Pharmacist	13. Gerontologist (Activation)
14. Physiotherapist	14. Health Care Administrator
	15. Hearing Instrument Practitioner
	16. Massage Therapist
	17. Medical Diagnostic Ultrasonographer
	18. Medical Imaging Radiographer
	19. Medical Imaging Ultrasonographer
	20. Medical Laboratory Technician/Assistant
	21. Medical Laboratory Technologist
	22. Medical Radiation Technologist
	23. Occupational Health & Safety Technician
	24. Occupational Therapist Assistant
	25. Ophthalmic Dispenser
	26. Orthotic/Prosthetic Clinician
	27. Orthotic/Prosthetic Technician
	28. Paramedic
	29. Personal Attendant
	30. Personal Support Worker
	31. Pharmacy Technician
	32. Physiotherapist Assistant
	33. Registered Nurse (in collaboration with universities)
	34. Registered Practical Nurse
	35. Rehabilitation Assistant
	36. Respiratory Therapist

(Sources: NOC, OCAS, COU, MTCU employment profiles, Canadian Institute for Health Information)