THE HEALTH CARE HUMAN RESOURCE CRUNCH:
HOPE FOR HEALTH CARE SERIES -WHITE PAPER THREE

EXECUTIVE SUMMARY

The shortage of health human resources (HHR) has been described by leaders and decision makers in health as the most important health issue in their countries. In 2006, the World Health Organization estimated there were close to 60 million full-time, paid health workers worldwide. While this seems like a large enough number to ensure we have plenty of well trained providers, there is actually a chronic global shortage of health workers.

In Canada, approximately 1 in 10 working Canadians are employed in health and social services and for the past several years the number of health professionals has been increasing. While this is encouraging, aging populations and an increase in chronic diseases are placing new demands on a health workforce that is already inadequate in number and itself aging.

The HHR crunch in Alberta can provide of sense of the urgency behind the shortage of both physicians and nurses. Estimates indicate that given our current approach to health care management, Alberta is currently short more than 1,000 family physicians. In Alberta’s largest city, Calgary, an estimated 1 in 4 people do not have a family physician. By 2016, it has been projected that Alberta will require an additional 1,800 physicians and 6,200 nurses. Alberta will be short more than 15,000 health providers in all categories by 2016 despite the fact that in 2004-2005 almost 15,000 students were enrolled in universities and colleges to study health programs.

Common Approaches to Growing Canada’s Health Human Resources

*Train More People* - Between 1996 and 2005, the supply of virtually all health care professionals in Canada increased; however, in many professions the increase in supply has not met population growth. Making up the shortfall through training requires significant investment. Additionally, the multi-year training cycle for many health care professions means it is many years before increasing enrollment impacts supply.

*Recruit* - Migration from other jurisdictions is one way to build Canada’s health workforce, however, it likely is not the solution. There is a global shortage of health workers and while migration may ease the shortage in one region, it inevitably worsens the shortage in another region. In addition, barriers in licensing, regulation, and language all limit the opportunities for the migration of health workers.

*Maximize Current Workforce* - There is no longer a mandatory retirement age for nurses or physicians in Canada, however, the demands of many health care professions mean that some people in the professions retire earlier than the age of traditional age of 65. For example, research is indicating that an increasing portion of RN’s are retiring early at around age 56. The impact of absenteeism on the health work force is also significant. It is estimated that in Canada the absenteeism rates for nurse
supervisors and registered nurses is an equivalent of 9,754 full time nursing jobs annually. Finally, the practice patterns of health care professionals impact the overall supply of health services. Factors that define practice patterns may include the number of years, days, hours a physician practices medicine, as well as, the number and type of patients treated.

Reduce Demand - One of the most powerful predictors of demand on health human resources is the overall population health. The utilization of hospital, family physician and specialist services by persons with chronic conditions is substantially higher than for those without chronic disease. Being overweight or obese is an important contributor to chronic disease. The number of overweight men, women, and children has been rising in Canada and currently more than 60 percent of Canadians are overweight or obese.

Now What

To simply expect to add more health care providers is unattainable demographically and unsustainable economically. There are clear signs that fundamental change will be necessary to maintain an adequate, healthy and satisfied health care workforce. Now it is time to turn our attention to thinking about some of the solutions. The next paper will continue the conversation by presenting some ideas and examples of changes that might contribute to building a sustainable health care system.
the Health Care Human Resource Crunch:

HOPE FOR HEALTH CARE SERIES - WHITE PAPER THREE

The previous paper in this series discussed some of the challenges associated with health care spending and financial sustainability. We outlined why health care costs continue to skyrocket upward in most countries and why this trend will likely continue, unless we begin to make fundamental changes.

This paper is intended to focus on another serious threat to Canada’s health care system, the shortage of health human resources (HHR). The crisis in HHR has been described by leaders and decision makers in health as the most important health issue in their countries. If there is no one available to deliver health care services then the question of how we are going to pay for these services seems irrelevant.

BACKGROUND

Health human resources generally refers to those individuals who provide health care or health services to the public; physicians, nurses and allied health professionals, as well as, family and volunteers when they are caregivers. In 2006, the World Health Organization estimated there were close to 60 million full-time, paid health workers worldwide. While this seems like a large enough number to ensure we have plenty of well trained providers, there is actually a chronic global shortage of health workers.

HHR and financial sustainability are very closely linked because labor costs are by far the largest component of Canada’s health care system budget. The specific percentage of spending on labor varies by jurisdiction but HHR expenditures are never below 60 percent and can be as high as 80 percent of health care budgets. This means that in 2007, of the $160 billion Canada spent on health care between $96 and $128 billion of that went toward HHR. Approximately 1 in 10 working Canadians are employed in health and social services. This represents more than 1.5 million health care providers involved in a wide range of regulated and unregulated professions. These professions include doctors, nurses, pharmacists, chiropractors, physiotherapists and midwives. In recent years, several new professions have emerged in Canada including physician assistants, nurse practitioners, clinical specialist, radiation therapists, anesthesia assistants and surgical assistants. These new specialties shift traditional workloads and make estimating and forecasting HHR an evolving process.

The average Canadian receives more than one and a half times the health care services as his or her equivalent three decades ago. The expansion of health services requires increased financial and human resources. Joint replacement is a good example of an expanding service. As complex
surgeries have become less invasive and more routine it has become possible to expand the number of procedures offered to an ever increasing group of people. Between 2000 and 2005, in British Columbia, the number of knee replacements increased by 84%, hip replacements by 47%, angioplasties increased by 62% and cataract surgeries by 33%.

THE ALBERTA EXAMPLE

The mix of federal, provincial and territorial health care systems sometimes makes it challenging to offer specific examples and bring a problem to light. For the remainder of this paper, many examples from Alberta have been chosen. The opportunity to examine challenges and seek solutions within a single environment exists in Alberta. Provincial health services in Alberta are managed by a single organization, Alberta Health Services (AHS). AHS is the largest integrated health system in Canada. Trends that may not yet be visible in smaller jurisdictions may be more apparent in a larger system.

AHS is one of the largest employers in Canada and the largest employer in Alberta with almost 90,000 employees. AHS acknowledges that Alberta’s health workforce is vitally important. It has also been acknowledged that Alberta’s health system does not have the capacity to make some important changes because of a lack of health care providers. Alberta is currently experiencing a shortage of both physicians and nurses. Estimates indicate that given our current approach to health care management, Alberta is currently short more than 1,000 family physicians. In Alberta’s largest city, Calgary, an estimated 1 in 4 people do not have a family physician. By 2016, it has been projected that Alberta will require an additional 1,800 physicians and 6,200 nurses. At a cost of $6266 per person annually, Alberta spends more per capita than any other Province which demonstrates that even for a jurisdiction expending significant financial resources HHR is still a plaguing problem.

THE URGENCY OF THE PROBLEM

Self-sufficiency in HHR has been defined as the capacity to produce or recruit enough new health care providers each year to keep pace with attrition and population growth. The ideal number within each profession is usually defined as a measure of supply of professionals against population size. In Canada, the number of physicians to 100,000 people in Canada is increasing. While this is encouraging, it fails to take into account Canadians’ changing health needs, increased investment in health promotion, increasing chronic disease incidence, new service delivery models, geographic distribution and advances in treatment and technology.

Aging populations and an increase in chronic diseases are placing new demands on a health workforce that is already inadequate in number and itself aging. To simply expect to add more health care providers is unattainable demographically and unsustainable economically. There are clear
signs that fundamental change will be necessary to maintain an adequate, healthy and satisfied health care workforce.\textsuperscript{17}

So, let's examine some frequently cited solutions and their associated challenges.

**Size of Current Workforce is growing... but**

In the 1980s and early 1990s following forecasts of health workforce oversupply in many countries, measures limiting the number of medical and nursing graduates were adopted.\textsuperscript{18} At the turn of the century, many countries, including Canada, were surprised by a combination of rising demand and limited domestic supply.

Between 1996 and 2005, the supply of virtually all health care professionals in Canada increased; however, in many professions the increase in supply has not met population growth.\textsuperscript{19}

**Training more people is an option... but**

Making up the shortfall through training requires significant investment. Additionally, the multi-year training cycle for many health care professions means it is many years before increasing enrollment impacts supply.

Alberta will be short more than 15,000 health providers in all categories by 2016 despite the fact that in 2004-2005 almost 15,000 students were enrolled in universities and colleges to study health programs.\textsuperscript{20}

**Bringing people in from elsewhere... but**

Migration from other jurisdictions is one way to build Canada’s health workforce, however, it likely is not the solution. There is a global shortage of health workers and while migration may ease the shortage in one region, it inevitably worsens the shortage in another region. In addition, barriers in licensing, regulation, and language all limit the opportunities for the migration of health workers.

Canada’s health systems are currently recruiting workers from other countries, while at the same time our health workforce is the target of aggressive recruitment campaigns from other countries. Canadian health care workers are highly regarded internationally. In particular, Canadian nurses are frequently the target of international recruitment efforts. In 2002, it was estimated that as many as 15% of Canada’s recent nursing graduates moved abroad.\textsuperscript{21}

**Keeping workers around longer... but**

In 2005, the average Canadian health worker was 42 years of age, slightly older than the average Canadian worker at 40 years. 1 in 10 physicians was 65 or older.\textsuperscript{22}
There is no longer a mandatory retirement age for nurses or physicians in Canada, however, the demands of many health care professions mean that some people in the professions retire earlier than the age of traditional age of 65. For example, research is indicating that an increasing portion of RN’s are retiring early at around age 56.  

Making the jobs easier... but

The health industry is often physically, mentally, and emotionally hard on its workers. In 2008, Alberta’s Health Service Industry had the highest lost time claim rate of any major industry. Within the health care industry, the long term care industry had the highest lost-time claim and disabling injury rate. Disabling injury claims caused by assaults and violent acts were 6.2 times higher than the average for all sectors.

The impact of absenteeism is significant. In 2006, on average, the typical Canadian health care worker, age 25 to 54, missed almost 12 days of work due to their own disability or illness. This compares to an average of 7 days missed work for all employed Canadians. It is estimated that in Canada the absenteeism rates for nurse supervisors and registered nurses is an equivalent of 9,754 full time nursing jobs annually.

Change the work patterns... but

The practice patterns of health care professionals impact the overall supply of health services. Factors that define practice patterns may include the number of years, days, hours a physician practices medicine, as well as, the number and type of patients treated. In Canada, the proportion of the general Canadian full-time workforce has remained consistent. In 2005, 82% of the Canadian labour force worked full-time and 18% worked part-time. By comparison, 24% of the health care workforce worked part-time.

The participation of women in the health care professions also impacts the number of human resource hours. Women make up 77% of the health workforce in Canada compared to 47% of all occupations. The high proportion of female health care providers has an impact on work force supply. As an example, for various reasons, female physicians work an average of 10 fewer hours per week than male physicians. And the number of females enrolled in Faculties of Medicine has increased significantly in recent years, in many Faculties they represent more than 50% of students.

There are some analysts who contend the changes in newly graduated family physician work patterns and productivity will be significant drivers of the shortage of family physicians. One study indicated younger family physicians may provide almost 20% fewer services than their family physician predecessors.
OTHER FACTORS THAT INFLUENCE THE SITUATION

Geography

Canada’s vast area also contributes to the HHR problem. In recent years, the supply of some health care professionals has been growing, however, the number and mix of health care professionals varies across the country. For example in 2006, the number of general practitioners and family physicians per 100,000 people was almost a third higher in urban Canada than in rural Canada. Almost 20% of Canada’s population lives in rural areas, but less than 10% of all physicians and 15.7% of general practitioners live in rural Canada.31

Health of Population/Burden of Disease

One of the most powerful predictors of demand on health human resources is the overall population health. The utilization of hospital, family physician and specialist services by persons with chronic conditions is substantially higher than for those without chronic disease.32 The World Health Organization predicts that in Canada, in the next ten years chronic diseases will account for 89% of all deaths. Deaths from chronic disease will increase by 15%. Most markedly deaths from diabetes will increase by 44%.33

Being overweight or obese is an important contributor to chronic disease. The number of overweight men, women, and children has been rising in Canada and currently more than 60 percent of Canadians are overweight or obese.34

Demographics

Relative to other countries, Canada’s baby boomer generation represents a larger percentage of the population.35 The pressures of aging boomers are frequently discussed but it is difficult to imagine exactly how this aging population will impact Canada’s health care system. In 2005, approximately 13% of Canadians were seniors and consumed an estimated 44% of government health care spending.36 The pattern of seniors consuming almost half of health care resources has been a steady yearly trend since 1998. By 2036, 24.5% of Canadians are expected to be age 65 and older.37

Canada has significant HHR challenges in meeting the health care needs of Aboriginal communities who may be geographically widely distributed across the country. Aboriginal people make up a growing share of Canada’s total population. However, while this population is younger than the non-Aboriginal population, its health needs are much greater. These needs will likely have an impact on health systems.38
Patient Expectations

In our daily lives we are consumers of goods and services, we expect and value convenience, speed, customer service, accessible information and ease of communication. A time crunched, savvy, educated population with unlimited internet based information at their finger tips has very high expectations of the health care system and its professionals.

CONCLUSION

A healthy population is fundamental to a productive society. The shortage of HHR has been described by leaders in health as the most important health issue in their countries. Health care costs are rising at worrisome levels and even if the money were available, the shortage of HHR cannot be corrected by dollars alone.

Where do we go from here?

The second and third papers in this Hope for Health Care White Paper Series have presented two significant challenges to the health care system. Focusing on problems can be discouraging and the complexity and scope of the problem can seem overwhelming, but the intent of these two papers is not to discourage or overwhelm. The intent of these two papers is to lay a common knowledge foundation for the coming discussions. Now it is time to turn our attention to thinking about some of the solutions. The next paper will continue the conversation by presenting some ideas and examples of changes that might contribute to building a sustainable health care system. The people at Stratavera are passionate about shifting the way people think about health and we are very excited to continue a conversation based on practical, productive solutions. Stay tuned.

5 THINGS EVERY CANADIAN CAN DO TO IMPROVE OUR HEALTH CARE SYSTEM

1. Consider this question: In light of your personal experience of health and wellness, what are some reasonable expectations of efficient and effective care?
2. If you make a Doctor’s appointment keep it, be on time, or call if you will be late.
3. Be patient with front line health care workers.
4. Get to know your pharmacist.
5. Send your thoughts about what you have read so far to alonsberry@stratavera.com
CREATING AN ACCURATE FORECAST OF OUR NEEDS

Forecasting the HHR necessary to meet the needs of Canadians is a complex process. The many interconnected influences on supply and demand make putting the right number of health care providers, with the right skill sets, in the right settings challenging.\(^\text{39}\) The following is a list of some of the more pressing supply and demand influences on health human resources in Canada.

### Supply Influences

- Size of current workforce
- Regulation
- Training
- Migration
- Attrition
- Health and safety of workers
- Productivity of workforce
- Funding
- Recruitment
- Retirement
- Compensation
- Competence of workforce
- Forecasting
- Infrastructure
- Retention
- Immigration
- Deaths
- Work Patterns
- Management/Supervision

### Demand Influences

- Health of population
- Geography
- Burden of disease
- Patient Expectations
- Demographics


