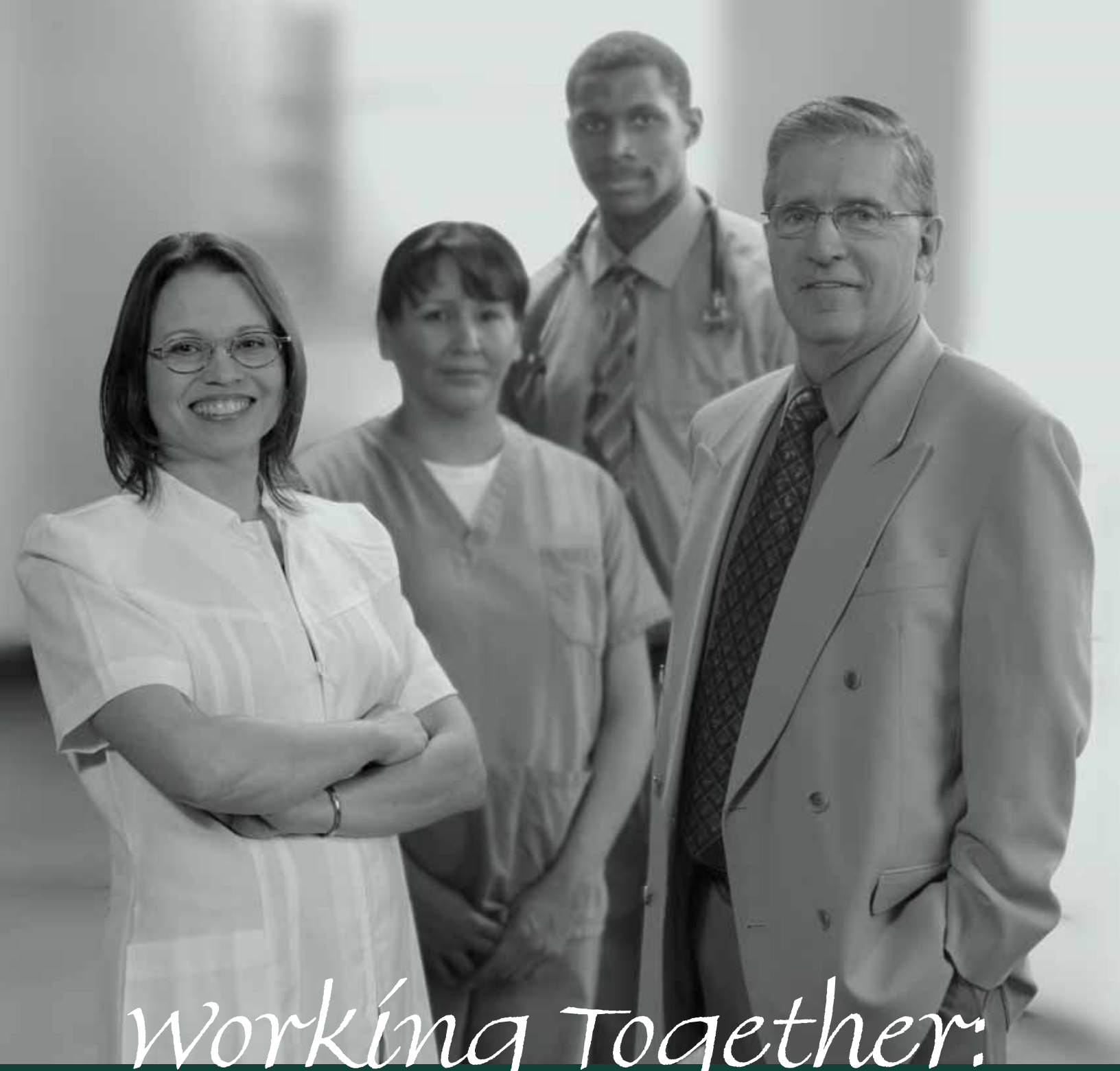

Working Together:

Saskatchewan's Health Workforce Action Plan

Saskatchewan
Health

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A Message *from the Premier and Minister of Health*

We are fortunate in Saskatchewan to have highly skilled health care professionals who are committed to providing the best possible care to their patients. However, like many other jurisdictions across Canada and around the world, Saskatchewan has experienced shortages in some health professions. Supporting, attracting and developing health care personnel is one of the biggest challenges in our health care system.

It is within this context that we are pleased to present *Working Together: Saskatchewan's Health Workforce Action Plan,* which outlines a collaborative plan to strengthen health human resource planning in the province.

This plan flows from the First Ministers' Meeting that both of us attended in September 2004. At this conference, we identified doctors, nurses, pharmacists and technologists – the largest groups of health providers – as the first set of health professionals to consider in this planning. At the same time, we agreed to release our plans by December 31, 2005.

As well as fulfilling our First Ministers' commitment, this health human resource plan builds on our *Action Plan for Saskatchewan Health Care.*

Since 2001, when we introduced our *Action Plan,* the government has demonstrated its commitment to retention and recruitment by:

- Educating more health care providers in Saskatchewan;
- Developing a workforce that is more representative of the people it serves;
- Expanding bursary programs for needed health care professionals;
- Expanding continuing education and development;
- Improving workplace environments;
- Further committing to health sciences education and research; and
- Developing and implementing a province-wide health human resource plan.

The health human resource plan also complements our provincial northern health strategy, the *Pan-Canadian Health Human Resource Framework* and the *Aboriginal Health Blueprint* initiative.

In developing this plan, we consulted extensively with our health partners across the province, asking them questions such as, "Have we proposed the right vision, goals and guiding principles for Saskatchewan? What are the most important issues affecting your organization/profession? What do you believe the potential solutions are for these issues? What would success look like for a health human resource plan?"

As a result of these consultations, the plan reflects our common vision, goals and objectives. The actions reflect our collective commitment to:

- Recognizing and retaining the health professionals that Saskatchewan has and supporting them in the work they are doing;
- Improving our self-sufficiency in training our own health professionals, within available resources;
- Recruiting from outside Saskatchewan to supplement our own supply; and
- Finding innovative ways to keep Saskatchewan youth in our province by providing them with training and employment opportunities in the health care field.

The development of a provincial health human resource plan is not a government strategy nor does it belong to any one organization or profession. Rather, it is a provincial strategy that brings together the views and experience of people in health care, research, education, Aboriginal communities and government sectors.

Collaboration and partnership of stakeholders will be vital to the ongoing success of this plan. For this reason, we will establish a workforce steering committee, made up of representatives from the health and learning sectors, to guide future actions and help measure progress.

We would like to thank all our partners for their hard work in developing this plan and look forward to its successful implementation.

Lorne Calvert
Premier of Saskatchewan

John T. Nilson, Q.C.
Minister of Health

Executive *Summary*

Working Together: Saskatchewan's Health Workforce Action Plan flows from the First Ministers' Meeting 2004, and builds upon the *Action Plan for Saskatchewan Health Care,* released in 2001.

The plan was developed with broad consultation and advice from health and learning stakeholders, as well as other government departments. From May to October 2005, health stakeholders offered their advice and ideas about issues facing the many different health professions in Saskatchewan.

Five themes emerged from these face-to-face and written consultations: quality of care; workforce environment; education and training; evidence-based planning; and roles, responsibilities and relationships.

The resulting plan reflects our common vision, goals and objectives to strengthen health human resource planning in this province. It sets a direction for a more integrated, coordinated workforce. Rather than focusing solely on the number of health professionals needed, the plan reflects the value of a workforce that can respond to change in health needs, skill-mixes and service delivery.

It also strives to improve Saskatchewan's self-sufficiency in educating and training our own health professionals, within available resources. At the same time, it calls for creating employment opportunities for newly trained professionals, building a representative workforce, drawing upon the experience of veteran employees to mentor new graduates, better aligning education with health service needs, and establishing a steering committee to help implement the plan and guide continued planning efforts.

Certainly, health human resource planning is an evolving science driven by the design of the health system and the way service is delivered. It requires a continual assessment of how service design decisions affect health human resources. (Please see appendix B for more information on the health human resource model.)

This plan does not belong to government, nor does it belong to any particular group or organization. Rather it is a provincial strategy that brings together the views and experience of people in health, research, education, Aboriginal communities and government sectors.

Working Together: Saskatchewan's Health Workforce Action Plan includes many actions that can be undertaken immediately without additional funding. The actions that require decisions around health care spending will be made through the normal budget planning process. The timeframe to fully implement the actions will be determined within our fiscal resources and the competing priorities of the province.

As part of our First Ministers' Meeting commitment, this plan identifies doctors, nurses, pharmacists and technologists - the largest groups of health providers - as the first set of health professionals to consider in this planning.

Future planning will take into consideration other occupations critical to meeting Saskatchewan's changing health care needs. These may include public health inspectors, medical health officers, mental health and addictions workers, home care and special care aides, and others. In addition, consideration will be given to occupations outside of the publicly funded health system.

Saskatchewan's Vision and Goals for a Health Workforce

Vision

An integrated workforce, well educated and trained, to provide high-quality care that builds a province of healthy people and healthy communities.

Health Human Resource Plan Guiding Principles

The plan is based on the following principles:

- Focus on the health needs of Saskatchewan residents;
- Build a representative workforce;
- Respect and value the health workforce in Saskatchewan;
- Be responsive to service needs, delivery models and health-related strategies;
- Use an integrated approach that engages all health sector partners in the planning process;
- Build strong and transparent accountability structures;
- Be evidence-based and outcomes-oriented; and
- Analyze the cost and service implications of any proposed actions.

Recently, I had a chance to participate in a new first for our province and a first for Canada: open strategic consultation on health human resource planning initiated by Saskatchewan Health. It was exciting to participate in the dialogue with employers, educators, unions, government and health regulatory bodies present.

Donna Brunskill
Dec/Jan 2006 SRNA Newsbulletin

Goals and Objectives

Goal #1: The health care system has a sufficient number and effective mix of health care professionals who are used fully to provide safe, high-quality care.

Objectives

- Improve the province's self-sufficiency by increasing our capacity to train more health providers, within our fiscal means.
- Improve the retention and recruitment of health care professionals to meet Saskatchewan's health needs.
- Support the optimal use of all health care professionals in working within their scope of practice.

Goal #2: The health system has safe, supportive, and quality workplaces that help to retain and recruit health care professionals.

Objectives

- Ensure workplace environments are safe and healthy.
- Assist workplaces to support staff in providing quality care.

Goal #3: Aboriginal people fully participate in the health sector in all health occupations.

Objective

- Become a leader in training Aboriginal health care professionals in Canada.

Goal #4: The education and training supply of Saskatchewan health care professionals is aligned with projected workforce requirements and health service needs.

Objectives

- Ensure the education and training system is responsive to Saskatchewan's labour market needs for health care professionals.
- Increase capacity for Saskatchewan's health employers to provide opportunities for students pursuing a health career.
- Provide culturally appropriate care for people.

Goal #5: The health workforce is innovative, flexible and responsive to changes in the health system.

Objectives

- Educate and train the health workforce to work in interprofessional teams to provide quality care.
- Enhance workforce information and data systems to support evidence-based planning.
- Ensure the roles and responsibilities of all partners in the health sector are articulated and understood.

Jurisdictions across the country want to give all Canadians timely access to high-quality, effective, patient-centred, safe health services. To do this, they need a collaborative approach that supports their individual efforts to plan and design health systems, based on population health needs, and identify the HHR required to work within their services delivery models.

Advisory Committee on Health Delivery and Human Resources

Our *Current Situation*

Building on the *Action Plan*

A key ingredient for a high-quality health care system is ensuring an adequate supply of health professionals to meet the immediate and longer-term needs of our residents. In December 2001, the province released *The Action Plan for Saskatchewan Health Care,* which included a goal to retain, recruit and train health care providers. Since the release of the *Action Plan,* Saskatchewan has undertaken a number of initiatives to realize this goal:

- Since 2001, Saskatchewan has offered over $8 million dollars in bursaries to students training in a wide range of health disciplines. Saskatchewan bursaries have a return-service commitment, which means students will get help with their tuition cost in exchange for a commitment to work in Saskatchewan's publicly funded health system for a specified period of time, upon completion of their studies. Medical bursaries are offered by government, in partnership with the Saskatchewan Medical Association.

- Since 1999, the number of nursing seats in the Nursing Education Program of Saskatchewan (NEPS) has increased by 120 per cent, to a total of 400.

- To ensure a regular supply of graduates into the health system, NEPS is being delivered at three sites – Saskatoon, Regina and Prince Albert – and allows students to pursue a Bachelor of Science in Nursing either full-time or part-time. For instance, full-time students in the four-year nursing degree program are eligible to fast-track their education and complete the program requirements in three years. In addition, NEPS is now offering a second-degree option for students who hold an undergraduate degree, allowing them to complete their nursing studies in only two calendar years. In order to improve access, NEPS students are also able to complete their first and second years of theory classes through distance education.

- Training capacity in the practical nursing program has increased by 16 seats between 2003 and 2005 and is delivered in an increasing number of locations across the province.

- Saskatchewan's training capacity for health sciences disciplines has increased. Through interprovincial agreements, Saskatchewan reserves spaces for residents to enrol in post-secondary programs that are not offered in the province, and in professions where there are employment opportunities in Saskatchewan.

  The province has an interprovincial training agreement with Southern Alberta Institute of Technology (SAIT) to train Saskatchewan students as respiratory therapists (eight seats), nuclear medicine technologists (four seats), and sonographers (four seats).

Saskatchewan purchases two MRI seats from Northern Alberta Institute of Technology (NAIT) and 15 occupational therapy seats from the University of Alberta.

- In 2005-06, Saskatchewan Health provided $20 million to fund programs and initiatives specifically targeted at retaining and recruiting physicians. Examples of some of the programs are specialist recruitment and retention bursaries, specialist emergency coverage program, specialist physician enhancement training program, long service retention program, emergency room coverage and weekend relief program, rural practice establishment grant program, undergraduate medical bursary program, medical resident bursary program, rural practice enhancement training, re-entry training programs, rural extended leave program, and continuing medical education initiatives.

  In the fall of 2001, the provincial government increased the number of seats at the College of Medicine from 55 to 60. In June 2003, government made a commitment to support the College of Medicine through increased funding to ensure ongoing accreditation of the college.

  These investments are having positive results: In March 2000, 1,587 family physicians and specialists were licensed to practise in Saskatchewan. By September 2005, that number increased to 1,735 – an increase of nine per cent.

- A number of immigration strategies were identified for selected health professions. The province, in partnership with health regions, expanded the Saskatchewan Immigrant Nominee Program (SINP) to include a health professions category. The province began nominating physicians in 2002 and included nurses the following year. The program allows foreign-educated nurses and doctors practising under a temporary work permit to apply for landed immigrant status in an expedited manner.

  In October 2005, the SINP was expanded to include all other skilled health occupations. This includes health occupations requiring at least one academic year of post-secondary education and/or one year of job-specific training.

- In 2005, the province announced funding for four new residency seats at the University of Saskatchewan's College of Medicine for internationally educated doctors who need more training before they qualify to practise medicine in the province. The seats are available to international medical graduates who live in Saskatchewan and who choose to specialize in anesthesia, general surgery, internal medicine, radiology, pediatrics, psychiatry, and obstetrics and gynecology. International medical graduates who qualify for the new seats must sign a return-service agreement with a commitment to practise in Saskatchewan one year for every year of funding provided.

- The government has made investments to create a more representative workforce by helping employers provide cultural awareness training for the current workforce. Health regions have offered this training to over 11,000 health employees as of October 2005.

- The Northern Health Science Access Program was initiated in the fall of 2001 to help improve the retention, recruitment, and admission of First Nations and Métis students from northern Saskatchewan into health professions, with a special emphasis on nursing as a career choice. Offered in Prince Albert, this invaluable 40-seat program helps to enhance success in sciences, math and English by providing a 10-month preparatory program. In 2004-05, 75 Aboriginal students were enrolled in the Nursing Education Program of Saskatchewan, representing approximately 25 per cent of first-year students in the program. At the same time, more opportunities exist to continue developing a representative workforce.

- Saskatchewan Health currently provides financial support to the two northern health regions for a summer student program. This helps create summer employment in the health sector for northern health science students, most of whom are Aboriginal.

- The Mamawetan Churchill River and Keewatin Yatthé Regional Health Authorities have received capital funding to assist in upgrading and building new housing units to assist with recruitment efforts. This is an important initiative as lack of housing has been identified as a significant barrier to recruitment efforts.

- Capital funding has been provided to health regions and the Saskatchewan Cancer Agency to invest in equipment that supports safer workplaces. This money is being used to purchase electric beds, patient lifts and other equipment that will support a safer work environment for health care providers.

- A Quality Workplace Program was implemented in a number of pilot projects across the province with the help of the Saskatchewan Registered Nurses Association. The evaluation of these pilot projects will assist in planning future quality workplace initiatives.

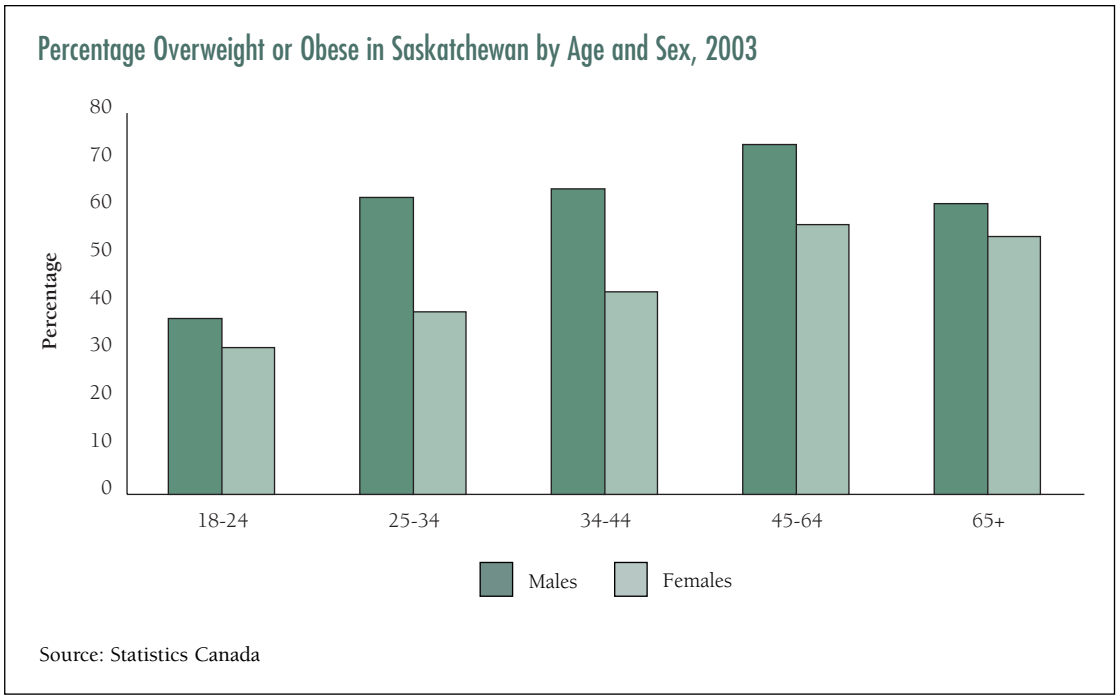
The health regions are also delivering their own Quality Health Workplace initiatives. These initiatives include:

- Improving occupational health and safety programs;
- Improving the health and well-being of staff;
- Preventing injury in the workplace; and
- Training and professional development.

Our Health Needs in Saskatchewan

Saskatchewan faces many of the same demographic challenges that are occurring across Canada. We have an aging population that will be cared for by a correspondingly aging health workforce. As of 2003, nearly 15 per cent of the provincial population was 65 years or older, and that figure is expected to rise to 18 per cent by 2020.

In contrast, we have a growing, young Aboriginal population. The projected growth of the Aboriginal population shows an increase from 13 per cent to 20 per cent in 2025. A report from the Canadian Institute for Health Information (CIHI) found Aboriginal people have a higher incidence of chronic and infectious disease, obesity and injuries. The resulting poorer health status for the Aboriginal population translates into a need for new approaches that are developed in partnership with Aboriginal communities and key health sector groups.



The changing face of disease is resulting in a shift of resources from young to old and from acute care to management of chronic disease, such as diabetes, cardiovascular disease, and cancer. These three illnesses, along with increased rates of obesity, are among the leading health concerns in the province.

In 2003, approximately 55 per cent of the Saskatchewan population was overweight or obese. Rates of physical inactivity are also high. Both obesity and low levels of physical activity are risk factors for diseases such as cardiovascular disease and diabetes, both of which are on the rise. Diabetes is of particular concern in Aboriginal communities and is affecting growing numbers of children.

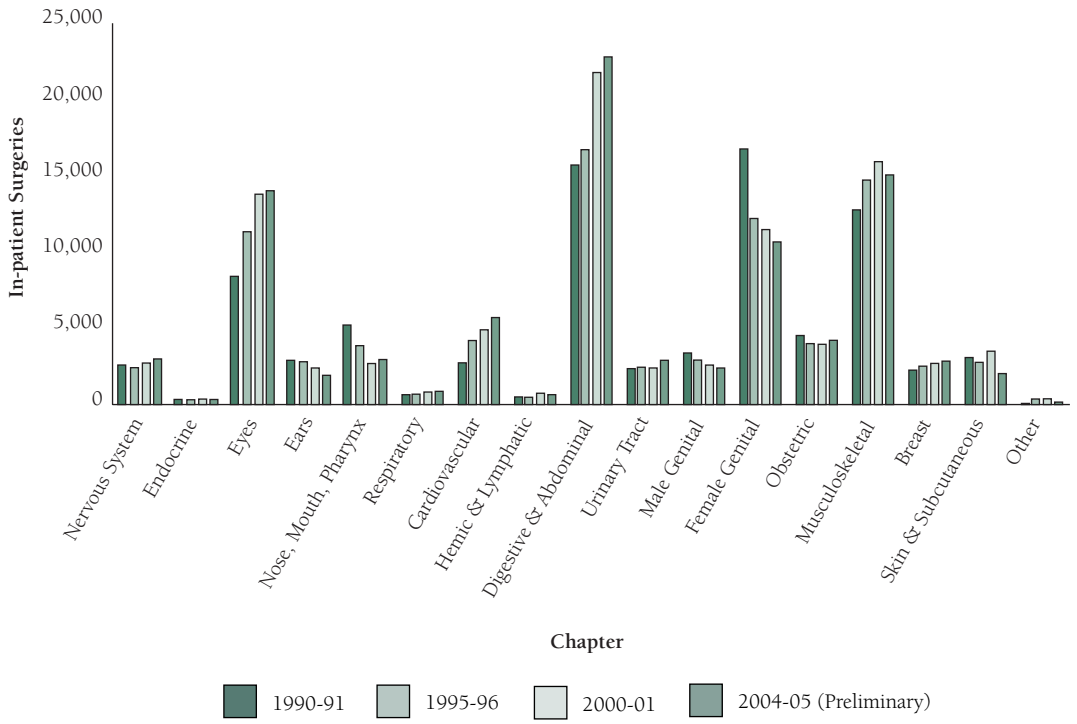
Our increasing life expectancy brings with it an increased chance of getting cancer. Lung cancer is the leading cause of cancer death for both women and men in the province, followed by breast cancer for women, prostate cancer for men, and colorectal cancer for both. Depression and other mood disorders also comprise a large percentage of mental health diagnoses that are on the rise in the province.

New technology and different techniques can impact on who and how patients are treated. To help illustrate this, the table on the following page shows the changing trend in surgery volumes from 1990-91 to 2004-05.

The rural/urban mix of our province is also changing. In the past 10 years, Saskatchewan's population has shifted from 66.8 per cent (1993) living in urban centres to 72.9 per cent (2003). Our First Nations population is also becoming increasingly urban. Saskatchewan's population on reserve shifted from 6.8 per cent in 1993 to 4.5 per cent in 2003.

The changing population demographics and the changing health problems will lead to a change in the kind and type of health services that are required in the province. The willingness of the public to engage in health promotion and illness-prevention strategies will determine whether the province sees any improved health outcomes in the population. The investment and success of these strategies will also affect our health status in the years to come, which, in turn, ultimately impacts on the type and number of health professionals needed.

Trends in Surgery[1] Volumes by CCP Chapter[2]



Notes

Data is from the Discharge Abstract Database.

[1] In-patient surgical cases are identified by CIHI's medical surgical indicator for years up to 2000-01. For subsequent years the indicator was calculated based on CCI to CCP conversion tables and the 2000-01 list of operative procedures. Day surgery cases are identified as cases that involve a procedure on CIHI's 1991 list of operative procedures. This definition counts the same kinds of day procedure cases each year. Changes to surgical techniques and the organization and delivery of services are occurring on an ongoing basis. Counts based on this definition include some procedures that are performed in ambulatory and other hospital settings, as well as in operating rooms. Newborns are excluded.

Totals: 1990-91 = 84,227; 1995-96 = 84,718; 2000-01 = 93,099; 2004-05 (preliminary) = 92,486.

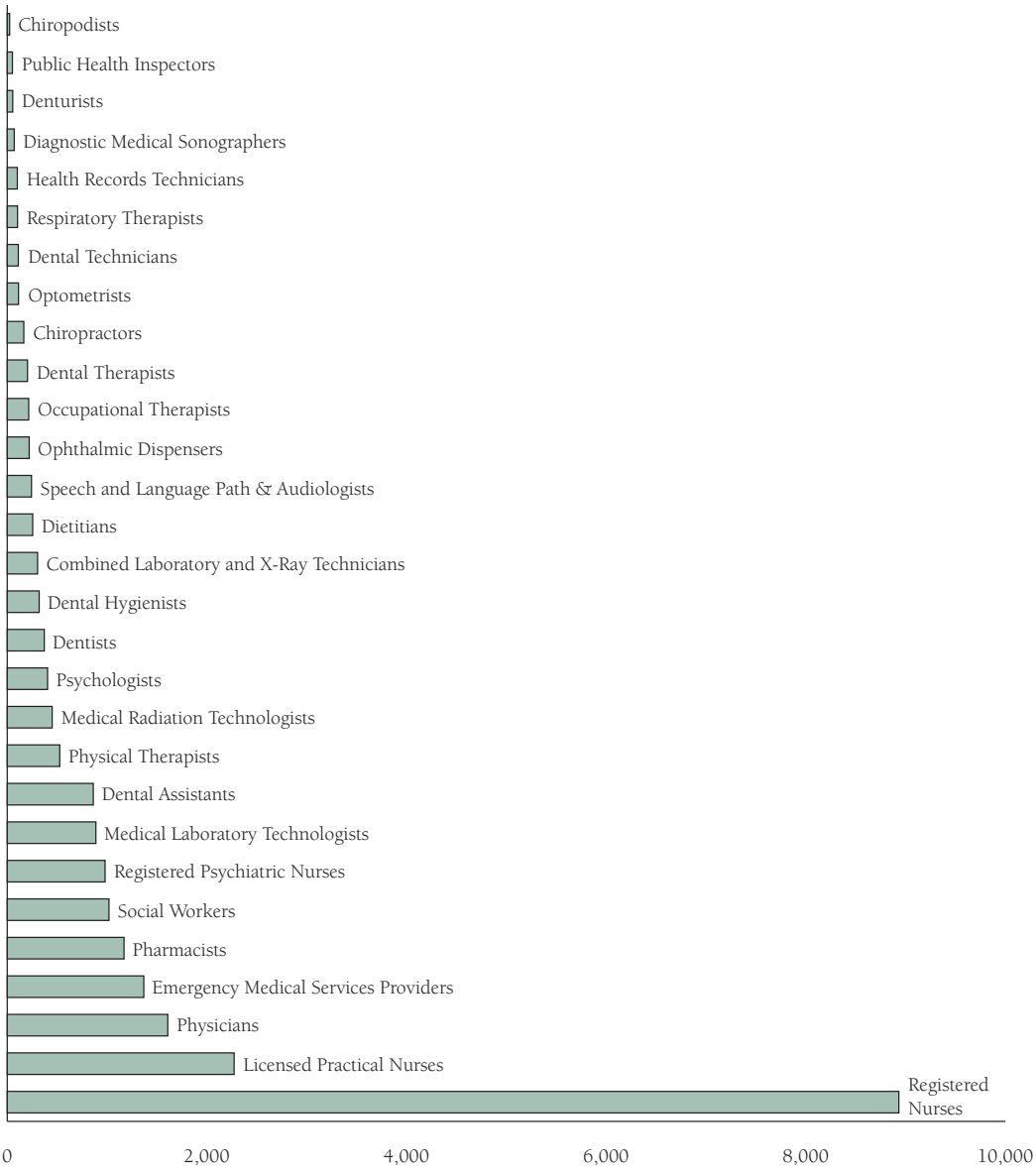
[2] Saskatchewan hospitals changed from CCP (Canadian Classification of Diagnostic, Therapeutic and Surgical Procedures) coding to CCI (Canadian Classification of Interventions) coding in 2001-02 and 2002-03. 2004-05 numbers are based on code conversions.

Source: Saskatchewan Health

The Health Workforce

There are many different health care professions that make up our delivery system. They each bring with them different skills and abilities. A snapshot of the type and number of health professionals is captured in the following graph.

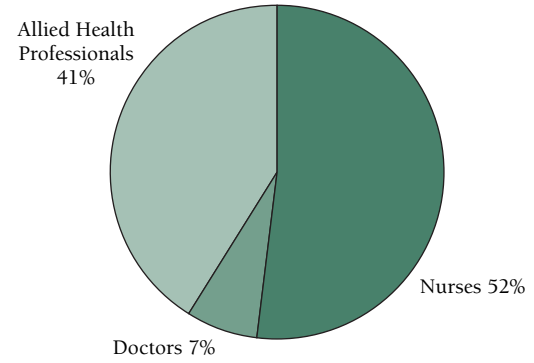
Number of Health Professionals in Saskatchewan, 2004[1]



[1] Number of health professionals based on number of active members as reported by provincial associations/bodies.

Source: Saskatchewan Health

Comparison of Health Professionals by Grouping, Saskatchewan, 2004



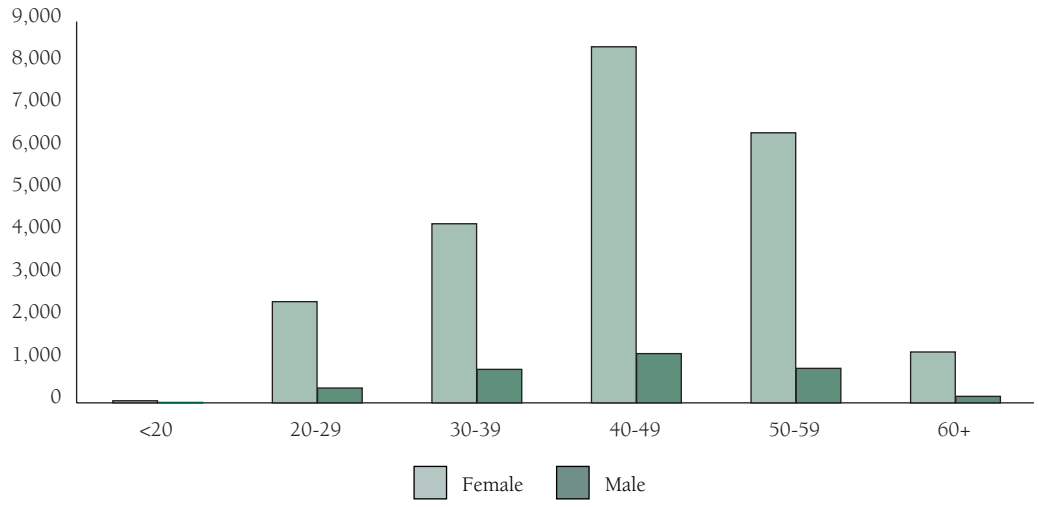
Source: Saskatchewan Health

In Saskatchewan, our health care system employs over 37,000 employees in numerous publicly funded and publicly administered settings including primary health, acute, long-term, community and public health and home care. We are fortunate to have a health workforce that is dedicated to their jobs and to the people they serve.

We know a substantial amount about Saskatchewan's health workforce. The payroll system of the Saskatchewan Association of Health Organizations (SAHO) reported an average of 25,928.7 full-time equivalents (FTEs) employed in the health regions and with the Saskatchewan Cancer Agency over the 2004-05 fiscal year. This statistic captures approximately 97 per cent of the Saskatchewan health workforce working within the publicly funded health system.

The highly labour-intensive nature of the health system requires a mix of full-time, part-time and casual employees. This explains how 37,000 employees are filling approximately 26,000 FTEs. Debate continues over the appropriate mix of full-time to part-time to casual employment that would provide the highest quality care to patients, while accommodating the employment of the health workforce.

Saskatchewan Health Sector FTEs – Age and Gender, 2004-05



Source: SAHO Payroll

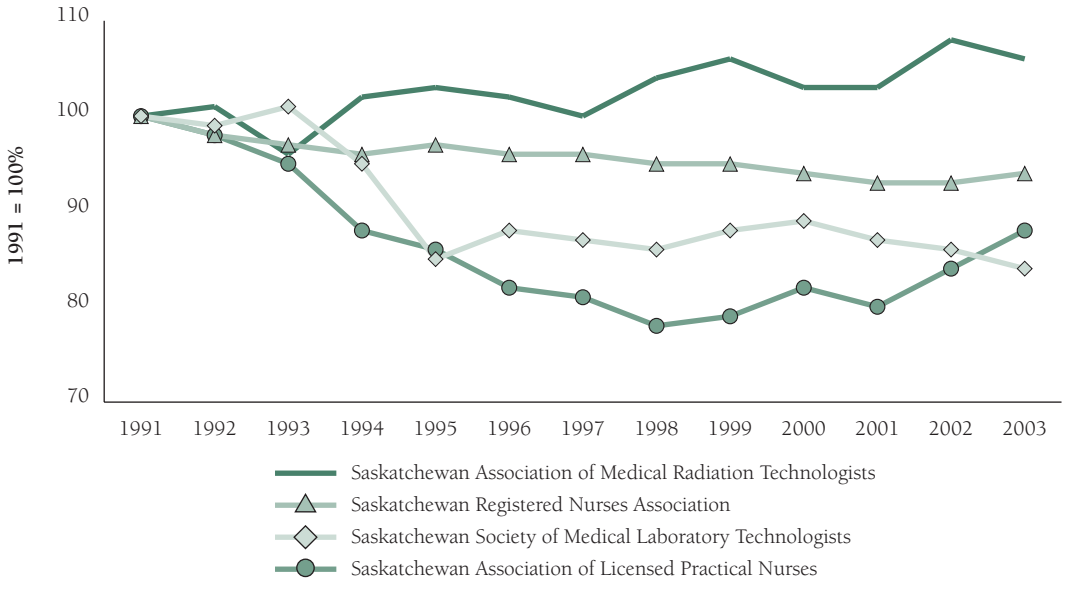
The preceding table illustrates the age and gender of the health sector workforce employed by health regions and the Saskatchewan Cancer Agency. The health sector workforce is female-dominated. The 40- to 49-year-olds make up the largest age group and 64.6 per cent of the health workforce falls between the ages of 40 and 59.

As part of the First Ministers' Meeting commitment, provincial and territorial plans were to focus initially on doctors, nurses, pharmacists and technologists – the largest groups of health providers.

When we look at the occupations identified by the First Ministers, we get a better understanding of some of the issues affecting those occupations. The graph below shows the membership trends for medical radiation technologists (MRTs), registered nurses (RNs), licensed practical nurses (LPNs) and medical laboratory technologists (MLTs) between 1991 and 2003.

Between 1991 to 2001, attrition and retirements accounted for the annual loss of approximately 22 MLTs and 12 MRTs. The current rate of graduates from SIAST is approximately 15 MLTs and 15 MRTs per year. The number of these health professionals leaving the province is balanced by a similar number moving to Saskatchewan from other provinces.

Percentage Changes of Membership, Select Health Regulatory Bodies, 1991-2003



Source: Medical Diagnostic Laboratory Market Analysis, 2005

Based on the current way we deliver diagnostic services, we will need to hire more MLTs, as existing MLTs approach retirement in the near future. At the same time, we will need to hire more MRTs because of the increasing demand for their services.

Nursing projections indicate the gap between the current demand and supply of nurses in Saskatchewan has narrowed. However, the projected number of nurses who are eligible for retirement indicate that we will need more nurses over the next few years.

The following table projects the loss of approximately 1,800 nurses (registered nurses and psychiatric nurses) between 2003 to 2008, based on historical retirement and turnover rates. During this same period, Saskatchewan will graduate approximately 1,400 nurses. This will leave a shortfall of approximately 400 nurses.

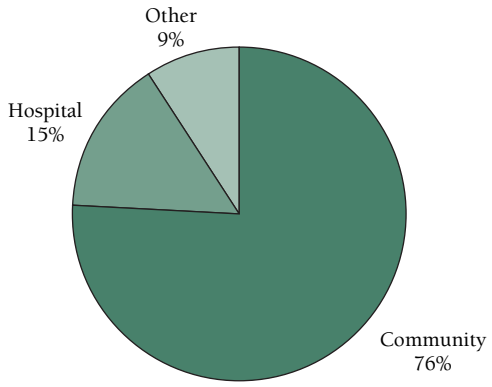
Retention Rate Calculated for Nurses (RNs/RPNs)

Age Group	Nursing Workforce by Age Group (2003)	Retention Rate (%)	Projected Number of Nurses (2008)
25-29	541	111	601
30-34	953	103	981
35-39	1,163	99	1,151
40-44	1,528	98	1,497
45-49	1,765	92	1,624
50-54	1,569	84	1,318
55-59	1,001	54	540
60-64	547	8	44
Total	**9,067**		**7,270**

Sources: Labour Market Analysis, Saskatchewan Nursing (1999); Canadian Institute for Health Information Registered Nurses Database, 2003.

According to the Saskatchewan College of Pharmacists, there were 1,121 pharmacists practising in Saskatchewan in 2005. The number of pharmacists practising in Saskatchewan has risen steadily over the past years.

Working Location of Pharmacists, 2004



Source: Saskatchewan College of Pharmacy

One of the concerns about educating pharmacists is our ability to provide adequate clinical placement training within the province.

In September 2005, Saskatchewan had 1,735 licensed physicians in the province. This included 954 general practitioners and 781 specialists. Over the past five-year period there has been an average increase of 12 general practitioners and 22 specialists per year. Over the same time period, the turnover of active physicians has also remained fairly constant, averaging 11.3 per cent each year.

Licensed and Active Physicians in Saskatchewan, 2005

Licensed	March/01	March/02	March/03	March/04	March/05	Sept/05
Family practitioners	909	897	900	905	927	954
Specialists	713	725	729	749	753	781
Total	**1,622**	**1,622**	**1,629**	**1,654**	**1,680**	**1,735**

Active[1]	March/01	March/02	March/03	March/04	March/05	Sept/05**
Family practitioners	693	705	716	730	741	736
Certified specialists*	437	493	503	507	524	512
Total	**1,130**	**1,198**	**1,219**	**1,237**	**1,265**	**1,248**

* Effective April 1, 2001, certified specialists include both Canadian and foreign certified.

** Quarterly reporting.

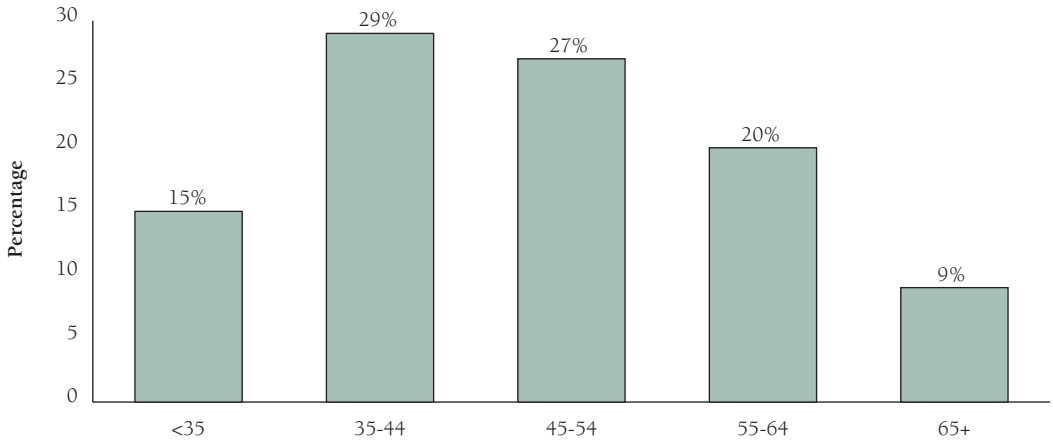
[1] An active physician is defined as one who receives $60,000 or more a year in payments from Saskatchewan Health and practises within the publicly funded health system.

Source: Saskatchewan Health

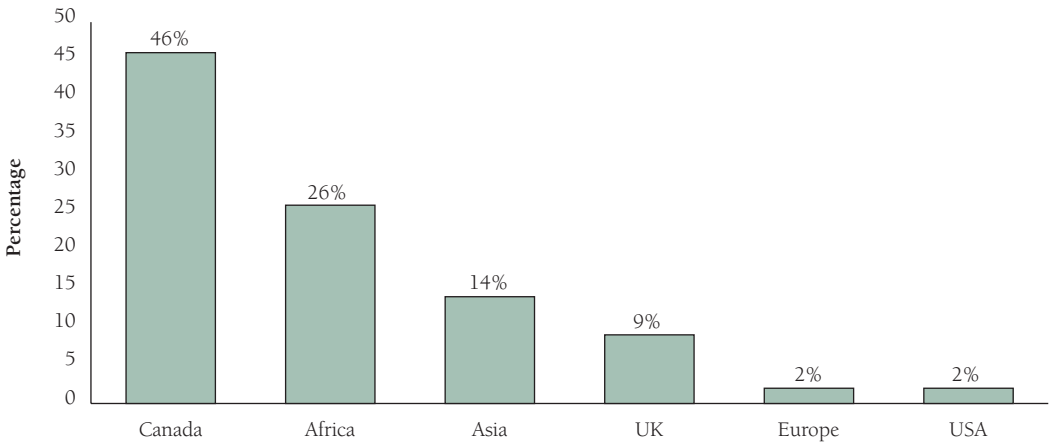
Over one-quarter (29 per cent) of active physicians in Saskatchewan in 2004-05 were 55 years of age or older; 71 per cent were younger than 55.

Nearly half (46.9 per cent) of the active physicians in Saskatchewan in 2004-05 received their first medical degree in Canada: 36 per cent in Saskatchewan, 10 per cent in other provinces and 54 per cent from outside Canada. Among these physicians, the highest number graduated in Africa (26 per cent) and Asia (14 per cent).

Physicians by Age, 2004-05



Source: Saskatchewan Health



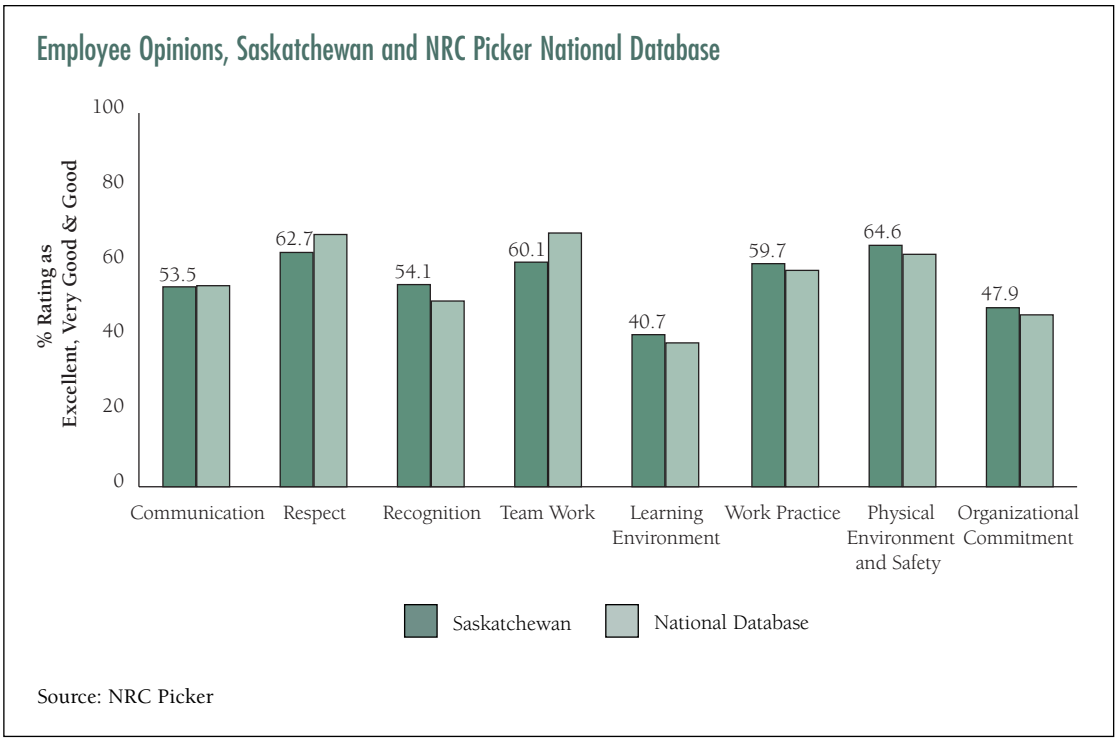
Source: Saskatchewan Health

As noted previously, this plan focuses on the largest groups of health professionals and those committed to by First Ministers in September 2004. Future planning will take into consideration other occupations critical to meeting Saskatchewan's changing health care needs. These may include public health inspectors, medical health officers, mental health and addictions workers, home care and special care aides, and others. In addition, consideration will be given to occupations outside of the publicly funded health system.

Regional health authorities, with the assistance of the Saskatchewan Association of Health Organizations (SAHO), conducted an employee opinion survey in the summer of 2005. This is part of their ongoing commitment to work with employees in the pursuit of quality workplaces. The survey results will be used to develop more specific actions around the plan to improve workplaces, and help fulfil regional health authority accreditation requirements.

The survey company (NRC Picker) that conducted the survey in Saskatchewan was able to compare Saskatchewan health employer results with other health care employers in the rest of Canada. Based on the company's national database, Saskatchewan employees are generally more positive on average than our national counterparts within the NRC Picker database.

Survey results showed physical environment/safety and respect were the highest-rated topic areas. The lowest-rated area was learning environment. The following graph shows the percentage of employees who positively rated each topic area. Positive ratings include responses of excellent, very good and good. (See appendix A for the list of questions under each topic area.)



Planning for the System

Over the past two decades, demographic changes, health care reform and technological innovation, as well as external policy shifts, have affected the number, mix and geographical distribution of the health workforce. Health human resource planning will enable the implementation of various health sector initiatives by helping to ensure that health care professionals are available with the appropriate skills and competencies.

Health human resource planning is driven by the design of the health system and the way service is delivered. It is an evolving science that requires a continual assessment of how service design decisions affect health human resources.

In the past, health human resource planning has been based primarily on past utilization of services. The utilization approach takes into consideration the current quantity, mix and distribution of health professionals in the system and these become a baseline for estimating future requirements, regardless of this baseline's adequacy and effectiveness. Changing population characteristics and the willingness and ability of the population to pay for services are not considered.

The development of this plan begins to move us to a more needs-based approach. Moving in this direction avoids the continuation of existing inequities and the inefficiencies in the deployment of health provider services. Unmet needs can then be identified in the planning process.

Population health needs are influenced by such things as people's genetic makeup, the environment in which they live, economic conditions, and the accessibility and quality of the health care system.

When planning for health human resources, it is necessary to consider:

- current circumstances (e.g., supply of workers);
- the number and skills required;
- fiscal resources;
- changes in worker education and training; and
- technological factors.

(Please see appendix B for graphic model on the health human resource model.)

In addition to the provincial health perspective, planning needs to take into consideration the impact of the above factors, for example, Saskatchewan's *2005 Training System Review,* as well as national strategies. Two recent initiatives are *A Framework for Collaborative Pan-Canadian Health Human Resources Planning* and the *Aboriginal Blueprint on Health.*

A federal/provincial/territorial committee, the Advisory Committee on Health Delivery and Human Resources (ACHDHR), has developed a pan-Canadian framework to help shape the future of health human resource planning and health service delivery based on advice from the jurisdictions. ACHDHR recognizes the jurisdictional responsibility for health system design and health human resource planning, as well as determining the resources available to deliver health care and affirms that – because of the small number of training programs across the country and highly mobile nature of the health workforce – jurisdictions cannot plan in isolation. It proposes a framework that supports system planning and sets out specific actions that jurisdictions can take together to achieve a more stable and effective health workforce.

At the First Ministers' Meeting in September 2004, First Ministers and Aboriginal leaders met to discuss joint actions to improve Aboriginal health and adopt measures to address the disparity in the health status of the Aboriginal population. They agreed to work together to develop a blueprint on Aboriginal health.

Increasing Aboriginal representation in front-line health delivery and creating greater cultural awareness among non-Aboriginal health care providers were identified as leading priorities in Aboriginal Health Blueprint meetings and submissions. These priorities are reflected in the *Aboriginal Health Blueprint – Saskatchewan Approach* document that will help to guide future planning in Saskatchewan.

The federal government also announced funding of $100 million over five years for an Aboriginal Health Human Resources Initiative (AHHRI). The three main objectives of the AHHRI are as follows:

- To increase the number of Aboriginal people working in health careers;
- To improve the retention of health care workers in First Nations, Inuit and other Aboriginal communities; and
- To adapt current health care educational curricula by improving its cultural relevance and thereby increasing the cultural competence of health care providers working with Aboriginal peoples.

> *Improving the educational outcomes of all Aboriginal learners, which includes First Nations, Inuit and Métis, is essential to building a more prosperous and self-reliant future for all Aboriginal peoples, and to promoting personal well-being and positive social change. All stages of the life-long learning continuum are critical to achieving better results, with the support of parents, families, elders and communities. In the future, this will mean linking and enhancing programs and services all along the continuum, in particular early learning and child care and post-secondary education.*
>
> *"Blueprint on Aboriginal Health: A 10-Year Transformation Plan"*

Themes

We consulted widely with our many health care partners from May to October 2005. The theme areas discussed most frequently were:

- Providing quality care;
- Workplace environments;
- Education and training;
- Evidence-based planning; and
- Roles, responsibilities and relationships of our health sector partners.

In the following chapters, the themes are discussed and potential actions are provided.

Providing Quality Care

Public expectations for health care are high. A major challenge in providing quality care is our ability to link the health needs of our population and the way we deliver services with a suitable mix and sufficient number of health professionals, who are located in the right place, at the right time.

Rural and Remote Regions: Regional health authorities often have difficulty retaining and recruiting health professionals to rural and remote areas. Vacancies may go unfilled for long periods of time. Some of Saskatchewan's challenges in retaining and recruiting health professionals are a result of our geography, small population, career opportunities, location of the latest technology, and small numbers of providers in some areas resulting in a lack of collegial support and coverage. When recruiting health professionals, health regions need to consider career opportunities for their spouses and educational and recreational opportunities for their children. An added challenge for health professionals in rural and remote areas is maintaining their ability to provide quality care when they normally see a low volume of cases.

Availability of Skilled Providers: Although Saskatchewan has many specialized services, some of these services are being provided by only a few providers. There are fewer than 20 MRI technologists operating the province's four MRIs. A shortage of two or three technologists creates a 10 to 15 per cent shortfall. Keeping this in mind, we need to look for innovative ways to share scarce services.

Skilled health providers are in great demand across this country and around the globe. We have had many successes in developing retention and recruitment programs for Saskatchewan health professionals. However, with an aging population and an aging workforce and increasing competition from other jurisdictions, we must continue to be vigilant in our efforts to retain and recruit the people we need, especially in our rural and northern areas.

Mentorship: When experienced health care professionals retire, the system loses a wealth of experience and knowledge. While new graduates may be able to fill the position, they do not immediately fully replace the knowledge and experience of the retiring professional. Mentorship is an effective strategy to pass knowledge from veteran staff to new graduates. Given the likely trend of increased retirements of the baby boomer generation, Saskatchewan has an opportunity to capitalize on knowledge-transfer in the near future.

International Medical Graduates (IMGs): Many of Saskatchewan's physicians are IMGs. There are challenges and gaps that have to be addressed when it comes to these individuals obtaining the proper certification and licensure from local and national regulatory bodies.

Skill Mix: There will always be, and indeed there must be, some degree of skill and service overlap across the full range of providers. This overlap is needed to ensure patients have access to competent and high quality care. The overlap is also necessary for broad human resource planning, where it may not be feasible to have every kind of provider present in all delivery settings. Similarly, it is necessary at the individual delivery setting because planning and staffing decisions also require a degree of flexibility. Decisions made around who does what must take into account that although someone may be trained with a relatively wide range of skills, their competency in some of those areas may weaken if they are not used regularly.

Culturally Sensitive Care: The Health Quality Council's survey, *Improving the Acute Care Hospital Experience: A Survey of Saskatchewan In-Patients,* provides us with valuable information about how Saskatchewan residents feel about the quality of acute care in Saskatchewan. Overall, the vast majority of Saskatchewan residents rated the overall quality of care as good, very good or excellent. However, First Nations and Métis patients consistently ranked their quality of care lower in such categories as overall care, overall doctor care, trust in nurses and overall pain control. Our system and its mechanisms need to reflect the cultural diversity in Saskatchewan. Problems unique to specific populations may require solutions more tailored to their needs.

Representative Workforce: Efforts must be made to build on work already being done to incorporate Aboriginal people (First Nations and Métis) into our workforce; initiatives have to occur in the education institutions that will encourage and make it easier for this target group to pursue careers in the health occupations. This should lead to providing more culturally appropriate care.

> *The capacity of the health care system to address Aboriginal needs, which can differ significantly from non-Aboriginal needs, will require serious consideration to ensure the development of a fully inclusive approach.*
>
> *First Nations and Métis Relations, Government of Saskatchewan*

Although Saskatchewan's population has remained around one million for the better part of 25 years, the broad cultural and generational demographics of the province will undergo a series of noticeable shifts over the next 15 to 20 years. Projections indicate that the Aboriginal population will increase from 13 per cent to 20 per cent by 2025, while the Aboriginal population aged 15 to 19 will increase from 16 per cent to 29 per cent over this same period.

Given that the Aboriginal population is the fastest growing segment of the labour workforce, we need to engage the Aboriginal community to pursue health careers to ensure an adequate supply of health professionals into the future.

Continuing Education and Professional Development: Beyond formal post-secondary education, health care workers have ongoing learning needs. Some health care workers participate in continuing education as part of their license renewal. Others participate to further their careers and keep their skills fresh. Regardless of their reasons, lifelong learning and continuing professional development is a significant factor in retaining productive health care providers.

Further investment in continuing professional development is necessary to ensure that health professionals have access to the best current research available in a format that can be readily put into practice. It is not sufficient for knowledge management tools and continuing professional courses to be accessible; health professionals need to be given time to attend them. Accordingly, continuing professional development must be recognized as a vital part of keeping and attracting health care professionals.

The learning environment is fostered by new practitioners entering the workforce and capitalizing on the breadth and depth of knowledge of more experienced staff.

Proposed Actions for Providing Quality Care

- Establish a provincial recruitment agency to help the province attract hard-to-recruit professionals and locate health professionals in hard-to-recruit-to areas of Saskatchewan.
- Work with appropriate stakeholders to complement the health human resource planning being done within the framework of the Northern Health Strategy.
- Pilot mentorship initiatives.
- Assist internationally educated health professionals to integrate into Saskatchewan's health sector.
- Research and begin piloting different skill-mix complements on patient/client/resident outcomes.
- Host a western symposium on best practices in Aboriginal health professional education, training and recruitment.
- Explore summer employment opportunities for students training to be health professionals.
- Expand the Northern summer student program.
- Clarify the human resource needs for the current primary health care model and the pace for implementation.

The solution to rural and remote care …is not more providers per square mile, but a more strategic delivery of services to the area while maintaining the approximate same ratio of providers per population density as exists elsewhere in the province.

College of Medicine, University of Saskatchewan

Workplace Environments

Healthy and safe work environments lead to a healthy workforce with high rates of satisfaction, retention and low absenteeism, which, in turn, lead to better patient care.

Supportive and Welcoming Workplace: A number of factors influence a supportive workplace. Individual staff can influence some of these factors including personal relationships, role clarity, reaction to stress, family/life balance, personal values, ethics, adaptability and self-confidence. The organization has an impact on the factors via: job security, workload, changing schedules and shifts, communications practices and structures, labour/management relations, learning opportunities and control over practice. The overall health system will also affect the workplace via: health care delivery models, consumer trends, competencies and standards of practice, diversity of the population and providers, and changing demographics.

Management: The system needs to support managers, providing opportunities for advancement and training. Given the increasing complexity of the work environment and the workforce, managers must have the appropriate management skills. Many workplaces have streamlined their management positions, resulting in fewer on-site managers, and managers who have a greater number of staff reporting to them. Based on demographic trends, it will be important to focus on succession planning to ensure competent and available leaders for the future.

Employee Opinion Survey: In May 2005, health employers, in partnership with SAHO, sent an employee opinion survey to 37,000 employees in the Saskatchewan health care system. The survey is part of the regional health authorities ongoing commitment to work with employees in the pursuit of quality workplaces.

The results of the survey can be tabulated around eight different topic areas (dimensions of care themes): communication, respect, recognition, team work, learning environment, work practice, physical environment and safety, and organizational commitment.

The purpose of the survey was to elicit the views and opinions of health care employees on their workplace. This initial province-wide survey is another step in building an environment of continuous improvement in health care workplaces in Saskatchewan. The survey results will be informative to management and will be used to shape initiatives to improve the workplace.

Occupational Health and Safety: This has to do with the physical setting in which our professionals practise. Continual monitoring and improvements will help reduce work-related injuries. Research has shown that an employee's perception of the work environment as safe and supportive is a key retention element.

Although the number and severity of Workers' Compensation Board claims appear to be declining in the health sector, there is still a high injury rate. This affects the health system's overall ability to function. From January 2004 to March 2005, the provincial average has been 1.77 time lost claims per 100 FTEs in the health system per quarter, while the average number of days lost per quarter was 68.02 days per 100 FTEs.

Life-Long Learning: The increased emphasis on life-long learning stems from several factors. First, in general, there is increased career mobility in society. Second, the focus on continuous quality improvement has underscored the need to keep up with the latest research and improvements in practice. Third, the proliferation of knowledge makes it vital for health professionals to have access to resources to keep abreast of advances in scientific knowledge and to acquire new skills.

Proposed Actions to Improve Work Environments

- Develop pilot projects that encourage the hiring of new graduates across the province, targeting rural, remote, northern and other hard-to-recruit-to areas.
- Enhance the occupational health and safety strategy in each health region and the Saskatchewan Cancer Agency.
- Support quality workplace initiatives identified as priorities within each health region.
- Implement the appropriate use of safety engineered sharp devices.

Education and Training

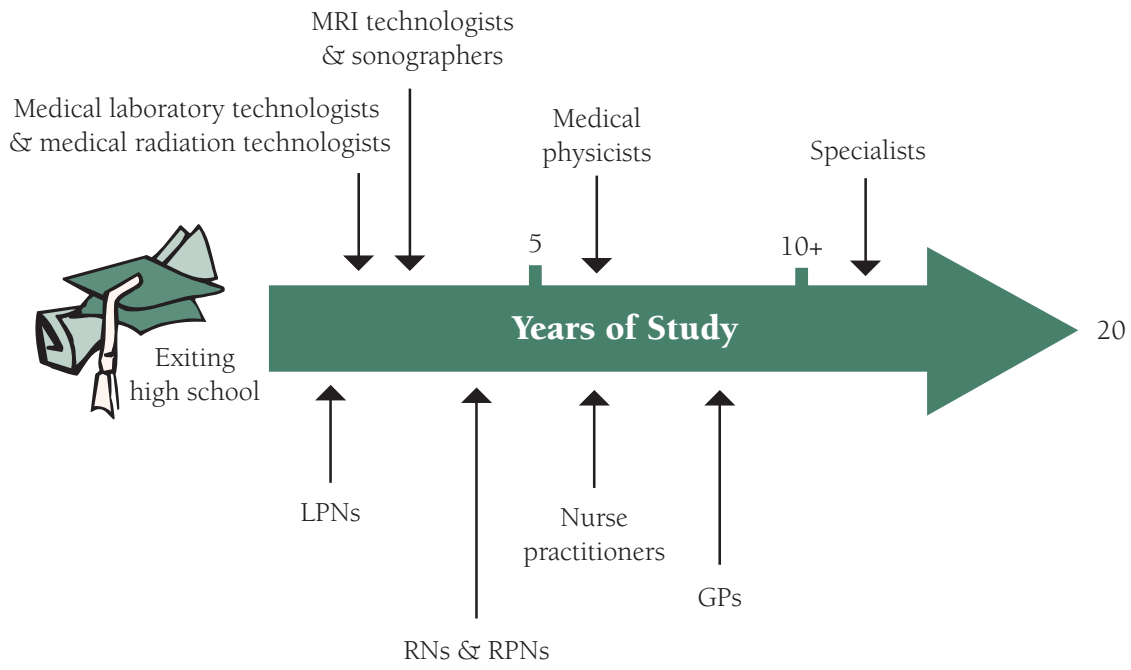
Forces shaping changes in health care over the next decade will have implications for the education and training of the health workforce. Changing population demographics, new models of service delivery, evolving scopes of practice, and technological innovations are changing the number and mix of human resources required, as well as the kinds of skills needed to deliver health services in the future. Education institutions will be called upon to adapt education and training programs to meet our changing health care needs. They will also need to replace retiring faculty, address capital and infrastructure requirements, and increase their involvement in research and development activities.

Saskatchewan's post-secondary education and training system currently provides approximately 40 distinct health education programs involving approximately 2,600 students annually. These programs are vital to ensuring the province has the right mix of health care providers with the right knowledge and skills to meet the health care needs of the province.

Supply: Understanding the factors that influence the flow of students into and out of post-secondary education helps to estimate the supply of potential graduates. A number of issues make defining "attrition" challenging. Reported attrition may include part-time students or students taking a leave of absence. There could be attrition at the program level, at the institutional level, at the provincial level and at the occupational level. While the total capacity of a program is one important aspect, the number of actual graduates is a more important factor.

Typical Duration of Training After High School Graduation for Entry into Health Care Professions, Saskatchewan, 2003

The minimum typical duration of education and training after high school graduation for entry into selected medical professions



Sources: Saskatchewan Health and CIHI

Increasing the supply of health professionals by increasing the number of education seats requires careful planning. This is not a short-term solution for those occupations that require lengthier education programs, but a medium-to-longer-term solution to maintaining a stable workforce.

Seat capacity is affected by the infrastructure of the institution, the number of teaching and clinical faculty, available funding, and the availability of clinical placements. Infrastructure includes laboratories, equipment and classrooms. Another reason for the limitations in seats available in health programs is the lack of availability of faculty, whether it is to teach or supervise clinical placements. The emerging health human resource planning model implies a need to establish an ongoing ability to review the health professional education and training infrastructure to assess the capacity for further expansion of enrolment.

Internationally trained professionals have often been used to help fill the demand of health professionals within Saskatchewan and Canada. However, as a result of an increasingly competitive market, the number of internationally trained health care professionals available to address a demand is becoming more difficult.

Approximately one-third of the increase in physician supply each year is due to international medical graduates who are either recruited directly to practise or who have taken significant post-graduate training in Canada.

The nursing division at Saskatchewan Institute of Applied Science and Technology (SIAST) has initiated a pilot project to assist international graduates who are coming to Saskatchewan and wish to continue their practice as registered nurses. Two common issues emerge. The first includes having difficulty obtaining initial registration because they have written and failed the Canadian Nurse Registration Exam (CNRE) and require remedial assistance before they apply to write the exam again. The second issue concerns international graduates passing the CNRE but encountering difficulties in the work environment related to differences in skills, the Canadian health care system, communication, documentation, and administration of medications.

Collaborative Planning: The number and mix of providers the education system produces each year is often based on academic priorities rather than population health or service delivery needs. Insufficient collaborative planning between the health system and the education system contributes to the oversupply of some providers and undersupply of others. Better collaboration between the education system, which produces health care providers, and the health system that manages and employs them will improve on the traditional approach to health human resource planning.

The success of planning efforts will depend, to a large extent, on effective coordination and linkages among various stakeholders involved in planning the health workforce. For health human resources to be most effective, key stakeholders such as educational institutes, employers, government and regulatory bodies need to be involved in the planning process.

Since Saskatchewan's population is relatively small, it is not feasible to educate every type of health provider that we need. As a result, we need to work within a pan-Canadian framework to ensure that, at a national level, we are producing sufficient numbers of providers. At the same time, we also need to work together to limit unnecessary competition and raiding of professionals.

Interprofessional Education: Interprofessional education has been defined as "occasions when two or more professions learn from and about each other to improve collaboration and the quality of care." Stakeholder organizations and government recognize the importance of multidisciplinary practice teams and they recognize that educating and training students collaboratively will be required to support this shift in delivery. The ways in which different professionals contribute to patient care is not clearly understood. We also do not know how this change in health care delivery will affect health human resource requirements, or education and training needs.

Health professionals continue to be educated and trained largely in isolation of each other. This approach does not promote an understanding among health disciplines about the contribution that each makes to quality patient care. Interprofessional education has been of interest for many years, largely in response to criticism that graduates from health science programs do not know how to work together as a team once they enter practice. Increased efforts to promote interprofessional education would increase the awareness of other disciplines and would pave the way for increased multidisciplinary teamwork in the future. Training health professionals to work in teams will also require the work environment to be structured to allow them to practise in this manner once they graduate.

Career Lifecycle: There are multiple pathways into and out of post-secondary education. The flow of individuals between educational institutions and the health care labour market can be characterized as dynamic and repetitive. The typical route for an individual aspiring for a health care career is enrolment into training, graduation, entry into the labour market, and possibly reintegration back into an educational institution as a student, faculty member or researcher.

Within the education system there is movement of individuals between educational institutions, between programs and into graduate studies. Not all students complete programs, as they may drop out, make a temporary exit or transfer to non-health programs. The movement into the workforce after graduation may also involve licensure requirements. Most professions and some occupations require competency maintenance that generates the need for continuing education.

Credit Transfer/Recognizing Prior Learning: Recognizing prior learning is a broad umbrella concept that includes credit transfer and an assessment of prior learning. It is a credible and practical process that looks at what a person knows and can do, and may lead to recognition of skills and knowledge. Often the skills acquired through a variety of experiences, including on the job, at home, and community volunteer work, can be applied to the skills or knowledge required in the workplace or at school.

The demands of students on the education system are changing and have resulted in the development of more student-focused institutions that provide flexible and responsive programming. The growing trend of part-time students, including students enrolling in part-time programs while maintaining full-time employment, has created a need for services that recognize workplace learning.

Make sure there are collaborative practice environments where students can train and work. To achieve progress in this area, we need parallel action on training at a number of levels – pre-professional and on-the-job training – for health care providers as well as for their managers. Students need training that prepares them for this new vision of health care; they need mentors experienced in interprofessional team work; and they need workplaces where collaboration is modeled to attract, support and retain them once they graduate. If we are serious about making team work a core competency for all health professionals, no one should graduate from a health care education program without experiencing work with an interprofessional team.

Health Council of Canada

To improve the mobility of health providers among institutions and through education programs, education institutions are encouraged to develop a culture of academic credit transfer. The current health education programs should review admission criteria to look at credit transfer from a broader range of courses in other programs and allocate credit for prior learning and previous related experiences.

Career Pathing Project: The Saskatchewan Association of Health Organizations, in partnership with the regional health authorities, is developing an innovative career development model known as the "career pathing model" for the provincial health sector. The model is based upon prior learning principles, and will enhance the recruitment, mobility, and retention of the existing and future health care labour force. The pilot project will help employees develop individual personal/professional action plans in which they compare and contrast their individual knowledge and skills inventory with existing opportunities in the health sector. By matching their interests and abilities with these real opportunities, pathways for career transitions can be more effectively, efficiently and meaningfully navigated. Transitioning career opportunities that arise is an important step in creating a sustainable, responsive, and representative labour force.

Clinical Placement: Clinical experiences are the settings in which students learn to apply scientific and theoretical concepts of the healing process to real patients in real settings. It allows them to integrate these concepts within their professional practice, to work with other members of a health team, and to adopt professional standards for behaviour by observing and modelling others. Clinical experience remains an essential component of health sciences education.

For clinical education programs, placements in real clinical settings are an integral part of education. Clinical placements are used in junior years to develop technical, communication, and patient and team interaction skills. Most programs use a senior practicum or internship to integrate clinical learning and prepare students to move into the workforce.

A saturation of clinical placement sites is occurring mainly in Saskatoon, Regina and Prince Albert hospitals. In these sites, often several programs are competing for the same settings, mainly nursing, practical nursing, and emergency health care (emergency room, operating room, labour and delivery, and ambulance).

Training programs' schedules are such that there are high-demand periods such as weekdays and the months of May and June. Relatively small specialty service units such as hospital pharmacy, psychiatry, mental health, medical diagnostics and laboratory services are often overwhelmed by the increasing demands for training students.

Preceptors are employees who teach, support, and evaluate students in clinical settings. They are role models who help students make the transition from the classroom to the workplace. There is increasing recognition that inadequate resources for clinical placements and availability of preceptors is a key barrier to the expansion of health discipline education programs. A recent priority for some provinces includes improving the coordination of clinical placements and the introduction of greater supports for preceptors. Another challenge facing clinical placements is aligning theory so it can be applied clinically in the field. While there is a move to interprofessional education and the team philosophy concept, students may have difficulty applying their learning in the field, as they are often placed in environments where they practise in isolation.

Investment in Education: Government provides funding for post-secondary education to cover a wide array of health programs. On average, government covers 80 per cent of the cost to train individuals in the health disciplines. As an example, to train a family doctor, government will invest approximately $500,000 over an eight-year period. To train a pharmacist, government will invest approximately $55,000 over a five-year period.

At the same time, the increasing cost of education is a growing concern with students and the public. This cost could limit access to health professional education to the most advantaged. Among those who do get in, debtload may influence both their choice of education and training and their practice location upon graduation.

Tuition fees represent only a fraction of the cost required to educate health care professionals. While the percentage of the cost borne by students may vary significantly from program to program, the average rate is approximately 20 per cent.

Proposed Actions for Education and Training

- Increase support to the College of Medicine to train future doctors.
- Increase the profile of health careers in elementary and high schools.
- Work with Saskatchewan Learning and SIAST to increase the number of MLT and MRT training seats in the province.
- Enhance practical nursing training in locations where shortages exist.
- Develop career pathing initiatives.
- Develop a proposal with the Aboriginal community and other stakeholders regarding an Aboriginal Centre of Excellence for health human resource training, linked to the Aboriginal Health Blueprint and the Aboriginal Health Human Resource Initiative.
- Establish a health labour market council made up of Saskatchewan Health, Saskatchewan Learning, health employers and educational institutes to better integrate the planning needed to match the supply and demand for health professionals.
- Review curriculum to ensure its cultural appropriateness.
- Examine the need for mental health professionals and addiction counsellors, in conjunction with Project Hope and the provincial mental health sector study.
- Increase our ability to provide students with clinical placement within the province.
- Create and support a single point of entry for clinical placements in each health region to enhance coordination.
- Expand the opportunity for students studying health sciences to take common classes.

Evidence-Based Planning and Improved Access to Information

The rise of evidence-based practice can have a large impact on the delivery of care. Clinicians are encouraged to incorporate the latest and best practice standards. Although managers and policymakers are quick to encourage this practice for clinicians, they have been less successful at translating and creating evidence-based planning into management and administration. From clinical practice guidelines to organizational development to interdisciplinary care, there is a dynamic range of areas that would benefit from the adoption of an evidence-based planning framework.

Planners and health service developers generally agree that evidence-based policies and practices should be followed where and when possible. The advantages of clearly stated principles and policies, grounded in proven results and measurable outcomes, are numerous.

Problems arise in trying to translate theory into practice. Difficulties encountered include the ambiguity of what constitutes evidence, few service-specific standards, and limited reliable data and information to document.

Research: Good quality research is important for supporting evidence-based planning. However, new research is not always what is required. Improving access to existing research including research from other sectors, and increasing the capacity of individuals and systems to use evidence effectively, will maximize the potential of existing evidence to inform practice and planning. The use of existing information sources is an important underpinning for original research.

Knowledge Transfer: Overall, evidence-based planning in health human resources needs to make connections between research findings, professional experience, lay knowledge and theory. However, it also means challenging all these forms of evidence. Critical appraisal of the strengths and weaknesses of our approaches in health human resources must be made.

Planning Approaches: The essential elements of health human resource planning capture the interdependency among a number of factors that have not been previously considered. It guides decision-making by taking into account current circumstances such as supply of workers, as well as other factors such as fiscal resources and changes in worker education and training. The underlying principle is the recognition that health human resources must be matched as closely as possible to the health care needs of the population.

Forecasting has typically been done on a utilization basis; however, almost all provincial and territorial jurisdictions are moving to a health needs-based model to determine the future need of health professionals.

Proposed Actions for Evidence-Based Planning

- Implement a provincial staff scheduling system.
- Develop an electronic survey tool.
- Implement a provincial human resource information system in which there is agreement on reporting needs, common data needs and common definitions.
- Develop forecasting and workforce projection models, in conjunction with *A Framework for Collaborative Pan-Canadian Health Human Resource Planning,* to help measure labour market needs.

Roles, Responsibilities and Relationships

Success in our system requires a complex interaction by many key players. Every day, our partners work hard to deliver quality health care. These partners include the health regions that plan for the delivery of health care services, the health providers that provide day-to-day care to patients, and the educational institutions that prepare health providers for practice. In a system where nearly 33,000 health services are provided per day to Saskatchewan residents, the ability of the partners to work together in an efficient and effective manner is paramount to success.

As can be expected in a system of this size and nature, challenges do occur. These challenges include under-utilization of certain health care providers, difficulties related to overlapping of roles, and issues related to the quality of care and challenges regarding the training of health providers. Although there are mechanisms in place by which to identify and address these issues, many continue to challenge the health system.

The Role of Government: Saskatchewan Health provides leadership and provincial planning to health regions, as well as financial resources and legislative and policy guidance.

The Role of Regional Health Authorities: The regional health authorities are responsible for determining regional priorities, allocating resources accordingly and managing the day-to-day delivery of health programs and services. The health regions operate with affiliate agencies and community-based organizations to provide a broad range of health care services to the people of Saskatchewan. Health regions are expected to comply with legislation and work towards a common strategic direction for the health system.

The Role of Unions: Unions are responsible for negotiating and monitoring employment conditions, and advancing the social, economic and general welfare of union members. The union provides advice and support on employment relations and regularly communicates with the public concerning various issues. Unions work collaboratively with health employers to deliver health programs and services; however, the respective roles of employer and employee create potential conflict situations.

Regulation of Health Professionals: Health professionals are regulated to protect the public from harm resulting from the actions of incompetent or unethical practitioners. Where possible, government delegates the responsibility for regulation to the members of the profession because they have the professional knowledge required to regulate professional practice appropriately.

While much of the focus is on immediate and looming shortages of some health care providers, especially nurses, the deeper and more complex issues relate to their changing roles, the need to re-examine traditional scopes of practice, and the challenge of getting the right mix of skills from an integrated team of health care providers to deliver the comprehensive approaches to health care that Canadians expect.

"Building on Values: The Future of Health Care in Canada – Final Report" Romanow Commission, November, 2002

Under Saskatchewan's legislative framework, professional regulatory bodies are responsible for protecting the public by:

- Prescribing qualifications, standards and tests of competency for the registration and licensure of members;
- Approving education programs required for registration of members;
- Establishing and administering registration and licensing processes;
- Setting standards of professional practice, including standards of conduct and competency;
- Establishing continuing education and/or competency requirements; and
- Administering an investigation and disciplinary process to adjudicate complaints of professional incompetence or misconduct.

The roles and responsibilities of professional regulatory bodies are defined in legislation governing each profession. Nevertheless, stakeholder consultations indicated regulatory bodies and their members may not always adhere to their mandate to regulate the practice of their members in the public interest. Regulatory bodies sometimes engage in advocacy for changes to their scope of practice, or for changes to the health care system that would benefit their profession, but that may not be in the public interest. Such advocacy is inconsistent, and may even conflict, with the regulatory responsibility of the organization.

Appropriate Use of Health Care Providers: Studies have shown that many health care providers feel that their skills are not being fully used. In a system that includes providers at all levels, this is problematic. It is important that optimal use of health professionals is made to the best of their abilities and training in order to more efficiently provide the right service at the right time.

In Saskatchewan, the pre-eminent challenge is the appropriate and optimal use of the nursing professions: licensed practical nurses, registered nurses, registered psychiatric nurses and nurse practitioners. Changes to educational and professional requirements, turf protection and lack of professional understanding exacerbate this issue. The various nursing professionals work together to provide care to patients, which creates situations of daily role overlap. Each nursing profession has its own scope of practice, based on their training, and these scopes overlap. We must foster improved understanding and a commitment to develop collaborative care models that will provide the best possible care in the most efficient and effective way.

"**Creeping" Credentialism:** The increasing level of education required by professions before being allowed to practise is commonly referred to as "credential creep." The stated rationale for increasing credentials is that such changes are required to keep pace with changes in the health care system. These can include greater job responsibilities, evolving scopes of practice, use of new technologies, and demands for teamwork and interpersonal communication.

Although these reasons are offered as rationale to increase credentials, there are potential negative consequences. Increasing credentials requires a longer training period, increasing the cost for both students and government, and pushes salaries upwards, which can have an impact on the supply of some occupations. This presents particular challenges for occupations considered to be in short supply. There is also a concern that a more highly qualified workforce can further the inequitable geographic distribution of workers.

Entry to Practise: In the past, an educational institute or a professional licensing body made decisions that increased the credential for a health professional to practise without coordinated input from other jurisdictions or stakeholders. While provinces and territories need to make decisions that support their individual needs, a credential change in one jurisdiction puts pressure on other provinces to consider a similar change.

A number of occupations are considering moving to an increased academic credential. Examples include licensed practical nurses moving from a certificate to a diploma. The Canadian Association of Medical Radiation Technologists has announced its intention to increase the entry-to-practise requirement to a bachelor's degree by 2010. Occupations that want to move from bachelor's to master's degrees include occupational therapists and physiotherapists. While Saskatchewan's nurse practitioner program in primary health care services is an 18-month post-diploma certificate, the Canadian Nurses Association suggests a master's degree as a national standard.

In 2004, the Conference of Deputy Ministers of Health and, later, the federal, provincial and territorial ministers of health and post-secondary education, approved a set of principles, policies, assessment tools and processes for responding to proposed changes in entry-to-practise credentials. The new process for managing proposed changes to credentials involves the collaboration of federal, provincial and territorial ministries of health and post-secondary/advanced education. The outcome of the new process is an analysis provided by the coordinating committee to provincial and territorial governments, outlining the strengths and weaknesses of each proposed credential change.

Proposed Actions for Roles, Responsibilities and Relationships

- Identify health professions where there are unclear scopes of practice and begin developing a clear understanding of overlap/commonalities within the system i.e. that which would resolve conflict and preserve flexibility.
- Create tiered pathways or steps within the health professions to allow for greater flexibility for students to bridge learning/training programs and for staff to career pathing.
- Work with health regions and the Saskatchewan Medical Association to ensure that physicians are involved in a process to do physician planning that helps to meet the provincial service and program needs.
- Review the regulatory authority of licensing bodies.
- Ensure that all health science programs adhere to the national entry-to-practise process and are adjudicated through the pan-Canadian process when proposing to increase their credentials to practise.

Managing *the Plan*

This plan has been developed with significant input from health sector partners and stakeholders. Our ability to successfully implement the plan will also depend on a high level of stakeholder commitment and involvement.

In keeping with the collaborative approach taken in the development of the plan, a workforce steering committee will be established that will include stakeholder representation. The committee will be responsible for developing further details of the plan and monitoring ongoing progress.

Committee members will be selected based on their:

- Commitment to the overall goals of the plan;
- Experience in the health system and/or in training health professionals;
- Association with a key organization/stakeholder; and
- Demonstrated commitment to interdisciplinary models of education, training and practice.

The committee will also help determine the next round of occupations or health professionals that should be considered in the planning necessary to meet Saskatchewan's changing health care needs.

The need for collaboration and coordination around HHR planning is not limited to governments. Others who share responsibility for shaping health system design and implementing service delivery models – including educators, employers, providers, professional associations, unions, patients, and the public – must also play a key role. Closer links among all players will ensure that the number, skills and mix of providers reflect the health needs of the population and the needs of the health system.

Advisory Committee on Health Delivery and Human Resources

Meeting *Our Goals*

This plan is designed to link health human resources to the health needs of Saskatchewan people and the various health sector strategies that have been developed to address these needs.

The following tables list the objectives and actions required to achieve our goals. In addition, the tables include targets for each of the 12 objectives that will assist us in measuring our success. They illustrate how a broad range of activities relate to one another and how they form a strategic approach to collaborative health human resource planning.

All stakeholders will need to work together to implement the proposed actions in order for the plan to work well. While this plan includes many actions that can be undertaken without additional funding, the investments required for full implementation will be considered through normal budget planning processes.

Goal I – The health care system has a sufficient number and effective mix of health care professionals who are used fully to provide safe high-quality care.

Objective 1: Improve the province's self-sufficiency by increasing our capacity to train more health providers, within our fiscal means.

Measure/Target

Increase the number of health care education seats for Saskatchewan students.

Proposed Actions

- Increase support to the College of Medicine to train future doctors.
- Increase the profile of health careers in elementary and high schools.
- Conduct an evaluation of the Nursing Education Program of Saskatchewan.
- Work with Saskatchewan Learning and SIAST to increase the number of MLT and MRT training seats in the province.
- Enhance practical nursing training in locations where shortages exist.
- Continually review Saskatchewan's training needs for those occupations where there are currently no programs being offered in Saskatchewan such as occupational therapy, speech language and sonography.

Objective 2: Improve the retention and recruitment of health care professionals to meet Saskatchewan's health needs.

Measure/Target

Reduce the number of positions sitting vacant for periods longer than six months.

Proposed Actions

- Establish a provincial recruitment agency to help the province attract hard-to-recruit professionals and locate health professionals in hard-to-recruit-to areas of Saskatchewan.
- Develop pilot projects that encourage the hiring of new graduates across the province, targeting rural, remote, northern and other hard-to-recruit-to areas.
- Work with appropriate stakeholders to complement the health human resource planning being done within the framework of the Northern Health Strategy.
- Increase Saskatchewan's presence at job fairs in Saskatchewan and in other provinces.
- Assist internationally educated health professionals (IEHPs) to integrate into Saskatchewan's health sector. Five projects include:
  - ~ Analysis of barriers impacting IEHPs;
  - ~ On-line portal for IEHPs and their families;
  - ~ Faculty development and mentoring modules for IEHPs;
  - ~ A bridging program for IEHPs; and
  - ~ Assessment tools to assess IEHPs' readiness to practise and residency training.
- Develop a provincial policy for international recruitment of health care professionals.
- Establish shared practice agreements between health regions to share scarce human resources.

Objective 3: Support the optimal use of all health care professionals in working within their scope of practice.

Measure/Target

Increase the percentage of employees who report positively their clarity of work expectations and freedom to improve how work is done.

Proposed Actions

- Identify health professions where there are unclear scopes of practice and begin developing a clear understanding of overlap/commonalities within the system i.e. that which would resolve conflict and preserve flexibility.
- Identify best practices with regard to those workplaces that have made significant progress on this front.
- Research and begin piloting different skill-mix complements on patient/client/resident outcomes.
- Evaluate the various skill-mix complements and begin implementing appropriate skill-mixes based on best practices.

Goal II – The health system has safe, supportive, and quality workplaces that help to retain and recruit health care professionals.

Objective 4: Ensure workplace environments are safe and healthy.

Measure/Target

Decrease the number and severity of WCB lost-time claims.

Proposed Actions

- Enhance the occupational health and safety strategy in each health region and Saskatchewan Cancer Agency.
- Implement the appropriate use of safety engineered sharp devices.
- Locate and use adequate safety equipment such as lift/transfer equipment in all institutional settings based on regular safety audits.

Objective 5: Assist workplaces to support staff in providing quality care.

Measure/Target

Increase the percentage of staff reporting a positive score for their learning environment.

Proposed Actions

- Develop career pathing initiatives.
- Pilot mentorship initiatives.
- Recruit more senior and experienced nurses to act as mentors with new graduates.
- Support Aboriginal employees in the workplace by expanding the Employee Aboriginal Network.
- Support initiatives for young professionals mentoring youth.
- Support quality workplace initiatives identified as priorities within each health region.
- Continue to dedicate specific funding for health regions to provide continuing education and professional development opportunities based on regions' staff needs.
- Enhance succession planning.
- Provide leadership mentoring and training.
- Support leadership development programs.
- Build capacity within the workplace to deal with intergenerational issues.
- Provide management training based on managers' individual learning plans.
- Undertake efforts to initiate individual learning plans for employees. Incorporate this process into the performance contract for managers.

Goal III – Aboriginal people fully participate in the health sector in all health occupations.

Objective 6: Become a leader in training Aboriginal health care professionals in Canada.

Measure/Target

Saskatchewan is designated by Health Canada as an Aboriginal Training Centre of Excellence.

Proposed Actions

- Support education initiatives for Aboriginal children to help students prepare for health careers, including career counselling, job fairs, nursing access programs and funding for the Northern Health Science Access Program.
- Help prepare the workplace by providing representative workforce training to health regions.
- Host a western symposium on best practices in Aboriginal health professional education, training and recruitment.
- Develop a proposal with the Aboriginal community and other stakeholders regarding an Aboriginal health human resources training centre of excellence, linked to the Aboriginal Health Blueprint and the Aboriginal Health Human Resource Initiative.
- Partner with Aboriginal communities to provide transition and succession planning, including mentoring opportunities and career counselling.
- Ensure training programs are adaptive to and respectful of Aboriginal approaches to learning and health.

Goal IV – The education and training supply of Saskatchewan health care professionals is aligned with projected workforce requirements and health service needs.

Objective 7: Ensure the education and training system is responsive to Saskatchewan's labour market needs for health care professionals.

Measure/Target

Saskatchewan Health, Saskatchewan Learning, education institutes and health employers agree on a process to share planning information concerning supply and demand issues.

Proposed Actions

- Establish a health labour market council made up of Saskatchewan Health, Saskatchewan Learning, health employers and education institutes to better integrate the planning needed to match the supply and demand for health professionals.
- Assess training gaps related to wait-list initiatives.
- Work with the elementary and secondary school system to ensure all school divisions offer science and advanced math courses at the secondary level to help ensure students have the necessary entry requirements.
- Implement policies that encourage Aboriginal students to enrol in health professions.
- Consider the development of a certificate program for health professionals specializing in rural health care.
- Examine the need for mental health professionals and addiction counsellors in conjunction with Project Hope and the provincial mental health sector study.

Objective 8: Increase capacity for Saskatchewan's health employers to provide opportunities for students pursuing a health career.

Measure/Target

Increase the number of clinical placements in Saskatchewan.

Proposed Actions

- Increase our ability to provide students with clinical placement within the province.
- Support clinical placements within Saskatchewan for those students enrolled in education seats that have been purchased in another province.
- Reward and recognize preceptors for the contribution they make in taking on students.
- Improve clinical placement processes by implementing Health Sciences Placement Network (a web-based tool that helps link employers with health science students) in the province and better coordinating placements so as to not overload particular sites.
- Develop the means to better facilitate placements in rural and more remote parts of the province.
- Create and support a single point of entry for clinical placements in each health region to enhance coordination.
- Explore summer employment opportunities for students training to be health professionals.
- Expand the Northern summer student program.
- Develop orientation training for new preceptors.
- Work with the education institutes to stagger practicums and expand clinical opportunities.
- Use Telehealth to help with clinical placements.
- Develop a clinical team placement program for students in rural and remote locations.
- Examine virtual clinical training and clinical simulation alternatives.
- Create tiered pathways or steps within the health professions to allow for greater flexibility for students to bridge learning/training programs and for staff to career pathing.

Objective 9: Provide culturally appropriate care for people.

Measure/Target

Increase the percentage of patients reporting a positive score for culturally sensitive care.

Proposed Actions

- Develop cultural competency training.
- Review curriculum to ensure its cultural appropriateness.
- Implement formal codes of conduct that make explicit the need for the respectful treatment of each other and patients/clients/residents in workplaces, and address the accountability for ensuring standards of behaviour.

Goal V – The health workforce is innovative, flexible and responsive to changes in the health system.

Objective 10: Educate and train the health workforce to work in interprofessional teams to provide quality care.

Measure/Target

Increase the number of health education programs offering interprofessional experiences in Saskatchewan.

Proposed Actions

- Clarify the human resource needs for the current primary health care model and the pace for implementation.
- Work with health regions and the Saskatchewan Medical Association to ensure that physicians are involved in a process to do physician planning that helps to meet the provincial service and program needs.
- Monitor the Interprofessional Education for Collaborative Patient-Centred Practice (IECPCP) project at the University of Saskatchewan and other locations to identify best-practices for interprofessional training opportunities.
- Provide training opportunities for staff already in the workforce as to how they can work within interprofessional teams.
- Expand the opportunity for health sciences students to take common classes.
- Consider establishing a core curriculum for first-year health science students that allows them to select a health discipline in their second year.

Objective 11: Enhance workforce information and data systems to support evidence-based planning.

Measure/Target

Workforce information from the health regions can be analyzed by occupation.

Proposed Actions

- Implement a provincial staff scheduling system.
- Enhance SAHO's payroll information system.
- Develop an electronic survey tool.
- Implement a provincial human resource information system in which there is agreement on reporting needs, common data needs and common definitions.
- Develop workload measurements and cost/benefit analysis.
- Develop ways to capture workforce data beyond the health regions, for example private health services such as dentists and pharmacists.
- Work with regulatory bodies where appropriate to help build capacity for data-sharing that helps inform workforce planning.
- Develop forecasting and workforce projection models, in conjunction with *A Pan-Canadian Framework for Collaborative Health Human Resource Planning,* to help measure labour market needs.
- Work with CIHI and other jurisdictions to develop a common national database of health providers.

Objective 12: Ensure the roles and responsibilities of all partners in the health sector are articulated and understood.

Measure/Target

A formal review of the regulatory authority of licensing bodies is completed.

Proposed Actions

- Review the regulatory authority of licensing bodies.
- Clarify the roles of other health partners in the system around health human resource planning issues.
- Ensure that all health science programs adhere to the national entry-to-practise process and are adjudicated through the pan-Canadian process when proposing to increase their credentials to practise.

Appendix A Employee Opinion Survey

Regional health authorities surveyed 37,000 health sector employees in May 2005. The focus of the survey was part of an ongoing commitment to work with employees in the pursuit of quality workplaces. NRC Picker designed and implemented the survey. Below are the list of questions that made up the survey:

Topic Areas

Communication

- How openly and honestly your supervisor communicates.
- How well informed you are about your organization's corporate plan.
- You are asked your opinion.
- Your involvement in decisions that affect your work.
- How clear the mission and goals of your organization are.
- How clearly defined your role and work expectations are.

Respect

- How well your supervisor responds to your ideas and concerns.
- Fair and equal treatment by your supervisor.
- How well colleagues/co-workers show respect for each other.
- How well your supervisor shows respect for staff.
- How well your organization respects staff diversity.

Recognition

- Recognition and support for your role.

Team Work

- How well staff work together and help each other out.
- The effectiveness of support and communication between your department and other departments.
- How well your supervisor works as part of the team.

Learning Environment

- Fair and regular feedback on your performance.
- Your opportunities for learning and development.
- Your opportunities to learn from other units, departments or teams.

Work Practice

- How well you can balance family life with work.
- How manageable your workload is.
- The time you are given to participate/contribute to organizational activities.
- Flexibility in your schedule/work hours.
- How well you are trained and supported on the job.
- Freedom to make improvements to how your work is done.
- A positive and fun environment to work in.
- Opportunities for advancement.
- The opportunity to have variety in your work.
- Your ability to make a difference in a patient's/client's/resident's life.

Physical Environment and Safety

- The cleanliness of the environment you work in.
- How well the layout of your work area lets you do your job.
- A safe and hazard-free environment for you to work in.
- Your personal security and safety in your work place.
- Up-to-date computer technology for you to use.
- Up-to-date equipment for you to use.

Organizational Commitment

- I talk up this organization to my friends as a great organization to work for.
- I am willing to put in a great deal of effort beyond what is normally expected in order to help this organization be successful.
- I am proud to tell others that I am part of this organization.
- I find that my values and the organization's values are similar.
- This organization really inspires the very best in me in the way of job performance.
- I am extremely glad that I chose this organization to work for over others I was considering at the time I joined.
- I really care about the fate of this organization.
- For me, this is the best of all organizations for which to work.
- How likely is it that you will actively look for a new job in the next year?

Appendix B Example of a Conceptual Model for Health Human Resource Planning

by Gail Tomblin Murphy

Figure 1 illustrates a conceptual model for population needs-based, system design-driven health human resource (HHR) planning. It was developed by O'Brien-Pallas, Tomblin Murphy, Birch, and Baumann (2005). The model has been adapted from earlier work by O'Brien-Pallas, Tomblin Murphy, Birch, Baumann (2001) and O'Brien-Pallas and Baumann (1997), and has been constructed from Anderson's (1995) service utilization model, Donabedian's (1966) quality of care framework, Leatt and Schneck's conceptualization of technology in human services organizations (1981), and work of a Canadian think tank summarized by Kazanjian, Pulcins and Kerluke (1992).

It is designed to include the essential elements of health human resource planning in a way that captures the dynamic interplay among a number of factors that have previously been conceptualized in isolation of one another (O'Brien-Pallas, 2002). It provides policy-makers and planners with a guide to decision-making, which takes account of current circumstances (e.g., supply of workers) as well as those factors which need to be accounted for in HHR planning (e.g., fiscal resources, changes in worker education and training).

This conceptual model considers factors that, though important in the HHR planning process, may not have been considered in planning to date. These factors include social, political, geographic, economic, and technological factors. At the core is the recognition that health human resources must be matched as closely as possible to the health care needs of the population (O'Brien-Pallas 2002).

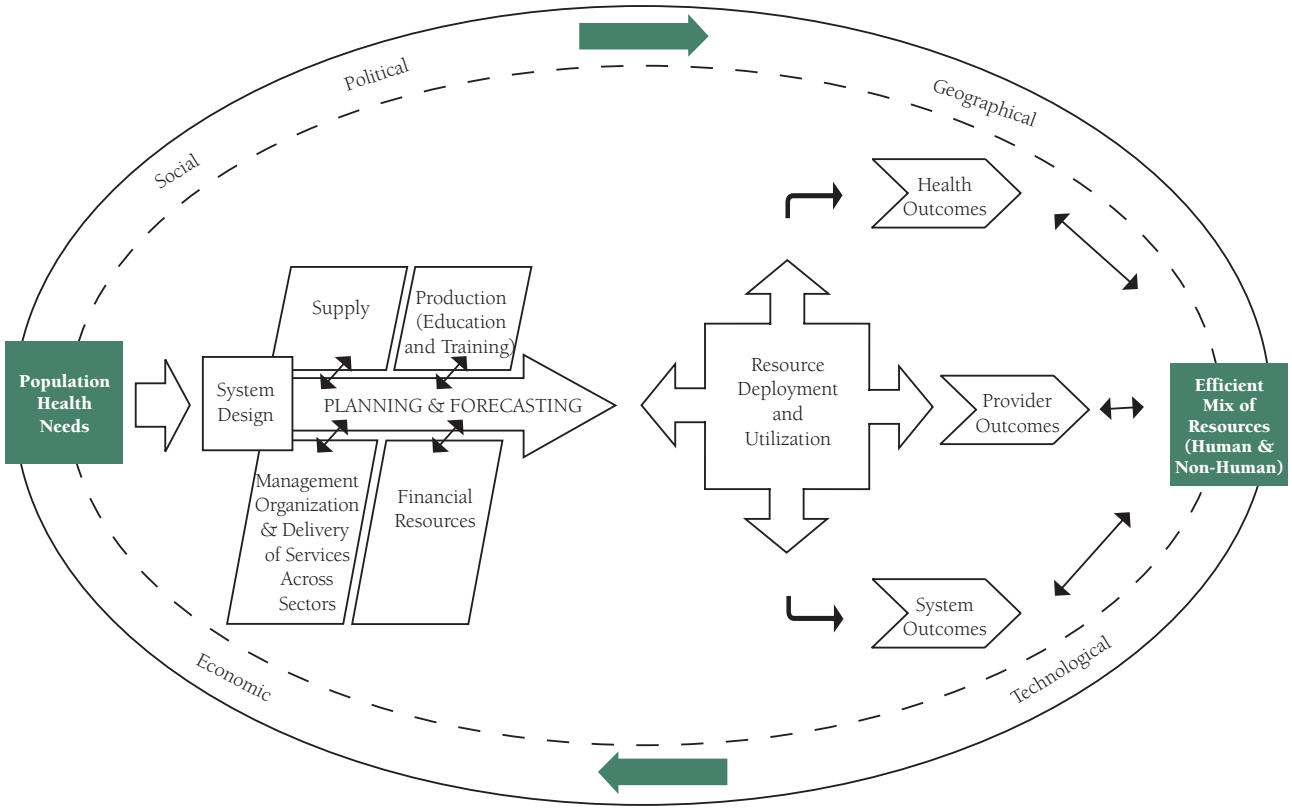
When used to guide planning, a conceptual model like the one on the following page can help policy-makers and planners take into account the impact of a range of dynamic variables on:

- Current circumstances (e.g., supply of workers).
- The number and skills required which need to be accounted for in HHR planning (e.g., fiscal resources, changes in worker education and training).
- Other factors important in the HHR planning process that may not have been considered in the past, such as social, political, geographic, economic, and technological factors.

Planners can use this type of model as the basis for simulations, which, in turn, can provide needs-based estimates of the health human resources required to achieve health, provider and system outcomes.

Figure 1: Health System and Health Human Resources Conceptual Model

Health System and Health Human Resources Planning Conceptual Framework[1]



[1] O'Brien-Pallas, Tomblin Murphy, Birch, 2005 (adapted from O'Brien-Pallas, Tomblin Murphy, Birch, & Baumann, 2001, and O'Brien-Pallas & Baumann, 1997)

Appendix C Health Human Resource Highlights

In Canada ...

Who's Who in Health Care?

- In 2001, 1.1 million Canadians worked in health care. That's about one out of every 10 people in the workforce.
- Canadians use different types of health services and can access many different health care providers. According to the 2003 Canadian Community Health Survey, 82 per cent of females and 71 per cent of males consulted a family physician during the past year. Dentists, specialists, chiropractors, massage therapists, homeopathic/naturopathic therapists, and acupuncturists were also reported to have been consulted by women more frequently than by men.
- In 2003, registered nurses, licensed practical nurses, and registered psychiatric nurses accounted for just under one-half of all health care workers in Canada.
- CIHI counted 70,000 physicians in Canada in 2003, which is approximately 220 per 100,000 Canadians.

Planning for the Future: The Supply of Health Care Providers

- Ensuring the right numbers of health care providers with the right mix of skills and training are available where and when needed is a complex task and depends on many factors, such as trends in demographics, health status, technology, practice patterns, and the organization and delivery of health services.
- The average age of workers in most health occupations is increasing. Overall, it rose from 39.2 years in 1994 to 40.8 years in 2000, and to 41.6 in 2003.
- Each year, some physicians – about one per cent of the total supply in recent years – leave Canada, while others return. Over at least the past three decades, this movement has ebbed and flowed.
- Between 2000 and 2003, the highest average numbers of physicians who entered Canada were from South Africa (114) and Asia/India (98).
- Assuming a retirement age of 65, Canada can expect to lose 29,746 RNs aged 50 or older by 2006. That's 13 per cent of the 2001 nursing workforce.

In Saskatchewan ...

- Each day in Saskatchewan, 33,000 services are provided to Saskatchewan residents.
- The health system in Saskatchewan employs more than 37,000 individuals, includes more than 30 health professions, and operates 269 health facilities.
- The *Hospital Financial Performance Indicators 1999-2000 to 2002-2003* report published by CIHI in April 2005 stated that Saskatchewan has the lowest administration costs in the country.

The national information in this section was taken from *Canada's Health Care Providers 2005 Chartbook* published by the Canadian Institute for Health Information.

Combined Laboratory and X-Ray Technicians

Number of CLXTs

According to the Saskatchewan Association of Combined Laboratory and X-Ray Technicians (SACLXT), there were 299 registered active members practising in Saskatchewan in 2005*. There was a fair amount of fluctuation in the number of CLXTs practising in Saskatchewan between 2001 and 2005, with an overall average increase of eight CLXTs per year (Figure 1).

* Estimates may be low due to non-mandatory membership with SACLXT.

Figure 1: Number of Practising CLXTs, 2001-2005

Sources: Labour Market Analysis, Sask Trends Monitor; SACLXT)

Employment Status

According to the Saskatchewan Association of Health Organizations (SAHO), over half of CLXTs employed by health regions in 2005 worked in part-time positions (64.4 per cent), while only 35.6 per cent were employed in full-time positions.

Educational Requirements

In Saskatchewan, CLXTs are required to complete a 56-week program through the Saskatchewan Institute of Applied Science and Technology (SIAST). This involves 36 weeks of theory and 20 weeks of clinical experience, upon the completion of which they receive a certificate and are eligible to register with the Saskatchewan Association of Combined Laboratory and X-Ray Technicians, although registration is not mandatory. In order to practise, graduates are also required to write a provincial comprehensive clinical examination. A 2004 graduate survey conducted by SIAST indicated that 100 per cent of respondents were employed: 33 per cent full-time and 67 per cent part-time or casual.

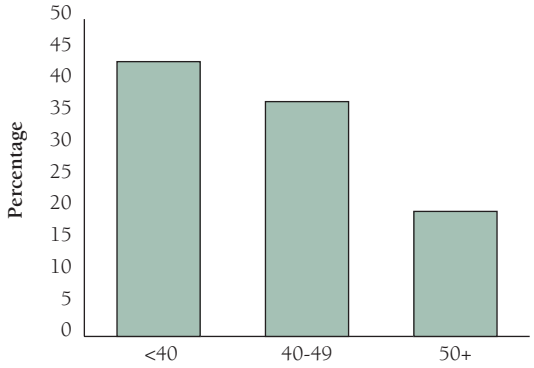
Gender Analysis

Gender analysis is not available for CLXTs.

Age Distribution

In 2005, 43.3 per cent of CLXTs in the province were under age 40 and an additional 37 per cent were between the ages of 40 to 49 (Figure 2). Less than one-quarter of CLXT full-time equivalents (19.7 per cent) were age 50 and over.

Figure 2: Age Distribution of CLXTs, 2005



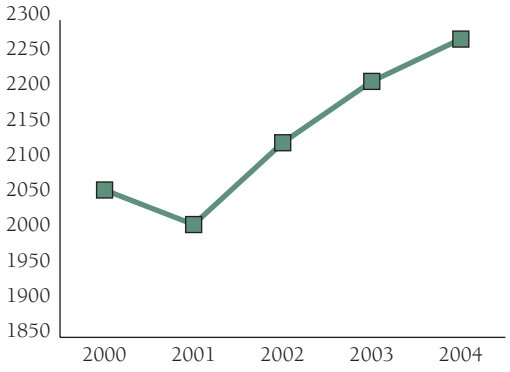
Source: SAHO Payroll

Licensed Practical Nurses

Number of LPNs

According to the Saskatchewan Association of Licensed Practical Nurses (SALPN), the number of practising licensed practical nurses (LPNs) registered in Saskatchewan in 2004 was 2,273, a three per cent increase from 2003 (2,213). The number of LPNs in the province has been rising, with an average increase of 54 LPNs per year between 2000 and 2004 (Figure 1).

Figure 1: Number of Practising LPNs, 2000-2004

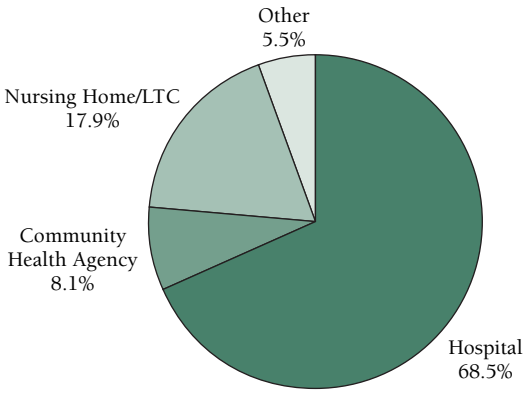


Source: SALPN

Employment Status

Approximately 60 per cent of the LPNs in Saskatchewan in 2003 were concentrated in urban areas, while the remaining 40 per cent were employed in rural/remote regions. In the same year, Saskatchewan's LPNs practised in the hospital sector (68.5 per cent), nursing home/long-term care setting (17.9 per cent), community health agency (8.1 per cent), and in other sectors (5.5 per cent) (Figure 2).

Figure 2: LPN Workplace Locations, 2003



Source: CIHI

Educational Requirements

LPNs are required to complete a 58-week program whereupon they receive a Certificate of Practical Nursing (CPN) and are eligible to register with SALPN, the provincial regulatory body. Following the CPN, a graduate LPN must write and pass the national examination in order to receive licensure. Aside from the certificate, LPNs may also be given what is referred to as an equivalency status if they come from another province or country.

Gender Analysis

As of 2005, males comprised 3.1 per cent of the LPN workforce in Saskatchewan, while females represented 96.9 per cent (2,005). In comparison, the national average of the LPN workforce for the same year was 93.2 per cent female and 6.8 per cent male.

Age Distribution

In 2005, 38.2 per cent of LPNs in the province were under 40 years of age, while 27.9 per cent of LPNs in the province were between the ages of 40 to 49. One-third of LPNs (33.9 per cent) were age 50 and over.

Medical Laboratory Technologists

Number of MLTs

According to the Saskatchewan Society of Medical Laboratory Technologists (SSMLT), there were 949 registered active practising members in 2004. This is up from the 906 registered practising members in 2003, an increase of five per cent. Overall, the number of medical laboratory technologists (MLTs) practising in Saskatchewan has been slowly declining, with an average decrease of four MLTs per year from 2000 to 2004.

In 2002, Saskatchewan was above the national average of MLTs per capita (Figure 1).

Employment Status

Among MLT full-time equivalents (FTEs) employed by Regional Health Authorities in Saskatchewan in 2005, 50 per cent were employed on a full-time basis, 34 per cent were part-time and 16 per cent were casual.

Educational Requirements

In Saskatchewan, the educational requirement to become an MLT is an 80-week diploma program offered at SIAST. Only 16 persons are accepted into the SIAST program each year. Upon completion of the program, MLTs are required to register with SSMLT, the provincial regulatory body. A 2004 graduate survey conducted by SIAST indicated that 100 per cent of respondents were employed: 67 per cent full-time and 33 per cent part-time.

Gender Analysis

According to SSMLT, approximately 87 per cent of MLTs practising in the province in 2004 were women.

Age Distribution

In 2005, 42.2 per cent of MLTs in Saskatchewan were 40 to 49 years of age, 28.8 per cent were 50 years of age or older, and 29 per cent were under 40.

Figure 1: Medical Laboratory Technologists per Capita, 2003

Source: Based on CIHI data

Medical Radiation Technologists

Number of MRTs

According to the Saskatchewan Association of Medical Radiation Technologists (SAMRT), there were 461 registered active medical radiation technologists (MRTs) practising in Saskatchewan in 2005. There was some fluctuation in the number of practising MRTs from 2000 to 2005; overall, there was an average increase of seven MRTs per year.

In 2003, Saskatchewan was just below the national average of MRTs per capita at 45 MRTs compared to 48 per 100,000 population (Figure 1).

Employment Status

In Saskatchewan in 2005, 56.8 per cent of MRTs employed by Regional Health Authorities worked full-time, which is higher than the other diagnostic professions. In total, 43.2 per cent of these MRTs were employed on a part-time or casual basis.

Educational Requirements

In Saskatchewan, the educational requirement to become an MRT is an 88-week diploma program offered at SIAST. Only 16 persons are accepted into the SIAST program each year. Upon completion of the program, MRTs are required to register with SAMRT, the provincial regulatory body. A 2004 graduate survey conducted by SIAST indicated that 100 per cent of MRTs who responded were employed: 91 per cent on a full-time basis, and nine per cent on a part-time/casual basis.

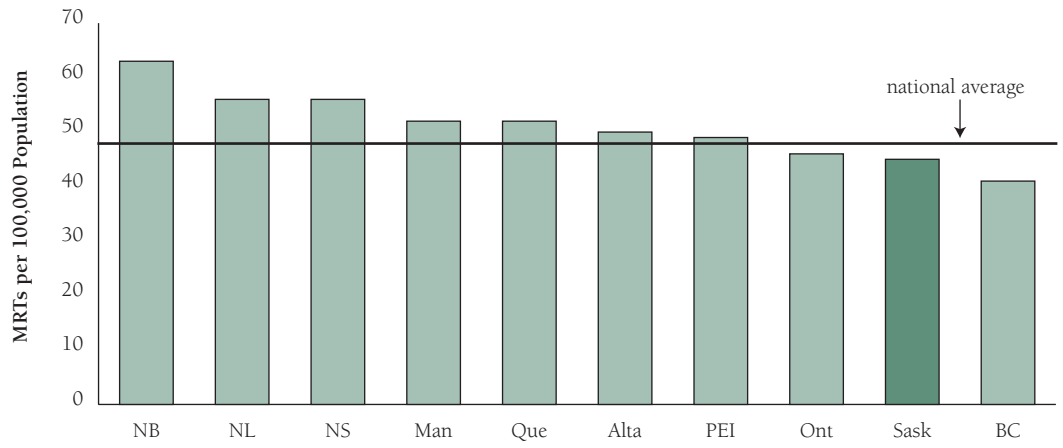
Gender Analysis

According to the Labour Market Analysis of Medical Diagnostic Occupations in Saskatchewan, in 2001, 77 per cent of MRTs were women. In 2003, SAMRT had 368 females and 110 males in their membership. (This number includes inactive, life, and associate members, who total 20.)

Age Distribution

According to SAHO payroll data, in 2005, 33.3 per cent of MRTs were between the ages of 40 to 49, while 27.1 per cent were under the age of 40, and 39.5 per cent were 50 years of age or older.

Figure 1: Medical Radiation Technologists per Capita, 2003



Source: CIHI

Pharmacists

Number of Pharmacists

According to the Saskatchewan College of Pharmacists (SCP), there were 1,121 practising members in Saskatchewan in 2005. There has been some fluctuation in the number of pharmacists practising in Saskatchewan over the past years, with an average increase of three pharmacists per year from 2000 to 2005. (See Figure 1 for pharmacists practising in Saskatchewan by Regional Health Authority.)

Employment Status

Among the pharmacists practising in Saskatchewan in 2005, 884 (79 per cent) practised in the community, while 237 (21 per cent) practised in hospital or other settings.

According to SAHO, approximately 60.4 per cent of pharmacists employed by Regional Health Authorities in 2005 worked on a full-time basis, while 26 per cent were part-time and 13.6 per cent were casual.

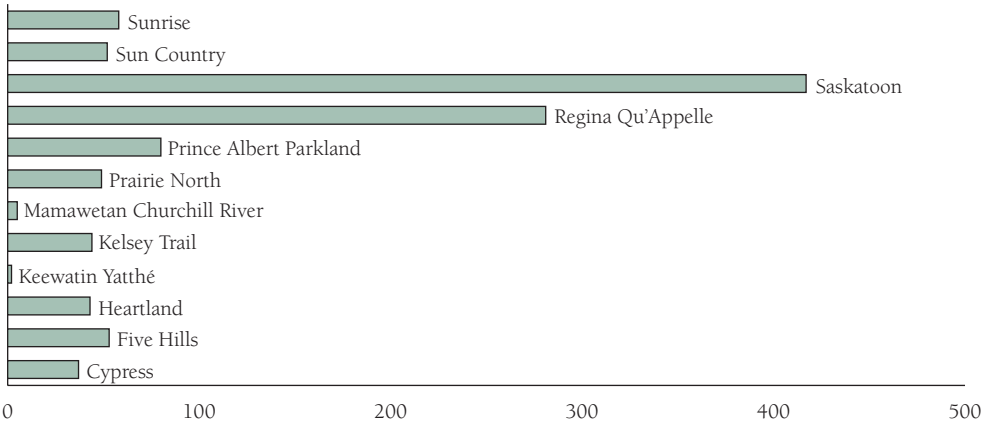
Educational Requirements

The educational requirement to become a pharmacist is a bachelor's degree in pharmacy. A four-year degree program is offered at the University of Saskatchewan. A period of internship is required to obtain a license to practise pharmacy in Saskatchewan. Those who wish to practise as pharmacists must successfully complete the Pharmacy Board of Canada's Qualifying Examination in order to obtain a license. All practising pharmacists are required to register with the College of Pharmacists.

Gender Analysis

Gender analysis is not available for pharmacists.

Figure 1: Pharmacists Practising in Saskatchewan by RHA, 2005

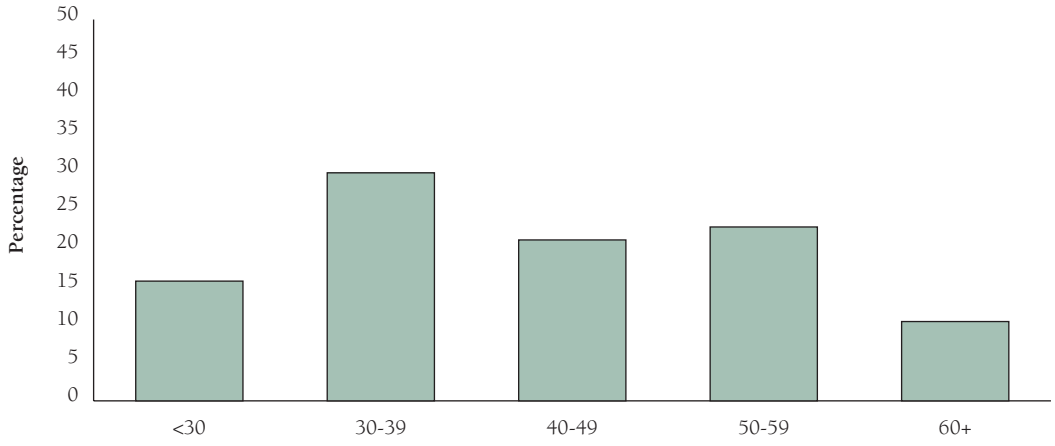


Source: Saskatchewan College of Pharmacists

Age Distribution

In 2005, 55.9 per cent of pharmacists practising in the province were under the age of 45. Only 33.3 per cent of pharmacists were age 50 and over. This is slightly higher than the average percentage of employees over age 50 for all health occupations in Saskatchewan (30 per cent). (See Figure 2 for pharmacist age distributions.)

Figure 2: Pharmacists Practising in Saskatchewan by Age, 2005



Source: Saskatchewan College of Pharmacists

Physicians

Total Number of Physicians

The total number of physicians in the province as of September 2005 was 1,735, including 954 general practitioners and 781 specialists. This number includes all fee-for-service physicians, as well as physicians with non-fee-for-service arrangements and temporary licensed locum physicians. The number of active* general practitioners has increased steadily by an average of 12 physicians per year from 2000-01 to 2004-05, while the number of active certified specialists has risen by an average of 22 physicians per year during the same period. Overall, there has been an average increase of 34 active physicians per year between 2000-01 and 2004-05.

There was an average increase of six rural physicians per year from 2000-01 to 2004-05.

* An active physician is defined as one who receives $60,000 or more a year in payments from Saskatchewan Health and practises within the publicly funded health system.

The physician/population ratio for active general practitioners in 2004-05 was 1 to 1,400, while the ratio for active specialists was 1 to 1,900. The average number of patients seen by an active physician per year was approximately 2,300. By type of physician, this breaks down to 2,600 patients per year on average per active general practitioner and 1,900 patients per year on average per active specialist.

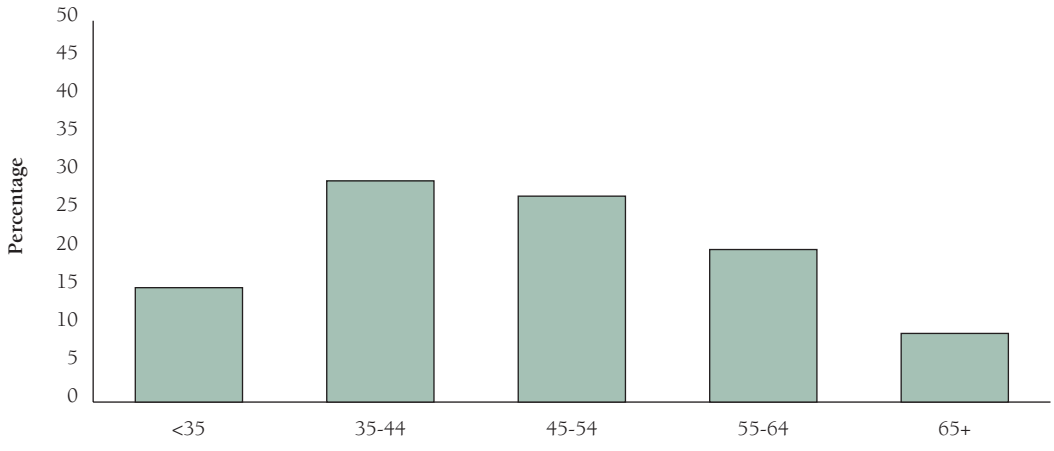
Gender Analysis

Gender analysis is not available for physicians.

Age Distribution

Over three-quarters (76 per cent) of active physicians practising in Saskatchewan in 2004-05 were between the ages of 35 and 64. Fifteen per cent were under 35, while nine per cent were 65 or older (Figure 1).

Figure 1: Physicians by Age, 2004-05



Source: Saskatchewan Health

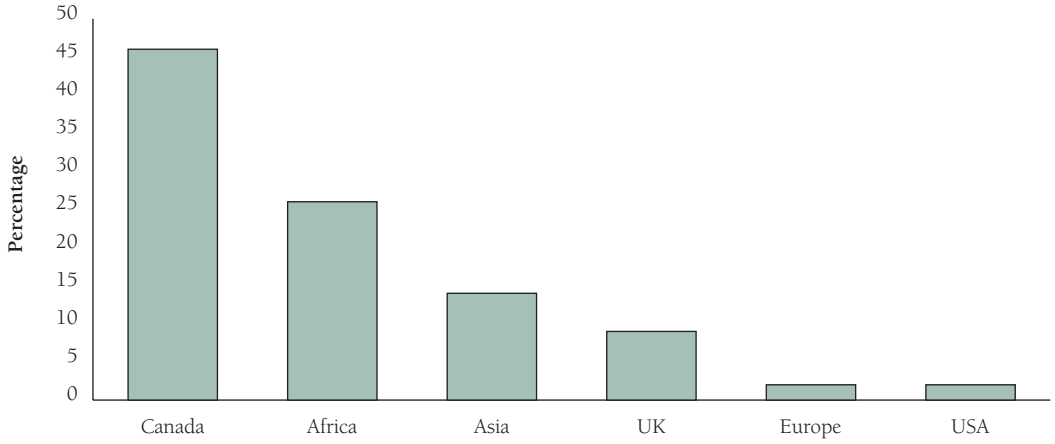
Place of Graduation

Nearly half (46.9 per cent) of the active physicians in Saskatchewan in 2004-05 received their first medical degree in Canada: 36 per cent in Saskatchewan and 10 per cent in other provinces. In the same year, 54 per cent of all active physicians in the province received their first medical degree outside of Canada. Among these physicians, the highest number graduated in Africa (26 per cent) and Asia (14 per cent) (Figure 2).

Turnover of Physicians

Between 2000-01 and 2004-05, the turnover of active physicians remained fairly constant at 11.3 per cent per year, on average.

Figure 2: Physicians by Place of Graduation, 2004-05



Source: Saskatchewan Health

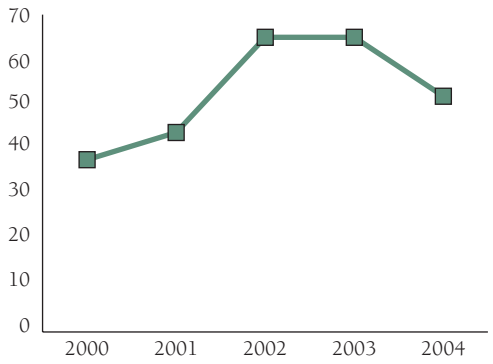
Public Health Inspectors

Number of Public Health Inspectors

According to the Canadian Institute of Public Health Inspectors (CIPHI), there were 52 public health inspectors (PHIs) in Saskatchewan in 2004*. There has been some fluctuation in the number of PHIs practising in Saskatchewan over the past years, with an average increase of four PHIs per year from 2000 to 2004 (Figure 1).

* Estimates may be low due to non-mandatory membership with CIPHI.

Figure 1: Number of PHIs, 2000-2004



Source: Based on CIPHI data

Employment Status

According to SAHO, 85 per cent of PHIs employed in 2005 were full-time and 15 per cent were part-time or casual.

Educational Requirements

The educational requirement to become a PHI is a bachelor's degree in environmental health/science. There is a four-year degree program offered in Saskatchewan at the First Nations University of Canada (FNUC) at the University of Regina campus. In addition to FNUC, this program is offered through British Columbia Institute of Technology, Concordia University, College of Alberta, and Ryerson Polytechnical University in Ontario. In FNUC's program, there is room for 20 students per year; however, only 12 are typically enrolled per year. Once this training is completed, successful completion of the CIPHI exam is required in order to work as a public health inspector in Saskatchewan.

There is a high retention rate of PHIs graduating from Saskatchewan. Since 2001, 11 people have graduated from FNUC's environmental health/science degree. Of these 11 people, 10 have found full-time employment in Saskatchewan.

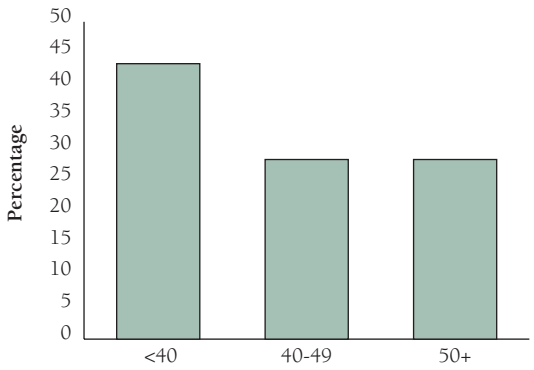
Gender Analysis

Gender analysis is not available for public health inspectors.

Age Distribution

In 2005, 28.3 per cent of PHI FTEs were over age 50 and 43.4 per cent of PHI FTEs were under the age of 40 (Figure 2).

Figure 2: Age Distribution of PHIs, 2005



Source: SAHO Payroll

Registered Nurses

Number of Registered Nurses

According to the Saskatchewan Registered Nurses' Association (SRNA), there were 8,932 registered nurses (RNs) practising in Saskatchewan in 2004. Although the number of RNs shows a decrease from 1995 to 2002, the number of RNs rose in 2003 and 2004. (See Figure 1 for the total number of practising RNs from 1994-2004.)

Employment Status

According to CIHI, in 2003, 54.3 per cent of the RN workforce in the province was full-time, 34.6 per cent was part-time, and 11.2 per cent was casual.

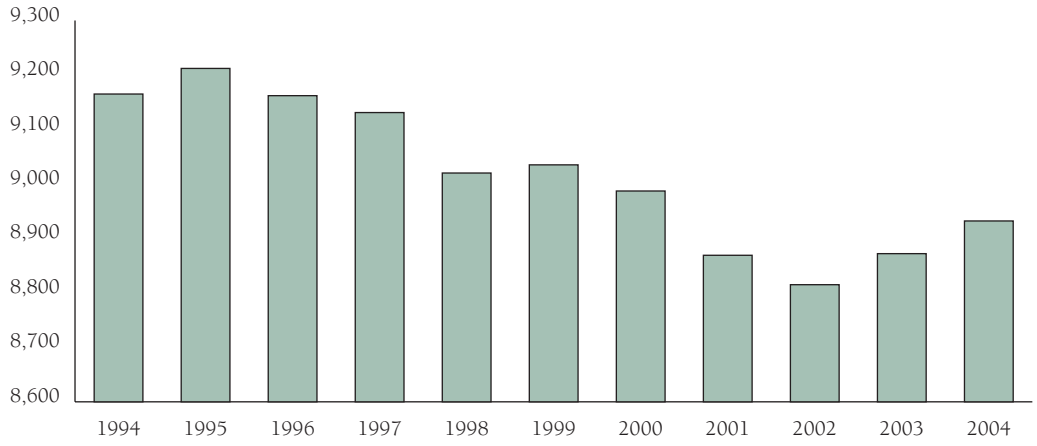
In the same year, Saskatchewan's RNs practised in the hospital sector (58.2 per cent), community mental health agency (18.1 per cent), nursing home/long-term care setting (12.3 per cent), and in other sectors (11.4 per cent).

Eighteen per cent (1,544) of the RNs in Saskatchewan had a place of secondary employment, the most frequently identified locales being the hospital sector, community health sector, and nursing home/long-term care environments.

Educational Requirements

In Saskatchewan, RNs currently receive their education through a four-year degree-based education offered through the Nursing Education Program of Saskatchewan (NEPS). The entire first and second years of the theory classes within the NEPS program are available through distance education. Alternative routes or "fast-track options" exist that make it possible for RNs to complete their degree in three, three-and-a-half or four years. All practising RNs are required to register with SRNA.

Figure 1: Total Practising Registered Nurses, 1994-2004



Source: Based on SRNA 2004 Annual Report

Gender Analysis

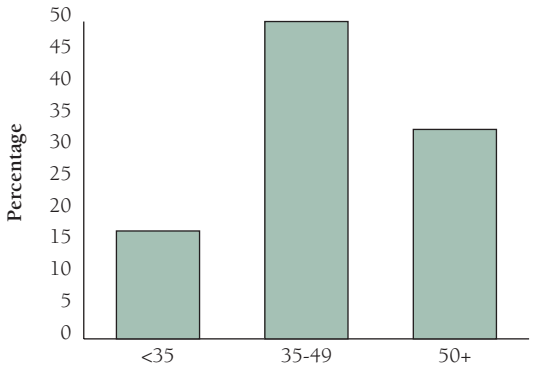
In 2003, males comprised 3.2 per cent (270) of the RN workforce in Saskatchewan, while females represented 96.8 per cent (8,233). This compares to a national average of 94.7 per cent female and 5.3 per cent male RNs.

Age Distribution

The average age of RNs in Saskatchewan in 2003 was 44.9 years.

According to CIHI, in 2002, approximately 17 per cent of Saskatchewan registered nurses were under 35 years of age, 50 per cent were 35 to 49 years, and 33 per cent were 50 years of age or older (Figure 2).

Figure 2: Registered Nurses by Age, 2002



Source: CIHI

Registered Psychiatric Nurses

Number of RPNs

According to the Registered Psychiatric Nurses Association of Saskatchewan (RPNAS), there were 980 registered psychiatric nurses (RPNs) registered with the association in 2004. Within the last decade there has been a steady decline in RPNs in the province, with an average loss of 19 RPNs per year from 2001 to 2004.

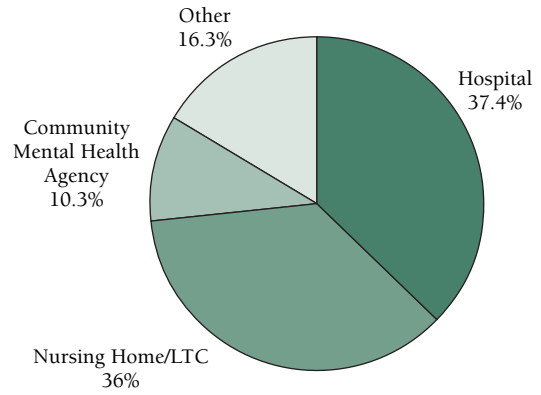
In 2002, there were 9.2 RPNs per 10,000 population in Saskatchewan, which compares favourably to the Western Canadian average of 5.4 RPNs per 10,000 population.

Employment Status

In 2003, 74.1 per cent of the RPN workforce in the province was employed full-time while 25.9 per cent was part-time or casual.

In the same year, Saskatchewan's RPNs practised in the hospital sector (37.4 per cent), nursing home/long-term care setting (36 per cent), community mental health agency (10.3 per cent), and in other sectors (16.3 per cent) (Figure 1). Approximately 15 per cent of Saskatchewan RPNs reported having a place of secondary employment with the most frequently identified locales being community health centres and residential care facilities.

Figure 1: Location of Practice for RPNs, 2003



Source: CIHI

Educational Requirements

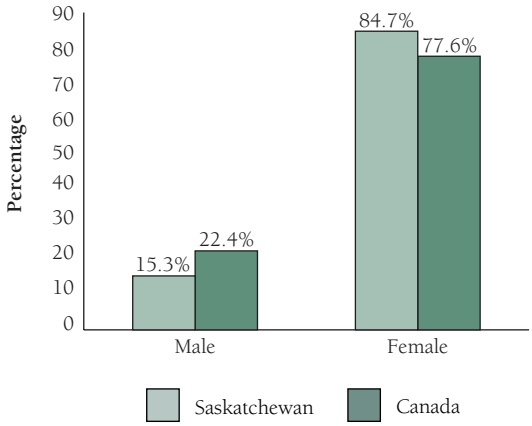
In Saskatchewan, RPNs currently receive their education through a four-year degree-based education offered through NEPS. All practising RPNs are required to register with RPNAS.

In 2003, 97.7 per cent (917) of RPNs in Saskatchewan completed their education in Canada. Saskatchewan has a relatively high retention rate (90.6 per cent) of RPN graduates.

Gender Analysis

In 2003, 15.3 per cent (144) of the RPN workforce in the province was male and 84.7 per cent (795) was female. This compares nationally to an average of 77.6 per cent female and 22.4 per cent male (Figure 2).

Figure 2: Percentage of Female/Male RPNs in Saskatchewan and Canada, 2003



Source: CIHI

Age Distribution

According to CIHI, in 2002, approximately 17 per cent of Saskatchewan RPNs were under 35 years of age, 56 per cent were 35 to 49 years, and 27 per cent were 50 years of age or older.

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