# Managing risks to quality medical services

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## Introduction

Managing the quality and cost of health care helps keep the health system sustainable. It also impacts the Government's financial well-being and the resources available for other services.

The Department of Health is responsible to maintain the health system, its quality, and its cost. The Government spends 32 percent of its total spending on health services (see Part B, page 52 of this chapter). In Saskatchewan, health spending grows faster than the rate of economic growth. It also grows faster than spending on other government services.[1]

In this study, we focus on medical services. We outline the Department's responsibility for quality medical services and describe key risks. We also highlight some of the ways that the Department manages risks to medical services.

By medical services we mean medically necessary services provided by doctors, nurse practitioners, dentists (e.g., dental surgery), chiropractors and optometrists. These services are most often paid for on a "fee-for-service" basis. Some doctors and others who provide medical services are paid a salary.

Medical services is one of the Department's largest areas of spending. In 2002-03, the Department spent $446 million on medical services. Medical services also trigger significant spending in other parts of the health system (e.g., drugs, diagnostic tests, hospitalizations).

The cost of medical services grows with scientific advances, more chronic illness, and rising public expectations. These key forces also influence the quality of services. The Department faces a challenge to balance quality with rising costs and expectations.

Exhibit 1 shows how the Department accepts responsibility for quality, cost-effective services in its goals. To manage risks to quality medical services, the Department must have systems that support safe and cost-effective services. In addition, it must design policies so that services are

[1] Pages 41, 51, *Saskatchewan Health Annual Report 2001-2002*.

fair or equitable, affordable, meet basic needs, and invest in the future through preventive approaches[2].

With limited resources, the Department's policies must make trade-offs so that medical services meet the minimum needs of all without unfair restrictions on services for those with special needs. Legislation requires the Department to balance "comprehensive" services with essential, "medically necessary" services available to everyone.

Exhibit 1—Overview of Plan for 2003-04 and beyond
(excerpts from *Saskatchewan Health Annual Report 2002-03*, emphasis added)

**Goals and objectives**

1. Improved access to quality health services (e.g., coordinate primary health care, reduce waiting times for surgery, improve emergency medical care, improve hospital…and long-term care including program standards)
2. Effective health promotion and disease prevention
3. Retain, recruit and train health providers
4. A sustainable, efficient, accountable quality health system
    a) ensure quality effective health care (e.g., provide support for good decisions to health professionals)
    b) appropriate governance, accountability, and management for the health sector (e.g., leadership, budgeting, education)
    c) sustain publicly funded and publicly administered health care (e.g., work with partners to ensure cost-effective approaches to health care, maintain financial sustainability)

## Background

*The Constitution Act* (1867)[3] makes health a provincial matter. It gives provincial governments authority over health services for the public.

Saskatchewan's Department of Health exercises this authority primarily through legislation. For example, *The Department of Health Act* (1979, section 6) authorizes the Department to "develop, co-ordinate and maintain a system for the provision of comprehensive health services."

[2] Peters, S. (1995). *Exploring Canadian values: Foundations for well-being*. Ottawa: Canadian Policy Research Network.
[3] Formerly called *The British North America Act*, section 92 describes the Division of Powers to provinces.

The Act also expects the Department to stimulate health research, for example, with grants. *The Regional Health Services Act* (2002, section 4) authorizes the Department to set measures and targets to promote the effective and efficient use of health services.

Through *The Canada Health Act* (1984), the Federal Government agrees to help the provincial governments pay for health services for the public. The Act puts conditions on provincial governments. For example, the Act requires provincial governments to provide "comprehensive" services that are "medically necessary."

The Act does not define "medically necessary." Each provincial government has the authority to select services that meet the needs of its population and set the fee it will pay for each of those services. Generally, "medically necessary" refers to services that serve a useful purpose. That is, services that the provincial governments judge appropriate.[4]

Provincial governments put limits on what they describe as medically necessary. For example, provincial governments do not pay for cosmetic surgery. Every year the Department publishes a list of services that it does not pay for in its Medical Services Branch Annual Statistical Report.

Provincial governments must make these decisions with care, considering the needs of the population. For example, the British Columbia Government refused to increase health services to children with autism. In 2002, the Supreme Court ruled that the province must provide the additional services. This ruling makes clear that there are limits to the ability of provincial governments to restrict services and still provide "comprehensive" services.

## Key forces influencing medical services

Many factors influence the health system. Medical services are changing continually due to three primary influences: scientific advances, more chronic illness, and rising public expectations. These factors put pressure on the quality and cost of medical services. Continual change increases the risk of inappropriate services and unmanaged costs.

[4] The term "medically necessary" includes moral judgements as well as those based on science and experience (e.g., which patient should have priority if there is a waiting list).

First, scientific advances change medical services and may increase risks. Service providers and the public want to use new discoveries. However, the benefits of some discoveries may not yet be proven. The Department must decide whether to use public resources to pay for these services. If there is no proof of benefit, the service is not medically necessary. Similarly, the Department must decide if it should continue to pay for less effective services when a better service is available.

Second, medical services change due to increased chronic illness. Unlike short-term acute illness, chronic illness requires regular ongoing medical attention. Half of all Canadians now have a chronic illness (e.g., asthma, high blood pressure, arthritis, back problems).[5] The rate of chronic illness in Saskatchewan has two main influences. Our population is older than in other provinces and older people have more chronic illnesses. Our growing First Nations population also has a high rate of chronic and disabling conditions such as diabetes.

Third, public expectations change medical services. Access to more health-related information (e.g., radio, television, or Internet) shapes what the public expects. The public sometimes asks for inappropriate medical services. For example, some people want specific laboratory tests or antibiotics when they will not help. Other people expect immediate surgery rather than trying more conservative approaches like exercise.

Canadian research shows that public demand influences medical services in unexpected ways. For example, healthy seniors use more medical services than do ill seniors. Similarly, people with higher incomes use more medical specialists than low income people with the same condition.[6] These patterns may increase the volume and cost of services without improving health in significant ways.

## Risks to quality medical services

Quality in any industry occurs when the right person receives the right services at the right time to achieve the intended purpose. Quality health

[5] Kirby, M.J.L. (2002). *The health of Canadians: The federal role*. Volume VI Recommendations for reform. Ottawa: Government of Canada.
[6] Black, C., Roos, N.J., Havens, B., & MacWilliam, L. (1995). Rising use of physician services by the elderly: Contribution of morbidity. *Canadian Journal on Aging 14*(2), 225-244.

services improve health. That is, quality health services reduce pain or increase a person's ability to function without causing harm.

The challenge is that the health industry often does not know whether the expected benefit of medical services will be greater than a potential harm. Harm may not be immediate, but later may cause disability or death. The health industry needs long-term research. Long-term research helps explain which services achieve their intended purposes without doing more harm than the benefit justifies. Research helps to identify high quality, cost-effective medical services.

Researchers commonly describe risks to quality medical services in three ways:

1. underuse of services known to benefit most people,
2. overuse of services in ways that are known to have little benefit, and
3. misuse of services in ways that cause harm.

Most risks to medical services are the result of faulty systems rather than faulty people.[7] The health industry has few systems to control risks to medical services.

Ideally, the systems would make it easier for service providers to make the right choices and harder to make the wrong ones. However, in Canada, the health system is just beginning to monitor harmful events to learn what systems would be helpful. At present, provincial governments do not know the extent of the risks to quality health services.

In addition, the health industry currently lacks research evidence about the benefit or harm of many frequently-used medical services. Nor does the health industry have systems to ensure that service providers use the available research evidence. This further compounds the risks. Exhibit 2 sets out some examples of the resulting risks for discussion below.

[7] Kohn, L.T., Corrigan, J.M., & Donaldson, M.S. (Eds.). (2000). *To err is human: Building a safer health system*. Washington, D.C.: National Academy Press.

**Exhibit 2—Risks to quality medical services**

Underuse of services known to benefit health
- failure to use effective advanced treatments
- inadequate use of prevention (e.g., failure to immunize against influenza, or to use effective screening procedures)

Overuse of services with minimal benefit compared to cost or the risk of harm
- repeated or routine use of tests intended for initial diagnosis
- excessive use of some surgeries

Misuse of services due to errors or uninformed decisions
- wrong treatment prescribed or wrong patient receives treatment
- treatment prescribed or given in wrong amount, time, or method

Healthcare providers and policy-makers express concern about increasing risks to the quality of medical services. Research in the United States and Australia shows that a harmful event of some kind happens to 3% to 16% of people admitted to hospital.[8] The harm may be due to a range of problems from unnecessary procedures (e.g., duplicate or excess tests), errors (e.g., wrong drug, operation on wrong limb), unreasonable variation in medical services, or other harmful events.

How the Department ensures quality medical services determines the benefit of the services and impacts future health costs. Underuse, overuse, or misuse of effective medical services can lead to unnecessary loss of life, disability, unnecessary hospitalization, and a waste of public resources.[9]

## Underuse of services

Research shows that many people do not receive effective medical services that would have benefited them. The services most commonly underused are preventive services.

Task forces in Canada and the United States found that not all patients who could benefit actually receive preventive services that research

[8] Thomas, E.J., Studdart, D.M., et al. (2000). A comparison of iatrogenic injury studies in Australia and the USA. *International Journal for Quality in Health Care 12*(5), 371-8.
[9] Hernandez, J.B. (1999). *Evidence-based standards for providers.* Sacramento Health Care Quality & Prevention Project.

shows is cost effective.[10,11] For example, not all those who would benefit from influenza vaccine (i.e., a flu shot) receive it. Similarly, not all women over 50 receive screening tests for cervical cancer every three years (i.e., a PAP smear).

## Overuse of services

The Department's *Action Plan for Saskatchewan Healthcare* (2002, p.66) states that, on average, use of services goes up annually. This increase in the number of tests, prescriptions, and services grows independent of factors such as the size of the population.

The use of medical services may increase for a variety of reasons. Service providers overuse some medical services due to public expectations. For example, in some provinces the desire to arrange infant births at convenient times may result in excess Caesarean births. Some overuse of medical services may include controversial treatments that recent research finds more harmful than previously thought (e.g., hormone replacement therapy during menopause).

Promotion of products by drug and equipment companies may also result in overuse of medical services. Some companies promote products and related medical services on the basis of short-term studies. Such studies may show short-term benefits without revealing long-term harm.

## Misuse of services

Misuse of medical services refers to errors or unanticipated variation in medical practice. The service provided does not match the patient's need or is not consistent with accepted best practice.

Some misuse of medical services may be due to errors related to service provider stress, fatigue, or distraction. This type of error may show that the health system is not adequately designed to prevent mistakes. For example, when doctors and nurses provide emergency coverage over very long time periods, they are more likely to make errors.

[10] United States Preventive Services Task Force. *Guide to Clinical Preventive Services*. 1996.
[11] Canadian Task Force on the Periodic Health Examination. *The Canadian Guide to Clinical Preventive Health Care*. 1994.

The health system describes some variations in medical services as misuse. That is, service providers may treat similar conditions in very different ways. For example, misuse occurs if medical approaches to the same condition vary widely in different locations. Similarly, it may be misuse if low income people receive different services than others with the same condition.

## Managing risks to quality medical services

The Department uses a number of approaches to manage risks to the quality of medical services. We discuss three of these approaches here:

- promoting evidence-based services;
- setting public policy; and
- analyzing medical services, including explaining underuse, overuse, and misuse in reports.

### Promoting evidence-based services

#### *Facilitating research*

The Department needs to know which medical services contribute most to health and well-being with the least cost. The Department encourages and funds some health research. The Department also works with others to promote research about effective services.

In its *2002-03 Performance Plan* (p.62), the Department committed to increase by 40% the public resources that it spends for health research. In this way the Department expects to increase information about the type or level of service that is most effective.

The Department also supports the identification and use of medical practice guidelines. Such guidelines influence the delivery of appropriate, evidence-based medical services.[12]

[12] In Saskatchewan, Health Services Utilization Research Commission has verified clinical guidelines. In Alberta, the Alberta Medical Association is involved (web site http://www.albertadoctors.org/resources/guideline.html). (November 2003).

Informing service providers about research findings and best practices is critical. The Department and professional bodies support a system of continuing medical education. Attending educational events is one way service providers stay up-to-date with the consensus on evidence-based best practices.

### *Setting standards*

Clear expectations help all service providers ensure their services are effective. The Department establishes standards for some services through its regulations and policies.

For example, in July 2003, the Department announced a new system to give patients fair and timely access to surgery. The Department consulted Saskatchewan specialists to develop a new way to assess urgency for surgeries such as hip replacements. The system helps doctors consider specific factors when deciding whether a patient needs priority surgery.[13]

Another system to promote appropriate medical services is the Health Quality Council established in 2002. One purpose of the Council is to provide evidence-based information to improve the quality and safety of the health system. One of the Council's five priorities is to develop systems to increase the use of best practices and other evidence that supports appropriate services. Best practices help to standardize the quality of services.

The Department's *2002-03 Performance Plan* (p.64 Goal 4, Objective 4) states that it intends to sustain medicare in various ways including making the best use of health providers and resources. Setting standards helps to clarify expectations, encourages best practices, and makes better use of resources. Standards can also reduce overuse, underuse, and misuse of medical services.

[13] Page 73, *Action Plan for Saskatchewan Healthcare.* Regina: Government of Saskatchewan.

## Setting public policy

### *Determining medically necessary services*

Each provincial government decides how to select which services are medically necessary and how to pay for them. In Saskatchewan, the Department's Payment Schedule Review Committee recommends changes to services and fee-for-service payments. The Committee has equal representation from the Department and the medical community.

Through the Committee's recommendations and changes to the regulations governing fee-for-service payments, the Department periodically revises the fee schedule so that it reflects new clinical approaches to carry out accepted services. Occasionally, the Committee recommends that specific medical services not be paid for under the Medical Services Plan.

The Committee makes these recommendations after considering what other provincial governments exclude from the range of comprehensive services. For example, since 1993, the Government no longer pays for the removal of warts and other harmless skin lesions as these procedures are not considered medically necessary. Similarly, since 1996, it no longer pays for elective male circumcision.

### *Paying for quality*

The Department is responsible to design payment systems that encourage high quality, effective services. To do this, the Department needs to focus public resources on those services known to work. It is complex to design a system that guides service providers to use effective services consistently.[14]

The method of paying service providers influences the medical services provided.[15] The Department pays most service providers on the basis of an agreed fee for each medical service performed. The Department also makes alternate payment arrangements (e.g., contract, salary) with an

[14] Leape, L.L, Berwick, D.M., & Bates, D.W. (2002). What practices will most improve safety? Evidence-based medicine meets patient safety. *Journal of American Medical Association* 288(4), 501.
[15] Shortt, S.E.D. (2002). Paying doctors Impact of a change in remuneration method at a Canadian academic health centre. *Canadian Journal of Program Evaluation* 17(1), 73-96.

increasing number of service providers.[16] The Department plans to use alternate payment arrangements for family doctors who voluntarily join primary health care teams.[17]

If the Government does not pay service providers for a particular service, service providers may be less willing to perform that service. For example, until June 2001, the regulations did not specify a payment code for time that service providers spent talking to home care nurses. Communication from home care nurses helps doctors to adjust treatments to suit current needs (e.g., pain medication). The Government now lists communication with home care nurses as a medically necessary service with a fee-for-service payment.[18]

### *Promoting collaborative care*

The Department is responsible to keep the health system up-to-date and responsive to changing needs. For example, increased chronic illness requires more collaboration among family doctors, home care nurses, other care providers, and specialists. The Department now emphasizes multidisciplinary teams for primary health care. These teams often include nurse practitioners who improve access to the health care system.

In addition, a shrinking population in southern rural areas and a growing population in northern areas directs the Department's attention to the question of adequate access to services in both northern and rural areas. The Department is responding with technology such as tele-health and long-distance diagnostic imaging which enable collaboration.

## Analyzing medical services

### *Monitoring medical services*

Monitoring medical services helps identify underuse, overuse, and misuse of services. It also helps to ensure that corrective action is timely.

[16] Alternate payment arrangements for doctors increased from $16.6 million in 2001-02 to $20.2 million in 2002-03. Page 6, *Annual Statistical Report 2003-03*, Medical Services Branch, Saskatchewan Health.
[17] Page 13, *Action Plan for Saskatchewan Health Care*. 2002. Regina: Government of Saskatchewan.
[18] Page 6, *Annual Statistical Report 2003-03*, Medical Services Branch, Saskatchewan Health.

The Department monitors payments for medical services. The Department uses its monitoring system to deter inappropriate services. The Department's systems also help it to avoid paying for medical services not actually provided including duplicate payments for a single service. If a doctor provides more services than expected, the Department explores the cause. If necessary, the Department encourages the doctor to reduce overuse of services.

In addition, the Department works with health professions to monitor medical services. For example, if the Department's monitoring system finds serious overuse or misuse of a specific procedure, it refers the case to the Joint Medical Professional Review Committee.[19] This Committee determines whether or not to recover overpayments from doctors. If the Committee suspects fraud, it refers the case to the Department of Justice. The Committee refers cases of potentially unethical or incompetent behaviour to the College of Physicians and Surgeons. These systems focus on individual service providers and may result in corrective action.

Other industries find that broader monitoring systems help to reduce errors and other risks to quality. The Department plans to require health regions to report harmful events that put at risk the quality of health services. *The Regional Health Services Act, 2002* (section 58, not yet proclaimed) requires health regions to report "critical incidents" or significant errors in care, including medical services.

The Department plans to use these reports to monitor the quality of health services and analyze the causes of significant quality problems. Such a system enables timely corrective action to reduce risks to quality medical services.

For example, when the Department produces reports about the type of misuse that occurs, it will be better able to design systems to support the quality of medical services. It will also be able to give feedback to service providers. Feedback helps to reduce risks.

[19] The Joint Medical Professional Review Committee examines the billing practices of doctors. The Joint Optometric Committee examines the billing practices of optometrists. The Joint Chiropractic Professional Review Committee examines the billing practices of chiropractors.

### *Reporting the performance of medical services*

The Department publishes an *Annual Statistical Report* that reports the number and type of medical services. The report also compares services from one year to the next. This is useful information to help analyze medical services.

The *Annual Statistical Report* does not include information about risks to medical services and how the Department manages these risks. The Government's accountability framework may require reports of the results of medical services in the future. Such reports would describe the quality of medical services (e.g., trends in use of medical services known to work, proportion of harmful events).

## Our audit plans

Controlling the risk of underuse, overuse, and misuse of medical services are critical to the Department's control of health system quality and costs.

In the future, we plan to examine and report publicly how well the Department manages the key risks to medical services.

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