



# The Centre for Spatial Economics

*Assessing past, present and future economic and demographic change in Canada*

## The Economic Impact of Hospital Closures in Ontario

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## Abstract

The Ontario government is faced with an economy mired in recession and the province is widely expected to run growing deficits over the next few years. In this environment, the Ministry of Health has embarked on a restructuring program for the province's hospital sector which is expected to lead to about 5,000 lay-offs in the hospital sector within the next two years.

This study finds that reducing the growth of hospital budgets in Ontario will ease some of the pressure on the province's finances. The cut in spending will, however, leave the province with a permanent reduction in its population, work force and GDP. It will also lower the standard of living for those that remain in the province. The study also notes that the impact of cuts in Ontario's hospital system will, however, be felt beyond the workers and businesses affected by the cuts by (i) reducing the ability of communities that lose their local hospital to attract or retain businesses and by (ii) increasing wait times for patients.

## About This Study

This study was commissioned by the Ontario Health Coalition (OHC) to provide analysis of the economic impact of cuts to Ontario's hospital budget. The OHC is a network of over 400 grassroots community organizations representing virtually all areas of Ontario. Its primary goal is to empower the members of its constituent organizations to become actively engaged in the making of public policy on matters related to health care and healthy communities. The OHC is a non-partisan group committed to maintaining and enhancing a publicly-funded, publicly-administered health care system.

The study was conducted by Robin Somerville, Director of Corporate Research Services, of The Centre for Spatial Economics (C<sub>4</sub>SE). The C<sub>4</sub>SE monitors, analyzes, and forecasts economic and demographic change throughout Canada at virtually all levels of geography. It also prepares customized studies on the economic, industrial and community impacts of various fiscal and other policy changes, and develops customized impact and projection models for in-house client use. Our clients include government departments, industry and professional associations, crown corporations, manufacturers, retailers and real estate developers.



# Table of Contents

Executive Summary ..... 1

Introduction ..... 3

Assumptions and Methodology ..... 3

Economic Impact ..... 4

Additional Costs to the Economy ..... 6

Summary ..... 8



## Executive Summary

The Ontario government is faced with an economy mired in recession. Job losses in many communities were severe last year and are expected to be as bad – if not worse – this year. The weak economy is having a significant impact on the province's ability to generate tax revenue while the demand for new spending on programs and services continues to rise. The province is widely expected to run growing deficits over the next few years.

In this environment, the Ministry of Health has embarked on a restructuring program for the province's hospital sector. Budgeted hospital funding growth for the next two years is less than the rate needed to keep pace with population growth and inflation. The Ontario Health Coalition (OHC) estimates that about 70% of hospitals in Ontario are projecting deficits in 2009/10 – deficits that must be reduced or eliminated through cuts in services, lay-offs and attrition.

While the OHC notes that hospital deficits – and cuts – exist throughout the province, they anticipate that these cuts will be particularly severe at hospitals in smaller communities. The hospitals in Port Colborne and Fort Erie are, for example, expected to close. Health care services for the affected communities will be transferred to larger – centralized – regional facilities. Service cuts from reduced funding are expected to lead to about 5,000 lay-offs in the hospital sector within the next two years.

This research estimates the economic impact of reduced hospital spending in Ontario. In the first year, employment in Ontario is reduced by 7,125 but over the longer-term it falls by 11,230 because of the negative economic cycle generated by the cuts. Reducing the growth of hospital budgets in Ontario will, however, ease some of the pressure on the province's finances but will leave the province with a permanent reduction in its population, work force and GDP. It will also lower the standard of living for those that remain in the province.

| <b>Summary of the Economic Impact of Hospital Closures in Ontario</b> |                        |                                   |
|---|------------------------|-----------------------------------|
| <i>(millions of 2009 dollars, except where noted)</i>                 | <b>1st Year Impact</b> | <b>Twenty Year Average Impact</b> |
| Gross Domestic Product  | -549                   | -1,290                            |
| Employment (number of people)   | -7,125                 | -11,230                           |
| Population (number of people)   | -2,135                 | -18,893                           |
| Standard of Living (2009 dollars per person)                          | -34                    | -17                               |
| Ontario Government Revenue  | -78                    | -225                              |
| Ontario Government Expenditure  | -278                   | -855                              |
| Ontario Government Net Lending  | 218                    | 656                               |

The impact of cuts in Ontario's hospital system will, however, be felt beyond the workers and businesses affected by the cuts. Local communities depend on their hospital: it forms a critical component of their economic infrastructure supporting their ability to attract and retain businesses – and workers – in their community. The impact on patients should not be overlooked either. Cuts in services are likely to increase wait times for treatment which are known to impose large, hidden costs on the province's economy.

Finally, cutting public spending during a recession runs counter to the need for economic stimulus at this time. A downward shift in the level of hospital services would be better handled by the affected workers and their patients when the economy is strong. There is now a significant risk that the government will – as in previous cycles – reconsider its previous actions and



accelerate spending when the economy recovers; providing stimulus that is neither needed nor helpful to the economy. Prudent policy would have the government restore funding for hospitals in the current economic environment and engage in constructive, long-term planning for the province's health care sector.



## Introduction

The Ontario government is faced with an economy mired in recession. Job losses in many communities were severe last year and are expected to be as bad – if not worse – this year. The weak economy is having a significant impact on the province’s ability to generate tax revenue while the demand for new spending on programs and services continues to rise. The province is widely expected to run growing deficits over the next few years.

In this environment, the Ministry of Health has embarked on a restructuring program for the province’s hospital sector. Budgeted hospital funding growth for the next two years is less than the rate needed to keep pace with population growth and inflation. The Ontario Health Coalition (OHC) estimates that about 70% of hospitals in Ontario are projecting deficits in 2009/10 – deficits that must be reduced or eliminated through cuts in services, lay-offs and attrition<sup>1</sup>.

While the OHC notes that hospital deficits – and cuts – exist throughout the province, they anticipate that these cuts will be particularly severe at hospitals in smaller communities. The hospitals in Port Colborne and Fort Erie are, for example, expected to close. Health care services for the affected communities will be transferred to larger – centralized – regional facilities. Service cuts from reduced funding are expected to lead to about 5,000 lay-offs in the hospital sector within the next two years.

This research examines the economic consequences of reductions in hospital services on Ontario’s economy. The next section reviews the assumptions and methodology employed in estimating the economic impact of cutting 5,000 hospital workers with the results of that exercise presented in the following section. The report then goes on to discuss the economic implications of hospital sector cuts on the affected communities and on patients. This is followed by a few concluding remarks.

## Assumptions and Methodology

This analysis assumes that there will be 5,000 fewer people working in Ontario’s hospital sector in 2009. This reduction in staffing is assumed to include 1,000 lay-offs and the remainder through retirements, early retirements and other voluntary separations.

The reduction in staffing reduces output – GDP – in the health care sector by \$252 million and also reduces the cost of financing the hospitals which is borne by the provincial government by \$325 million. These are referred to as the direct impacts of hospital sector restructuring.

| <b>Direct Economic Impact of Hospital Closures in Ontario</b><br><i>millions of 2009 dollars</i> |       |
|--|-------|
| Health Care Sector Employment  | 5,000 |
| Health Care Sector GDP   | 252   |
| Ontario Government Hospital Funding  | 325   |

The direct impacts generate spin-off – or indirect and induced – impacts based on the loss of sales experienced by the businesses that used to supply goods and services to the health care sector and

<sup>1</sup> Ontario Health Coalition, *Pre-Budget Submission to the Standing Committee on Finance and Economic Affairs*, (Toronto: Ontario Health Coalition, December 2008), p.3.



from the decrease in spending by all the people that used to be employed in health care and in the businesses that used to supply the sector.

The full economic impact of hospital closures is the sum of the direct, indirect and induced impacts and was estimated using the C<sub>4</sub>SE's Provincial Economic Modeling System. The C<sub>4</sub>SE's Provincial Modeling System is a dynamic multi-sector regional economic model of the country. It includes a bottom-up set of macroeconomic models for the provinces, the territories and the rest of the world. The national model links economic activity in one region with activity in the other regions through trade. The provincial models include detailed income and expenditure categories and demographic and labour market information. The purpose of the modeling system is to produce medium- to long-term projections of the provincial economies and conduct simulation studies that require industry and demographic detail.

The economic impacts are expressed in terms of their difference (or percent difference) relative to the baseline scenario. The baseline scenario is the C<sub>4</sub>SE's June 2008 outlook for the Canadian economy and is predicated on hospital funding being sufficient to prevent proposed hospital closures and staff reductions. The reduced spending scenario represents an alternate future path for the economy. The difference between this path and the baseline scenario represents the impacts of changes in health care spending on the economy. It is important for the reader to note that the measures in the tables only show the difference in outcomes relative to the baseline and **not** the actual level or growth of economic activity. The reader should also note that the impacts reported at a particular point in time represent the change in the economy relative to the baseline economy at that time and are not a cumulative or discounted impact.

This study assumes that the 1,000 laid-off health care workers receive severance packages worth, on average, nine months' income. It also assumes that the other 4,000 health care workers that leave their jobs receive an average of one month's income reflecting the fact that some may be offered early retirement packages. The cost of this restructuring is assumed to be \$49 million and is borne by the provincial government.<sup>2</sup> This restructuring package provides households with income and reduces the negative impact on the economy in the first year.

This study does not, however, include restructuring costs for facilities that need to be renovated or expanded to accommodate patients from communities that no longer have access to local care. Nor does the study include estimates of potential government revenue from the sale and disposal of public assets. It is worth noting, however, that these assets would raise significantly less revenue today than they would have twelve months ago.

Finally, it is important to note that this study assumes the cut in government funding for hospitals is permanent. While future governments may well alter policy again, that possibility falls outside the scope of this analysis.

## **Economic Impact**

A permanent reduction in government spending on health care in Ontario reduces economic activity in the province. Employment falls by 7,125 in the first year and by an average of 11,230

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<sup>2</sup> This restructuring cost is likely to be very conservative. It does not, for example, include legal, consulting, audit and counselling fees nor does it include any potential retraining costs. Ontario's Auditor General estimated labour-related restructuring costs were \$834 million in the 1990s – 17 times higher than those used in the current study.



in each of the next twenty years. Fewer workers produce less goods and services, so GDP falls by nearly \$1.3 billion a year on average over the next two decades.

The impact of reduced hospital funding on Ontario's economy deepens in subsequent years. The deepening impact occurs for two main reasons. The first reason is that the former health care sector workers are no longer receiving – or spending – their severance allowances. The second is that decline in employment, income and spending encourages people to seek opportunities elsewhere in the country or in the world and this creates a negative economic cycle: fewer people in Ontario lowers the demand for housing, goods and services which reduces employment, reducing incomes which encourages people to look for work elsewhere. The cycle is broken once wages in Ontario drop sufficiently to lower business costs and make businesses more competitive in global markets. The economy then stabilizes but at a new, lower, level of population, output and employment. Ontario's population falls by 19,000 people on average over the next twenty years and the negative economic cycle reduces the standard of living (GDP per capita) for all that remain in the province.

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| Population (number of people)   | -2,135                 | -18,893                           |
| Standard of Living (2009 dollars per person)                          | -34                    | -17                               |
| Ontario Government Revenue  | -78                    | -225                              |
| Ontario Government Expenditure  | -278                   | -855                              |
| Ontario Government Net Lending  | 218                    | 656                               |

The impact of reduced hospital funding yields positive net results for the Ontario government's finances but leaves the federal government with less cash.

In the first year Ontario government spending falls by \$278 million. This is less than the \$328 million decline in health and social service costs because of one-time restructuring costs of \$49 million. The decline in spending is partially offset by a decline in government revenues of \$78 million led by declines in personal income taxes and retail sales and excise taxes. The federal government experiences increased spending in Ontario due to a rise in EI payments while revenues from personal income taxes, the GST and EI premiums fall.

| <b>Impact of Hospital Closures on Government Finances in Ontario</b> |                           |                                      |                                   |                                      |
|--|---------------------------|--------------------------------------|-----------------------------------|--------------------------------------|
| <i>(millions of 2009 dollars)</i>                                    | <b>1st Year Impact</b>    |                                      | <b>Twenty Year Average Impact</b> |                                      |
|  | <b>Ontario Government</b> | <b>Federal Government in Ontario</b> | <b>Ontario Government</b>         | <b>Federal Government in Ontario</b> |
| Government Net Lending   | 218                       | -126                                 | 656                               | -106                                 |
| Total Government Spending  | -278                      | 49                                   | -855                              | -92                                  |
| Health & Social Services   | -328                      |                                      | -517                              |                                      |
| Restructuring Costs  | 49                        |                                      |                                   |                                      |
| Total Government Revenue   | -78                       | -77                                  | -225                              | -201                                 |
| Direct Taxes - Persons   | -30                       | -55                                  | -78                               | -143                                 |
| Direct Taxes - Business  | 11                        | 17                                   | 21                                | 21                                   |
| Contributions to Social Insurance                                    | -6                        | -11                                  | -12                               | -16                                  |
| Indirect Taxes   | -48                       | -26                                  | -114                              | -58                                  |
| Other Personal Transfers   | -3                        | 0                                    | -7                                | 0                                    |
| Investment Income  | -4                        | -3                                   | -9                                | -7                                   |



Over the next twenty years, Ontario government spending averages \$855 million a year less. Most of the decline in spending arises from the health care sector – but some is also due to reduced education spending and a reduction in the public service arising from lower population growth in Ontario. A reduction in government revenues of \$225 million a year is the result of lower economic activity in the province and this limits the positive impact on Ontario's budget deficit to \$656 million a year. Federal government spending in Ontario falls as a result of the province's lower population, but their revenues fall by more leaving the government with an increase in its deficit of \$106 million a year on average.

The economic impacts of reduced hospital funding are, not surprisingly, felt most keenly by those working in the health and social services sector<sup>3</sup>. Job losses are not, however, confined to just that sector.

In the first year the construction, wholesale and retail trade, and professional services sectors also experience a decline in employment. Over time, job losses are also experienced by workers in education and government services due to reduced population growth in the province.

| Economic Impact by Sector of Hospital Closures in Ontario |                                |                      |                                |                      |
|---|--------------------------------|----------------------|--------------------------------|----------------------|
|   | 1st Year Impact                |                      | Twenty Year Average Impact     |                      |
|   | GDP (millions of 2009 dollars) | Employment (persons) | GDP (millions of 2009 dollars) | Employment (persons) |
| Total Economy   | -549                           | -7,125               | -1,290                         | -11,230              |
| Agriculture   | -1                             | -6                   | -3                             | 21                   |
| Other Primary   | 0                              | 2                    | 0                              | 17                   |
| Manufacturing   | -22                            | -52                  | -29                            | 464                  |
| Utilities   | -5                             | -15                  | -17                            | -25                  |
| Construction  | -53                            | -524                 | -117                           | -1,043               |
| Transportation & Warehousing                              | -9                             | -66                  | -22                            | -16                  |
| Wholesale & Retail Trade                                  | -42                            | -385                 | -98                            | -392                 |
| Finance, Insurance & Real Estate                          | -49                            | -175                 | -240                           | -249                 |
| Professional, Scientific & Management Services            | -35                            | -305                 | -87                            | -202                 |
| Accommodation & Food Services                             | -9                             | -219                 | -23                            | -347                 |
| Education Services  | -11                            | -202                 | -51                            | -888                 |
| Health & Social Services                                  | -251                           | -4,988               | -414                           | -7,792               |
| Other Private Services                                    | -17                            | -151                 | -41                            | -246                 |
| Government Services                                       | -3                             | -38                  | -50                            | -532                 |

## Additional Costs to the Economy

The economic costs described in the previous section simply enumerate the impact of fewer health care workers in terms of their direct economic contribution. The overall impact on the provincial economy is, however, considerably more far reaching. The impact on communities that lose access to health care services will be felt particularly keenly. And a reduced health care budget – and staff – suggests that the capacity of the health care system to provide services will shrink, reducing access and raising wait times for treatment. Economic research has demonstrated that wait times for medical treatment impose significant costs on an economy through reductions in productivity.

<sup>3</sup> In the first year, total job and output losses in the health care and social services sector are actually slightly **less** than the direct job and output losses because of the stimulative impact on the economy – and the demand for health care and social services – from the restructuring costs paid to former health care sector workers.



## Regional Impacts

Regional economic development practice, popularized by Harvard Professor Michael Porter, argues that a region's economic success depends on the quality of its economic building blocks. These building blocks support the region's export-driven leading sectors and the network of supporting industries that supply goods and services to these leading sectors. All of these building blocks require the attention of public policy makers, business and labour leaders if a region is to achieve and maintain a high level of economic growth and a correspondingly high standard of living. These economic building blocks are:

- Access to large, dynamic markets
- Access to a skilled labour force
- Access to capital, land and resources
- Effective physical infrastructure
- A competitive tax and regulatory framework
- Quality of life

The quality of life in a community is determined by many factors but one of the most fundamental of those factors is access to acceptable health care services. Communities that lose access to these services find themselves at a significant disadvantage when competing to attract – or even retain – businesses. A region's public and private physical infrastructure includes its roads, sewers, telephone and cable access, education and training facilities. It also includes its ability to care for workers, their dependents and other residents in the community through timely access to health care services. Travelling long distances for health care imposes obvious costs for emergency patients but also imposes travel and wait time costs for residents' non-urgent health care needs.

The loss of health care services in communities already struggling with the current economic situation impedes their ability to pitch the benefits of their community to prospective new businesses, and risks condemning them to a period of prolonged stagnation.

## Patient Impacts

Reductions in the number of health care professionals working in the province's hospitals are likely to lead to declines in the number of procedures performed and longer wait times for treatment<sup>4</sup>. The wait times experienced by patients who have to wait longer than medically reasonable for treatment impose costs not only on the patients themselves, but also on the economy as a whole. The Canadian Medical Association recently published a study of the economic cost of wait times in Canada<sup>5</sup>. This research measured three sources of cost imposed

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<sup>4</sup> If current medical staff are not being fully utilized at present then it is possible that a decline in staffing, accompanied by more efficient scheduling, could provide the same – or even better – level of patient care. In this case productivity in the health care sector would rise yielding benefits to the government and people of Ontario. While gains in efficiency are always possible, few observers anticipate that the health care system will be able to provide the same level of service to patients in the province with the anticipated cuts to the system.

<sup>5</sup> The Centre for Spatial Economics, *The Economic Cost of Wait Times in Canada*, (Ottawa: Canadian Medical Association, January 2008).



on the economy as a result of excess wait times: patient costs, caregiver costs and medical system costs.

1. **Patient costs** measure the impact from reduced economic activity as a result of patients being unable to participate in the labour force. These costs involve the direct loss in production from these people no longer producing goods and services as well as the broader reduction in economic activity resulting from reduced incomes and lower spending.
2. **Caregiver costs** measure the impact from reduced economic activity as a result of caregivers giving up work to care for family members or relatives. As with patient costs, these costs involve the direct loss in production from these people no longer producing goods and services as well as the broader reduction in economic activity resulting from reduced incomes and lower spending.
3. **Health care system costs** include the additional costs to the health care system from patients attending medical appointments, submitting to tests and procedures, and taking medications that would not have been required had their wait time not exceeded the maximum recommended.

The research concluded that total economic costs — the sum of the patient, caregiver and health care system costs — are influenced by two main factors: the length of time spent waiting for treatment and whether patients are able to continue their regular activities while waiting for care.

The study estimated the cost of waiting for treatment in Ontario for four of the five priority areas identified following the 2003 First Ministers' Accord on Health Care<sup>6</sup> was \$6.3 billion of lost GDP and \$853 million of lost revenue for the Ontario government in 2007. The study did not estimate the cost of wait times for all the other areas of medical practice outside these priority areas. This research establishes that the hidden costs of an underperforming health care system can be extremely high.

## Summary

Reducing the growth of hospital budgets in Ontario will ease some of the pressure on the province's finances. The cut in spending will, however, leave the province with a permanent reduction in its population, work force and GDP. It will also lower the standard of living for those that remain in the province.

The impact of cuts in Ontario's hospital system will, however, be felt beyond the workers and businesses affected by the cuts. Local communities depend on their hospital: it forms a critical component of their economic infrastructure supporting their ability to attract and retain businesses – and workers – in their community. The impact on patients should not be overlooked either. Cuts in services are likely to increase wait times for treatment which are known to impose large, hidden costs on the province's economy.

Finally, cutting public spending during a recession runs counter to the need for economic stimulus at this time. A downward shift in the level of hospital services would be better handled

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<sup>6</sup> The priority areas covered in the study included total joint replacement surgery, cataract surgery, coronary artery bypass graft surgery, and MRI scans. The fifth priority area, not covered in this research, is cancer care.



by the affected workers and their patients when the economy is strong. There is now a significant risk that the government will – as in previous cycles – reconsider its previous actions and accelerate spending when the economy recovers; providing stimulus that is neither needed nor helpful to the economy. Prudent policy would have the government restore funding for hospitals in the current economic environment and engage in constructive, long-term planning for the province’s health care sector.

