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## AUDIT OF PERFORMANCE INDICATORS

### BACKGROUND

- 7.1 During the past four years, the First Ministers have entered into three Health Accords. The first was in September 2000. It was followed by February 2003 and September 2004 Accords. (See <http://www.hc-sc.gc.ca/english/hca2003/index.html> for details of the September 2003 and September 2004 Accords.)
- 7.2 In the 2002 Report of the Auditor General (chapter 12), we reported the results of our audit of the September 2002 performance indicators report published by the Department of Health under the September 2000 Accord. The Department's Reporting to Nova Scotians on Comparable Health and Health System Indicators - Technical Report included 67 indicators in 14 areas which had been approved by the Conference of Deputy Ministers and were reported by all provinces at the same time.
- 7.3 We were able to give an unqualified opinion on all but 18 of the indicators reported in 2002 by the Department of Health. The 2002 audit was the first time that we were asked to audit a non-financial performance report so it was a significant undertaking for our Office. We worked with legislative auditors through a sub-committee of the Canadian Council of Legislative Auditors (CCOLA) to develop common audit approaches and solutions to common audit issues.
- 7.4 The 2002 Report was not the first time Nova Scotia reported health system data to the public. However, it was the first cooperative effort between Federal, provincial and territorial governments to report to their own citizens on health system performance using the same set of comparable indicators.
- 7.5 In 2004, the Department of Health engaged our office to perform an audit of the second health performance indicators report which was released by all jurisdictions on November 30, 2004. The Nova Scotia report, *A Measure of Our Health and Health System*, is available at <http://www.gov.ns.ca/health/downloads/measure-health.pdf>. Our Auditor's Report is located at <http://www.gov.ns.ca/health/downloads/auditorsreport2.pdf>.
- 7.6 As in 2002, the Department of Health worked with its counterparts in other jurisdictions to develop indicators. This was done through sub-committees of the Conference of Deputy Ministers (the Advisory Committee on Governance and Accountability and the Performance Reporting Technical Working Group). The Conference of Deputy Ministers approved 18 featured indicators and an additional optional 52 non-featured indicators for reporting. The government of Nova Scotia decided to report 18 featured indicators and 2 non-featured indicators.
- 7.7 The Department of Health and its counterparts in other jurisdictions are required to issue reports under the 2003 and 2004 Accords. Detailed plans for issuing

those reports have not yet been developed nationally and there has been no national decision on whether they will be audited.

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## RESULTS IN BRIEF

**7.8** The following are the principal observations from our audit.

- We were able to give an unqualified opinion on the indicators reported by the Department of Health in the November 2004 publication, *A Measure of Our Health and Health System*. We are encouraged by the work undertaken by the Nova Scotia Department of Health in the preparation of that report.
- We were also requested by the Department of Health to undertake additional audit work related to three specific performance measures, not included in *A Measure of Our Health and Health System*, that originate from Provincial systems. We were only able to conclude that systems are adequate to produce data which is complete and accurate for one of the three measures audited. The Department of Health is planning to work with the responsible entities to make improvements to the processes for collecting data for the other two indicators.

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## AUDIT SCOPE

**7.9** The objectives of this audit, for featured indicators in *A Measure of Our Health and Health System*, were to assess whether:

- performance measures (as defined by the Conference of Deputy Ministers - CDM) as reported by Nova Scotia, adequately reflect the facts, to an appropriate level of accuracy;
- the performance measures are defined and their significance and limitations are explained;
- the report states and properly describes departures from what was approved by the Conference of Deputy Ministers, and explains plans for the future resolution of any departures; and
- the performance measures comply with the definitions, technical specifications and standards of presentation approved by the Conference of Deputy Ministers.

**7.10** The indicators included in *A Measure of Our Health and Health System* originated from national databases at Statistics Canada, Health Canada and the Canadian Institute for Health Information (CIHI). To avoid duplication of audit effort, legislative auditors relied on a single audit of these national databases. Indicators originating from Statistics Canada and Health Canada were audited by the Office of the Auditor General of Canada. Indicators originating from CIHI were audited by a team of auditors led by the Office of the Auditor General of British Columbia.

- 7.11** The criteria used in our audit are shown in Exhibit 7.1, Appendix A, page 112.
- 7.12** Our audit was limited to information related to the most recent year for which each indicator was reported. We did not assess relevance or sufficiency of the indicators selected for reporting. Our work on the Department of Health's analysis and discussion of the health indicators was limited to reading such information to make sure that it was not inconsistent with the result of the audited indicators.
- 7.13** In addition, we were requested by the Department of Health to undertake additional work related to three specific performance measures, not included in *A Measure of Our Health and Health System*, that originate from Provincial systems. Our objectives were to assess whether the systems that support the production of the following measures are adequate to produce data which is complete and accurate.
- **Home care**
    - Home care clients, all ages - The number of distinct individuals who have been assessed by continuing care coordinators and determined to require home care services for the week ending...
    - Home care clients, aged 75+ - The number of distinct individuals aged 75+ who have been assessed by continuing care coordinators and determined to require home care services for the week ending ...
  - **Wait times for cardiac bypass surgery**
    - Median wait time for cardiac bypass surgery
    - Distribution of wait times for cardiac bypass surgery
  - **Wait times for radiation therapy**

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## PRINCIPAL FINDINGS

### Indicators included in *A Measure of Our Health and Health System*

- 7.14** Our opinion on the indicators reported in *A Measure of Our Health and Health System* was unqualified. The full text of our Auditor's Report is included as Exhibit 7.1 on page 111.

### Other Indicators from Provincial Systems

- 7.15** **Home care** - We were unable to complete our audit of the systems which produce the home care indicators noted in paragraph 7.13 above. The SEAScape system is used to manage the single entry access process for continuing care which includes long-term care, home care and other programs. The system does not have a field which clearly identifies home care clients and, therefore, we could not segregate

home care from other clients to enable completion of the audit. The Department of Health performs a complex series of extractions to identify such clients, but we were unable to duplicate the process and create the same results or to perform alternate audit procedures.

- 7.16** [Wait times for cardiac bypass surgery](#) - We determined that the indicator data reported by the Capital District Health Authority's Division of Heart Health and Emergency - Cardiac Wait Times Database did not meet the definition specified by the Department of Health. The information provided included numerous cardiac procedures such as valve replacements and pacemakers whereas Health had requested information on only cardiac bypass surgery. In addition, we found problems with the methodology used to calculate the wait times. We concluded that, at the time of our audit, the system used to provide wait time information for cardiac bypass surgery was not adequate to produce data which was complete and accurate. The Department of Health subsequently started discussions with the Capital District Health Authority to clarify responsibility for production of the indicator data and specific requirements.
- 7.17** [Wait times for radiation therapy](#) - We concluded that the systems which produce data on wait times for radiation therapy at the Capital District Health Authority's QEII Cancer Care Program are adequate to produce data which is complete and accurate.
- 7.18** We made recommendations for improvements to controls such as:
- implementation of a requirement to change system passwords periodically;
  - offsite storage of weekly and daily backup tapes; and
  - retention of Requests for Radiation Services documentation for a longer period of time to ensure adequate management/audit trail is retained.
- 7.19** Although the data from the system is complete and accurate, it cannot be used to report the related non-featured indicator defined by the Conference of Deputy Ministers. The Nova Scotia system reports wait times by priority classification for treatment (e.g., urgent, emergent), whereas the approved indicator categorizes wait times by site of the cancer. In order to enable future reporting of an indicator that is comparable to other jurisdictions, the system will need to capture the site of the cancer and be able to summarize wait time data on that basis.

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## CONCLUDING REMARKS

- 7.20** Over the past several years, much has been said and written by others on the need for better health information and reporting of outcomes. The Province of Nova Scotia has taken some steps to achieve this - see chapter 6 of this Report which describes the Nova Scotia hospital Information System project. Another step is the reporting in *A Measure of Our Health and Health System* and the decision to engage our Office to provide an audit opinion on the report. Our audit provides assurance to the reader on the quality of the included data. The role of audit is well understood

in the provision of financial information, but is just beginning to be recognized in the provision of non-financial information. We commend the Department of Health for its efforts and the leadership shown in publishing this report and having it audited.

- 7.21** The systems to collect outcome data in some areas need to be strengthened. Our audit work in two areas (Home Care and the Capital District Health Authority's Division of Heart Health and Emergency - Cardiac Wait Times Database) indicated problems with the systems in place to generate performance measures. There are many other Provincial health systems which generate important information for decision making, such as wait times, and the Department of Health needs to ensure that the information generated is reliable and verifiable. There are a number of entities and staff involved in collecting health outcomes data throughout the Province. To ensure a common understanding, it is important that standards for collection and reporting be developed and clearly communicated.
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To the Minister of Health and the Members of the Legislative Assembly of Nova Scotia:

I have audited the 20 health indicators presented in Nova Scotia's *A Measure of Our Health and Health System*, dated November 30, 2004, as prepared by the Department of Health. The report is published pursuant to the 2003 First Ministers' Accord on Health care renewal, which builds on the 2000 First Ministers' Meeting Communiqué on Health. The Conference of Deputy Ministers of Health identified and defined 18 featured indicators required for reporting and an additional 52 optional non-featured indicators to be reported to Canadians. Reporting health indicators is the responsibility of the Government of Nova Scotia which has reported 18 featured and 2 non-featured indicators. I note that the technical specifications and any limitations on the quality of the data are not included in *A Measure of Our Health and Health System* but available on the following website which is referenced in the report: [www.cihi.ca/comparable-indicators](http://www.cihi.ca/comparable-indicators)

My responsibility is to express an opinion on the completeness, accuracy and adequacy of disclosure of the 20 health indicators presented in *A Measure of Our Health and Health System*, based on my audit. However, my responsibility does not extend to assessing the performance achieved by the Nova Scotia health care system, nor the relevance or sufficiency of the health indicators selected for reporting. My work on the analysis and discussion of the health indicators presented in this report was limited to reading such information to make sure that it was not inconsistent with the result of the audited indicators. As well, my audit was limited to information related to the most recent year for which each indicator was reported.

I conducted my audit in accordance with the standards for assurance engagements established by the Canadian Institute of Chartered Accountants. Those standards require that I plan and perform an audit to obtain reasonable assurance whether the health indicators presented are free of significant misstatement. To this end, I audited these health indicators to determine whether they meet the criteria of completeness, accuracy and adequate disclosure, as presented in Appendix A of my report. My audit includes examining, on a test basis, evidence supporting the health indicators and disclosures. My audit also includes assessing significant judgments made in *A Measure of Our Health and Health System*, dated November 30, 2004, by management of the Department of Health.

In my opinion, the health indicators included in *A Measure of Our Health and Health System* and the disclosure of limitations and technical specifications on the referenced website [www.cihi.ca/comparable-indicators](http://www.cihi.ca/comparable-indicators), present fairly, in all significant respects, the required information and it is complete, accurate and adequately disclosed, using the criteria in Appendix A.

My work included auditing the data for the indicator of "hospitalization rate for ambulatory care sensitive conditions." I was unable to form an opinion on this indicator in my 2002 report because the Canadian Institute for Health Information's study on data quality was not completed. This study has now been completed and I am able to form an opinion that, in *A Measure of Our Health and Health System*, this indicator presents fairly, in all significant respects, the information required, using the criteria in Appendix A.

I am encouraged by the work undertaken by the Nova Scotia Department of Health in the preparation of this report.

E. Roy Salmon, FCA  
Auditor General

Halifax, Nova Scotia  
November 30, 2004

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## **APPENDIX A**

### *Audit criteria*

The Department of Health has acknowledged the suitability of the following criteria:

#### *Complete*

According to the 2003 First Ministers' Accord on Health Care Renewal, the Conference of Deputy Ministers approved 70 indicators, including a subset of 18 indicators that all jurisdictions are to feature in their 2004 reports. All health indicators reported comply with the definitions, technical specifications and standards of presentation as approved. All 18 featured health indicators are reported.

#### *Accurate*

The health indicators reported adequately reflect the facts, to an appropriate and consistent level of accuracy, to enable comparisons to be made between jurisdictions and between the 2002 and 2004 reports within each jurisdiction, where applicable.

#### *Adequate disclosure*

The health indicators are defined and the significance and limitations on the quality of the data are explained. The report states and properly describes departures from what was approved by the Conference of Deputy Ministers and explains plans for the future resolution of the departures, where applicable.