

12.

HEALTH - AUDIT OF PERFORMANCE INDICATORS

BACKGROUND

12.1 In September 2000, the First Ministers agreed to

“provide comprehensive and regular public reporting by each government on the health programs and services they deliver, on health system performance and on progress towards the priorities set forth...; and collaborate on the development of a comprehensive framework using jointly agreed comparable indicators such that each government will begin reporting by September, 2002.” (First Ministers’ Meeting Communiqué on Health, September 11, 2000)

12.2 In addition, they agreed to *“...allow each government to determine appropriate third party verification for itself to certify and analyse this information for the benefit of Canadians.”*

12.3 On June 26, 2001 the Deputy Minister of Health requested the Auditor General to provide the required third party verification for the report, and we accepted the engagement. Subsequently, we entered into discussions with the Department of Health to better define the role of the Auditor General and an agreement governing the terms of the engagement was signed in April 2002.

12.4 Each of the other jurisdictions (Canada, provinces and territories) requested the legislative auditor to provide verification of the respective report. It is noteworthy that Nova Scotia was the first jurisdiction to engage its legislative auditor to provide the required verification. This engagement was the first time that we were asked to audit a non-financial performance report and, for that reason, this was a significant audit for our Office.

12.5 Over the course of the two-year period between the First Ministers’ Meeting and the tabling of the final report, the Department of Health worked with its counterparts in other jurisdictions through the Performance Indicators Reporting Committee (PIRC), a sub-committee of the Conference of Deputy Ministers of Health. PIRC defined a framework of 67 indicators in 14 areas which were approved by the Conference of Deputy Ministers. Meanwhile, the legislative auditors worked together through a sub-committee of the Canadian Council of Legislative Auditors (CCOLA) to develop common audit approaches and solutions to common audit issues.

12.6 Although the legislative auditors worked together to establish common audit approaches, some jurisdictions did not engage their auditors to provide audit opinions on the report but, rather, asked their legislative auditors to perform a more limited engagement - *specified auditing procedures* - where the procedures performed are not sufficient to constitute an audit. In all, nine legislative auditors performed audits, while five performed specified auditing procedures. We are pleased to have been asked by the Department of Health to perform an audit of the indicators as we believe this is the advisable approach because it gives assurance to users of the indicators regarding the fairness of the indicators in accordance with the definitions approved by the Conference of Deputy Ministers.

12.7 Many of the 67 indicators originated from national databases at Statistics Canada, the Canadian Institute for Health Information (CIHI) and Health Canada. To avoid duplication of audit effort, the legislative auditors each 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 from three jurisdictions led by the Office of the Auditor General of British Columbia.

12.8 On September 30, 2002 each jurisdiction issued its public report on the 67 indicators. Nova Scotia's *Reporting to Nova Scotians on Comparable Health and Health System Indicators - Technical Report* and its accompanying *Highlights and Discussion Report* and *Executive Summary* are available on the internet at <http://www.gov.ns.ca/health/pirc/>. Our Auditor's Report is located on page 5 of the *Technical Report*.

12.9 We understand that the current plan is for these reports to be produced bi-annually by all jurisdictions, and that the next reports will be issued late in 2004.

RESULTS IN BRIEF

12.10 The following are the principal observations from our audit.

- We were able to give an unqualified audit opinion on all but 18 of the indicators reported by the Department of Health. Of the 18 indicators on which we could not provide an opinion, seven originated from the Canadian Institute for Health Information, two originated from Statistics Canada, eight originated from Health Canada and one originated from a Provincial system (Home Care Admissions). For seven of the eight Health Canada indicators, the Department of Health decided to draw the data from databases at the Nova Scotia Department of Health rather than Health Canada. We audited these seven indicators and found them to be accurate, although we could not conclude on the adequacy of disclosure of any data limitations for these indicators.
- This is not the first time that Nova Scotia has reported health system data to the public. However, it is 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. This new process will improve Nova Scotia's ability to gather useful health care data and report health system performance to its residents along with comparisons to other provinces and territories. We are encouraged by the work undertaken by the Nova Scotia Department of Health in the preparation of *Reporting to Nova Scotians on Comparable Health and Health System Indicators*.

AUDIT SCOPE

12.11 The objectives of this audit were to assess whether:

- the Conference of Deputy Ministers' (CDM) defined performance indicators, reported based on Provincial data, adequately reflect the facts to an appropriate level of accuracy;
- the performance indicators 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 non-compliance issues; and

- the performance indicators comply with the definitions, technical specifications and standards of presentation approved by the Conference of Deputy Ministers.

12.12 The criteria used in our audit are shown in Appendix 1, page 205.

12.13 Our audit was limited to the indicators reported in *Reporting to Nova Scotians on Comparable Health and Health System Indicators - Technical Report* dated September 30, 2002. We did not audit the *Highlights and Discussion Report* or the *Executive Summary*.

PRINCIPAL FINDINGS

12.14 The full text of our Auditor's Report is included as Exhibit 12.1 on page 202.

12.15 Subsequent to the Department of Health's release of its Report, we met with those responsible for preparation of the Report to discuss lessons learned from this first audit, and to make suggestions for improvement to the preparation process for future reports. For example, the Department of Health was not required to report certain indicators such as wait times for specialist visits, diagnostic tests and surgery in this iteration of the Report. These will be required for future Reports and we encouraged the Department of Health to ensure that the systems developed to track these indicators include appropriate documentation and an audit trail to facilitate future audits.

12.16 The Department of Health has committed to work with its partners and our Office to improve systems and controls to ensure that we can provide an unqualified opinion on all indicators in future audits.

CONCLUDING REMARKS

12.17 In previous Reports of the Auditor General, we have commented on the need for improved health information systems. The Department of Health is currently investing an estimated \$57 million in a new Hospital Information System (see page 156 of this Report) to satisfy the need for timely and relevant clinical and management information for decision-making.

12.18 New systems help to meet the need for quality information, but we also believe that the user needs assurance on the quality of the data generated by such systems. Audits provide the needed assurance. 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.

12.19 This was our first audit of health indicators and we were very pleased with the quality of the Report produced by the Department of Health and the cooperation of Departmental staff. We look forward to working with the Department of Health on the audit of the next health indicators report. We encourage government to look at the 2002 health indicators report as an example of the added assurance that an audit can provide on non-financial information in all sectors.

Exhibit 12.1**AUDITOR'S REPORT**

To the Minister of Health and the Members of the Legislative Assembly of Nova Scotia

I have audited the health indicators presented in the Nova Scotia Department of Health's *Reporting to Nova Scotians on Comparable Health and Health System Indicators: Technical Report*, dated September 30, 2002. The Conference of Deputy Ministers defined the specific indicators to be regularly reported to Canadians. Reporting health indicators is the responsibility of the Department of Health. My responsibility is to express an opinion on the health indicators based on my audit. However, my responsibility does not extend to assessing the performance achieved or the relevance of the health indicators.

Except as explained, in the following four paragraphs, I conducted my audit in accordance with the standards for assurance engagements of the Canadian Institute of Chartered Accountants. Those standards require that I plan and perform an audit to obtain reasonable assurance whether the health indicators are free of significant misstatement. To this end, I audited these health indicators to determine whether they meet the criteria set out in Appendix 1. My audit included examining, on a test basis, evidence supporting the health indicators and disclosures. My audit also included assessing significant judgments made by management of the Department of Health. My audit was limited to information relating to the most recent year in which each indicator was reported. Since my audit was limited to those indicators defined by the Conference of Deputy Ministers, two of the indicators included in the Department of Health's Report were not included in my audit:

- Radiation Therapy Wait Times (Department of Health has noted a significant departure from the requirements established by the Conference of Deputy Ministers)
- Ground Ambulance Response Times for Emergency Calls (not required by the Conference of Deputy Ministers)

Data used for seven indicators were drawn from the relevant Canadian Institute for Health Information (CIHI) databases:

- 30-day Acute Myocardial Infarction In Hospital Mortality Rate
- 30-day Stroke In Hospital Mortality Rate
- Total Knee Replacement Rate
- Total Hip Replacement Rate
- Risk Adjusted Acute Myocardial Infarction Re-Admission Rate
- Risk Adjusted Pneumonia Re-Admission Rate; and
- Age Standardized Rate of Hospitalization for Ambulatory Care Sensitive Conditions

At this time, I am unable to provide an opinion on the accuracy of the data and the adequacy of disclosure on limitations of the data drawn from the Discharge Abstract/Hospital Morbidity Database of the Canadian Institute for Health Information for the indicators named above. My inability to provide an opinion is due to a lack of documentation of the CIHI quality assurance process, and because CIHI's three-year abstraction study, which will provide information on the quality of input data, will not be completed for another two years.

Data for two indicators were drawn from Statistics Canada:

- Five year Age Standardized 365-day Acute Myocardial Infarction Survival Rate
- Five year Age Standardized 180-day Stroke Survival Rate

I was unable to conclude on the accuracy of these two indicators because Statistics Canada uses as one of its data sources the Discharge Abstract Database (DAD) maintained by CIHI, and Statistics Canada has not made a formal determination of the quality of the data it receives from this database.

Health Canada maintains national databases for eight disease surveillance indicators:

- Invasive Meningococcal Disease Incidence Rate
- Measles Incidence Rate
- Haemophilus Influenza B (Invasive) (HIB) Incidence Rate
- Prevalence of Diabetes
- Tuberculosis Incidence Rate
- Reported HIV Diagnoses
- Verotoxogenic E Coli Incidence Rate; and
- Chlamydia Incidence Rate

Participation in these databases is voluntary, and there is a lack of formal federal/provincial/territorial agreements on data sharing, data standards and data definitions. The quality assurance processes for these databases are inadequate to ensure the accuracy of the data, and Health Canada states, in the Federal health indicators report, that improvements are required in data quality. The Nova Scotia Department of Health decided to draw the data for seven of these indicators (all except Prevalence of Diabetes) from databases at the Nova Scotia Department of Health rather than Health Canada. I audited the seven indicators drawn from Nova Scotia databases (all except Prevalence of Diabetes) and found them to be accurate. I am unable to conclude on the adequacy of disclosure for these eight indicators.

The Home Care Admissions indicator data were drawn from Home Care Nova Scotia records. As noted in the report by the Department of Health, the source data for this indicator could not be verified and may include multiple admissions for the same client. All records required to audit the data had not been retained by the Department of Health. Therefore, I am unable to form an opinion on the accuracy of the data or on the adequacy of disclosure for this indicator.

In my opinion, except for the 18 indicators mentioned in the preceding four paragraphs, the remaining indicators included in the Department of Health's Report and subject to my audit are, in all significant respects, presented fairly in accordance with the criteria in Appendix 1 and the definitions approved by the Conference of Deputy Ministers. Furthermore, the Department of Health has noted four indicators where there is a departure from the requirements established by the Conference of Deputy Ministers. I have determined that the circumstances relating to those departures were properly described by the Department of Health.

The Department of Health indicated that three of these indicators could not be presented because the source data is not presently available, and that an additional indicator (Cardiac Wait Times) departs in some respects from the definition established by the Conference of Deputy Ministers because of the way in which the data were compiled by the Maritime Heart Centre.

The Nova Scotia report includes comparative health indicators relating to other governments (provincial, territorial, and federal). Health indicators for some provinces and territories and for Canadian government programs have been audited by legislative auditors while, for other provinces, legislative auditors have been engaged to perform specified auditing procedures. Appendix 2 includes an explanation of the difference between those two types of engagements, and details regarding the nature of the engagement performed in each of the jurisdictions. The auditors' findings and observations resulting from engagements in other Canadian jurisdictions are included in the respective governments' reports and are neither reproduced in the Nova Scotia Department of Health report nor audited by my Office.

This is not the first time that Nova Scotia has reported health system data to the public. However, it is 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. This new process will improve Nova Scotia's ability to gather useful health care data and report health system performance to its residents along with comparisons to other provinces and territories. 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
September 23, 2002

*Appendix 1***AUDIT CRITERIA****Complete**

The health indicators reported comply with the definitions, technical specifications and standards of presentation approved by the Conference of Deputy Ministers.

Accurate

The PIRC-defined health indicators reported based on Nova Scotia data adequately reflect the facts, to an appropriate level of accuracy.

Adequate disclosure

The health indicators 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 non-compliance issues.

*Appendix 2***VERIFICATION OF COMPARATIVE INFORMATION FROM OTHER JURISDICTIONS**

The governments of Canada, the Provinces and the Territories have adopted different approaches to meet the September 2000 First Ministers Meeting Communiqué on Health requirement with respect to “third party verification” for their health reports. Some have engaged their legislative auditor to provide audit assurance on their health reports and others have asked for specified auditing procedures to be applied. The paragraphs below outline the major differences between an audit assurance engagement and a specified auditing procedures engagement. For a complete comparison, please refer to CICA Handbook Section 5025 for audit assurance engagements and Section 9100 for specified auditing procedures engagements. I believe, for reasons described in the following paragraphs, that an audit under CICA Handbook Section 5025 is the advisable approach.

In an attest audit engagement, the auditor’s responsibility is to offer assurance to users, in the form of an audit opinion, on a report prepared by management. The auditor determines the nature, extent, timing, appropriateness and sufficiency of audit procedures, which, in the auditor’s judgment, are necessary to provide assurance concerning the subject matter, or the health care report in the present context.

In a specified auditing procedures engagement, the auditor’s responsibility is to report the results of applying auditing procedures specified by management. As the extent of specified auditing procedures may vary from engagement to engagement, such engagements are difficult to compare. And since the extent of the procedures performed are not sufficient to constitute an audit, the reports do not provide an audit opinion. Reports state those procedures actually applied and only the factual results of those procedures, leaving the reader to determine the fairness of the information.

The following is a list of jurisdictions that have engaged their legislative auditor to provide audit assurance on their health reports and those that have asked for specified auditing procedures to be applied.

Audit Opinion CICA 5025	Specified Auditing Procedures CICA 9100
Nova Scotia	Alberta
British Columbia	Ontario
Saskatchewan	New Brunswick
Manitoba	Prince Edward Island
Quebec	Newfoundland and Labrador
Canada	
Yukon	
Northwest Territories	
Nunavut	