

BACKGROUND

4.1 In September 2004, the First Ministers agreed on a 10-year plan to strengthen health care in Canada. A key initiative in this plan was to improve access to care and reduce wait times.

4.2 The following extract from the First Ministers' plan provides detail of the agreement on wait times.

"All jurisdictions have taken concrete steps to address wait times. Building on this, First Ministers commit to achieve meaningful reductions in wait times in priority areas such as cancer, heart, diagnostic imaging, joint replacements, and sight restoration by March 31, 2007, recognizing the different starting points, priorities, and strategies across jurisdictions..."

First Ministers agree to collect and provide meaningful information to Canadians on progress made in reducing wait times, as follows:

- Each jurisdiction agrees to establish comparable indicators of access to health care professionals, diagnostic and treatment procedures with a report to their citizens to be developed by all jurisdictions by December 31, 2005.
- Evidence-based benchmarks for medically acceptable wait times starting with cancer, heart, diagnostic imaging procedures, joint replacements, and sight restoration will be established by December 31, 2005 through a process to be developed by Federal, Provincial and Territorial Ministers of Health.
- Multi-year targets to achieve priority benchmarks will be established by each jurisdiction by December 31, 2007.
- Provinces and territories will report annually to their citizens on their progress in meeting their multi-year wait time targets." (First Minister's Meeting on the Future of Health Care 2004: A 10-year plan to strengthen health care)

4.3 The agreement also included establishment of a Wait Times Reduction Fund of \$4.5 billion over the next six years, beginning in 2004-05, to support related initiatives across the country. The purpose of the fund is described as follows:

"The Wait Times Reduction Fund will augment existing provincial and territorial investments and assist jurisdictions in their diverse initiatives to reduce wait times. This Fund will primarily be used for jurisdictional priorities such as training and hiring more health professionals, clearing backlogs, building capacity for regional centres of excellence, expanding appropriate ambulatory and community care programs and/or tools to manage wait times."

- 4.4 The Nova Scotia government has received \$122.6 million from the Fund. As of March 31, 2006, there is \$86.1 million remaining in a trust account of which the Province is a beneficiary.
- 4.5 The Department of Health (DOH) undertook a number of initiatives focusing on wait times including the January 2004 release of the *Report of the Provincial Wait Time Monitoring Project Steering Committee*. The committee was formed to research and recommend a standardized, province-wide approach to collecting and reporting wait-time information and made a number of related recommendations including the formation of a Wait Time Advisory Committee. The Department of Health issued a response to the report in January 2004. The response indicated that shortening wait times for tests, treatment and care was a key priority and that obtaining standardized information was a first step in the process. The Department of Health established a Wait Time Advisory Committee in 2005.
- 4.6 In October 2005, the Department of Health established a website (<http://www.gov.ns.ca/health/waittimes/default.htm>) which “provides information on Nova Scotia’s plan to improve wait times, highlighting the progress to date, and sharing wait time information for publicly funded tests, treatments, and services across the province.”
- 4.7 At the time of our review, the website provided data on wait times for approximately 40 health services in the Province in the following categories:
- Referrals to Specialist
 - Diagnostic Services
 - Treatment Services
- 4.8 The website clearly notes that the wait times provided are for scheduled tests, treatments and services only and do not include wait times for services provided on an emergency basis. The source of the data is various systems in hospitals, District Health Authorities and the Department of Health. The Department of Health describes its objectives for the wait time information as follows:
- “Nova Scotians can receive health services anywhere across the province.*
- The wait time information provided here may help you decide whether you would like to receive services outside your community. The information is provided by hospital or facility within each district health authority.*
- Our goal is to collect wait-time information for the entire healthcare system. We will continue to share this information as and when it becomes available.”*
- 4.9 In the spring of 2006, the Department of Health requested the Office of the Auditor General to provide an opinion on whether the systems that provide data supporting certain wait times are adequate to produce reliable, complete and accurate information. Because there are a number of systems that produce wait time information and the Office of the Auditor General does not have sufficient resources to review each of these, we decided to focus on a sample of three wait

times - one from each of the major categories. The three wait times included in this review are:

- Referrals to Specialist - Cancer Specialist (Radiation)
- Diagnostic Services - Magnetic Resonance Imaging (MRI)
- Treatment Services - Knee Replacements

4.10 There are two basic approaches to measurement of wait times.

- *Prospective data* is future-oriented and represents the estimated number of days that a patient booking a service would likely have to wait as of the date that the calculation is performed.
- *Retrospective data* is based on actual historical experience and represents the number of days that patients receiving the service have waited.

4.11 Prospective data is future-oriented and, therefore, less reliable. Retrospective data is based on actual experience and, therefore, can be objectively measured and reported. Because retrospective data is deemed to be more useful, the Department of Health has indicated that it intends to report more retrospective wait time data in the future. Systems to collect and report retrospective data are complex and do not exist in all areas. Of the three wait times we examined, the data related to Knee Replacements and Referrals to Cancer Specialists is retrospective. The data for MRIs is prospective and represents the estimated amount of time that a person seeking the service would need to wait.

4.12 The level of assurance provided on the findings and conclusions in this chapter is less than for an audit (i.e., a review provides moderate assurance while an audit provides high assurance). This is because of the type of procedures we performed. Our evidence was based on enquiry, analysis and discussion and was focused on reaching conclusions that are plausible in the circumstances. We did not perform sufficient testing and other audit procedures to permit us to give audit (high) level assurance on our conclusions. Further information on audit and review level assurance may be obtained from the *Canadian Institute of Chartered Accountants Assurance Handbook (Section 5025 - Standards for Assurance Engagements)*.

4.13 We began an audit of the management and use of MRIs and CT scanners at Capital Health and the Cape Breton District Health Authority during the current year. The results of that audit will be reported in 2007. Our review of the wait time for MRIs was performed as part of that audit.

4.14 In 2004 we audited wait times for Cardiac Bypass Surgery and Radiation Therapy. Our findings were reported in Chapter 7 of the June 2005 Report of the Auditor General. At that time, we concluded that the systems producing data on wait times for radiation therapy at the Capital District Health Authority were adequate to produce data which is complete and accurate, while the systems used to provide wait time information for cardiac bypass surgery were not adequate.

RESULTS IN BRIEF

4.15 The following are the principal observations from our review:

- **Wait Times for Referrals to Cancer Specialists (Radiation)** - We concluded that the system supporting production of this wait time information at Capital Health is adequate to produce data that is accurate, reliable and complete. For the Cape Breton District Health Authority, we were unable to conclude that the system was adequate because of anomalies affecting the completeness and accuracy of the data.
- **Wait Times for Diagnostic Services (MRI)** - We were unable to verify the calculations of this wait time at both Capital Health and Cape Breton District Health Authority because certain supporting documentation is not available for verification after the wait time is calculated and reported.
- **Wait Times for Treatment Services (Knee Replacements)** - We concluded that the system supporting production of this wait time information is adequate to produce data that is accurate, reliable and complete.
- During our review of all three wait times, we found that there were few formal controls over the quality of information reported. We have made several recommendations to improve quality control processes.

REVIEW SCOPE

4.16 The first objective of this review was to assess the adequacy of the systems that support the production of wait times information for:

- consultations with radiation oncologists at Capital Health (CDHA) and the Cape Breton District Health Authority (CBDHA);
- MRIs (Magnetic Resonance Imaging) at Capital Health and the Cape Breton District Health Authority; and
- knee replacement surgery at four District Health Authorities (Capital Health, Cape Breton, Pictou County, and Annapolis Valley).

4.17 The second objective was to determine whether the Wait Times website adequately disclosed the limitations of the wait times listed above and relevant information such as definitions and sources of data.

4.18 Our review included the following three computer systems which provide source data for the wait times included in this assignment:

- OPIS system at Capital Health and the Cape Breton District Health Authority (Wait time for consultation with radiation oncologist)

- QuadRIS system at Capital Health (Wait time for MRIs)
- MSI Physician Payments database (Wait time for knee replacement surgery)

- 4.19** The booking system for MRIs at Cape Breton District Health Authority is completely manual and was also included in our review scope.
- 4.20** The level of assurance provided on the findings and conclusions in this chapter is less than for an audit (i.e., a review provides moderate assurance while an audit provides high assurance). This is because of the type of procedures we performed. Our evidence was based on enquiry, analysis and discussion and was focused on reaching conclusions that are plausible in the circumstances. We did not perform sufficient testing and other audit procedures to permit us to give audit (high) level assurance on our conclusions.
- 4.21** We began our review by establishing criteria which represent best practices for the area being examined. The following criteria were discussed with the Department of Health in the planning stages of this assignment.
- Wait times should adequately reflect the facts to an appropriate level of accuracy.
 - There should be appropriate systems, policies and procedures to collect and process the data.
 - Systems providing source data should be subject to quality control to reduce the risk of omissions and errors.
 - Wait times reports should be prepared using a defined process that provides control over information quality including supervision, authorization, checks, guidance and training for those preparing the report.
 - Reported information should be capable of being verified. Wait times should be traceable and capable of reproduction.
 - There should be appropriate policies and procedures in place to ensure the information used to calculate wait times is complete.
 - Wait times should be defined. Significance and limitations should be explained.
 - Information should be presented in a neutral, unbiased manner.
- 4.22** Our review was based on the wait times disclosed on the Department of Health's website as at September 2006. The data on the website is updated on a regular basis. Our conclusions specifically relate to the data and systems we reviewed and would not apply to any changes after September 2006.

PRINCIPAL FINDINGS
Referrals to Specialist - Cancer Specialist (Radiation)

- 4.23** DOH reports monthly on the wait times for referrals to radiation cancer specialists (see Exhibit 4.1). The wait time is retrospective and is calculated as the time between the specialist appointment and the day the cancer care center receives the referral. The calculation and the details from this calculation are taken from the Oncology Patient Information System (OPIS). These wait times are presented for Nova Scotia's two cancer centres, Halifax and Cape Breton.
- 4.24** We concluded that the system supporting production of this wait time information at Capital Health is adequate to produce data that is accurate, reliable and complete. For the Cape Breton District Health Authority, we were unable to conclude that the system was adequate due to anomalies we encountered. We have made recommendations to management for improvements.
- 4.25** **Suggested improvements** - We found differences between Halifax and Cape Breton in the way OPIS is being used. Fields which should be standardized are being defined differently resulting in incomparable reporting. Also, not all those preparing wait times information were aware of the reporting capabilities of the system.

Recommendation 4.1

We recommend that the use of all OPIS fields be standardized.

Recommendation 4.2

We recommend that the reporting capabilities of OPIS be communicated to all those responsible for preparation of wait time reports which use the system for source data.

- 4.26** We were unable to reconcile the OPIS data for Cape Breton to the wait time published on the website. An additional item was added and other unidentifiable changes were made to the data after the reporting date.
- 4.27** **Presentation of wait time** - The reporting of wait times for radiation oncology is presented on the website as an average for all types of cancer. This masks important differences relating to different types of cancer. The Provincial Wait Time Monitoring Project Steering Committee also recommended that data be reported by type of cancer.
- 4.28** In addition, the wait time calculation on the DOH website is currently presented as an average rather than a distribution. This provides limited information and the results may be skewed by outliers.

- 4.29** We found that while OPIS is capable of providing an appropriate level of aggregation for reporting wait times, DOH currently does not utilize this and reports at a level of detail that is too simplified. OPIS has the ability to report a cumulative distribution for wait times, by type of cancer, although the website reports just a single average.

Recommendation 4.3

We recommend that the reporting of wait times for referrals to radiation cancer specialists reflect more comprehensive information such as the cumulative distributions by type of cancer.

Diagnostic Services - Magnetic Resonance Imaging (MRI)

- 4.30** The wait times for MRI are reported to the Department of Health by four District Health Authorities (DHAs) (see Exhibit 4.2). We reviewed the system for reporting wait times at two of the four: Capital Health and Cape Breton District Health Authority. We were unable to verify the calculations at either DHA because certain supporting documentation is not available for verification after the wait time is calculated and reported as described below.
- 4.31** The Capital District Health Authority uses source data from the QuadRIS electronic radiology information system while the Cape Breton District Health Authority uses a completely manual booking system. Both DHAs report the information monthly to the Department of Health.
- 4.32** The wait time for MRI is to be measured prospectively (see paragraph 4.10) and the website defines the wait time as “counting the number of calendar days from the day the request arrives in the diagnostic imaging department to the next available day with three open appointments”.
- 4.33** **Presentation of wait time** - Capital Health complies with the definition on the website with two exceptions:
- The starting point for the calculation is not the date when the requisition is received by Capital Health’s Diagnostic Imaging Department but, rather, when it is triaged and filed with the unbooked requisitions. The period of time between receipt of the requisition and filing is estimated by Capital Health to be about one day and the Provincial Wait Time Monitoring Project Steering Committee estimated the figure to be a few days. The reported wait times would all be underestimated by a small amount due to the number of unbooked requisitions not yet triaged and filed which are not included in the calculation.
 - At any given point, not all triaged requisitions would have been entered into the booking system. At the current time, CDHA is not booking MRI appointments beyond February 2007 when two new MRI machines are planned to start operating. The website indicates that the reported wait time

is the “next available day with three open appointments”. CDHA uses that figure as its starting point but then adjusts it for an estimate of the number of additional days that would be required for the number of unbooked requisitions. We believe that CDHA’s approach is appropriate. However, the wording of the definition needs to be reviewed to ensure that it is consistent with the actual calculation.

- 4.34** The Cape Breton District Health Authority’s methods for booking MRIs and calculating wait times are very different from the methods used by Capital Health. A completely manual system is used to schedule MRIs and examinations are only scheduled three days in advance of the procedure. As a result, the majority of requisitions are unbooked. We understand that CBDHA is planning to start using the Nova Scotia hospital Information System (Meditech system) to book MRIs at some point in the future.
- 4.35** Accordingly, the website definition which focuses on the first day with three open appointments does not accurately describe the information calculated and reported by CBDHA. Rather, the DHA counts the total number of unbooked requisitions and divides by the typical number of scans that can be performed in a day. This number is then added to the number of days to the next day with three open appointments and reported to the Department of Health.
- 4.36** The website definition of MRIs does not distinguish between types of examinations (i.e., major body parts involved). We found that there were significant differences between the expected wait times for types of examinations and the reported average (e.g., bone examinations had a relatively long wait time whereas other body sites had shorter times). More comprehensive reporting of wait times such as expected wait times for each major type of examination would improve the relevance and information value to the user of the information. The Provincial Wait Time Monitoring Project Steering Committee recommends disclosure by body part/type of scan.
- 4.37** As indicated in paragraph 4.11 above, calculation of wait times data on a retrospective basis provides more reliable information and the Department of Health plans to move to that method of calculation in the future. We support the Department of Health’s plans to move to retrospective data collection for all wait times.

Recommendation 4.4

We recommend that the Department of Health modify the definition of MRI wait times used on the website to ensure it is consistent with the information calculated and provided by the District Health Authorities.

Recommendation 4.5

We recommend that the Department of Health’s website disclosure of the wait time for MRIs

reflect more comprehensive information such as the specific wait times for major types of MRI examinations rather than just a single data point such as the average for all types.

- 4.38** **Verification of calculation** - We could not verify the accuracy or completeness of the wait time calculation at Capital Health because the information supporting the next available day with three open appointments is taken from the on-line system and is not available for verification after the wait time is calculated and reported. The number of unbooked requisitions is counted by one person and there is no check of the total. Support for these factors is not retained as a management trail or available for verification purposes. We, therefore, could not verify the information at a later point in time.
- 4.39** In addition, we found calculation errors at Capital Health which made the reported wait time calculation inaccurate. The information from the electronic system for each of the three major types of examinations (i.e., body sites - neuro, bone, body) at each of the MRI sites (Halifax Infirmery, Victoria General/ IWK) is adjusted through an electronic spreadsheet and complex manual calculations to arrive at an average number of calendar days. The end result is calculation of a single weighted average figure representing each of the three major types of examinations and MRI sites. We found errors in this process for the month we examined (August) which caused the wait time to be understated by 18 days.
- 4.40** Similarly, CBDHA also has one person count the number of unbooked requisitions and there is no check of the total. Support for this figure is not retained as a management trail or available for verification purposes. We could not verify the accuracy or completeness of the wait time calculation at CBDHA because we could not verify the unbooked requisitions figure at a later point in time.

Treatment Services - Knee Replacements

- 4.41** DOH reports the wait times for knee replacements quarterly (see Exhibit 4.3). The wait time is retrospective and is generally calculated as the time between the procedure and the second previous visit. The data is extracted from the MSI billing system, administered under contract with the Department of Health by Medavie Inc., using a custom FoxPro program. The calculation of the wait times is done by custom FoxPro and Stata computer programs. These custom programs were developed in-house by staff at DOH. We reviewed the logic used in the assumptions and reviewed the programming code to ensure accuracy.
- 4.42** We concluded that the system supporting production of this wait time information is adequate to produce data that is accurate, reliable and complete. The methodology used to calculate these wait times was found to be neutral and unbiased. Although no significant errors were found in the system or data we reviewed, there are weaknesses in the current system which increase the potential risk of error. We identified some areas for improvement which have been communicated separately to management and are summarized in this chapter.

- 4.43** We would like to commend the staff at DOH for their initiative and commitment to increased automation of this wait time calculation. This increased automation has allowed for more efficient and accurate reporting. However, several minor deficiencies were identified in our review of the programming logic of the systems used to collect and process data. These deficiencies affected both the completeness and the accuracy of the data to some extent but did not change the resulting wait times significantly.
- 4.44** **Suggested improvements** - The process used to calculate knee replacement wait times is very complex but is only informally documented. This lack of formal documentation places undue reliance on key staff. In the event of staff turnover there would be a lack of continuity and the loss of institutional knowledge.
- 4.45** The Department currently has very few formal review processes to ensure the information is accurate before it is posted to the website. Although we found no errors, the lack of a formal review process increases the risk of inaccurate information being posted to the website.
- 4.46** The data for the knee replacement wait time calculation is downloaded two months after the end of the quarter. The MSI billing manual allows for physicians to submit claims up to 90 days after the end of the quarter. Although this only had a negligible effect on the knee replacement wait time for the month we reviewed (August 2006), this may cause problems with completeness and accuracy in the future or on other reportable categories.

Recommendation 4.6

We recommend that the Department of Health continue to monitor submission dates for physician claims to ensure that the quarterly data downloaded from the MSI billing system is substantially complete for purposes of the specific wait time calculation.

- 4.47** The most serious limitation surrounding the calculation of wait times for knee replacements is due to the reliance on the MSI billing system. This system was not designed to report wait times and considerable effort and time have been expended to develop the logic and code necessary to extract the wait time information from the physician billing system. There are planned changes to the physician billing system and we encourage the Department of Health to include its requirements for wait time information in the new system.

Recommendation 4.7

We recommend that, to the extent possible, the physician billing system and related billing codes be modified to increase the accuracy and efficiency of wait time calculations.

- 4.48** **Presentation of wait time** - We found the reporting of knee replacement wait times to have an adequate level of disclosure. We compared the current information reported on knee replacements to the standards set in the reporting requirements outlined in 2004 by a national working group that established standards for reporting under the First Minister's Health Accord and found that DOH generally met these guidelines. One exception is that the website does not disclose the median wait time which was recommended by that group.

Controls over Quality of Information

- 4.49** During our review of all three wait times, we found that there were few controls over the quality of information reported. We expected to find defined policies and procedures for the collection and reporting of data and independent reviews of reported information to ensure quality (see review criteria in paragraph 4.21). In all three cases, we found that staff preparing the calculations understood the processes and requirements, but there were no documented policies to ensure consistency and knowledge transfer to other staff who might be required to participate in the process in the future. We also found that there were no standard quality review and approval processes at the DHAs or Department of Health. Such processes could include requirements for independent review of calculations and comparison of wait times with prior periods and expectations to determine reasonableness.
- 4.50** Support for wait time reports should be maintained to provide a trail for management. This is difficult when information is obtained from on-line systems with constantly changing data but printing of critical screens is one option. Retention of lists to support manual counts, or independent counts and signoffs by a second person are other options providing for adequate management trails. These trails would then be available to those who subsequently need to review and verify the information reported.
- 4.51** Quality is generally enhanced through use of information technology to automate calculations and data extracts. The wait time information calculation was completely automated in only one of the three cases (Referrals to Cancer Specialist (Radiation) from OPIS system). We encourage the Department and DHAs to build the requirement for wait time information and reports into automated systems. When systems are automated, basic controls over information technology systems should be implemented. For example, program changes should be subject to appropriate testing and review, code changes should be locked, and processes should be documented in user manuals. We note that these processes are occurring for OPIS. The following general recommendations would enhance the quality of wait time information.

Recommendation 4.8

We recommend that the Department of Health consider building the requirement for wait time information and reports into automated systems.

Recommendation 4.9

We recommend implementation of a formal quality control process for wait time data at both the District Health Authorities where the reports originate and the Department of Health.

Recommendation 4.10

We recommend that the Department of Health formally document policy guidance for how each wait time is to be calculated.

Recommendation 4.11

We recommend that all District Health Authorities retain, for at least one year, the support for all wait times reported to the Department of Health.

Recommendation 4.12

We recommend the Department of Health develop a centrally stored user manual explaining the process and logic for each automated wait time calculation.

Recommendation 4.13

We recommend that all programming changes related to electronic wait time information be subject to appropriate testing and review. In addition, we recommend that the code be locked as read only between iterations.

CONCLUDING REMARKS

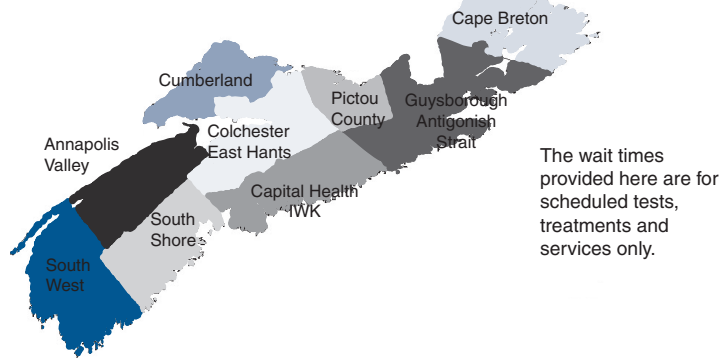
- 4.52** It is generally recognized that access to care and wait times are key aspects of health system performance. In order to attain a high level of performance, good wait time information is required.
- 4.53** We believe that the Department of Health and District Health Authorities are attempting to report wait time data that is accurate, complete and reliable. The Department of Health requested the Office of the Auditor General to review the wait time information on the Province's website. This request is a tangible indicator of the Department's interest in improving the quality of the information.
- 4.54** Reporting of wait time information is a new initiative both nationally and in Nova Scotia. Our review found that some systems were working well while others require improvement and increased automation. This is to be expected given that this is a new initiative and that the processes for providing wait time information

are complex. There are approximately 40 different wait times on the website and more are planned. In some cases, existing information systems were in place long before the need for wait time information was contemplated and data providers need to manually manipulate the data to reflect wait times.

- 4.55** The Department of Health needs to provide standards and implement quality control processes to ensure data reported is consistent, accurate, reliable and verifiable. The requirement for wait time information needs to be incorporated into automated systems.
- 4.56** 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. Nova Scotia is the first jurisdiction in Canada to formally request its legislative auditor to examine wait time information. We commend the Department of Health for the leadership shown in requesting this review and for its efforts to report accurate, reliable and complete wait time information.
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Wait Times Data - Referrals to Specialist Cancer Specialist (Radiation)

Cancer Specialists are located in the Capital District Health Authority at the Nova Scotia Cancer Centre in Halifax, and in the Cape Breton District Health Authority at the Cape Breton Cancer Centre in Sydney.



Location	Average Wait Times (Calendar Days)
Cape Breton	17
Capital Health	12

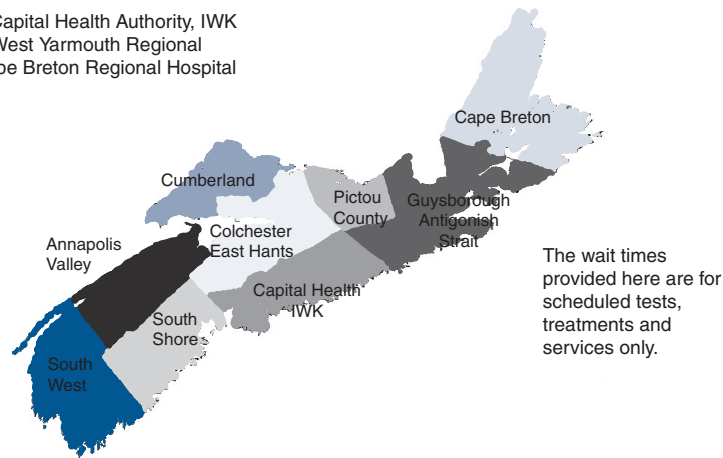
August 2006 data - Next update end of October 2006

How do we measure wait times for Radiation Cancer Specialists?

Wait times are currently measured by counting the number of calendar days from the day the referral arrives in the cancer centre to the day the specialist appointment takes place.

Wait Times Data - Diagnostic Services Magnetic Resonance Imaging (MRI)

MRIs are provided at Capital Health Authority, IWK Health Centre, South West Yarmouth Regional Hospital and at the Cape Breton Regional Hospital in Sydney.



The wait times provided here are for less urgent services. People requiring more urgent care receive it sooner.

District Health Authority	Community	Facility	Wait Times (Calendar Days)
Cape Breton	Sydney	Cape Breton Regional Hospital	54
Capital Health	Halifax	Queen Elizabeth II Health Science Centre	162
IWK Health Centre	Halifax	IWK Health Centre	95*
South West	Yarmouth	Yarmouth Regional Hospital	41

August 2006 data - Next update end of October, 2006

*Patients under the age of 7 years requiring sedation may wait longer as special preparation is needed. Wait times may also include women requiring MRI for gynecological examinations.

Adult MRIs scheduled through Capital Health and done at the IWK Health Centre are included in Capital Health's data.

How do we measure wait times for MRI (Magnetic Resonance Imaging)?

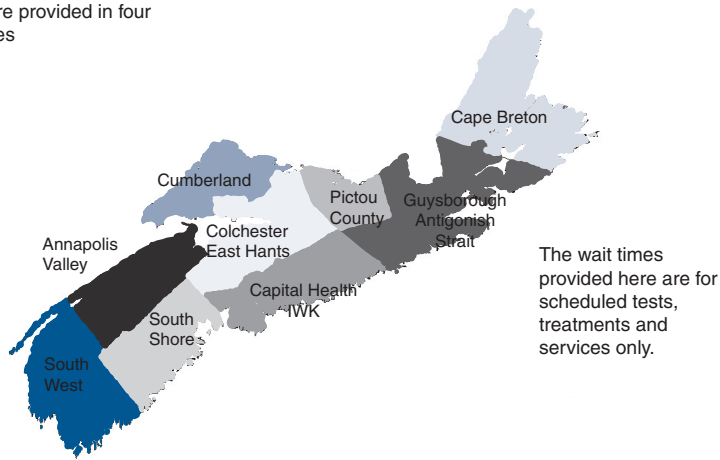
Wait times for MRI are measured prospectively by counting the number of calendar days from the day the request arrives in the diagnostic imaging department to the next available day with three open appointments.

Systems continue to be developed to measure wait times in all diagnostic areas.

Source: Department of Health website

Wait Times Data - Treatment Services Knee Replacements

Knee Replacements are provided in four district health authorities



The wait times provided here are for scheduled tests, treatments and services only.

Cumulative Percentage of Patients Whose Surgery was Completed within Specific Time Periods

District Health Authority	Days								
	30	60	90	180	270	360	540	720	
Annapolis Valley	0%	3%	7%	40%	57%	66%	84%	91%	
Cape Breton	0%	2%	12%	57%	80%	86%	94%	96%	
Capital Health & Pictou County	1%	4%	10%	39%	51%	70%	84%	93%	
Nova Scotia	1%	3%	10%	43%	58%	72%	86%	93%	

Table is based on all patients who received service on a scheduled basis between April 1 and June 30, 2006. Next update scheduled for the end of December 2006.

How do we measure wait times for Knee Replacements?

Wait times for Knee Replacement are measured using the physician billing system. The wait time is calculated retrospectively from the time the Knee Replacement surgery was performed to the time of the 2nd previous visit with the orthopedic surgeon.

Source: Department of Health website

DEPARTMENT OF HEALTH'S RESPONSE

Recommendation	Response
4.1 the use of all OPIS fields be standardized	Agree. We will communicate this direction to Cancer Care NS.
4.2 the reporting capabilities of OPIS be communicated to all those responsible for preparation of wait time reports which use the system for source data.	Agree. We will communicate this direction to Cancer Care NS
4.3 the reporting of wait times for referrals to radiation cancer specialists reflect more comprehensive information such as the cumulative distributions by type of cancer.	Agree. This request has already been made of Cancer Care NS and will be addressed as soon as the upgrade to OPIS is completed.
4.4 the DOH modify the definition of MRI wait times used on the website to ensure that it is consistent with the information calculated and provided by the DHAs.	Agree.
4.5 the DOH's website disclosure of the wait times for MRIs reflect more comprehensive information such as the specific wait times for major types of MRI examinations rather than just a single data point such as the average for all types.	Agree. We will communicate this requirement to those facilities with MRIs.
4.6 the Department of Health continue to monitor submission dates for physician claims to ensure that the quarterly data downloaded from the MSI billing system is substantially complete for purposes of the specific wait time calculation.	Agree.
4.7 to the extent possible, the physician billing system and related billing codes be modified to increase the accuracy and efficiency of wait time calculations.	Agree. We have already taken steps to automate as much of this process as possible to reduce the risk of data handling errors.

<p>4.8 the DOH and DHAs consider building the requirement for wait time information and reports into automated systems.</p>	<p>Agree. Our approach is to use the information systems that support the business process to capture and report wait time information. However, many areas of the health care system still do not have the automated systems in place to support the business process. We have and will continue to request funding to address these deficits. In the meantime, we will work with existing systems and new systems that are in development to ensure that the requirement for wait time data capture and reporting is addressed.</p>
<p>4.9 implementation of a formal quality control process for wait time data at both the DHAs, where the reports originate, and the DOH.</p>	<p>Agree.</p>
<p>4.10 the Department of Health formally document policy guidance for how each wait time is to be calculated.</p>	<p>Agree.</p>
<p>4.11 that all DHAs retain, for at least one year, the support for all wait times reported to the DOH.</p>	<p>Agree. This issue will be included in the policy guidance provided by DOH.</p>
<p>4.12 the DOH develop a centrally stored user manual explaining the process and logic for each automated wait time calculation.</p>	<p>Agree. We have already taken steps to address this.</p>
<p>4.13 all programming changes related to electronic wait time information be subject to appropriate testing and review. In addition, we recommend that the code be locked as read only between iterations.</p>	<p>Agree. We have already taken steps to address this.</p>