

# **N**o more time to wait

Toward benchmarks and best practices in wait time management

AN INTERIM REPORT BY THE WAIT TIME ALLIANCE  
FOR TIMELY ACCESS TO HEALTH CARE



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**An interim report by the Wait Time Alliance**

**March 2005**

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## **Acknowledgements**

This paper was prepared by the Canadian Medical Association as a member of the Wait Time Alliance.

The Canadian Medical Association acknowledges the work of those individuals on the expert working groups of the Wait Time Alliance for the reports that are included in this document.

Wait Time Alliance members:

Canadian Association of Nuclear Medicine  
Canadian Association of Radiologists  
Canadian Cardiovascular Society  
Canadian Medical Association  
Canadian Orthopaedic Association  
Canadian Ophthalmological Society  
Canadian Association of Radiation Oncologists

## ***Executive summary***

### **Background**

Timely access to health care remains one of Canadians' top concerns. The Wait Time Alliance, consisting of 6 medical specialty societies, was formed out of physicians' concern over Canadians' access to health care and an interest in working collaboratively with stakeholders to determine evidence-based benchmarks for medically acceptable wait times in 5 priority areas (cardiac care, cancer care, diagnostic imaging, joint replacement and sight restoration) as per the 2004 first ministers' 10-year plan to strengthen health care. The formation of the alliance is significant as it represents an unprecedented effort to bring together several national medical specialty groups whose members are directly involved in providing care in the 5 priority areas identified by the first ministers.

The alliance's goal is to provide governments and the public with medical expertise on medically acceptable wait times, particularly with respect to the implementation of wait-time commitments contained in the first ministers' 10-year plan. This interim report is intended to highlight the work of the Wait Time Alliance to date in identifying evidence-based benchmarks for medically acceptable wait times for the 5 priority areas.

The alliance's work began with the preparation of a glossary of common terms and agreement on a number of "first principles" that should govern the development of any medically acceptable benchmarks. These principles include the need for benchmarks to be pan-Canadian, evidence-based and clinically derived, as well as a commitment to adopt a transparent approach to reducing wait times for the 5 priority areas that is patient-centred and not offset by an increase in wait times in other areas of care.

### **Wait-time benchmarks by specialty**

The alliance believes that research evidence is an important factor in determining benchmarks, but we must avoid becoming "evidence-bound." Clinical judgement based on interaction between clinicians and their patients is an equally important component. In many circumstances, little research evidence exists, yet key resource allocation decisions must still be made.

In several cases, national specialty societies have already begun developing a clinical consensus on medically acceptable wait times, reviewing available evidence on wait times and existing clinical guidelines in relation to appropriateness. Some groups have completed the work, the results of which are included in this interim report. Others have provided a status report on their work to date with the goal of releasing the results in the alliance's final report. Table 1 summarizes the benchmarks identified in the specialty reports thus far.

**Table 1: Provisional summary of benchmarks by priority level (unless specified, time refers to calendar days).**

<b>Specialty and procedure</b>	<b>Emergency cases*</b>	<b>Urgent/ semi-urgent cases*</b>	<b>Routine cases*</b>
<b>Diagnostic imaging: radiology</b> CT scans and MRIs	Within 24 h	Urgent: Within 7 days  Semi-urgent: Within 30 days	Within 7 days of scheduled time frame in situations where follow-up imaging is required
<b>Diagnostic imaging: nuclear medicine</b> Myocardial perfusion imaging with either SPECT or PET technology Radionuclide bone scanning F-fluorodeoxyglucose positron emission tomography (FDG-PET)	Within 24 h	Urgent: Within 7 days  Semi-urgent: Within 30 days	Within 7 days of scheduled time frame in situations where follow-up imaging is required
<b>Joint replacement</b> Hip and knee replacement surgery	Within 24 h	Within 30–90 days	9 months: - Within 3 months for consultation - Within 6 months for surgery
<b>Cancer care</b> Radiation therapy	Within 24 h	Individualized on basis of individual need	Within 10 working days
<b>Sight restoration</b> Cataract surgery	n.a.	Higher priority cases have expedited surgery proportional to their relative degree of priority	Within 4 months
<b>Cardiac care**</b> Coronary artery bypass graft surgery	Immediate to 48 h	3–56 days	42–180 days

\*See glossary for definitions.

\*\*The range of benchmarks reflects the differences in terminology used by various provincial programs across the country and the different definitions for each category.

Note: CT = computed tomography; MRI = magnetic resonance imaging; n.a. = not applicable; PET = positron emission tomography; SPECT = single photon emission computed tomography.

Diagnostic imaging was identified as a special case when it comes to medically acceptable wait-time benchmarks given that it affects wait times for many other specialties. This interim report begins to develop the concept of diagnostic imaging in support of the other priority procedures identified by the first ministers.

The 5 priority areas, along with many other medical procedures, are competing for fixed resources at any given time — operating room time, anesthesia, nursing care, etc. Accordingly, relative urgency of procedures must inevitably be factored into decision-making. Although the initial focus of the alliance’s work has been on wait-time benchmarks for individual procedures, decision-making tools will be required to compare urgency levels

across procedures and assist with resource allocation. Moreover, it is both possible and desirable to promote best practices in the measurement, monitoring and management of wait times across procedures. This will be discussed in more detail in the alliance's final report.

## **Observations**

A review of the 6 reports reveals several areas of commonality. Most specialties report a dearth of nation-wide benchmarks for their specialty in use either in Canada or elsewhere. Despite this obstacle, all 6 specialty groups have either identified wait-time benchmarks or are in the process of doing so. No group has said that this cannot be done or has declined to take on the challenge.

Another common feature of the specialty reports is that none of the organizations identified acceptable wait times longer than 6 months. This raises the question of whether there should be a maximum wait time beyond which a patient who needs any type of medical care (where appropriateness of intervention is clearly established) should not have to wait. Several industrialized countries, most notably the United Kingdom, have taken this approach.

Members of the alliance are concerned that the focus on these 5 specialties and a specific set of procedures should not be to the detriment of wait times for other procedures or the coordination of care provided by other medical professionals.

The development of medically appropriate wait-time benchmarks is a fluid and continuous process. Improvements in medical technologies and the adoption of new approaches based on evidence-based research are changing the diagnostic and treatment landscape on an ongoing basis. That is why determining the process for developing and refining the benchmarks may be more important over the longer term than the level of a particular benchmark at a particular time.

The specialty reports identified a number of factors that can affect the development of and adherence to medically acceptable wait-time benchmarks. These include:

- Health human resources (at all levels)
- Availability of equipment and technologies
- System coordination
- Appropriateness (need to ensure that limited medical resources are not inappropriately used and to ensure access is available so that physicians do not under-refer a service or use a less efficient or effective service as an alternative)
- Expectations by patients, providers and funders.

Most of the specialty reports identified the need for additional resources to collect and monitor wait-time related data on an ongoing basis and disseminate them for both public use and research purposes, particularly on a national basis.

## **Recommendations and next steps**

This interim report provides a starting point on which to build greater understanding of the wait-times issue and consensus on medically acceptable wait times. The proposed benchmarks capture the input of expert clinicians from across the country and are part of an

ongoing process that seeks to engage the medical community. As well, the alliance recognizes that there is still a need for input from other health care providers, patients and the public on acceptable wait times and looks forward to working with other stakeholders in the process.

In its next phase of work, the Wait Time Alliance will turn its attention to implementation issues including resource implications, standardizing measurement and monitoring systems, and setting targets to reduce wait times. Further, the alliance wishes to focus on the interrelations of benchmarks in the 5 priority areas of care both in terms of priority setting and resource allocation.

The alliance proposes the following next steps for consideration and action by federal, provincial and territorial governments:

1. *Create a steering committee on wait-time strategy:* Using the work of the alliance as one of the key inputs, the federal, provincial and territorial ministers should immediately create a steering committee on wait-time strategy analogous to the very successful Steering Committee on Patient Safety. The steering committee would report to the Conference of Federal-Provincial-Territorial Ministers of Health and would include membership from key stakeholders, as well as government representation on a regional basis. Five separate expert tables would be created under the auspices of the steering committee to develop wait-time benchmarks, mirroring the 5 priority areas in the first ministers' 10-year plan. This work would unfold over the coming months with a view to meeting the December 2005 commitment set out in the agreement.
2. *Develop a pan-Canadian approach to collecting wait-time data:* With respect to the development of comparable indicators of access and wait times, the Canadian Institute for Health Information should work with provincial and territorial governments to develop a pan-Canadian approach to collecting wait time data that ensures consistent measurement and monitoring of wait times across the country. There is also a need for immediate and ongoing input from health provider organizations (unlike the process for developing indicators under the 2000 and 2003 health accords).
3. *Set realistic targets to meet benchmarks:* Following development of medically acceptable wait times that are based on input from all key stakeholders, realistic stretch targets should be set as soon as possible toward meeting the benchmark wait times in the 5 priority areas. Governments will then need to direct additional resources from the Wait Times Reduction Fund to begin reducing wait times in a measured and balanced manner for all levels of urgency.
4. *Monitor progress toward reducing wait times:* To ensure that efforts to improve wait times in the 5 priority areas are not achieved at the expense of reduced access to other medical services, the Health Council of Canada, with the support of provincial and territorial governments, should monitor progress in reducing wait times across the country. The federal, provincial and territorial governments should also develop wait-time benchmarks for other medical services to ensure Canadians' access to all medically necessary care.

5. *Establish a targeted health services research program:* To build capacity and support ongoing policy development in this area, the federal government should allocate significant new resources to a comprehensive program of applied research on access and wait-time issues under the auspices of the Canadian Institutes of Health Research. Funding should also be available to ensure that cross-provincial initiatives such as the Western Canada Waiting List Project can continue to provide leadership and guidance on wait-time measurement, monitoring and management.

The Wait Time Alliance's final report is expected to be released in the summer of 2005.

## **1. Introduction and purpose of the alliance**

Timely access to health care remains one of Canadians' top concerns. Many report having experienced unacceptable delays, causing them increased pain and anxiety while they wait for health care services.<sup>1</sup> Their confidence that the health care system will be there when they need it most continues to wane.<sup>2</sup>

Over the past few years, Canada's physicians have been urging governments to act on growing evidence of reduced access to health care services and lengthening wait times. The September 2004 first ministers' *A 10-year plan to strengthen health care*<sup>3</sup> acknowledged this problem and provided a framework for action to improve access and reduce wait times, starting with 5 priority areas: cardiac care, cancer care, diagnostic imaging, joint replacement and sight restoration. The plan includes a commitment by governments to develop comparable indicators of access, evidence-based benchmarks for medically acceptable wait times and multi-year targets across the 5 priority areas, complemented by a targeted \$5.5 billion Wait Times Reduction Fund.

The Wait Time Alliance was formed out of physicians' concern over Canadians' access to health care and an interest in working collaboratively with stakeholders including the federal-provincial-territorial ministers of health to determine evidence-based benchmarks for medically acceptable wait times as per the 2004 first ministers' 10-year plan. Its formation is significant as it represents an unprecedented effort to bring together several national medical specialty groups whose members are directly involved in providing care in the priority areas identified by the first ministers (see box).

### **The Wait Time Alliance**

The Wait Time Alliance comprises the Canadian Association of Radiologists, the Canadian Association of Nuclear Medicine, the Canadian Association of Radiation Oncologists, the Canadian Cardiovascular Society, the Canadian Ophthalmological Society and the Canadian Orthopaedic Association. Each of these organizations has involved clinical leaders in its respective specialty to help adduce the evidence on medically acceptable wait times. The CMA is also a member of the alliance, providing research and policy support.

For each of the 5 priority areas, the alliance has set out to

- a. identify clinically acceptable indicators of access and wait times
- b. provide a medical perspective on the development of evidence-based benchmarks for medically acceptable wait times
- c. advise on the implementation of wait-time reduction strategies.

The alliance's goal is to provide governments and the public with medical expertise on medically acceptable wait times, particularly with respect to the implementation of the wait-

time commitments contained in the first ministers' 10-year plan. This interim report is intended to highlight the work of the Wait Time Alliance to date in identifying evidence-based benchmarks for medically acceptable wait times for the 5 priority areas. The alliance recognizes that consensus on wait times will require input from other key stakeholders including patients, the public and funders.

## **2. Anatomy of the 2004 first ministers' wait-time commitments**

The alliance recognizes the importance of ensuring that its contribution is consistent with the framework agreed to in the first ministers' 10-year plan. This framework for improving access and reducing wait times includes priorities for action, time frames for deliverables, a funding vehicle and a performance reporting mechanism (see box). These commitments were the subject of intense negotiations between the federal, provincial and territorial governments and constitute the only public record of the decisions made. However, they are subject to some interpretation.

### **Commitments made in the first ministers' 10-year plan<sup>3</sup>**

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.

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.

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.

The Canadian Institute for Health Information will report on progress on wait times across jurisdictions.

## **Scope of the commitments**

Although the 10-year plan provides ample flexibility to provincial and territorial governments to address their own priorities, there is an acknowledgement that wait times in the 5 priority areas should receive immediate attention, as these are areas where there have been significant documented access problems. However, there will clearly be a need to broaden efforts beyond these 5 areas to ensure a balanced approach to reducing wait times across the health system. In particular, legitimate concerns have been raised about success in these identified priority areas coming at the expense of longer wait times in other important areas.

## **Comparable indicators**

As noted above, the 10-year plan calls for *each jurisdiction* to establish *comparable* (i.e., not identical or common) indicators of access to health care professionals, diagnostic and treatment procedures by December 2005. Some comparable indicators of access to health services have already been developed under the 2000 and 2003 health accords by the Performance Indicator Reporting Committee (PIRC) under the auspices of the Federal-Provincial-Territorial Conference of Deputy Ministers of Health. To date, this has tended to be an exclusive process, with little opportunity to provide clinical input or advice. To meet the wait-time commitments, the PIRC is expected to be mandated to work toward a consensus on an expanded set of indicators by December 2005.

## **Evidence-based benchmarks for medically acceptable wait times**

The 10-year plan commits provinces and territories to developing *evidence-based* benchmarks for medically acceptable wait times, starting with cardiac care, cancer care, diagnostic imaging, joint replacement and sight restoration, to be established by December 2005 via a process to be developed by the federal-provincial-territorial ministers of health. “Evidence-based” is understood to mean based on the best available evidence. “Medically acceptable” implies that the benchmarks would be seen as acceptable by the health care delivery community.

Although not explicitly stated in the 10-year plan, the commitment to develop benchmarks is understood by many to imply the development of a pan-Canadian clinical standard of timely access to care in each of the 5 priority areas. However, this is a bone of contention, with some jurisdictions claiming that the agreement does not call for pan-Canadian benchmarks and allows for individual provinces and territories to adopt their own benchmarks.

The Canadian Institutes of Health Research (CIHR) recently announced that they will fund research over the next year related to wait-time benchmarks in use for the 5 priority areas and the evidence supporting them. This work, some of which is required by 15 October 2005, is to be used by the provincial and territorial deputy ministers of health in their efforts to establish evidence-based benchmarks for medically acceptable wait times.

### **Multi-year targets to achieve priority benchmarks**

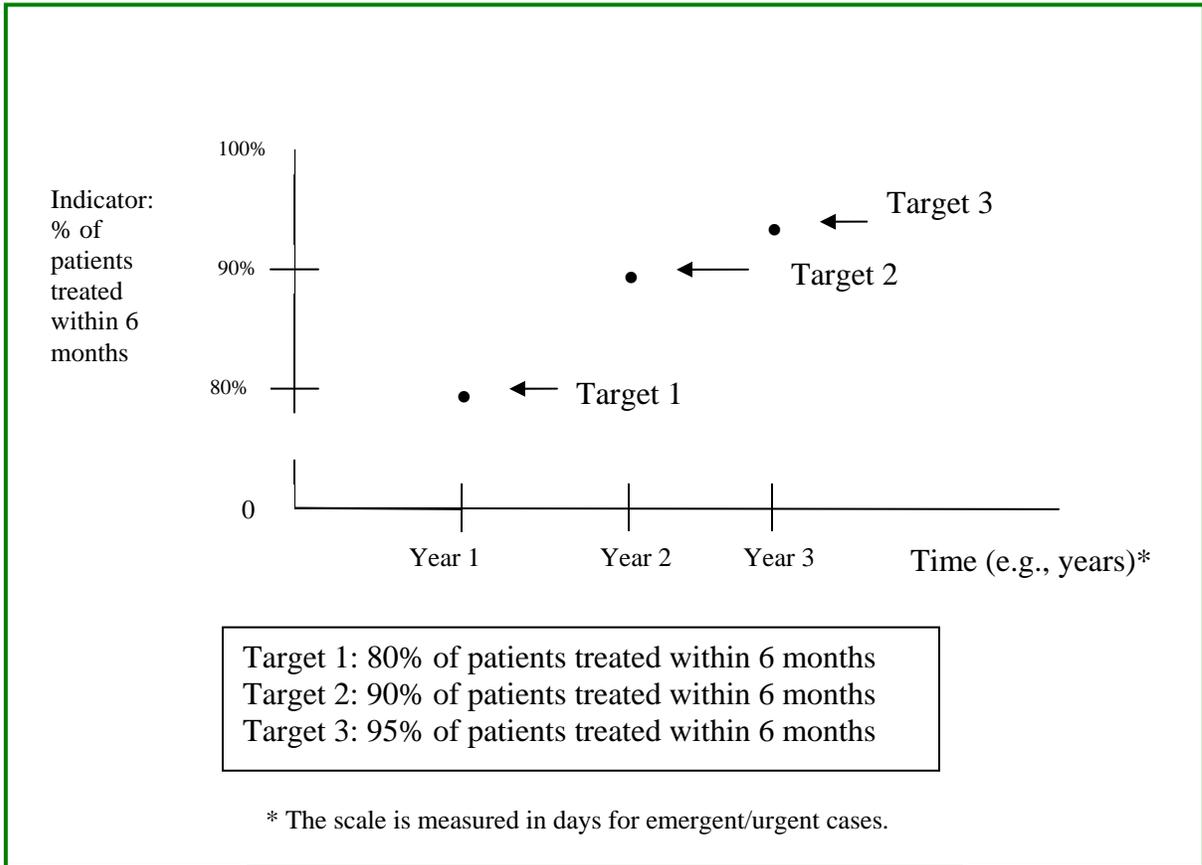
Once the wait-time benchmarks have been established, the 10-year plan calls on provinces and territories to set multi-year targets for achieving them by December 2007. Although the plan does not define the term “target,” it is generally understood to mean that jurisdictions will commit to achieving wait-time benchmarks for a given proportion of the population within a certain time frame. Hence, targets could be expected to vary from one jurisdiction to another depending on available resources.

Figure 1 illustrates how the indicators, benchmarks and targets relate to one another. In this example, the indicator is the percentage of patients treated within the 6-month wait-time benchmark. Targets are shown as steps over time toward having progressively more patients treated within the wait-time benchmark.

### **Wait Times Reduction Fund**

To support the wait-time commitments in the 10-year plan, the federal government has set aside \$5.5 billion over 10 years in a Wait Times Reduction Fund. The 10-year plan states that the Wait Times Reduction Fund will be used at the discretion of provinces and territories to hire and train health human resources, clear backlogs, build capacity for regional centres of excellence, expand ambulatory and community care and develop tools to manage wait times. (The fund will be enshrined in legislation (Bill C-39) with \$4.25 billion payable to a trust for the provinces and the remaining \$1.5 billion to be transferred to provinces at the rate of \$250 million a year from 2009–10 to 2014–15.<sup>4</sup>)

**Figure 1: Percentage of patients receiving treatment within the 6-month wait-time benchmark for elective procedure X.**



### **3. First principles for medically acceptable wait-time benchmarks**

In this initial phase of work, the alliance identified a number of first principles to govern its work toward the development of medically acceptable benchmarks:

1. Benchmarks of medically appropriate wait times should be *pan-Canadian*, so as to avoid duplication of effort and maximize economies of scale. Benchmarks should not be geographically bound but evidence-based.
2. Wait-time benchmarks must be clinically indicated and derived from *an ongoing process* involving clinical consensus based on the best available evidence. The funding provided in the health care agreement reflects this need for ongoing evaluation, updating and refinement of benchmarks.
3. The early, ongoing and *meaningful input of the practising community* is essential for the successful development and implementation of wait-time benchmarks.
4. *Public accountability and transparency* are exceedingly important, and Canadians must see tangible results in terms of reduced waiting times for health services in the 5 priority areas. This requires a patient-centred approach that addresses the full breadth of the care process, for example, to ensure that reductions in wait time for diagnosis are not offset by an increase in wait time for treatment.
5. Wait-time benchmarks and the associated provincial targets to reduce wait times must be *sustainable*. This will require a commitment to ongoing targeted funding through the Wait Times Reduction Fund, strategies to promote appropriate use of health services and careful monitoring to ensure that meaningful wait-time reductions in the 5 priority areas are not achieved at the expense of reduced access to other health care services.

As discussed in the next section, the members of the alliance are committed to integrating these principles into their benchmark work. However, at some point, the input of patients and the public will be required to determine whether the wait-time benchmarks are acceptable to them.

#### **4. Evidence-based not evidence-bound: report on benchmarks by specialty**

This section provides an overview of 6 medical specialty reports on the 5 priority areas identified in the first ministers' 10-year plan. Each report proposes medically acceptable wait times, that is, the threshold wait time and level of severity beyond which the best available evidence and clinical consensus indicate the patient's health is likely to be adversely affected.

The alliance believes that research evidence is an important factor in determining benchmarks, but we must avoid becoming "evidence bound." Clinical judgement based on interaction between clinicians and their patients is an equally important component. In many circumstances, insufficient or inconclusive research evidence exists, yet key resource allocation decisions must still be made. This lack of research evidence and the importance of clinical judgement is why the alliance believes the setting of benchmarks must be evidence-based but not evidence-bound. Making decisions based on only one source of information, such as limited research evidence, can lead to other problems as seen in managed care settings in the United States.

#### **Methods**

Members of the alliance recognized the need to establish a glossary of terms to ensure a common understanding of concepts involved in wait-time analysis (see Appendix A).

A review of existing benchmark efforts in various jurisdictions was undertaken, including those of the Cardiac Care Network of Ontario, the Saskatchewan Surgical Care Network and the Western Canada Waiting List Project,<sup>5</sup> particularly its work on developing waiting time benchmarks for cataract surgery and hip and knee replacement. In its recent report, the Western Canada Waiting List Project documented ground-breaking work on the development of maximum accepted wait times that combined input from clinicians, patients and the public, as well as research evidence.

As part of this initiative, each medical specialty member of the alliance undertook to develop a clinical consensus of medically acceptable wait times (Appendix B contains the reports and a description of the methods used by each group). In several cases, national specialty societies had already begun work toward this goal. Some have completed the work, the results of which are included in this interim report, whereas others have provided a report on work in progress with benchmarks to be available in the alliance's final report.

Although there are some variations across specialties, wait-time benchmarks for each specialty were derived by expert clinical working groups based on the following inputs:

- a review of available clinical evaluations or epidemiologic evidence on medically acceptable wait times
- where available, an assessment of existing standards of access at regional, provincial and national levels as well as internationally.

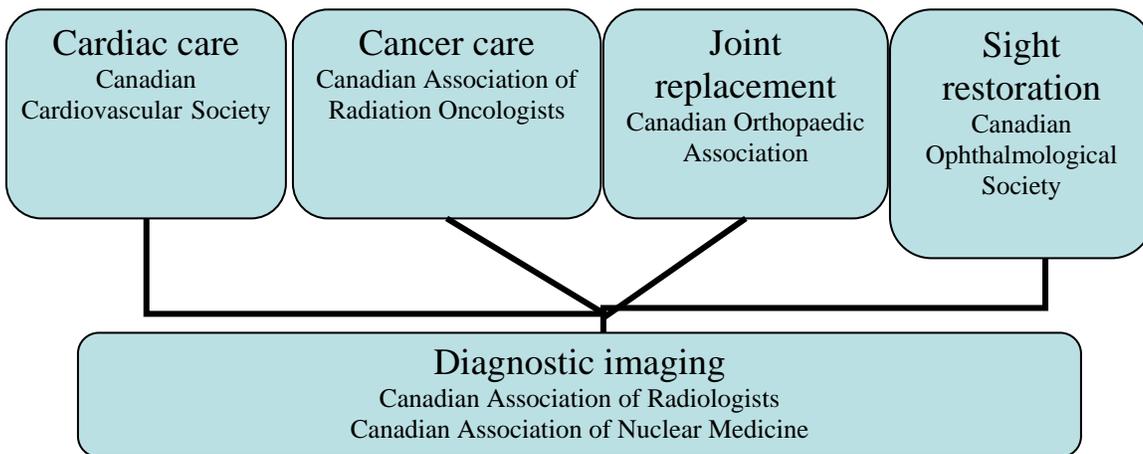
Some specialty groups undertook a review of existing clinical guidelines in relation to appropriateness, and some examined priority tools currently in use in other jurisdictions.

Few medical benchmarks are used on a widespread basis and there is a dearth of evidence on maximum acceptable wait times for many procedures. As a result, in many cases consensus among practitioners was the approach used to identify the benchmarks.

Figure 2 illustrates how the 5 priority areas relate to one another and to the various specialty societies that have been part of the work of the alliance. As shown, diagnostic imaging supports the other 4 priority areas because it is one of the main inputs in the decision to treat. Efforts to date to develop priority-setting tools for diagnostic imaging have tended to view this area in the abstract, without reference to specific providers or “problem-based” learning. This report begins to develop the concept of diagnostic imaging in support of the other priority procedures identified by first ministers.

The 5 priority areas and many other procedures are competing for fixed resources at any given time — operating room time, anesthesia, nursing care, etc. How do urgency scores for one specialty procedure relate to urgency scores for another, if at all? Accordingly, relative urgency between procedures must inevitably be factored into real-world decision-making. Although the initial focus of the alliance’s work has been on wait-time benchmarks for individual procedures, decision-making tools will ultimately be required to compare urgency levels across procedures and assist with resource allocation. Moreover, it is both possible and desirable to promote best practices in the measurement, monitoring and management of wait times across procedures. This too will be discussed in more detail in the Wait Time Alliance’s final report.

**Figure 2: Organizational approach to the project**



The alliance believes that attention must be given to research that examines these complex interrelations. (We note that the CIHR's current call for proposals on wait-time benchmarks is focused on the 5 priority areas as separate entities.)

## Specialty reports

This section provides an overview of the 6 specialty reports. The full reports can be found in Appendix B. Table 1 summarizes the benchmarks identified in the specialty reports featured in this section.

**Table 1: Provisional summary of benchmarks by priority level (unless specified, time refers to calendar days).**

<b>Specialty and procedure</b>	<b>Emergency cases*</b>	<b>Urgent/ semi-urgent cases*</b>	<b>Routine cases*</b>
<b>Diagnostic imaging: radiology</b> CT scans and MRIs	Within 24 h	Urgent: Within 7 days  Semi-urgent: Within 30 days	Within 7 days of scheduled time frame in situations where follow-up imaging is required
<b>Diagnostic imaging: nuclear medicine</b> Myocardial perfusion imaging with either SPECT or PET technology Radionuclide bone scanning F-fluorodeoxyglucose positron emission tomography (FDG-PET)	Within 24 h	Urgent: Within 7 days  Semi-urgent: Within 30 days	Within 7 days of scheduled time frame in situations where follow-up imaging is required
<b>Joint replacement</b> Hip and knee replacement surgery	Within 24 h	Within 30–90 days	9 months: - Within 3 months for consultation - Within 6 months for surgery
<b>Cancer care</b> Radiation therapy	Within 24 h	Individualized on basis of individual need	Within 10 working days
<b>Sight restoration</b> Cataract surgery	n.a.	Higher priority cases have expedited surgery proportional to their relative degree of priority	Within 4 months
<b>Cardiac care**</b> Coronary artery bypass graft surgery	Immediate to 48 h	3–56 days	42–180 days

\*See glossary for definitions.

\*\*The range of benchmarks reflects the differences in terminology used by various provincial programs across the country and the different definitions for each category.

Note: CT = computed tomography; MRI = magnetic resonance imaging; n.a. = not applicable; PET = positron emission tomography; SPECT = single photon emission computed tomography.

### *Diagnostic imaging*

As mentioned above, diagnostic imaging plays a key role in determining access to the other 4 areas, as imaging studies are needed for both pre- and post-treatment in heart surgery, hip and knee replacement and cancer care. Their wait-list capacity depends on the ability of diagnostic procedures to provide services to them. Two members of the alliance provide diagnostic imaging: the Canadian Association of Radiologists (CAR) and the Canadian Association of Nuclear Medicine (CANM).

CAR looked at benchmarks for computed tomography (CT) and magnetic resonance imaging (MRI) as targeted in the 2004 first ministers' 10-year plan. There are no published wait-time benchmarks for diagnostic imaging. CAR members participated in 3 provincial expert panels on benchmarks for diagnostic imaging and examined guidelines in a number of other countries.

Nuclear medicine is a specialty involving the use of radionuclides for the diagnosis and treatment of disease. The CANM has chosen 3 procedures for the development of wait-time benchmarks:

- Myocardial perfusion imaging, with either single photon emission computed tomography (SPECT) or positron emission tomography (PET) technology, used for the diagnosis of coronary artery disease, and in the assessment of patients with an established diagnosis of coronary artery disease.
- Radionuclide bone scanning: Except for a few limitations (multiple myeloma and histiocytosis X), radionuclide bone scanning is the primary imaging examination used to detect bone metastases. It is more sensitive than plain radiography and offers the advantage of providing a survey of the entire skeleton.
- F-fluorodeoxyglucose positron emission tomography (FDG-PET): Used to image cancer, this technology exploits the fact that many tumours hypermetabolize glucose. FDG-PET is a new technology that has emerged over the past decade and is now accepted and funded clinically in most countries of the Organisation for Economic Co-operation and Development (OECD) for the assessment of a number of tumours.

There are substantial variations in wait times for these services and access problems exist for general nuclear medicine procedures, such as bone scanning, cardiac nuclear medicine procedures and bone mineral density measurement. There are no published benchmarks for wait times for these diagnostic procedures.

The 2 organizations coordinated their efforts and have produced a common framework for medically acceptable wait time benchmarks. These benchmarks are based on sound evidence for appropriate use of these diagnostic procedures. Furthermore, clinicians believe these to be acceptable.

- Emergency:** Situations in which there is a risk of mortality or permanent morbidity with increased delay of the examination. The benchmark should be access within 24 h.
- Urgent:** Situations that are unstable and may deteriorate and treatment cannot be initiated until diagnostic imaging study is performed. The benchmark should be access within 7 days.
- Semi-urgent:** Situations involving some pain, dysfunction and disability that are stable and unlikely to be treated quickly. The benchmark should be access within 30 days.
- Routine:** Situations where follow-up imaging is requested within a scheduled time frame. The benchmark should be access within 7 days of the time specified by the referring physician.

CAR stresses that it is essential that benchmarks be used in tandem with appropriateness guidelines to ensure that diagnostic imaging equipment is being used in the most effective and timely manner (discussed in greater detail below).

### ***Joint replacement***

The National Standards Committee of the Canadian Orthopaedic Association (COA) has been overseeing its work on wait-time benchmarks. Although the committee has examined wait times in the context of several procedures, hip and knee replacements are the focus for this report.

For the purposes of its work, the COA used the term “maximum acceptable wait time” or MAWT. In defining this term, the COA states, “if a patient waits longer than the MAWT, some important deleterious effect is incurred or the risk of such an event occurring is significantly increased.”

The issue of severity of a patient’s condition is important in considering acceptable wait-time benchmarks and prioritization. Therefore, a severity rating system is required that can be applied on a universal and objective basis, particularly when arranging for patients’ surgery within a long queue.

To date, the committee has focused on scheduled, elective or routine procedures for patients who are generally not admitted immediately after consultation (i.e., those who are discharged home but may be scheduled for surgery). Urgent and emergent conditions have been deferred for future study.

The committee also distinguished between an MAWT for consultation (from referral to consultation) and an MAWT for surgery (from the decision for surgery to the date of surgery). Both benchmarks are consistent with existing national and international literature in this specialty.

The MAWT benchmarks that have been developed are as follows:

- Consultation: Within 90 days (assuming the patient has been appropriately pre-screened and is ready for surgery)
- Surgery: Within 6 months from the decision date for any scheduled orthopedic procedure (for a total of 9 months for both consultation and surgery MAWT).

Although these are benchmarks for scheduled cases, the committee did prioritize cases:

- Priority 1: A situation that has the potential to deteriorate quickly and result in an emergency admission should be operated on within 30 days.
- Priority 2: A situation that involves some pain and disability but is unlikely to deteriorate quickly to the point of becoming an emergency admission should be operated on within 90 days.
- Priority 3: A situation that involves minimal pain, dysfunction or disability and is unlikely to deteriorate quickly to the point of requiring emergency admission should be operated on within 6 months.

These benchmarks are consistent with the recently released estimate of MAWTs for knee and hip replacements developed by the Western Canada Waiting List Project.<sup>5</sup>

### *Cancer care*

Of the 5 priority areas, cancer is perhaps the most complex due to its range of multiple diagnostic and staging tests and various treatment modalities involving many points of access and wait times for patients.<sup>6</sup> Nevertheless, for the purposes of this project, it was decided to focus on radiation oncology as access to this treatment is seen by many as the greatest concern.

Little research evidence currently exists on medically acceptable wait times for radiation oncology and their impact on patient outcomes. Accordingly, the Canadian Association of Radiation Oncologists used a consensus approach among its members based on the principle that wait times for radiation oncology should be as short as reasonably achievable (ASARA). Other sources of information were considered including international practice and patient's psychological trauma in waiting for treatment. The benchmarks presented below were originally developed in the early 1990s and were subsequently reviewed and endorsed in 2002.

The wait-time benchmarks for radiation oncology are as follows:

- Emergency cases should receive radiation therapy on the day of diagnosis. Urgent cases should receive therapy on the basis of individualized need.

- Routine cases involve 2 components: consultation and radiation therapy. Consultation relates to the interval between the date of the initial referral for radiation oncology and the date of the radiation oncology consultation. The medically acceptable wait time shall not exceed 10 working days.
- The wait time for radiation therapy is the interval between the radiation therapy requisition date (which takes into consideration the health status of the patient, e.g., healing from surgery, and readiness to receive radiation therapy) or consultation date, whichever is later, and the first day of therapy. The medically acceptable wait time for therapy shall not exceed 10 working days.

For multi-modality treatments (e.g., radiation plus chemotherapy), the wait time for radiation therapy is the interval between the target radiation therapy start date and the first day of therapy.

*Other cancer services:* Given the scope and complexity of cancer services, it will be essential to engage other relevant specialties, including general surgery, in a broader discussion of wait-time benchmarks for cancer-related services. These discussions should also include the Canadian Association of Provincial Cancer Agencies.

As noted in Appendix C, the Saskatchewan Surgical Care Network, an advisory committee to Saskatchewan Health has established target time frames for surgical care. It has set a target of performing 95% of cancer and suspected cancer surgeries within 3 weeks.

### ***Sight restoration***

The Canadian Ophthalmological Society chose to focus on wait times for cataract surgery, as this affects the greatest number of patients waiting for sight restoration surgery.

An ophthalmology working group under the Canadian Ophthalmological Society examined available literature and evidence on wait-time benchmarks including the work of the Western Canada Waiting List Project. The working group reached a consensus that 4 months is a reasonable (maximum) medically acceptable wait time for routine cataract surgery with the shortening of the waiting time to be proportional to the relative degree of priority. This benchmark is in line with the estimated maximum acceptable wait time for cataract surgery developed by the Western Canada Waiting List Project.<sup>5</sup>

This wait-time benchmark is consistent with previous Canadian physician surveys about what would be a reasonable wait time and is only slightly longer than acceptable wait times obtained from patient surveys. It is also a reasonably obtainable figure based on collective experience across the country. The committee recognized that there are no empiric data in the literature that define an optimum wait time, but that there are data showing significant morbidity among those waiting (increased risks of falls and hip fractures, higher risks of motor vehicle accidents while on cataract waiting lists).

It was suggested that a standardized prioritization tool be used at the provincial level to ensure that higher priority cases are treated sooner.

## Cardiac care

Cardiovascular care covers the entire continuum from access to a specialist consult, to invasive and non-invasive diagnostic and therapeutic procedures, to rehabilitation and secondary prevention (e.g., life style modification).

In Canada, there are no national standards for access to cardiovascular services and procedures; historically, all work relating to standards and wait times has been conducted at the provincial level. Several provinces, especially Ontario, Quebec, Alberta and Nova Scotia, have invested significant resources in developing and implementing wait time standards for some key procedures, most notably coronary artery bypass graft (CABG) surgery. Examples of provincial benchmarks for CABG are provided in Table 2.

**Table 2: Examples of provincial benchmarks for coronary artery bypass graft surgery.**

<b>Cardiac Care Network of Ontario</b>	<b>Quebec Tertiary Cardiology Network</b>	<b>Alberta Health and Wellness</b>	<b>Province of Nova Scotia</b>
<ul style="list-style-type: none"> <li>- Emergency: immediate</li> <li>- Urgent: within 14 days</li> <li>- Semi-urgent: within 42 days</li> <li>- Elective: within 180 days</li> </ul>	<ul style="list-style-type: none"> <li>- Very urgent: 24 h</li> <li>- Urgent: 72 h</li> <li>- Semi-urgent: 2 weeks</li> <li>- Semi-elective: 6 weeks</li> <li>- Elective: 3 months</li> </ul>	<ul style="list-style-type: none"> <li>-Emergent: within 24-48 hours</li> <li>- Urgent inpatients: 1 week</li> <li>- Urgent outpatients (with scheduled readmission): 2 weeks</li> <li>- Planned outpatients: 6 weeks</li> </ul>	<ul style="list-style-type: none"> <li>-Emergent: 24 hours</li> <li>- in-house urgent: &lt;7 days</li> <li>- Semi-urgent A: &lt;2-3 weeks</li> <li>- Semi-urgent B: &lt;6-8 weeks</li> <li>- Elective: &lt;3 months</li> </ul>

As shown in the table, the urgency categories vary considerably among the provinces. For example, some provincial standards are based on the categories of emergent, urgent, semi-urgent and elective, whereas others distinguish primarily between inpatients and outpatients. Even when category labels are the same, the provincial definitions for these categories may vary. Also, over time, new clinical trials have shed light on additional factors and risks related to wait times for CABG. Thus, the standards in Alberta (a benchmark of 6 weeks for planned outpatients), which are based on the most recent research, are markedly different from Ontario's standards (benchmark of 180 days for elective surgeries). This comparison highlights the need to review and refine standards periodically to ensure that they continue to reflect current research.

As noted above, CABG is a well-established procedure. Newer procedures such as percutaneous coronary intervention (PCI), also known as angioplasty, and the entire field of electrophysiology, have only recently produced the needed research to begin establishing evidence-based standards for medically acceptable wait times.

In the spring of 2004, the Canadian Cardiovascular Society established an Access to Care Working Group with a mandate to develop commentaries on access to cardiovascular services from a national perspective.

Although wait times for cardiac surgery have enjoyed widespread press in the past 10 years or so, all cardiac patients require access to the full continuum of treatment for all indications. Therefore, the working group has identified 8 areas across the continuum and key indicators that require national standards:

- Access to care in emergent and urgent situations
- Access to specialist consultation
- Access to non-invasive cardiac studies (stress test, echocardiogram)
- Access to nuclear cardiology
- Access to revascularization procedures and other cardiac surgeries
- Access to heart failure clinics
- Access to electrophysiology services
- Access to cardiac rehabilitation/heart health lifestyle modification.

For each area, a subgroup will conduct a formal literature review and build a consensus opinion on appropriate medically acceptable wait-time standards. This process will include the development of definitions for appropriate triage categories, reflecting medical urgency. Although the goal is to have evidence-based standards, in many cases, there is insufficient evidence available to support this level of confidence. Where necessary, the subgroup will rely on a consensus of expert opinion.

The initial target is to have this work substantially completed within the next 3–5 months.

### ***Observations***

A review of the 6 reports reveals several areas of commonality. First, most specialties report a dearth of nation-wide benchmarks for their specialty, either in Canada or elsewhere (see also Appendix C for a review of current benchmarks and targets implemented in Canada and abroad). For example, there are no national standards or targets for access to care for cardiovascular procedures or office consultations.

Despite this obstacle, all 6 specialty groups have either identified wait-time benchmarks or are in the process of doing so. No group has said it cannot be done or has declined to take on this challenge. The key message here is that the medical community is able to identify acceptable benchmarks — this is not an obstacle in the process. In addition, the alliance members support the collection and public disclosure of wait-time information.

Another common feature in the reports is that none of the organizations identified acceptable wait times beyond 6 months. This raises the question of whether there should be a maximum wait time beyond which a patient who needs any type of medical care (where appropriateness of intervention is clearly established) should not have to wait. Several industrialized countries, most notably the United Kingdom, have taken this approach.

As noted previously, diagnostic imaging is a special case when it comes to medically acceptable wait-time benchmarks given that it affects wait times for many other specialties (see box below).

#### **The effect of wait times for diagnostic tests on other specialties<sup>7</sup>**

Myocardial perfusion imaging (MPI) may be used to determine which patients presenting with unstable coronary syndromes should be advanced urgently for cardiac catheterization. If urgent catheterization should be carried out within 8 days, then wait times for urgent MPI must be shorter than 8 days for the test to be appropriately used. Conversely when MPI is used to determine risk before major non-cardiac surgery and that surgery has wait times longer than 3 months, then a routine wait time of 2 months for MPI would be acceptable.

As stated in the nuclear medicine specialty report, appropriate wait-time benchmarks for diagnostic tests are contingent on the following principles:

- They are based on the speed with which the information provided is required to plan or execute therapy and thus must be linked to the specific clinical indication.
- Limited access to diagnostic procedures should not serve as an impediment to implementing a treatment plan within agreed upon time frames.<sup>7</sup>

There is common concern among the members of the alliance that the focus on the 5 specialties and a specific set of procedures should not be to the detriment of wait times for other procedures or the coordination of care provided by other medical professionals. For instance, allocating extra resources to cataract surgery may limit access to other important areas such as glaucoma care.

It is apparent that identifying medically appropriate wait times is a fluid and continuous process. Improvements in medical technologies and the adoption of new approaches based on evidence from research are changing the diagnostic and treatment landscape on an ongoing basis. That is why determining the process for developing and refining the benchmarks may be more important over the longer term than the level of a particular benchmark at a given moment in time.

Finally, all of the organizations identified several non-medical issues affecting wait times ranging from resource issues to patient preferences. These are discussed in the next section.

## **5. Enabling factors**

In this section, we summarize numerous factors that can affect development and adherence to medically acceptable wait-time benchmarks.

### **Health human resources**

Perhaps the most obvious factor that can influence wait times is health human resources. This problem is pervasive at all levels. In its report, the Canadian Ophthalmological Society noted that the current shortage of ophthalmologists is expected to become worse because of the decrease over the last 20 years of the number of graduates per year despite increasing demands for services based on demographic changes and advances in technology. In addition, there is a shortage of residency programs in many specialties to accommodate new graduates.

The insufficient numbers of technicians is another problem that can have a profound impact on wait times. For example, the addition of 1 full-time equivalent (FTE) nuclear medicine technologist in Prince Edward Island will result in a 40% increase in the availability of bone density examinations and is expected to reduce wait times from 14 months to 1 month over the next year.

### **Equipment**

Availability of equipment is identified in some of the specialty reports as a cause of excessive wait times. Canada lags significantly behind other OECD jurisdictions in the use of FDG-PET, as has been the case with MRI. An inability to operate equipment at high levels of capacity due to a lack of operating funds can further contribute to the wait times.

Similarly, a shortage of inputs necessary for the equipment or procedure can reduce availability. For example, there are problems with the supply of the radiopharmaceutical most frequently used in cancer imaging.<sup>7</sup> Corneal transplants vary across the country due to lower rates of tissue availability in some regions. Efforts to promote donations of tissue and optimization of notification services so that tissue can be harvested in a timely fashion can improve this.

### **System coordination**

Some specialty reports noted that better coordination within the specialty referral system could make a difference. Orthopedic surgeons, for example, often see patients who are not ready for surgery for a variety of reasons. Greater efficiencies can be achieved by improving how patients are filtered and pre-screened for surgical consultations.

## **Appropriateness**

Some specialty reports raised the issue of appropriateness in the context of the need to ensure that limited medical resources are used as efficiently as possible. This works both ways: ensuring that resources are not used inappropriately and ensuring that access is available so that physicians do not under-refer a service or use a less efficient or effective service as an alternative. According to the Canadian Association of Radiologists: “One of the ways that wait lists can be created is when physicians refer patients inappropriately because they are unsure as to which is the best test or lengthy wait lists for the most appropriate test make a less appropriate test more attractive.” As a result, CAR recommends that benchmarks be used in tandem with appropriateness guidelines (which it has developed) to ensure that diagnostic imaging equipment is being used in the most effective and timely manner.

## **Expectations**

Expectations of patients, providers and funders can all affect wait times. Some patients may choose to wait to be treated by a preferred specialist, thereby affecting his or her wait time. Funders, on the other hand, have to take into consideration competing priorities, which can ultimately affect wait times.

## **Data collection**

Most of the specialty reports identified the need for additional resources to collect and monitor wait-time-related data on an ongoing basis and disseminate them for both public use and research purposes, particularly on a national basis. This should include funding for longitudinal research to measure the effect of targeting specific procedures for wait-time reductions and its impact on other clinical areas. Information technology systems are necessary to support these functions.

## **6. Conclusion and next steps**

*A 10-year plan to strengthen health care*<sup>3</sup> provided a framework for beginning to reduce wait times for health services across Canada in a measured and responsive way. This interim report provides a useful starting point from which to build greater understanding of the wait-time issue and consensus on medically acceptable wait times. The proposed benchmarks capture the input of expert clinicians from across the country and are part of an ongoing process that seeks to engage the medical community. The proposed benchmarks presented in this report are still under review by members of the medical community. As well, the alliance recognizes that there is still a need for input on acceptable wait times from other health care providers, patients and the public and looks forward to working with other stakeholders in the process.

In its next phase of work, the Wait Time Alliance will turn its attention to implementation issues including resource implications, standardizing measurement and monitoring systems and setting targets to reduce wait times. Further, the alliance wishes to focus on the interrelations of benchmarks in the 5 priority areas for care both in terms of priority setting and resources.

In the interim, the alliance puts forward the following proposed next steps for consideration and action by federal, provincial and territorial governments:

1. *Create a steering committee on wait-time strategy:* Using the work of the alliance as one of the key inputs, the federal-provincial-territorial ministers should immediately create a steering committee on wait-time strategy analogous to the very successful Steering Committee on Patient Safety. The steering committee would report to the Conference of Federal-Provincial-Territorial Ministers of Health and would include members from key stakeholder groups, as well as government representation on a regional basis. Five separate expert tables would be created under the auspices of the steering committee to develop wait-time benchmarks, mirroring the 5 priority areas in the first ministers' 10-year plan. This work would unfold over the coming months with a view to meeting the December 2005 commitment set out in the agreement.
2. *Develop a pan-Canadian approach to collecting wait-time data:* With respect to the development of comparable indicators of access and wait times, the Canadian Institute for Health Information should work with provincial and territorial governments to develop a pan-Canadian approach to collecting wait-time data that ensures consistent measurement and monitoring of wait times across the country. There is also a need for immediate and ongoing input from health provider organizations (unlike the process for developing indicators under the 2000 and 2003 health accords).
3. *Set realistic targets to meet benchmarks:* Following development of medically acceptable wait times that are based on input from all key stakeholders, realistic stretch targets should be set as soon as possible toward meeting the benchmark wait times in the 5 priority areas. Governments will then need to direct additional

resources from the Wait Times Reduction Fund to begin reducing wait times in a measured and balanced manner for all levels of urgency.

4. *Monitor progress toward reducing wait times:* To ensure that efforts to improve wait times for the 5 priority areas are not achieved at the expense of reduced access to other medical services, the Health Council of Canada, with the support of provincial and territorial governments, should monitor progress in reducing wait times across the country. The federal, provincial and territorial governments should also develop wait-time benchmarks for other medical services to ensure Canadians' access to all medically necessary care.
5. *Establish a targeted health services research program:* To build capacity and support ongoing policy development in this area, the federal government should allocate significant new resources to a comprehensive program of applied research on access and wait-time issues under the auspices of the Canadian Institutes of Health Research. Funding should also be available to ensure that cross-provincial initiatives, such as the Western Canada Waiting List Project, can continue to provide leadership and guidance on wait time measurement, monitoring and management.

***The Wait Time Alliance's final report is expected to be released in the summer of 2005.***

## ***Appendix A: Glossary of terms***

For the work of the alliance to be clear and consistent, it is important to agree on a set of common terms that to the greatest degree possible can be used across the 5 priority areas. The following definitions are proposed.

### **Emergency**

Immediate danger to life or limb.

### **Medically acceptable wait-time benchmark**

Threshold wait time for a given health service and level of severity beyond which the best available evidence and clinical consensus indicate that the patient's health is likely to be adversely affected. For example, the highest priority patients for primary hip replacement should wait no longer than 4 weeks for surgery.

### **Routine**

Situation involving minimal pain, dysfunction or disability (also called "scheduled" or "elective").

### **Semi-urgent**

Situation involving some pain, dysfunction and disability but that is stable and unlikely to deteriorate quickly to the point of becoming an emergency.

### **Urgency**

The extent to which immediate clinical action is required based on the severity of the patient's condition and considerations of expected benefit.

### **Urgent**

Situation that is unstable and has the potential to deteriorate quickly and result in an emergency admission.

### **Wait time**

- For consultations, the time elapsed between referral by the family physician and the first consult with the specialist
- For specialty and diagnostic tests, the time elapsed between the decision and the delivery of service
- For therapeutic procedures (including surgeries), the time elapsed between the decision to treat and the procedure.

### **Wait-time indicator**

Standardized measure of wait time for a given health service that is comparable across jurisdictions and provides an accurate picture of wait times for a cohort of patients. For example, the percentage of patients needing primary hip replacement who have waited more than 1 year for surgery.

**Wait-time target**

A target wait time for a given health service that may be equal to or exceed the medically acceptable wait-time benchmark for a given proportion of patients. A wait-time target is in effect for a given period of time and represents a step along the continuum to achieving the medically acceptable wait time for all patients. For example, jurisdiction X will aim to have 70% of patients needing primary hip replacement operated on within the benchmark wait time by 2007, moving up to 90% by 2009.

## ***Appendix B: Specialty reports***

### **Canadian Association of Radiologists**

#### **Introduction**

In the 2004 Health Accord, First Ministers committed to achieving meaningful reductions in wait times in 5 key areas; Cancer treatment, heart surgery, diagnostic imaging, joint replacement and sight restoration.

Diagnostic Imaging plays a key role in 4 of the 5 key areas, since imaging studies are needed in both pre and post treatment in the case of heart surgery, hip and knee replacement and cancer. Their wait list capacity depends on the ability of diagnostic radiology to provide services to them. Patients are also not willing to endure lengthy waits for access to the diagnostic imaging studies their physicians need in order to make a diagnosis and determine a course of treatment for them.

Diagnostic imaging is part of the flow of information that is needed to restore a patient back to a state of health. It is the front gate through which these patients must enter before they can access the rest of the healthcare system.

The Canadian Association of Radiologists (CAR) has initiated and participated in many studies of wait times for diagnostic imaging procedures in Canada. All of the studies have identified major access problems for imagery tests and more specifically for CT, MRI, DMD and US.

Unlike other diagnostic imaging exams CT has the ability to image a combination of soft tissue, bone and vessels. CT is especially useful in searching for lesions, tumors and metastasis and does not only reveal the site but also the size, spatial location and extent of a tumor. CT has become the initial approach for evaluation or detection of many cancers and heart diseases. Therefore in the context of the 5 in 5 plan of the Government CT is really a priority.

The application of MRI for stroke investigation and Magnetic Resonance Angiography (MRA) for evaluating intra-cranial aneurism and vascular occlusion disease make this modality a tool of choice in the management of such cases. Also MRI's are used to scan areas such as joints and the brain for a wide range of conditions. This is very significant in the area of orthopedic surgery especially for hip and knee replacement. Thus making this modality a priority for access.

Since the Health Accord is specifically targeting wait lists for CT and MRI as first priorities, the expert panel has decided to limit their comments on those two modalities.

Ultrasound is well established and used in many fields of medicine. Common applications include the diagnosis of gallstones, tumors of the liver or kidney and the sex, position and size of babies in the uterus. The advent of 4D imaging in US now allows clinics to see fetal motion, behavior and surface anatomy which will make US a key diagnostic tool and if present access problems are not advanced another crisis may be looming.

The same goes for BMD. Bone fracture is a common health problem amongst older women and a major cause of morbidity, disability and reduced quality of life. Osteoporosis predisposes women to bone fracture, with hip fracture a particular concern. BMD exam helps prevent fractures and complications resulting from them thus saving significant cost to the healthcare system. The wait list problem is therefore of significant importance and should be targeted as soon as possible.

## **Methodology**

For each modality we have retrieved literature using a defined search strategy. On the Dialog System, the Medline, Embase, Inspec, Biosis Previews and Pascal Databases a cross-search using the duplicate removal feature was performed. The search strategy included descriptor and key words for CT and MRI in the cardiovascular thoracic and neurological areas.

The Committee used recently developed CAR Guidelines for imaging and a search was made of the following for guidelines related to appropriate use:

1. CMA infobase clinical practice guidelines
2. American College of Radiology (ACR) appropriateness criteria
3. The Royal College of Radiologists guidelines

In addition, the Committee used the recent work of provincial committees and reports on the same subject:

1. Alberta Diagnostic Imaging Advisory Committee Report
2. Nova Scotia wait time Diagnostic Imaging Committee Report
3. The Ontario CT / MRI Wait List Expert Committee Report

The following principles were adopted regarding waiting, the benchmarks for diagnostic tests:

- They are based upon the speed with which the information is regarded to plan or execute therapy and thus must be linked to the specific clinical indication.
- Limited accessibility to diagnostic imaging technology should not seem as an impediment to implementing a treatment plan with agreed upon the frames.

An additional search of the web for wait time target information yielded a number of sources listing current wait times for access to radiotherapy, orthopedic surgery, cardiac catheterisation, cardiac bypass grafting, cardiac angioplasty, vascular surgery and orthopedic surgery. This data was used to estimate appropriate wait times based on the above principles.

Benchmarks are needed in order to ensure that patients receive timely access to the diagnostic imaging studies that are critical to their receiving appropriate treatment promptly. However, the use of appropriateness guidelines plays a key role in ensuring that patients are being appropriately referred to the test. With 35 million diagnostic imaging exams being

performed each year and an annual increase of 3% it is essential that we avoid inappropriate referrals and the associated costs to the healthcare system. One of the ways that wait lists can be created is when physicians refer patients inappropriately because they are unsure as to which is the best test or lengthy wait lists for the most appropriate test make a less appropriate test more attractive.

A Committee of the CAR has developed appropriateness guidelines for the use of Diagnostic Imaging services the guidelines offers a three-tiered rating evaluation system. Scientific evidence indicates that the Diagnostic Imaging exam rated "A" is the most effective for assessing a given clinical symptom, while "C4" has the least scientific evidence to support a referral.

### **Benchmarks**

There are no published benchmarks for wait times for diagnostic imaging exams. However we have developed these benchmarks based upon sound evidence for appropriate utilization for these modalities. Furthermore, clinicians believe these to be acceptable.

We have adopted the following definitions:

- Emergency: Situations where there is a risk of mortality or permanent morbidity with increased exam delay. Benchmark access within 24 h.
- Urgent: Situation that is unstable and has the potential to deteriorate with this and treatment cannot be initiated until diagnostic imaging study is preferred. Benchmark access within 7 days.
- Semi-Urgent: Situation involving some pain, dysfunction and disability that is stable and unlikely to be treated quickly. Benchmark access within 30 days.
- Routine: Situation where follow-up imaging is requested within a relative time frame (scheduled). Benchmark access within 7 days of the specified time line suggested by the referring physician.

### **Priority criteria**

Priority tools are defined as a consistent way to prioritize cases. While they may be useful in determining the most urgent cases on a short list of patients waiting for access to CT or MRI scans, it is very difficult to use priority tools effectively to prioritize patients on a long waiting list. Priority tools would have to be applied to a patient's overall situation - not only individual aspects, since a patient with limited symptoms could potentially be in a critical situation.

Another challenge is that if a physician is able to determine how a patient's health situation is evolving, this suggests that they may already have a diagnosis and raises questions about the need for a diagnostic imaging test. Attempts to create effective priority tools to manage wait lists have indicated that they are of a limited value. For example, The Western Canada Wait List Initiative was unable to develop priority criteria for MRI of the brain that led to clinically useful priority criteria.

## **Conclusion**

The First Minister's Meeting on the Future of Healthcare in September identified diagnostic imaging as one of five key areas where wait lists need to be reduced. Radiology plays a crucial role in the healthcare system as the precursor to patients receiving treatment; without a diagnosis, patients cannot be treated and returned to a state of good health. Given the rapidly changing technological environment and its impact on diagnostic imaging, it is difficult to propose evidence based benchmarks. However, three expert panels that independently analyzed available data from around the world reached the same conclusions and made similar recommendations regarding benchmarks. These are the benchmarks that the Canadian Association of Radiologists proposes to be used as national benchmarks for wait lists. It is essential that benchmarks be used in tandem with appropriateness guidelines to ensure that diagnostic imaging equipment is being used in the most effective and timely manner.

## Canadian Association of Nuclear Medicine

### Introduction

In the 2004 Health Accord, the First Ministers committed to achieving meaningful reductions in wait times in 5 key areas; Cancer treatment, heart surgery, diagnostic imaging, joint replacement and sight restoration. Nuclear medicine is a specialty involved in the use of radionuclides for the diagnosis and treatment of disease. The majority of nuclear medicine procedures involve medical imaging; nuclear medicine plays a role in 4 of the 5 key areas identified by the ministers.

The Canadian Association of Nuclear Medicine (CANM) has initiated a study of wait times for a number of nuclear medicine procedures in Canadian provinces (the territories do not provide nuclear medicine services). To date we have identified that there are substantial variations in wait times for these services and access problems for general nuclear medicine procedures such as bone scanning, cardiac nuclear medicine procedures and bone mineral density measurement. The CANM has chosen three specific procedures for the development of wait time benchmarks.

The first is myocardial perfusion imaging, with either SPECT or PET technology, used for the diagnosis of coronary artery disease, and in the assessment of patients with an established diagnosis of coronary artery disease. This test has been well validated and its appropriate utilization is described in a number of consensus practice guidelines.<sup>1-3</sup>

Except for a few limitations (multiple myeloma and histiocytosis X), radionuclide bone scanning is the primary imaging examination used to detect bone metastases. It is more sensitive than plain radiography and offers the advantage of providing a survey of the entire skeleton. Bone scanning may also be used to assess for the effectiveness of treatment and are helpful to determine when radionuclide therapy for palliation may be indicated.<sup>4,5</sup>

Finally, <sup>18</sup>F – fluorodeoxyglucose positron emission tomography (FDG-PET) is used to image cancer; this technology exploits the fact that many tumours hypermetabolize glucose. FDG-PET is a new technology which has emerged over the past decade and is now accepted and funded clinically in most countries in the OECD for the assessment of a number of tumours (Table 1).<sup>5-14</sup> Most recently this imaging technology has been combined with CT scanning resulting in the production of fused anatomical (CT) and functional (glucose metabolism) images. As was the situation with the introduction of MR imaging, Canada lags significantly behind other jurisdictions in the implementation of this technology, which is only now in the process of being introduced to practice in Quebec, Ontario, Manitoba, Alberta and British Columbia.

## **Methodology**

### ***Derivation of benchmarks***

For each of the three procedures in question a search was made of the following for guidelines related to appropriate use:

- CMA Infobase Clinical Practice Guidelines (<http://mdm.ca/cpgsnew/cpgs/index.asp>)
- American College of Radiology (<http://www.acr.org>)
- The Royal College of Radiologists (<http://www.rcr.ac.uk/>)
- The American College of Cardiology (<http://www.acc.org/>)
- Canadian Cardiovascular Society (<http://www.ccs.ca/>)
- Cancer Care Ontario (<http://www.cancercare.on.ca/>)

The following principles were adopted regarding appropriate waiting time benchmarks for diagnostic tests:

- They are based on the speed with which the information provided is required to plan or execute therapy and thus must be linked to the specific clinical indication;
- Limited accessibility to diagnostic procedures should not serve as an impediment to implementing a treatment plan within agreed upon time frames

A search of the web for wait time target information yielded a number of sources listing current wait times for access to radiotherapy, orthopedic surgery, cardiac catheterization, cardiac bypass grafting, cardiac angioplasty, and vascular surgery.<sup>15-21</sup> This data was used to estimate appropriate wait times for related nuclear medicine procedures based on the principles above.

### ***Clinical input***

The proposed wait time benchmarks for myocardial perfusion imaging have been reviewed by clinicians through the Canadian Cardiovascular Society and the Canadian Society of Nuclear Cardiology. The benchmarks for FDG – PET have been correlated with those previously derived through a review process of the disease site groups at the Juravinski Cancer Centre in Hamilton, ON.

### ***Patient input***

To date there has been no formal consultation with patient groups in the development of these benchmarks

### ***Resource implications***

The survey of facilities indicates that in jurisdictions with excessive wait times for access to myocardial perfusion imaging that insufficient instrumentation is available. Investment into PET imaging instrumentation and cyclotron/radiochemistry facilities is also required. Furthermore, a major limiting factor to the implementation of FDG – PET imaging persists in that FDG, the radiopharmaceutical most frequently used in cancer imaging is not an approved drug in Canada. Because of the short half life of the product (109 minutes), it must be produced in facilities near the imaging site. In Canada, the existing production sites are all within university centres which have faced a crippling regulatory burden which has stained them financially and limited academic output. Two new drug submissions are accepted by BGTD for an expedited review, but the department is in backlog and there is concern that these submissions may not be dealt with for up to 3 years.

### **Benchmarks**

There are no published benchmarks for wait times for diagnostic procedures. However we have developed these benchmarks based upon sound evidence for appropriate utilization for these diagnostic procedures. Furthermore clinicians believe these to be acceptable. We have adopted the following definitions:

- Emergency Cases – there is a risk of mortality or permanent morbidity with increased exam delay. Benchmark access within 24 h.
- Urgent Cases – the patient’s condition may change and treatment cannot (or ideally should not) be initiated until diagnostic imaging studies are performed. Benchmark access with 7 days.
- Semi Urgent Cases – the patient’s condition involves pain, dysfunction or disability but is stable. Benchmark access within 30 days.
- Routine – imaging studies are required to appropriately manage the patient’s care. The wait time defined has been established such that established clinical benchmarks can be met. Benchmark access within 7 days of requested appointment by referring physician.

### **Considerations**

#### ***Ensuring appropriate use***

Adequate access to imaging technologies would assist in ensure that the best test to answer the clinical problem is performed first, reducing inappropriate use of diagnostic services and possibly decreasing the overall utilization. However in an environment of rapidly increasing information it is difficult for each individual practitioner to maintain current knowledge of appropriateness information. The incorporation of decision support tools into Hospital and Facility Information systems (Order Entry Modules) could assist physicians and other practitioners in making appropriate decisions as to the use of diagnostic tests.

### ***Monitoring the system***

The majority of nuclear medicine departments use their institution's Radiology Information System (RIS) to book studies, create and issue reports. Parameters such as urgent and routine wait times, time from booking to exam completion, time from completion to reporting, and time from reporting to transcription are monitored. It should be possible to routinely collect that data for selected studies to monitor both wait times and wait time trends. Unfortunately, data held within the RIS is frequently collected according to province specific fee schedules and is not directly comparable from jurisdiction to jurisdiction. The creation of a Canada wide procedure listing which could be linked to province specific fee schedules would enable the routine collection of this data. It is important that accurate data be collected both from hospitals and independent health facilities, which, in some jurisdictions, perform a significant proportion of diagnostic tests.

### ***Impact on other services***

Myocardial Perfusion Imaging (MPI) has the potential to ensure that patients are appropriately triaged for access to cardiac catheterization. The use of MPI in this manner has been shown to be cost effective and the risk to patients is reduced.<sup>22</sup>

Similarly FDG-PET imaging has been demonstrated to reduce costs and improve care. For example, FDG-PET imaging to stage lung cancer has been demonstrated to reduce the number of futile thoracotomies in patients with early lung cancer.<sup>23</sup> This enables the delivery of appropriate care to the patient and improves cost-effectiveness.

### ***What would be the effects if these benchmarks were not followed?***

Clinicians and their patients expect that diagnostic data will be available to them sufficiently quickly that they will be able to create and implement a treatment plan in an acceptable time frame. In the case of wait times in excess of these benchmarks, clinicians will use alternate staging methods to expedite care. Alternative diagnostic methods may be less accurate, more invasive, or more costly. Furthermore, any wait time in excess of 4 to 6 weeks (20–30 working days) will result in difficulties in maintaining continuity of care, and, in particular, scheduling difficulties in the physician's office.

***Do you have any (non-financial) suggestions on how these benchmarks could be met?***

The introduction of FDG-PET to the Canadian health care system requires that Health Canada introduce a process, similar to that of the FDA, to rapidly evaluate 18F-Fluorodeoxyglucose new drug submissions from each of the production facilities.

**Table 1. Indications for clinical use of <sup>18</sup>F-FDG.**

<b>Indication</b>	<b>United States</b>	<b>European Union</b>	<b>Australia</b>
Brain			E
Breast	S,R,M		
Colorectal	D,S,R	E,M	S,R
Head and Neck	D,S,R,	A	
Lung	C,D,S,R	D,A,E	E,S
Lymphoma	D,S,R	A,D	
Melanoma	D,S,R	A	E
Thyroid	R		
Cervix			S
Esophagus	D,S,R		S
Ovary			E
Stomach			S
Myocardial Viability	D	D	D

A = assessment

C = characterization

D = diagnosis S = staging

E = evaluation

M = monitoring

R = re-staging

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# **The National Standards Committee of the Canadian Orthopaedic Association**

Ted Rumble and Hans J. Kreder (Co-chairs)  
March 2005

## **Definitions**

Different definitions used to measure actual patient waiting times include mean, median, mode, minimum and maximum. In theory a benchmark could be set for each of these measures. Mean, median and mode waiting time benchmarks would ignore the fact that many patients may wait significantly longer than these times, while the overall group may well meet the benchmark as most wait distributions are right skewed. Moreover one must also consider that benchmarks will be applied at the individual patient level (how long should this particular patient wait) albeit overall monitoring of adherence to the benchmark will consider larger patient groups.

Some have advanced the concept of “ideal wait time” as the basis of benchmarking. Most individuals waiting for service of any kind would probably state that an ideal wait time would be immediate service, making it difficult to operationalize a definition of what constitutes an ideal wait. The concept of maximum acceptable wait time is easier to define at least in theory. It implies that some important deleterious effect (emotional, economic, quality of life, etc.) is incurred or that the risk of such an event occurring is substantially increased beyond the acceptable wait time. For example, while it is ideal to establish blood flow immediately to someone with an anoxic brain, the maximum acceptable time to do so is about two minutes before brain cell death and irreversible damage ensues. After consideration of the issues and the benchmark definitions used in most other jurisdictions around the world, the committee decided to recommend using maximum acceptable wait time (MAWT) for benchmarking purposes. MAWT benchmarks should be based on the best available evidence and be constantly updated as new information becomes available.

## **General approach**

The committee reviewed how other jurisdictions had handled the issue of benchmarking considering that there are many different procedures that could potentially be benchmarked and that patients waiting for treatment within a given condition category might vary dramatically in terms of treatment urgency. Some jurisdictions have taken the approach of drawing up separate benchmarks for individual diagnostic or operative procedures (see Saskatchewan in Appendix I) while others have considered priority ratings that can be applied to any patient irrespective of the diagnosis or procedure. After careful review, the committee felt that the former approach is flawed in the sense that not all patients within a diagnostic (or procedural) category require intervention with equal urgency so that a priority rating tool is still required. Thus the committee has recommended adoption of a wait time benchmark based on priority rating categories. Additional ranking of the patients within a priority category was also considered.

## Benchmarks for maximum acceptable waiting time

The committee focused the discussion as follows:

1. Only scheduled procedures were considered at this time. Urgent and emergent conditions were deferred for future study. Scheduled patients are those that are generally not admitted immediately after consultation (i.e. those that are discharged home but may be scheduled for surgery). Although some acute fractures and soft tissue injuries (locked knee) are discharged home and scheduled in upcoming OR time, we excluded all acute fractures and soft tissue injuries from consideration as scheduled procedures at this time.
2. The MAWT from referral to consultation (*wait for consultation*) was considered separately from the wait after decision for surgery date to surgery (*wait for surgery*).

### *Wait for consultation*

*Efficiency gains through better patient filtering*

In many communities orthopaedic surgeons see many patients who are not ready for surgery for a variety of reasons. The committee emphasized the merits of filtering patients before referral to an orthopaedic surgeon's office for maximum efficiency. The Alberta efforts were discussed, whereby patients will be evaluated at regional centres for a variety of conditions to optimize non-surgical care and to then refer for surgery when appropriate. Alternatives include better primary care provider education on the management of orthopaedic conditions and the proper place of surgical referral. While more orthopaedic education is clearly required in medical student training, this will not lead to changes for some years to come, and the concept of regional centres was considered a preferred option.

*Efficiency and patient satisfaction gains through surgeon extenders*

When a pre-screened patient is referred for surgery much routine work could be undertaken by a physician assistant (PA) or surgeon extender (for example: review of systems, allergies, medications & preoperative education). Evidence in the US indicates that patient satisfaction with PAs is high and that their presence in the clinical setting improves surgeon productivity.

### *MAWT for consultation*

*The committee recommends that no patient referred to an orthopaedic surgeon should be asked to wait longer than 3 months under any circumstances. This recommendation is based on policies in other jurisdictions and the consensus of the committee.*

### *Wait for Surgery (following mutual decision to operate after consultation)*

*MAWT for surgery*

*The committee recommends that no patient be asked to wait longer than 6 months after the mutual patient / surgeon decision is made to operate. The patient's actual MAWT for surgery*

is determined by that patient's priority rating (see below). This recommendation is based on policies in other jurisdictions and the consensus of the committee.

*Priority rating*

After reviewing the available tools used in other jurisdictions, the committee decided to recommend adopting a priority rating scheme similar to one used in Australia. There the priority rating is assigned at the time of surgical booking and becomes part of the patient record.

***Priority 1:*** *A situation that has the potential to deteriorate quickly and result in an emergency admission should be operated within a MAWT of 1 month.*

***Priority 2:*** *A situation which involves some pain and disability but which is unlikely to deteriorate quickly to the point of becoming an emergency admission should be operated within a MAWT of 3 months.*

***Priority 3:*** *A situation that involves minimal pain, dysfunction or disability and which is unlikely to deteriorate quickly to the point of requiring emergency admission should be operated within a MAWT of 6 months.*

*Western Canada Waiting List Project MAWT*

In February 2005, the Western Canada Waiting List Project (WCWL) released the Final Report, *Moving Forward*, outlining MAWT benchmarks for hip and knee replacement surgery. Utilizing three clinically relevant levels of urgency ranging from least urgent (Urgency 1) to most urgent (Urgency 3), the report proposes the following maximum acceptable waiting times:

Urgency III (most urgent)	1 month
Urgency II	3 months
Urgency I (least urgent)	5 months

The WCWL urgency levels are based their prior work developing and validating a priority screening tool. These represent clinically distinct and relevant patient populations (see Appendix II)

These benchmarks are primarily based on clinical, patient and public input. Orthopaedic surgeons reviewed standardized patient cases developed using the WCWL priority criteria and determined maximum acceptable waiting times. Patients scored with the priority criteria also recommended a maximum acceptable waiting time based on cases like theirs. Members of the public may not hold the clinical or patient experience to make direct MAWT judgements. As a result, the WCWL report used an indirect methodology in which members of the public would choose among different clinical scenarios taken from the priority criteria. Analysis of these responses determined the public MAWTs. Patient and surgeon responses were consistent while the public MAWTs were longer. The following table outlines the

clinical, patient and public inputs for MAWTs (from the WCWL 2005 Final Report, *Moving Forward*):

	Clinical	Patient	Public
Urgency III (most)	1 month	1 month	7 months
Urgency II	3.25 months	2 months	21.75 months
Urgency I (least)	6.5 months	3 months	36.75 months

<i>Relative patient ranking</i>
---------------------------------

Within each priority category, the most urgent patients should ideally receive surgery before less urgent patients, taking into account various patient, social and disease related factors.

The committee reviewed a number of existing priority and disease severity rating tools and made the following points:

1. Prioritization tools are mainly required when arranging patients for surgery within a long queue. If all patients meet their priority specific benchmark, the need for severity rating and prioritization within that category becomes much less acute.
2. Simple universal priority rating tools are preferred. It would be cumbersome to utilize a different tool for each condition.
3. An ideal tool would have high inter and intra-rater consistency and minimize “gaming”.

Among the tools reviewed were the WOMAC and WCWL. The WOMAC may be collected for all total hip and total knee replacement patients as a preoperative severity rating tool and may be used to monitor the effectiveness of treatment after surgery.

The Western Canada Waiting List Project (WCWL) has developed a priority screening tool for prioritizing patients waiting for hip and knee arthroplasty (see Appendix II). While continued validation of the tool is ongoing, existing data support the tool as a measure of physician-rated urgency. In its February 2005 report, the WCWL further adapted this tool for primary health care to prioritize referrals to orthopaedic surgeons based on urgency.

Longer-term the committee recognises the need to develop and validate priority screening tools for orthopaedic procedures beyond TJA. Tools that are condition specific would require considerable effort for a surgeon with a varied practice casemix. In the future, as wait times become shorter, relative priority ranking may become less and less important.

### **Adherence to benchmarks**

There is little value in setting benchmarks unless policy and resources are put into place to ensure compliance. To monitor the effectiveness of such policy it is imperative that actual wait times be periodically measured. It is anticipated that over time the number of persons exceeding the MAWT will be brought down eventually to zero. Specific policy targets

should be set in this regard (i.e. bring the percentage exceeding MAWT down by 50% next year).

### ***Collection of waiting time data***

Although supporting the collection and public disclosure of wait time information, the committee realizes that such an endeavour is significantly resource intensive and the Canadian Orthopaedic Association lacks the necessary resources to accomplish this task on its own.

The joint registries that are supported in part by the COA are potential vehicles for national monitoring of care provided to total hip and total knee replacement patients but this leaves many other procedures un-monitored and at risk of suffering at the expense of programs designed to improve access to care for hip and knee replacement patients. Potentially, cooperation with federal & provincial ministries and agencies would best accomplish data collection objectives

The committee encourages authorities to implement the requisite resources for wait time data collection. Additional information that will need to be collected as part of the medical record includes the date of patient referral, surgical booking (decision date) and priority ranking at the time of booking. Ensuring compliance in the collection of this data across the country might be challenging. Requiring this data at the time of submitting a surgical booking is one possible measure to ensure complete data collection.

### ***Public disclosure of wait times***

*Overview*

Public access to information regarding wait times is of interest to patients, providers and policy makers. Regional information regarding wait times and adherence to MAWT benchmarks would provide the public with a sense of the magnitude of the problem of access to orthopaedic care in general as well as highlighting potential regional disparities. This information could then be used to lobby policy makers for the necessary resources to address the problem. The availability of surgeon specific data would provide patients and referring doctors with the necessary information to make an informed choice regarding which surgeon to approach with a referral.

The committee supports the concept of public access to information regarding regional and individual surgeon wait times for consultation and for surgery. This information needs to be accurate and updated on a timely basis. Surgeon specific data could be released in the form of mean or median wait times or as the percentage of patients waiting longer than the MAWT. There may be some sensitivities around the publication of mean wait times for surgeons with excessively long or short queues and the dissemination of information regarding percentage of patients exceeding the MAWT may be more acceptable to surgeons while still providing useful information to the public.

*Patient choice*

The committee considered that a patient may choose to wait for surgery with a given surgeon, even if that surgeon has a large percentage of patients who receive care in excess of

the MAWT. Provided that alternative providers in the region are available to the patient, and that the regional wait times are within the benchmark, the patient would be able to avail themselves of timely care, but would retain the ability to choose the provider of their choice.

*Resource allocation*

Ideally resources would be allocated to regions where the benchmarks are not being met. To achieve this while maintaining equity and fairness may be difficult. As noted above, the committee felt strongly that patient choice must be preserved. As such, patients may choose to stay in long queues providing they are made aware of how they might access care more quickly. It would be impossible to preserve equity if additional resources were made available specifically to those providers with a long queue at the expense of the other providers in the region. Moreover such a system might be gamed by booking patients onto the wait list early in the disease process if it meant that more resources would be allocated to that surgeon. While the committee discussed these issues at length no clear implementation plan for resource allocation to regions below the MAWT benchmark was finalized.

***Which wait times should be monitored?***

There is considerable danger that as attention and resources are allocated to one condition, the wait time for other procedures may be adversely affected. While it would be ideal to monitor the wait times for each conceivable specific condition, it may be more useful to monitor adherence to benchmarks by considering common and effective procedures from various subspecialties rather than individual operations, at least in the initial phase of monitoring. Such procedures might be termed “sentinel” procedures.

We considered that sentinel procedures should possess the following attributes:

- a. Apply to an important condition that is proven to benefit from orthopaedic treatment (surgery)
- b. Apply to a relatively common condition that represents an important proportion of services or cost to orthopaedics as a whole or to the subspecialty area in question
- c. Are measurable and routinely collected so that the number of individuals are treated inside and outside of the MAWT benchmark can be tracked over time (i.e. in CIHI or other billing / administrative databases).

The committee produced a list of potential sentinel procedures to track based on the above criteria and proposed that these be circulated to the membership for consideration and possible modification. In drawing up the list we reviewed the top 50 procedures in Ontario by cost and by frequency of service.

List of procedures:

1. Upper extremity: instability surgery
2. Lower extremity: hip & knee replacement
3. Spine: lumbar disectomy
4. Pediatrics: scoliosis, clubfoot, DDH
5. Sports med: ligament repair
6. Foot & ankle: Forefoot reconstruction including bunions
7. Non-acute trauma related: nonunions, malunions

## **Legal issues**

If payors, hospital administrators, providers and patients agree on a specific time limit for treating a specific condition, it follows that pressure can be brought to bear on payors and administrators to provide the necessary operating room and support resources to ensure that the timelines can be realized. Moreover, if a system of monitoring wait times is in place, the effect of policy initiatives can be evaluated over time to ensure that resources are made available in a cost effective manner.

There is always concern that guidelines will be used to litigate or punish those who failed to provide treatment according to the guideline. What if a surgeon did not operate on a patient within the suggested time limit despite having sufficient resources available? Is he or she liable for any adverse consequences the patient may have suffered? Historically, guidelines have not been successfully used to prosecute providers. While this is a theoretical concern, it is much more likely that benchmarks will be used to the benefit of our patients than to the detriment of care providers. We must also be careful to advise users of the guidelines that each circumstance must be individualized to some degree and that the benchmark is simply a guideline.

The committee has obtained legal opinions that have been forwarded to the COA executive for review.

## **Literature review**

Apart from the literature concerning emergent conditions (such as compartment syndrome, ischemia, etc.), there has been little data published regarding the effect of delay to treatment for orthopaedic conditions other than TJR surgery.

Evidence from the literature indicates that timely access to TJR is advantageous both clinically and economically.

Early TJR surgery is associated with better functional outcomes. Fortin et al. (2002) followed a group of 165 THR/TKR surgery patients in Boston and Montreal assessing pain and function using the WOMAC and SF-36 at baseline, six months and two years.

Improvements in pain and function at two years were similar to those observed at six months. In addition, patients with worse WOMAC and SF-36 scores at baseline had comparatively worse function six months and two years after surgery. They conclude that early surgical intervention in the course of functional decline is warranted. An earlier study by Fortin et al. (1999) also indicated that THR/TKR patients with better function before surgery had better function six months post-surgery.

Holtzman et al. (2002) investigating hip arthroplasty (using Medicare administrative data in Minneapolis) echoed Fortin et al's findings. They measured activity level, pain, ability to walk and ability to perform Instrumental Activities of Daily Living (IADLs). In all cases, patients with worse pre-operative status were more likely to be worse off one year post-surgery. They conclude that patients who are more likely to benefit from total hip

arthroplasty are those with graver pre-operative status. Still, superior pre-operative status is associated with better outcomes.

Also in a 2002 study, Hajat et al. concur that measures of pain and function are worse one year later among patients with worse scores prior to THR. And patients who waited more than twelve months for consultation with a surgeon or for the actual surgery suffered significantly worse measures of pain and function twelve months post-THR.

Health status declines while waiting for surgery. Killi et al. (2003) indicate that Harrison hip scores declined significantly with time on the waiting list for THR. The median wait for surgery in the study is 330 days. They conclude that patients requiring total hip replacement deteriorate while on the waiting list. Waiting times should be as short as possible to reduce unnecessary suffering. Mahon et al. (2002) conclude that clinically important losses in HRQOL and mobility occur in patients waiting more than 6 months for THA.

It is well known that patients lose knee range of motion as their arthritis worsens. It is also known that the ROM achieved by TKR is primarily determined by the pre-operative ROM. Hence, a long wait for TKR is likely to leave patients with less ROM than they might have had if their surgery had not been delayed.

Saleh et al (1997) carried out an economic analysis to determine whether there were economic advantages to performing THA early rather than having patients wait. They conclude that there is the potential for substantial savings in resources as a result of timely surgery.

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### Appendix I: Intentional comparison: MAWTs

Sweden	<ul style="list-style-type: none"> <li>-guarantee on the national level for visits in primary care (non-urgent patients should get a visit within 7 days)</li> <li>-referral to a specialist should not take more than 90 days</li> <li>-plans to introduce a waiting time guarantee of three months for all elective treatment</li> </ul>
New Zealand	<ul style="list-style-type: none"> <li>- a maximum waiting time of six months for first specialist assessment</li> <li>- all patients with a level of need which can be met within the resources (funding) available are provided with surgery within six months of assessment (decision to treat)</li> </ul>
Finland	<ul style="list-style-type: none"> <li>- at present there are no maximum waiting time guarantees</li> <li>- discussions about such initiatives for the future</li> </ul>
Ireland	<ul style="list-style-type: none"> <li>- There is no waiting time guarantee in Ireland</li> <li>- A 2001 government strategy document outlined these goals: <ul style="list-style-type: none"> <li>-By the end of 2002—12 month wait</li> <li>-By the end of 2003—6 month wait</li> <li>-By the end of 2004—3 month wait</li> </ul> </li> </ul>
Spain	<ul style="list-style-type: none"> <li>-maximum waiting time guarantee in Spain set by each regional health service</li> <li>-maximum waiting time is set to six months except for cardiac surgery</li> </ul>
Australia	<ul style="list-style-type: none"> <li>- public patient requiring elective surgery is assigned to an elective surgery category</li> <li>-Category 1: Admission within 30 days desirable for a condition that has the potential to deteriorate quickly to the point that it may become an emergency.</li> <li>-Category 2: Admission within 90 days desirable for a condition causing some pain, dysfunction or disability but which is not likely to deteriorate quickly or become an emergency</li> <li>-Category 3: Admission at some time in the future acceptable for a condition causing minimal or no pain, dysfunction or disability, which is unlikely to deteriorate quickly and which does not have the potential to become an emergency</li> </ul>
United Kingdom	<ul style="list-style-type: none"> <li>-Achieve a maximum wait of four months (17 weeks) for an outpatient appointment and reduce the number of &gt;13-week outpatient waits by March 2004, as progress towards achieving a maximum wait of three months for an outpatient appointment by December 2005</li> <li>-Achieve a maximum wait of nine months for all inpatient waits and reduce the number of six-month inpatient waits by 40 per cent by March 2004, as progress towards achieving a maximum six-month wait for inpatients by December 2005 and a three-month maximum wait by 2008. This will ensure an overall reduction in the total list size and reduction of at least 80 per cent by March 2005 in the number of over six month inpatient waits from the March 2004 baseline</li> <li>- In all other inpatient and day case treatment, including orthopaedic treatment, the current maximum waiting time for 2004-05 was 18 months, but on 30th June 2004 the Minister announced that the 2nd Offer Scheme will be extended to support a maximum length of wait of 12 months by the end of March 2005</li> </ul>
Saskatchewan	<ul style="list-style-type: none"> <li>-Elective</li> <li>-1 week: locked knee, malignant bone tumour, secondary placement of fracture, implant failure (fracture&amp; infection), some cases of peripheral nerve injury</li> <li>-2 weeks: acute tear of major tendon or meniscus in active patient athletes, recent acute lumbar disc protrusion with paralysis, paresis or severe pain, some cases of implant failure and peripheral nerve injury</li> <li>-6 weeks: selected joint replacement (polyarthritis, bilateral disease, revision or when indicated by concomitant disease, recurrent dislocation of total joint, subacute implant infection, congenital dislocation of the hip, routine spinal disk herniation, rotator cuff repair, knee arthroscopy</li> <li>-3 months: club foot correction, anterior cruciate reconstruction, shoulder acromioplasty, selected joint replacements, selected spinal fusion</li> <li>-6 months: all elective surgery</li> </ul>

**Appendix II: Developing priority criteria for hip and knee replacement: results from the Western Canada Waiting List Project**

*Can J Surg* 2003;46(4):290-6.

**Arnett G, Hadorn DC; Steering Committee of the Western Canada Waiting List Project.**

Western Canada Waiting List Project Hip and Knee Replacement Panel, Edmonton, Alta.

**INTRODUCTION:** The Western Canada Waiting List Project (WCWL), a federally funded partnership of 19 organizations, was created to develop tools for managing waiting lists. The WCWL panel on hip and knee replacement surgery was 1 of 5 panels constituted under this project. **METHODS:** The panel developed and tested a collection of standardized clinical criteria for setting priorities among patients awaiting hip and knee replacement. The criteria were applied to 405 patients in 4 provinces. Regression analysis was used to determine the set of criteria weights that collectively best predicted clinicians' overall urgency ratings. Inter-rater and test-retest reliability was assessed from 6 videotaped patient interviews, scored by orthopedic surgeons, related professionals and general practitioners. **RESULTS:** The priority criteria accounted for over two-thirds of the observed variance in overall urgency ratings (adjusted  $R^2 = 0.676$ ). The panel modified the criteria and weights based on the empirical findings and on clinical judgement. The reliability of the priority criteria for the hip and knee replacement tool was among the strongest of the 5 instruments developed in the WCWL project. **CONCLUSIONS:** The panel considered the criteria easy to use and reasonably reflective of expert surgical judgement regarding clinical urgency for hip and knee replacement. Further development and testing of the tool appears warranted.

Additional information may be obtained by consulting the Western Canada Waiting List Project website: [www.wcwl.ca](http://www.wcwl.ca)

## Canadian Association of Radiation Oncologists

### Definition of RT Waiting

By: Manpower and Standards of Care in Radiation Oncology Committee  
September 2000

1. The interval between the date of the *initial referral to radiation oncology* and the date of *the radiation oncology consultation* reflects the waiting time for radiation oncology consultation, and this should not exceed 10 working days.
2. For routine single modality treatments, the interval between *the radiation therapy requisition date* OR *the radiation oncology consultation date*, whichever is later, and *the first day of therapy* reflects the waiting for radiation therapy.
3. For multi-modality treatments, the interval between *the target RT start date* and *the first day of therapy* reflects the waiting for radiation therapy.
4. The waiting for radiation therapy should not exceed 10 working days.
5. As a quality indicator, radiation centres can report at regular intervals *the number* OR *percentage of patients who have waited more than 10 working days* for radiation oncology consultation or for radiation therapy.

F. Wong, MD

Chair, Manpower and Standards of Care in Radiation Oncology Committee

Presented/Accepted CARO Board of Directors, Sep 21/00

Presented/Accepted CARO Members, Sep 22/00

# **Canadian Ophthalmological Society**

## **Introduction**

The Canadian Alliance for Timely Access is a working group of the Canadian Medical Association and the Canadian medical specialty associations that are most directly affected by the federal government's recent announcement to allocate \$5.5 billion to shorten waiting times in designated areas. The Canadian Ophthalmological Society [COS] is pleased to be a member of the Alliance and to have the opportunity to comment on the allocation of additional resources aimed at reducing waiting times for sight restoration procedures. The COS has chosen to focus its comments on waiting times for cataract surgery since this is the area that affects the greatest number of Canadians and has the greatest number of patients waiting for sight restoration surgery.

## **Methodology**

As part of its role in the Alliance the COS created a wait time subcommittee to review the available literature and make a recommendation about medically acceptable waiting time for cataract surgery. This committee contained representatives from all regions of the country and had several members who had previously been involved in studies looking at cataract waiting time such as the Western Canada Wait List Project (WCWLP). The committee relied heavily on an extensive literature review on this issue, which had previously been undertaken by the WCWLP. This committee's report was then reviewed by the COS Council on Provincial Affairs, a committee made up of the chairs of the provincial ophthalmological associations. The document was then further modified and approved by the COS board of directors.

## **Medically acceptable wait time**

The COS has reached a consensus that the reasonable medically acceptable wait time for visually significant cataract surgery should be four months. It is felt that higher priority cases should have expedited surgery with the shortening of the waiting time to be proportional to the relative degree of priority. Prioritization can be determined by using any one of the number of prioritization tools. The COS does not feel that there needs to be a single national prioritization tool in place. Given the provincial responsibility for healthcare, the COS feels that each province should set up its own central wait time registry which employs the prioritization tool of its choice. The justification for this wait time benchmark was that it was a reasonable, obtainable figure based on our collective experience across the country. Furthermore it is consistent with previous Canadian physician surveys about what would be reasonable wait time and only slightly longer than acceptable wait times from patient surveys. The need to not wait too long is based on data showing significant morbidity while waiting [increased risks of falls and hip fractures] and higher risks of motor vehicle accidents while on cataract waiting lists.

## **Considerations**

A fundamental national problem is the shortage of ophthalmologists. This problem will only get worse given the reduction over the last 20 years of the number of ophthalmologists graduating per year despite increasing demands for services based on demographic changes and advances in technology. Therefore part of any long-term strategy to address long waiting times must include expansion of residency programs across the country. Paradoxically, despite an existing shortage of ophthalmologists new graduates find it hard to set up practice across the country because of difficulty in obtaining operating room time. Therefore the COS recommends that the first priority for allocation of additional operating room time that is created by this federal transfer payment should be to new graduates who are just setting up practice. Their addition to the community will not just help shorten cataract waiting lists but also improve access for patients waiting with other eye care problems.

# Canadian Cardiovascular Society

## 1. Introduction

The Canadian Cardiovascular Society (CCS) has identified access to care as a key priority area for the Society. Although many provinces have established wait time standards for some key procedures (e.g., bypass surgery), there are currently no national standards for access to these or other services within the broad range of cardiovascular care.

In the spring of 2004, the CCS established an Access to Care Working Group (the Working Group) with a mandate to develop commentaries on access to cardiovascular services from a national perspective. These commentaries were to be a first step in developing national standards by creating a summary of the currently available data and by calling on cardiovascular researchers to action to fill the gaps in this body of knowledge.

The Working Group had begun work on its first three commentaries when Canada's First Ministers made a formal commitment to reduce wait time in five key areas, including cardiac care. The CCS is honoured to have been invited by the Canadian Medical Association (the CMA) to join an alliance of specialty organizations to develop medically-acceptable wait times in these five areas. Accordingly, the Working Group has shifted its focus to participating within the Canadian Alliance for Timely Access.

Cardiovascular care covers the entire continuum of care, from access to a specialist consult, to invasive and non-invasive diagnostic and therapeutic procedures, to rehabilitation and secondary prevention (e.g., life style modification). As well, cardiac patients may have one of any number of indications requiring medical attention, including coronary artery disease (e.g., blockage of one or more arteries), valvular disease, heart failure, or arrhythmia (e.g., indications associated with abnormal heart rhythms).

Although wait times for cardiac surgery have enjoyed wide-spread press in the past ten years or so, all cardiac patients require access to the full continuum for all indications. Therefore, the Working Group has identified eight areas across the continuum and for key indications that require national standards:

- Access to care in emergent and urgent situations,
- Access to specialist consultation,
- Access to non-invasive cardiac studies (stress test, echo),
- Access to nuclear cardiology,
- Access to revascularization procedures and other cardiac surgeries,
- Access to heart failure clinics,
- Access to electrophysiology services, and
- Access to cardiac rehabilitation/heart health lifestyle modification.

## **2. Methodology**

The Working Group is in the process of establishing eight sub-groups: one for each of the areas of interest noted above. Each subgroup will consist of a chair who is a recognized Canadian authority within that discipline and a panel of four to eight specialists who have an interest and reputation in the area. Where appropriate, we will be inviting other members of the Alliance to participate on these subgroups (e.g., Access to Nuclear Cardiology Subgroup).

Each subgroup will conduct a formal literature review and build a consensus opinion on appropriate medically-acceptable wait time standards. This process will include the development of definitions for appropriate triage categories. Although our goal is to have evidence-based standards, we realize that, in many cases, there is insufficient evidence available to support this level of confidence. Where necessary, we will develop rely on a consensus expert opinion. Each subgroup's final report will be submitted to a secondary review panel to solicit input from a broader range of specialists and other stakeholders.

The CCS is currently in the process of recruiting the subgroup chairs and membership. Our initial target is to have this work substantially completed within the next three to five months.

Our intention is to develop wait times that reflect medical urgency. Accordingly, the recommended wait time standards will not reflect any other factors such as resource constraints or the patient's individual social or psychological situation.

## **3. Medically-Acceptable Wait Times**

In Canada, there are no national standards for access to cardiovascular services and procedures; historically, all work relating to standards and wait times has been conducted at a provincial level.

Several provinces, especially Ontario, Quebec, Alberta and Nova Scotia, have invested significant resources in developing and implementing wait time standards for some key procedures, most notably coronary artery bypass graft (CABG) surgery. CABG is a well-established procedure with a sufficient volume of clinical trials examining acceptable wait times to support the development of appropriate standards.

Examples of provincial standards for CABG are provided in Table 2.

**Table 2: Examples of Cardiac Benchmarks in Canada**

	<b>Cardiac Care Network of Ontario</b>	<b>The Quebec Tertiary Cardiology Network</b>	<b>Alberta Health and Wellness</b>	<b>Province of Nova Scotia</b>
<b>Bypass Surgery</b>	<ul style="list-style-type: none"> <li>- Emergency: Immediate</li> <li>- Urgent: within 14 days</li> <li>- Semi-urgent: within 42 days</li> <li>- Elective: within 180 days</li> </ul>	<ul style="list-style-type: none"> <li>- Very urgent: 24 hours</li> <li>- Urgent: 72 hours</li> <li>- Semi-urgent: 2 weeks</li> <li>- Semi-elective: 6 weeks</li> <li>- Elective: 3 months</li> </ul>	<ul style="list-style-type: none"> <li>- Emergent: Within 24-48 hours</li> <li>- Urgent inpatients: 1 week</li> <li>- Urgent outpatients (with scheduled readmission): 2 weeks</li> <li>- Planned outpatients: 6 weeks</li> </ul>	<ul style="list-style-type: none"> <li>- Emergent: 24 hours</li> <li>- in-house urgent: &lt; 7 days</li> <li>- Semi-urgent A: &lt; 2-3 weeks</li> <li>- Semi-urgent B: &lt; 6-8 weeks</li> <li>- Elective: &lt; 3 months</li> </ul>

As shown in the table, the urgency categories vary materially among the provinces. For example, some provincial standards are based on the categories of emergent, urgent, semi-urgent, and elective, whereas others distinguish primarily between inpatients and outpatients. Even when category labels are the same, the provincial definitions for these categories may vary. Also, overtime, new clinical trials have shed light on additional factors and risks related to wait times for CABG. Thus, the standards in Alberta, with a benchmark of six weeks for planned outpatients, which are based on the most recent research, are markedly different than Ontario's standards, which show a benchmark of 180 days for elective surgeries. This comparison highlights the need to review and refine benchmarks periodically to ensure that they continue to reflect current research.

As noted above, CABG is a well-established procedure. Newer procedures such as percutaneous coronary intervention (PCI), which is also known as angioplasty, and the entire field of electrophysiology, have only recently produced the needed research to begin establishing evidence-based standards for medically-acceptable wait times.

#### **4. Considerations**

Earlier work conducted by the CCS and other provincial organizations (e.g., the Cardiac Care Network of Ontario) suggests that meeting the medically-acceptable wait times for cardiac services will require more human, physical and financial resources than are currently devoted to cardiac care. Current capacity is limited by the availability of:

- Qualified health care providers (e.g., specialists, family physicians, nurses, technicians, anesthesiologists, perfusionists).
- Physical infrastructure (e.g., operating rooms, ICU and CCU beds, cath and electrophysiology labs and equipment)
- Funding for needed devices and programs (e.g., implantable cardioverter defibrillators, rehabilitation and secondary prevention programs).

## **Appendix C: Current benchmarks and targets in Canada and other countries**

Wait-time benchmarks and targets already exist in various forms in Canadian jurisdictions and in a number of industrialized countries. The following provides a sampling of existing benchmarks and targets currently in use in Canada and abroad for each of the 5 priority areas identified in the first ministers' 10-year plan.

### **General benchmarks and targets**

*International* — Several countries have adopted benchmarks and targets that cut across treatment areas. In Australia, benchmark wait times for admission are 30 days for urgent cases, 90 days for a second category of urgency and 12 months for all others. Denmark has a “critical illness waiting time guarantee” that stipulates a maximum wait of 2 weeks for investigation plus 2 weeks for treatment plus 2 weeks for follow-up treatment. A general waiting time guarantee of 2 months applies to all types of non-acute treatments. The Netherlands has set the target that 80% of patients will receive outpatient care within 5 weeks and 80% will receive inpatient or day treatment within 7 weeks. In Spain, the maximum wait time for all treatments is set at 6 months. In Sweden, specialist consultations must occur within 90 days and treatment must be provided within 90 days of diagnosis. Finally, in the United Kingdom, the maximum wait for inpatient treatment is 6 months and for outpatient services it is 3 months, both benchmarks to be reached by 2005. The United Kingdom also has specific target wait times for cardiac surgery and cancer therapy, as noted below.

*Canada* — Saskatchewan is the only province to have adopted a schedule of time frames across all surgical interventions. Target time frames are based on level of priority, which are determined using a standardized priority-scoring tool. Target time frames are as follows:

Priority level	Scoring range	Target time frame
Priority I	95 to 100	95% within 24 h
Priority II	80 to 94	95% within 3 weeks
Priority III	65 to 79	90% within 6 weeks
Priority IV	50 to 64	80% within 3 months
Priority V	30 to 49	80% within 6 months
Priority VI	1 to 29	80% within 12 months
All cases		Within 18 months

## **Cardiac procedures**

*International* — Italy has a maximum wait of 30 days for a cardiology visit and has set targets for angioplasty as follows: 50% of patients to receive treatment within 60 days and 90% within 120 days. New Zealand has maximum recommended wait times ranging from immediately to 6 weeks based on assessment with a standardized priority-scoring tool. The United Kingdom has adopted a target 3-month maximum wait for cardiac surgery to be reached in 2005.

*Canada* — The Cardiac Care Network of Ontario has adopted maximum recommended wait times for catheterization and bypass surgery. Catheterization benchmarks are: immediate for emergency patients, 7 days for urgent, 28 days for semi-urgent and greater than 28 days for elective. Bypass surgery benchmarks are: surgery without delay for emergency patients, surgery within 14 days for urgent patients, within 42 days for semi-urgent patients and within 180 days for elective patients.

Quebec's tertiary cardiology network specifies target wait times for hemodynamics (ranging from immediate to 2 months), cardiac surgery (24 h for very urgent, 72 h for urgent, 2 weeks for semi-urgent, 6 weeks for semi-elective and 3 months for elective) and electrophysiology (24 h to 3 months).

Alberta has a provincial target of 1 week for urgent inpatients, 2 weeks for urgent outpatients and 6 weeks for planned outpatients.

## **Cancer treatments**

*International* — In Italy, the first visit for cancer therapy is to be provided within 2 weeks, surgical intervention within 30 days and chemotherapy and radiotherapy within 30 days. Maximum wait times in New Zealand range from 24 h to 4 weeks based on assessment with a standardized priority-scoring tool. In the United Kingdom, a target of 1 month from specialist diagnosis to treatment has been set for all cancers, and 2 months from urgent general practitioner referral to treatment, with both of these targets to be met in 2005.

*Canada* — In Saskatchewan, the target is to have 95% of cancer-related surgeries carried out within 3 weeks. No other provincial benchmarks or targets are known to have been implemented in this area.

## **Diagnostic imaging**

*International* — In Italy, the maximum wait time for MRI and ultrasounds is 60 days. No other internationally adopted benchmarks or targets are known to exist in this area.

*Canada* — Alberta has adopted a target of 24 scans per 1,000 population in an effort to reduce wait times. No other provincial benchmarks or targets are known to have been implemented in this area.

## **Joint replacement**

*International* — In Italy, the target is to have 50% of patients receive hip replacement surgery within 90 days, and 90% within 180 days. No other benchmarks or targets are known to exist in this area.

*Canada* — Alberta has set a target to reduce wait times to 4 months for non-urgent joint replacement surgeries. Emergency joint replacements are to be performed within 48 h. In its recently released final report, the WCWL project identified 3 maximum acceptable waiting times for hip and knee replacements: Urgency III (most urgent), 4 weeks; Urgency II, 12 weeks; Urgency I (least urgent), 20 weeks.

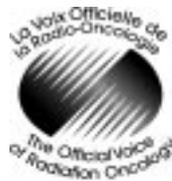
## **Sight restoration**

*International* — In Italy, the target is to have 50% of patients receive cataract surgery within 90 days, and 90% within 180 days. No other benchmarks or targets are known to exist in this area.

*Canada* — There are currently no benchmarks or targets in use for this area in Canadian jurisdictions. However, the Western Canada Waiting List Project has developed maximum acceptable wait times for cataract surgery. They are as follows: Urgency III (most urgent), 4 weeks; Urgency II, 8 weeks; Urgency I (least urgent), 12 weeks.

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