



At a Glance



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4 Health and Wellness: Surgical Waitlist and Operating Room Utilization

Summary

Data in the Province's surgery wait time registry – PAR-NS – is reasonably accurate and there have been efforts to improve elective surgery wait times in recent years. However, Nova Scotia does not have adequate processes to manage waitlists for surgery or to optimize operating room use focused on surgical priorities. Nova Scotia still lags far behind national benchmarks in key areas; in 2013, only 43% of knee replacements met the six-month benchmark. There is no overall action plan to deal with this.

Health and Wellness has not set performance targets for elective surgery wait times. Annual demand has routinely outpaced completed surgeries. Without targets, it is difficult to evaluate entity and system performance.

The Province has a central system for elective surgery wait time information called PAR-NS. Wait time information is available publicly on the Department of Health and Wellness website. We found this website user-friendly and noted the type and nature of available information compared favourably with other jurisdictions in Canada.

We found the registry's data was reasonably accurate for reporting wait times; however surgeons do not consistently use the system's surgery priority system. This means the resulting waitlist is not correctly prioritized. Some surgeons' offices do not submit patient booking information in a timely manner which delays patient placement on the waitlist. Nearly 25% of submissions are at least one week late.

Further, we found the allocation of operating room time does not always consider patient priority and waitlists. It tends to reflect the historical assignment of time to a surgical service or individual surgeon. Active oversight of operating rooms at the district health authorities and IWK Health Centre has focused on managing day-to-day operations. We found that available operating room time was not optimally used, which means lost opportunities to do more surgery.

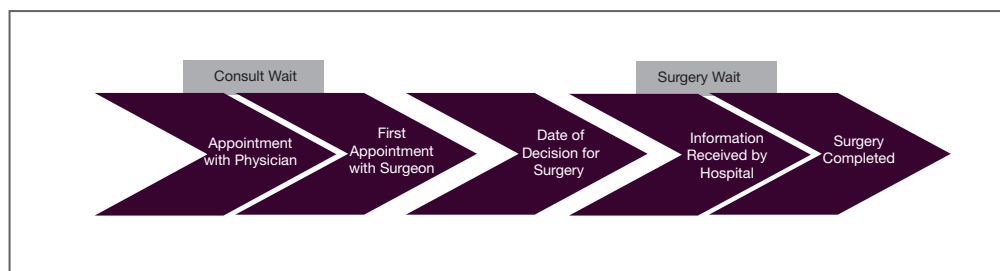
We found there have been efforts to manage wait times in the districts and at the IWK Health Centre, often with support of the Province, but a systematic and common provincial approach is still in the planning stages. The Department needs to oversee these processes and increase the pace of change.

We expect that following amalgamation, our recommendations specific to district health authorities will be applicable to the newly formed district health authority and the IWK Health Centre.

4 Health and Wellness: Surgical Waitlist and Operating Room Utilization

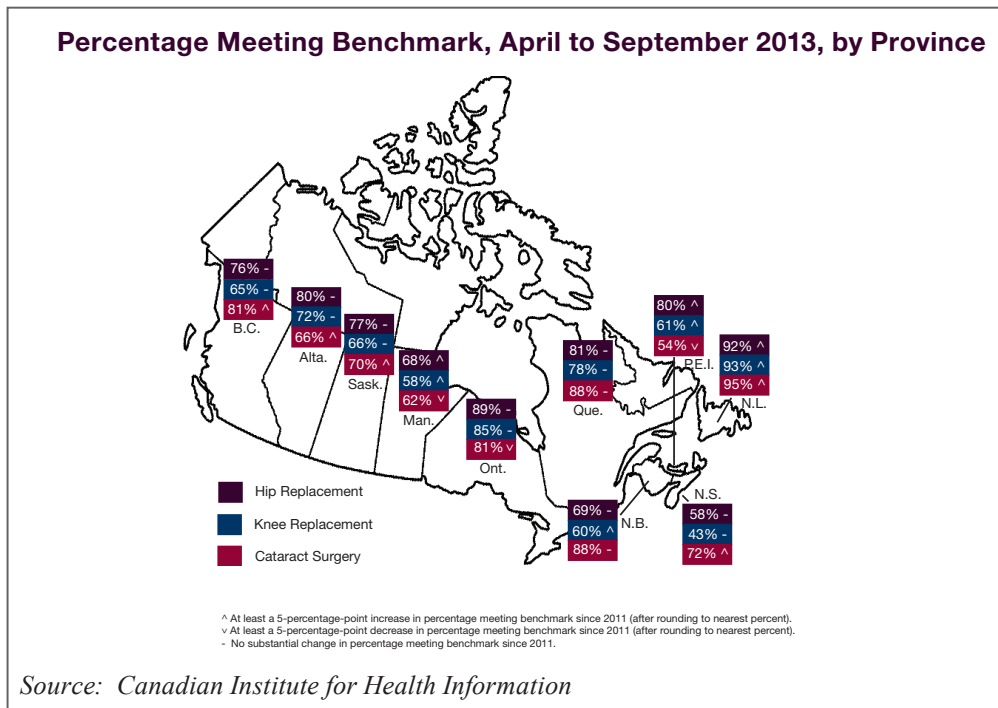
Background

- 4.1 Under the Health Authorities Act, the Department of Health and Wellness is responsible for the strategic direction of health care, policy, and standards for delivery of services. It is also responsible for the allocation of financial resources to the district health authorities and IWK Health Centre. District health authority and IWK management are responsible to determine their priorities in the provision of health services and recommend their plans to the Department.
- 4.2 Elective surgery wait time has two elements: consult wait time and surgery wait time. Consult wait time is the period between the date when the surgeon receives a patient referral and the date the patient is first seen by the surgeon. Surgery wait time is the period between the date the surgery booking information was received by the hospital and the date the surgery was completed. Currently, the date of decision for surgery is not used in the calculation of wait time in Nova Scotia, or in most other Canadian jurisdictions.



- 4.3 In 2004, federal and provincial representatives met to discuss the future of health care and a 10-year plan to strengthen health care was developed. This plan established strategic investments in five initial priority clinical areas: cancer, heart, diagnostic imaging, joint replacement and sight restoration. As part of this plan, the wait times reduction fund was established to assist provinces and territories with their wait time reduction initiatives.
- 4.4 In 2010, the Patient Access Registry system (PAR-NS) was implemented in Nova Scotia, with support from the federal government. At a cost of approximately \$12 million, this system enabled a prioritized, Province-wide elective surgery waitlist. The system draws data from all operating room systems used in the Province on a real (or near real) time basis. Surgeon offices may also have their own systems to record patient information outside PAR-NS.

- 4.5 Surgical wait time information from PAR-NS is available publicly through the Department’s website. This includes consult and surgery wait information for completed elective surgeries.
- 4.6 As a result of the national wait time strategy, elective surgery wait time benchmark timeframes were established for some initial priority wait areas, including the following.
- Knee replacement
 - Hip replacement
 - Cataracts
- 4.7 The Canadian Institute for Health Information reports results for most provinces. The chart below shows that Nova Scotia lags behind most other provinces compared to these benchmarks. For example, only 58% of hip replacements and 43% of knee replacements met the benchmark between April and September 2013.



- 4.8 Operating room resources are managed at Capital Health, Annapolis Valley Health, and the IWK Health Centre (the entities we visited for detailed audit work) with an OR committee to provide oversight. The Department of Health and Wellness has limited involvement in operating room utilization. From 2008 until 2010, the Department of Health engaged a consultant to perform benchmarking for operating room costs and utilization at each of the Province’s district health authorities and the IWK. These reports suggested areas for improvement and performance measures.



- 4.9 It is important to note that elective surgeries are not generally optional as the name suggests. Elective surgery simply means nonemergency. We also acknowledge that wait time is an important patient-centred consideration, but not the sole factor with respect to surgical care. Other factors include hospital teaching mandates, minimum surgeries, skill maintenance and practice viability.

Audit Objectives and Scope

- 4.10 In summer 2014, we completed a performance audit of elective surgery wait times and operating room use at the Department of Health and Wellness, Annapolis Valley Health, Capital Health, and the IWK Health Centre.
- 4.11 The purpose of this audit was to determine whether:
- the Province has adequate systems and processes for managing patient waitlists for surgical procedures so that wait time and clinical patient need is appropriately considered; and
 - operating rooms are managed to optimize usage and focus on surgical priorities.
- 4.12 The audit was conducted in accordance with sections 18 and 21 of the Auditor General Act and standards adopted by the Chartered Professional Accountants of Canada.
- 4.13 The objectives of the audit were to assess whether:
- surgery wait times data in PAR-NS is reasonably accurate and fairly presented in public reporting;
 - surgery wait times are calculated appropriately and consistently across the Province;
 - wait times data is analyzed to manage surgery waitlists;
 - wait times are sufficiently communicated to stakeholders (surgeons, hospital and district management, patients, general public);
 - the processes for establishing wait time targets and monitoring performance are adequate; and
 - operating rooms are managed to optimize usage.
- 4.14 Certain audit criteria for this engagement were adapted from Accreditation Canada's Qmentum Program. Other criteria were developed by our Office. The audit criteria were accepted as appropriate by senior management in all



the entities we audited. We conducted our audit in 2014, using data from April 1, 2011 to September 30, 2013.

- 4.15 Our audit approach included examination of relevant policies, procedures, reports and other documentation, and interviewing Department, district and IWK staff and surgeons. We also tested surgery booking information and analyzed wait time and operating room utilization data, information and reporting.
- 4.16 We expect that following amalgamation, district-specific recommendations will be applicable to the newly formed district health authority and the IWK Health Centre.

Significant Audit Observations

Surgery Wait Time and PAR-NS

Conclusions and summary of observations

The Department’s public wait time website is easy to use and reports information which is relevant for patients waiting for surgery. We found PAR-NS data is reasonably accurate to report patient wait times for surgery consistently across the Province. Wait time is calculated from when the booking is received by the hospital. This does not capture the time between the surgeon’s decision to operate and receipt of booking information at the hospital. We recommended that Nova Scotia move to a more patient-centred approach by calculating wait times from the date of decision to operate. We also found that surgeons’ offices are often late in submitting booking information to hospitals. This delays patient entry to the waitlist.

- 4.17 *Background* – The Patient Access Registry system (PAR-NS) is a central wait time reporting application, run by the Department of Health and Wellness. A comprehensive policy outlines the data to be entered by the district health authorities. It also assigns responsibility for data quality to a manager at the Department of Health and Wellness and one in each district health authority.

► Wait time reporting is reasonably accurate

- 4.18 *Data quality and reporting* – We tested PAR-NS data to determine whether it was reasonably accurate for wait time reporting. We examined support for the information recorded in PAR-NS for 135 patients and did not find significant errors or issues. The testing was based on data as reported to PAR-NS; we did not audit the completeness of the waitlist. Additionally, our testing did not assess clinical decisions made by surgeons to place a patient



on the waitlist. Rather, we assessed the accuracy of information based on submissions from surgeons' offices.

- 4.19 We also analyzed all waitlist data from April 1, 2011 to September 30, 2013 to check for duplicate patient records and other data quality weaknesses. We did not find significant data quality issues.
- 4.20 The Department of Health and Wellness, each district health authority, and the IWK have a manager responsible for data quality. Access managers are integral to managing PAR-NS and ensuring data is accurate.

► Wait time information reporting compares favourably with other jurisdictions

- 4.21 *Public wait time reporting* – PAR-NS data is used to provide quarterly, public wait time information on the Health and Wellness website. The website shows how long people who had surgery completed during the most recent quarter waited.
- 4.22 We found the website compares favourably with those in other provincial jurisdictions, in both ease of use and also, what is reported (see chart below). It shows trends by surgical procedure and facility. Starting with the March 31, 2014 reporting period, the website now includes surgeon-level wait time information. Surgeon-level wait time can be key information for patients in deciding where they may seek to receive care. We noted certain provincial jurisdictions report additional information, such as the number of patients still waiting for a procedure and performance targets.

Canadian Jurisdictional Comparison of Wait Time Websites									
Province	Average Length of Time Waited	50th Percentile Waited	90th Percentile Waited	Cases Waiting	Facility-Level Wait Time	Surgeon-Level Wait Time	Benchmarks	Targets (other than full benchmarks)	Trending
Newfoundland and Labrador		✓	✓				✓		
Nova Scotia	✓	✓	✓		✓	✓	✓		✓
Prince Edward Island	✓	✓	✓				✓		✓
New Brunswick		✓	✓		✓		✓	✓	✓
Quebec	✓			✓	✓		✓	✓	
Ontario			✓		✓		✓		
Manitoba		✓			✓				
Saskatchewan		✓	✓	✓		✓	✓	✓	✓
Alberta	✓	✓	✓		✓	✓			✓
British Columbia		✓	✓	✓	✓	✓	✓	✓	✓

Source: Wait time website for each jurisdiction.

► Surgeons not submitting booking requests in a timely manner

4.23 *Late submissions from surgeons' offices* – We found many surgeons' offices throughout the Province do not submit surgery booking information in a timely manner. The PAR-NS policy allows seven days for surgeons to submit booking information to the waitlist, and an additional five days for that information to be entered into PAR-NS by hospital staff. However, surgeons' offices often miss their deadline, with nearly 40% of all submissions exceeding the seven-day timeframe. There has been no improvement in the timeliness of submissions between 2011 and 2014.

Surgeon Booking Information Submission Timeliness (Percent within timeframes)			
Year	0 – 7 days %	8 – 14 days %	15 + days %
2011	60%	14%	26%
2012	58%	13%	29%
2013	62%	12%	26%
2014	62%	12%	26%

Source: PAR-NS

4.24 Late submission of patient surgery bookings means the waitlist is not up-to-date. However, because the wait for surgery is calculated using the date the booking was received by the hospital, late submissions do not impact the wait time calculation. Although other jurisdictions also calculate wait times in this manner, from a patient's perspective, the actual wait begins when the decision is made to operate and the patient is medically ready.

4.25 Health and Wellness management told us they are considering changing the surgery wait calculation to start when the decision to operate is made and the patient is ready. This would more appropriately reflect patient experience. Regardless of how the wait time is calculated, it is important that surgeons' offices submit booking information in a timely manner. The Department of Health and Wellness should take leadership and emphasize that timeliness of submissions is important to ensure wait time data is as complete as possible. We understand the Department may continue to be required to calculate surgery wait times for the Canadian Institute for Health Information which uses the date a booking was received in its reporting.

Recommendation 4.1

The Department of Health and Wellness should report surgery wait times from the date of decision to operate to the date of surgery. Also, the Department should ensure booking information is submitted within the PAR-NS policy timeframes.

Department of Health and Wellness Response: The Department of Health and Wellness accepts the recommendation to begin reporting surgery wait times from the date of decision and will begin working to enact this change as soon as technically possible.



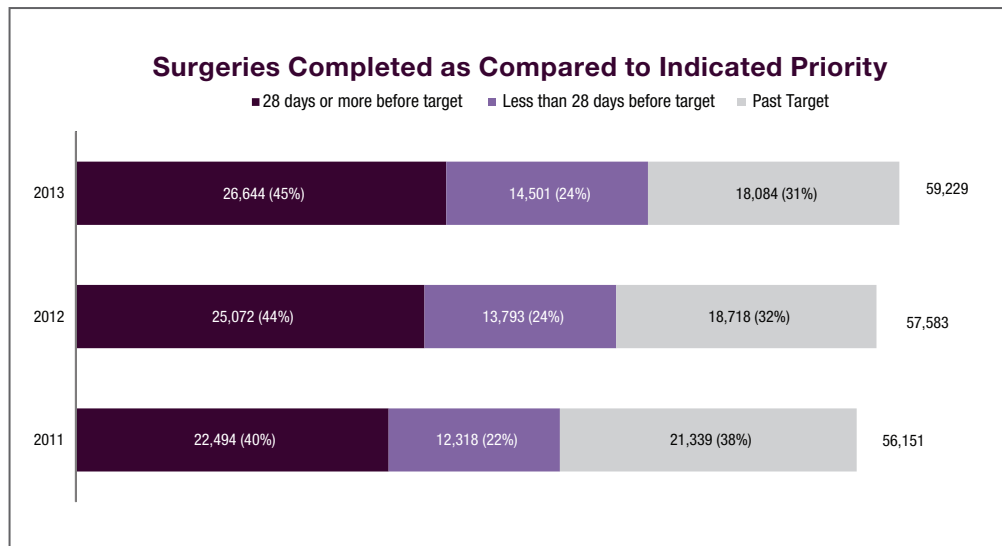
The Department of Health and Wellness will work with the District Health Authorities and other stakeholders as appropriate to ensure booking information is submitted within PAR-NS policy timeframes.

► Waitlist priority ranking process not consistently used

4.26 *Waitlist priority ranking* –PAR-NS ranks patients based on clinical priority for surgery. Surgeons are supposed to assign one of six clinical priorities which indicate how quickly the patient should have surgery. These range from within one week to one year.

4.27 The prioritization system is not consistently used when scheduling surgeries. We noted that some surgeons use the same priority for most of their patients. While we found wait time data is reasonably accurate, we did not assess the correctness of clinical priority.

4.28 The chart below provides a three-year summary of when surgeries were completed compared to priority. For example, in 2013, based on the assigned surgery priority, 45% of surgeries were done well before they needed to be and 31% were done late. This means broad use of hospital-based or other central scheduling could not be done reliably using the current PAR-NS data because the priority of each patient is uncertain.



Source: PAR-NS

Includes elective surgeries with established priority

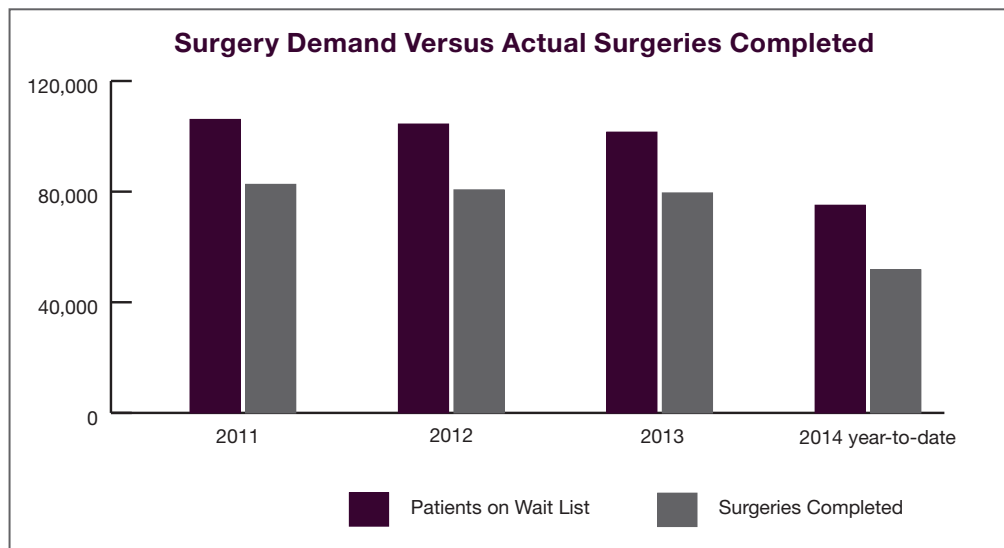


Surgery Wait Time Management

Conclusions and summary of observations

The Department of Health and Wellness, Annapolis Valley Health, Capital Health, and the IWK Health Centre do not set realistic organizational performance targets for elective surgery wait times. In addition, the Department has not established expectations for elective surgery volumes or wait time performance. There have been efforts to manage wait times in the districts, often with support of the Department, but there is no overall Provincial approach. Orthopaedic surgery has begun work on a Provincial approach, but there is no action plan to put this into practice. While we found no significant issues of accuracy in our testing of waitlist data, we noted the Department had concerns with the elective surgery waitlist in relation to when patients are added to the list. We recommended the Department develop a practice to ensure patients are only added to the waitlist when appropriate according to Department policy.

4.29 *Background* – The following chart shows that the trend for surgery in Nova Scotia indicates annual demand regularly exceeds the number of surgeries completed. For example, in 2013, only 78% of those on the waitlist had surgery. Nova Scotia is far behind national wait time targets for areas such as hip and knee replacements. Setting targets, monitoring performance against those targets, and developing plans to make improvements over time, is an important aspect of managing surgical wait times across the Province. We assessed the process to establish wait time targets and monitor performance at Annapolis Valley Health, Capital Health, the IWK Health Centre, and the Department of Health and Wellness. We also considered how this information is used in managing surgical wait times.



Source: PAR-NS



► Efforts made to manage wait times Provincially but more progress needed

4.30 *Provincial wait time improvement efforts* – There is a Provincial committee to deal with matters relating to elective surgery wait time called the Provincial Perioperative Advisory Committee. Members include staff from Health and Wellness and district health authorities. We noted active efforts by the committee to identify issues and make recommendations to Health and Wellness regarding possible ways to manage surgical wait time issues Provincially.

4.31 For example, in September 2012, the Provincial Perioperative Advisory Committee recommended all operating room procedures be managed through district surgical offices rather than surgeon offices. In April 2013, the Committee recommended a twelve-month maximum target for all elective surgeries by April 2015, with a future target to be set for six months. However, when we completed our work, these recommendations had not been implemented.

4.32 The Provincial Perioperative Advisory Committee’s approach is to address wait time issues by surgical specialty, beginning with orthopaedics because it has the longest wait times. As illustrated by the chart below, wait times to complete hip and knee replacement surgery have greatly exceeded national benchmarks. For example in 2013, the wait for knee replacement surgery was 615 days. The benchmark for the procedure is 180 days.

National Benchmark Surgeries – Nova Scotia Trends				
Type of Surgery	Days Waited for Surgery			
	Actual – Nova Scotia (PAR-NS data)			National Benchmark
	2011	2012	2013	All Years
Hip Replacement	490	497	521	180
Knee Replacement	637	560	615	180

4.33 The Orthopaedic Working Group was formed in 2012 to develop Provincial processes to improve the quality of services. The group includes Health and Wellness staff, and clinical and administrative leads from the district health authorities offering orthopaedic surgery.

4.34 Health and Wellness management told us that a January 2014 report by this working group resulted in an additional \$4.2 million for orthopaedics in 2014-15. The working group has been tasked with developing a five-year plan for orthopaedics in the Province. In summer 2014, efforts to recruit a program manager to oversee the development of a five-year plan were unsuccessful and the Department must now decide how to proceed.

4.35 Once complete, it is expected the Orthopaedic Working Group’s approach will be used as a template for other surgical areas Provincially. While it is in



the early phases, it is hoped this will lead to timely improvements. However, we have concerns regarding the results of efforts to date. The Orthopaedic Working Group has been meeting for nearly two years and a plan is not in place. The Department needs to exercise leadership to ensure the five-year plan is developed and executed so results can be achieved. Efforts are also needed to operationalize improvements to other surgical areas.

4.36 As demonstrated by the chart below, results for national benchmark surgeries vary significantly by district. This also supports the need for a Provincial approach to wait time management. For example, at Annapolis Valley Health the wait for cataract surgery was approximately nine months. If you were a patient in the Cape Breton District Health Authority, you waited one month. The national target for completion of cataract surgery for high risk patients is four months.

National Benchmark Surgeries by District Health Authority – 2013			
	Days Waited for Surgery		
	Hip Replacement (Target 180 days)	Knee Replacement (Target 180 days)	Cataracts (Target 120 days) Note 2
All District Health Authorities	521	615	229
DHA 1 – South Shore Health	Note 1	Note 1	142
DHA 2 – South West Health	Note 1	Note 1	81
DHA 3 – Annapolis Valley Health	592	600	279
DHA 4 – Colchester East Hants Health Authority	Note 1	Note 1	128
DHA 5 – Cumberland Health Authority	Note 1	Note 1	96
DHA 6 – Pictou County Health Authority	474	602	70
DHA 7 – Guysborough Antigonish Strait Health Authority	Note 1	Note 1	154
DHA 8 – Cape Breton Health Authority	382	415	30
DHA 9 – Capital Health	540	719	267
Note 1 – Joint replacements not completed in these districts			
Note 2 – Target refers to high risk patients; Nova Scotia does not stratify cataract patients.			
<i>Source: PAR-NS</i>			

4.37 The Department’s recent estimates note approximately \$35 million is needed to start completing 90% of hip and knee replacements within the six-month benchmark reported by the Canadian Institute for Health Information. Once this benchmark is achieved, an estimated \$7.7 million is needed annually to maintain a six-month wait moving forward. These estimates are based on



current processes. Process improvement may mean less funding is required. We have not audited whether these estimates are reasonable.

► Waitlist may contain patients not medically ready for surgery

4.38 In September 2013, the Department presented a proposal to the Orthopaedic Working Group to optimize existing orthopaedic surgical resources. Possible approaches included:

- validating surgery waitlists;
- requiring districts to implement central intake models;
- publishing surgeon wait times for hip and knee; and
- promoting next available surgeon in the referral.

4.39 Department policy defines when patients are to be placed and remain on the waitlist. However, Health and Wellness management believe surgery waitlists should be validated through clinical assessment of patients waiting more than a year. Our testing of waitlist data looked at data accuracy, but did not address clinical matters. When we completed fieldwork in August 2014, the working group had not dealt with scheduling practices or ensuring only patients that should be on the waitlist are. For example, a patient may be receiving medical treatment and it is uncertain if surgery will be required.

4.40 We noted that many recommended actions of the past two years have taken place: funding of pre-habilitation clinics; public reporting of surgeon wait time; promotion of next available surgeon in consult referrals; actions to address foot and ankle waits; and additional resources for knee and hip replacement surgeries. However, Health and Wellness must address its concerns regarding the validity of the orthopaedic waitlists and surgeon scheduling practices.

4.41 Regardless of the scheduling practice used (i.e., hospital versus surgeon), an accurate waitlist which only includes those ready for surgery is required to decide where attention is needed.

Recommendation 4.2

The Department of Health and Wellness should ensure the surgery waitlist complies with its policy, including ensuring the existing waitlist consists of only patients ready for surgery.

Department of Health and Wellness Response: The Department of Health and Wellness accepts this recommendation.



The Department will work with the District Health Authorities and the Access Managers to ensure all PAR-NS policies are adhered to, including ensuring the existing waitlist consists only of patients eligible for surgery.

► Realistic wait time performance expectations not established

- 4.42 *Wait time targets and public performance reporting* – The Department of Health and Wellness has not established targets for elective surgery wait time performance. The Department’s 2012-13 Accountability Report includes the number of patients waiting over a year for elective surgery and indicates the Department wants the elective waitlist to decline in the future. The 2013-14 report did not include patients waiting more than a year. We noted that there was a 14% reduction in patients waiting longer than one year during that period.
- 4.43 As noted, Nova Scotia is still far behind in many areas when compared to national benchmarks. The Department’s 2014-15 Statement of Mandate notes the Department will “*explore ways to achieve a target of one year maximum wait time for elective surgery in Nova Scotia.*” This is not a concrete, short-term target, but the suggestion of a goal for the future. Health and Wellness has no interim targets, no plans, and no defined timeframe by which they plan to reach a one-year maximum wait. There are also no overall Provincial expectations for the district health authorities with regards to elective surgery performance.
- 4.44 At Annapolis Valley Health, Capital Health and at the IWK Health Centre, we found varying practices in setting organizational performance targets for surgery wait times and performance reporting. In all cases, persistent weak surgery wait time performance indicates the need for interim performance targets.
- 4.45 Annapolis Valley Health reported results against surgery priority targets internally, but did not have realistic organizational surgery wait performance targets.
- 4.46 Capital Health established organizational targets for knee, hip and cataract surgery, and reported against those publicly. Performance has not been close to the target of 100% meeting the benchmarks. For example, at June 30, 2014, only 37% of knee replacements met the benchmark.
- 4.47 The IWK Health Centre reported overall surgery wait time results against surgery priority targets, but did not set realistic organizational performance targets. Realistic targets serve to help define performance expectations and accountability for making real improvements in surgical wait times.



Recommendation 4.3

The Department of Health and Wellness, Annapolis Valley Health, Capital Health, and the IWK Health Centre should set specific, short-term surgery wait time performance targets and regularly report against those targets publicly.

Department of Health and Wellness Response: The Department of Health and Wellness accepts this recommendation.

The Department will work with and support the District Health Authorities to establish broad provincial wait time targets, and timelines for achievement, as well as district specific wait time targets, and timelines for achievement, based on local considerations and capacity.

Annapolis Valley Health Response: Annapolis Valley Health agrees with setting realistic interim surgery wait-time performance targets. Annapolis Valley Health's implementation of interim performance targets will demonstrate improvement in surgical waits and allow us to reach national benchmarks over time.

Capital Health Response: Agree and intend to implement with a timeline of January to March 2015.

IWK Health Centre Response: The IWK Health Centre agrees with this recommendation and will implement. The IWK has initiated this work and expects to be fully compliant with the recommendation by June 30, 2015.

4.48 *Internal reporting* – At Health and Wellness, we determined internal reporting of surgery wait time is prepared and communicated to Department senior management regularly. The reporting provides a comprehensive Provincial snap shot of wait time with analysis. This information was considered by the Perioperative Advisory Committee in the conduct of its oversight work.

► Processes for wait time reporting at the districts and IWK are lacking

4.49 At Capital Health, there is regular elective surgery wait time reporting at some levels in the District. Information is reported to the Capital Health Board monthly. Certain surgical services received reporting, but on an ad hoc basis. We were provided numerous examples of ad hoc reporting in the District which shows that wait time information can be readily provided if requested. However, the lack of routine reporting of wait times means management does not regularly review the information to identify and analyze wait time issues and trends at the District and within services.

4.50 Wait time reporting was not a regular agenda item for the Capital Health's OR Executive Committee. Part of that committee's mandate is to allocate



operating room time to meet service standards. While wait times were occasionally discussed, it was not given the committee’s oversight attention to the extent needed to manage the waitlist.

- 4.51 At Annapolis Valley Health, monthly, quarterly, and annual elective surgery wait times based on PAR-NS data were reported to some of the management team. However, some managers access such reports through an intranet site and we found the site was not up-to-date for all monthly reports.
- 4.52 We found IWK pediatrics management receives comprehensive wait time statistics, which are regularly reviewed at the Children’s OR Committee. In addition, IWK adult surgical management recently began to receive wait time reports, which are reviewed by the Adult Surgical OR Committee. In both cases, the information is generated largely from an internal IWK system which predates PAR-NS. Management expressed concern about the continued use of the internal system since PAR-NS is now the source system for wait times. They indicated they will look to identify PAR-NS reporting options. We also observed that regular wait time reporting occurs at the executive and board level.
- 4.53 We found that wait time reporting processes were not documented at any of the three health entities we audited. Regular surgical wait time reporting processes need to be documented to provide continuity if personnel change positions or leave the organization. This includes detailing information requirements and related analysis, as well as who should receive reports and at what frequency. The process should also contain direction to survey users periodically to ensure reporting continues to meet needs.

Recommendation 4.4

Annapolis Valley Health, Capital Health and the IWK Health Centre should develop and document regular, internal elective surgery wait time reporting processes. These processes should be updated periodically based on a review of user information needs. Management should use this reporting to determine what action is needed to help address wait time issues.

Annapolis Valley Health Response: Annapolis Valley Health accepts this recommendation and is developing documentation that outlines internal elective surgery wait time reporting processes.

Capital Health Response: Agree and intend to implement by December 31, 2015. Management and physicians will be accountable under our co-leadership model.

IWK Health Centre Response: The IWK Health Centre agrees with this recommendation and will implement. Expected timeline for completion is June 30, 2015.

► Districts and IWK demonstrated efforts to improve wait times

4.54 *District management of wait time issues* – We found Capital Health management demonstrated efforts in addressing elective surgery wait issues. The areas of greatest wait in the District (and the Province) are orthopaedics and ophthalmology. Examples of efforts identified included:

- reallocation of operating room resources;
- monitoring long-waiting patients (to ensure patients wish to remain on the list);
- use of a blitz strategy for certain long-waiting orthopaedic surgery patients in 2013;
- using Scotia Surgery for certain surgeries; and
- process changes in ophthalmology to increase the number of cataract surgeries performed with existing operating room capacity.

4.55 Capital Health also submitted proposals to Health and Wellness to increase ophthalmology capacity and add another surgeon. However, we found the proposal to increase capacity did not explain how increased surgery volumes could be achieved without a change in funding. Indirect costs were also not included in the comparisons of alternatives. Health and Wellness had similar concerns and this proposal did not move forward.

4.56 Annapolis Valley Health management has processes to identify elective surgery wait time issues and have demonstrated initiative in addressing these issues. The areas of greatest waits in the District were orthopaedics and ophthalmology. We identified examples of active efforts to manage surgical wait times, including:

- monitoring long waiters to help ensure a valid wait population;
- requests for additional resources from Health and Wellness to apply against key wait areas;
- establishing an orthopaedic pre-assessment clinic;
- pilot project for central surgery booking; and
- cooperation with other districts to obtain additional resources.

4.57 The IWK has two surgical services operating programs – the Children’s program, and Women and Newborn Health program. We found the IWK Children’s program management have processes to identify and consider elective surgery wait time issues; management has demonstrated some effort in addressing issues. The areas of greatest wait concern are dental,



gastrointestinal, ophthalmology, and orthopaedics. Efforts identified included:

- cooperation with South Shore Health to perform certain procedures there;
- reallocation of operating time;
- monitoring long-waiters; and
- developing a proposal to address children’s dental surgery volumes.

4.58 Across the Province, efforts to address local wait issues, particularly in relation to orthopaedic surgery, have meant keeping up with incremental demand, without addressing wait time improvement. In the case of ophthalmology, efforts have resulted in reduced waitlists. Managing operating room use is central to district efforts to manage waitlists within existing resources. This is dealt with in the following section.

Operating Room Use

Conclusions and summary of observations

Annapolis Valley Health, Capital Health and the IWK Health Centre did not have effective processes to support the efficient use of operating room resources. We found policies are either outdated or in draft form at both Annapolis and Capital. Key performance indicators to manage and assess the efficiency of operating room use are not consistently measured in either of the three entities we audited. We also found that information about efficient use of operating rooms is not collected; reporting is not established; and regular monitoring is not always carried out. Management at Annapolis Valley Health and the IWK Health Centre indicated there is an assumption that OR resources are already used efficiently. However, we found that utilization of operating rooms is not adequately monitored. Time is often allocated on the basis of historical precedent, without consideration of waitlist priorities. While there is active oversight of operating rooms at the district health authorities, it is largely focused on managing daily operations. In addition, clinical services planning for the coordination of Provincial operating room resources is in very early stages.

4.59 *Background* – We examined operating room use practices at Annapolis Valley Health, Capital Health and the IWK Health Centre. We also assessed Department of Health and Wellness activities in this area. Effective processes to support the efficient use of operating rooms and managing surgical priorities are necessary to alleviate waitlist demands and provide timely access to surgical services.



► Processes to support efficient operating room use are deficient

- 4.60 *Policies and processes* – Each district we visited and the IWK had its own processes to support operating room use. The processes should address matters such as physician and anesthetist absences, cancellations, and allocation of operating room time. At the IWK Health Centre, the Women’s and Newborn Health Program and the Children’s Program have processes specific to each program. At Capital Health, there was also variation between the Dartmouth General Hospital and the District’s other facilities.
- 4.61 At Annapolis, Capital and the IWK, we found processes were ineffective to support efficiency of operating room use. For example, processes lacked guidance around planning for unused OR time and considering wait times when re-allocating unused OR time.
- 4.62 *Annapolis Valley Health* – The District’s Operating Room Policy has been draft since 2010 but management told us it is the current practice. Provisions for allocating operating room time, scheduling, surgery cancellations, and planned surgeon absences were included in the policy.
- 4.63 Although the policy states that the OR committee assigns operating room time with consideration of demand, wait times, and other matters, we found only one instance in which time was moved to another service for the long term, despite significant wait times that demonstrate the need to do so. Management indicated that allocation of operating room time is largely based on historical precedent and it has been challenging to implement change due to individual physician preferences.
- 4.64 Additionally, optimal use expectations are not established for the operating rooms. Annapolis management told us they believe operating room use is already optimized. However, when we requested an overall utilization statistic (time used versus time available), we were told that this information is no longer available since an upgrade to the surgical information system.
- 4.65 Without clear expectations or measures for operating room utilization, District management cannot plan and objectively compare performance to determine if resources are optimized and allocated to services with the most critical needs. This impacts wait times and the ability to provide timely service to patients.

Recommendation 4.5

Annapolis Valley Health should update and approve its operating room scheduling policy. The policy should address optimal usage expectations, and formal standards to allocate operating room time and include guidance for revisiting operating room allocation on a regular basis with consideration of wait time.



Annapolis Valley Health Response: Annapolis Valley Health is in agreement with this recommendation. The current operating room scheduling policy will be revised to ensure allocation of operating time is based on patient need, resources, community, utilization, and provincial priorities. Implementation success requires collaboration with Department of Health and Wellness and physicians. Resource allocations may impact the District’s ability to achieve targeted results.

4.66 *Capital Health* – Operating room policies and guidelines that support operating room utilization at Capital Health have not been updated since 2005. The policies lack guidance on key elements necessary to support efficient operating room use. There is no formal process to plan for surgeon and anesthetist absences and the policy does not require consideration of wait times when allocating resources. We found that OR committees provided guidance for some areas. For example, the OR Executive Committee mandated that a service with the longest waitlist be given priority for operating room time which other services could not use due to scheduling issues. The OR Executive Committee and the Dartmouth General OR Committee also established a two-week notice deadline for surgeons to submit surgical bookings.

4.67 We noted issues at the Dartmouth General Hospital with respect to patient wait and operating room use. Courtesy physicians are not assigned regular operating room time, but a surgeon with courtesy privileges had the largest waitlist for a particular service. No steps have been taken to reassign patients within the service. In another surgical service, 50% of one surgeon’s patients waited close to a year for surgery while a colleague’s patients waited approximately two months. The chart below provides further information on this situation. While we acknowledge the physicians have a different mix of patient types, this is an example of historical allocation of operating room time and issues which can arise. A more patient-centred process would involve consideration of wait times.

Elective Surgery Cases Waiting – Dartmouth General Hospital Example (as at June 30, 2014)					
	Total Cases	50th Percentile Days Wait	90th Percentile Days Wait	Long-waiters *	% waiting over a year
Surgeon A	132	60	270	8	6%
Surgeon B	544	293	626	230	42%

* Waiting longer than one year

Source: PAR-NS

4.68 A 2010 consultant report for Capital Health noted a utilization benchmark of 90% would be appropriate. Capital Health performance indicators to measure operating room use suggest that operating rooms are not optimized. The year-to-date utilization rate reported June 2014 ranged from 71% to 84% at the Victoria General and Halifax Infirmary sites. The Dartmouth General



Hospital's utilization rate for the month of June 2014 was 80%. District management told us that they are not fully confident in the data that makes up these figures for the Halifax sites because the information is being pulled from a number of systems and the output has not been fully validated. This issue has been ongoing since 2012. Capital Health management need to take steps to ensure the reported operating room utilization rates are correct.

Recommendation 4.6

Capital Health should update its operating room policies over utilization to better support efficient operating room use. The policies should address revisiting operating room time allocation with more consideration of wait times. Reporting of utilization information should be validated to ensure the output is accurate.

Capital Health Response: Agree and intend to implement with a timeline of January to March 2015. Approach is to include hiring/realigning resources to support deep analysis of current operating room information systems to determine capacity to provide utilization reports and information to inform decision making. If this is not adequate other options will be explored. The new approach will be multilevel – surgeon, surgical service and system. The existing policies will be revised, and an accountability process to support the new policies will be in place. Work is currently already in progress regarding the realignment of ENT and orthopaedic operating room time at Dartmouth General Hospital.

- 4.69 *IWK Health Centre* – The IWK Children's program operating room policy is adequate. It includes procedures to deal with absences, cancellations, and consideration of waitlists for allocation of operating rooms. Operating room time has been reallocated based on the policy. The IWK Women's and Newborn Health program developed a policy to use a committee to schedule surgeries based on waitlist data. Management told us the policy is followed, but since the committee does not keep minutes, we could not confirm this. The policy does not include guidance on planned surgeon and anesthetist absences or cancellations.
- 4.70 Usage expectations are not established for operating rooms. IWK management indicated that operating rooms are already optimized. However, when we requested an overall utilization statistic (time used versus time available), we were told that this information is not reported regularly. Due to the lack of recent data, it cannot be determined if operating room resources are optimized. However, results from ad hoc reports we examined indicate that efficiencies can be gained in certain areas, such as surgery on-time starts and turnover time between surgeries. For example, 76% of first surgeries of the day started late in the IWK Children's program for the period April to June 2013.
- 4.71 Sufficient information is necessary to identify inefficiencies in operating room utilization and take steps to improve performance. Without clear



expectations or measures for operating room utilization, management at the IWK cannot plan and objectively compare performance to determine if resources are optimized and allocated to services with the most critical needs.

Recommendation 4.7

The IWK Health Centre should update its operating room policies, including having clear guidance on planned physician absences, surgery cancellations, and optimal usage expectations. The Health Centre should measure and monitor its operating room usage regularly.

IWK Health Centre Response: The IWK Health Centre agrees with this recommendation and will implement. There are OR policies currently in place that will be revised to ensure the required processes are defined, documented, and enforced. Expected timeline for completion is June 30, 2015.

► Operating room use lacks regular and reliable utilization monitoring and reporting

- 4.72 *Reporting* – Operating room use lacks regular and reliable utilization monitoring and reporting. While PAR-NS has some OR utilization reporting, it is still under development. The information available to each district health authority outside PAR-NS to collect and report certain operating room use statistics is not consistent. Although information varies, management at Annapolis, Capital and the IWK expressed concerns about the quality and accessibility of information. Certain systems require manual data entry and are therefore labour intensive. Nursing and clinical staff are sometimes required to perform these tasks, which may not be the best use of those staff member’s time.
- 4.73 In 2012, Capital Health developed a reporting tool which includes a number of key operating room performance indicators. Reports are compiled from various systems and distributed and discussed on a bi-weekly basis. However, Capital Health management have told us that they are not fully confident in the quality of the information in these reports and have been working on validating the data. The Dartmouth General Hospital does not have access to this reporting tool and reports more basic information, such as cancellations and the number of surgical cases and hours, to key personnel on a regular basis.
- 4.74 Annapolis Valley Health reports a number of operating room use statistics that are results-based. Overall, there are no operating room key performance indicators established to manage results. We found that some reports provide comparative figures showing time used, but these are not compared to available time. Basic information about overall utilization was not available



from the system and we noted that other reports were manually prepared by staff.

- 4.75 IWK Health Centre reports operating room utilization statistics on an ad hoc basis. We found evidence that some ad hoc reporting was completed during the audit period.
- 4.76 Reporting meaningful information would be helpful to management in all districts when making decisions about allocating operating room resources to meet surgical priorities.
- 4.77 *Monitoring and oversight* – Annapolis Valley Health, Capital Health, and the IWK Health Centre have some structures to monitor operating room utilization. However, as noted previously, they do not have sufficient information and supporting processes required to make informed decisions.
- 4.78 We found that committees are identifying opportunities to improve utilization. Examples include: modifying current processes, sharing resources with other districts and external sources, and submitting proposals to the Department of Health and Wellness. For example, Capital Health has partnered with Scotia Surgery to complete certain surgeries. Capital also uses surgical facilities at Hants Community Hospital to conduct orthopaedic surgeries. IWK Children's programs use Bridgewater surgical facilities to perform certain types of surgical procedures. Annapolis Valley Health conducts some procedures at South Shore District Health Authority. This indicates that the opportunity exists for provincial coordination of operating room resources.

Recommendation 4.8

Annapolis Valley Health, Capital Health and the IWK Health Centre should establish standard management reporting that includes meaningful operating room utilization measures.

Annapolis Valley Health Response: Annapolis Valley Health is in agreement with this recommendation. Operating room utilization key performance indicators have been identified. They will be monitored on a quarterly basis to ensure optimal operating room utilization.

Capital Health Response: Agree and intend to implement with a timeline of April to June 2015. The timeline for implementation will support collaboration for the development of standardization across management zones.

IWK Health Centre Response: The IWK Health Centre agrees with this recommendation and will implement. The IWK currently reports utilization measures on an ad hoc basis and will establish regular reporting processes and definitions. Expected timeline for completion is June 30, 2015.



► No overall plan for efficiently managing operating rooms Provincially

4.79 *Operating room coordination: Health and Wellness* – Historically, operating room utilization was considered the responsibility of the district health authorities. In 2012, the Department recognized it has a Provincial role in trying to coordinate clinical services planning (including surgery) and the Provincial Clinical Services Planning Steering Committee was formed. Clinical services planning involves designing a Provincial approach to care including where people can access services, such as surgical procedures. Management decided to focus on orthopaedic surgeries initially since the Orthopaedic Working Group had been formed and was developing a five-year plan. However, there is still no overall framework for surgical clinical services planning. Clinical services planning will be fundamental for ensuring operating room resources are optimized with a focus on surgical priorities Province-wide.

Recommendation 4.9

The Department of Health and Wellness should develop a clinical services planning framework for surgery that determines which services will be offered in each location.

Department of Health and Wellness Response: The Department of Health and Wellness agrees with this recommendation. The Perioperative Advisory Committee will assist in providing leadership and will work with the new provincial health authority structure to determine a clinical plan for surgical services.