Niagara Health System Operative/Perioperative External Review November 29th, 30th and Dec 1, 2006

Reviewers Betty Watt, John Cain and Bryce Taylor

Introduction

The reviewers were asked to conduct an examination of the Niagara Health System's (NHS) delivery of surgical services. the review was requested by the chief executive officer with the following instructions: "The purpose of the external review is to assess and identify opportunities for enhancements in the provision of service within the operative/perioperative program, identify opportunities to achieve cost savings and identify where centers of excellence can be supported for surgical services in Niagara, building on capacity and critical mass. To better utilize health professional human resources. To be in a position to capitalize on ongoing provincial initiatives within the context of transformation agendas"

The information provided consisted of a number of documents that were pre-circulated to the reviewers. In addition, numbers of specific operations performed at various sites in the previous and current fiscal years, as well as operating room and Clinic schedules were provided at the time of the review. Minutes of the patient surgical team meetings were also provided at the review. In addition to the many meetings with members of the healthcare teams, a preliminary working dinner with senior members of the NHS proved very useful in setting the stage for a productive dialogue.

We thank our hosts for their preparation for the review, and their hospitality during the extensive two and a half day sessions. All individuals interviewed were very helpful, candid, and passionate about their roles in this impressive and complex health-care organization. It should be stated at the outset that virtually to a person, all those we met were very focused on the highest level of patient care, and were well aware that surgical efficiencies, quality of care, working conditions, interpersonal relationships and the development of centres of excellence were the subjects of the current process.

We must emphasize that a complex working environment is difficult to assess in a very short time, and that meeting in groups may not always provide a balanced view of the actual dynamics within an extensive organization like the NHS. Therefore, interpretation of concerns expressed by a large number of people are dependent upon group-based expressions in a short period of time. It is also noted that any recommendations may refer to an "ideal world", and above all other industries, *healthcare* continues to live in reality rather than an ideal world. In addition, each of the reviewers has had extensive experience in *imperfect* organizations; the interpretation and advice is based on experience that, while similar to that at NHS, may not be immediately extrapolatable to other organizations. Finally, it is recognized that the subjects under discussion have been the foci of concern for many years, and that the local political reality of a number of small but "vocal" municipalities within the region has significantly affected decision making and planning of healthcare. In particular, it was made clear to the reviewers that there would *not* be complete closure of any of the current hospitals; however, specific services within those hospitals might still be candidates for significant reorganization within the NHS.

We also recognized that in response to perceived problems, a number of important changes in management have been instituted relatively recently, some in the last few months. A number of individuals in leadership positions were literally in their first weeks of responsibility. While it may be considered somewhat early to draw conclusions about the results of those changes, we realized that the principal subjects had been addressed for a long time, and therefore the effect of recent managerial change was likely minimal.

After we relate results of interviews at all NHS hospitals, we will offer recommendations as to how we feel NHS might consider going forward--all opinions and recommendations reflect unanimous agreement on the part of the three reviewers, but may lack insight as to the opportunities of realization in the NHS setting, especially with respect to political considerations. Interviews were held with senior management, surgeons, nursing focus groups, site leadership, operating room nursing leadership, regional SPD director, charge nurses and anaesthesiologists. As stated, we will provide feedback from these various encounters; ***it is important to emphasize that in each group interviewed, feedback will be recorded in italics and does not necessarily reflect agreement by the reviewers.***

Niagara Health System--2000-2006

The Niagara Health System is a large hospital organization providing secondary and tertiary surgical care to a population base of over 400,000 inhabitants of the Niagara peninsula. It consists of a merger of seven "legacy" hospitals. There are full service hospitals in Welland, Niagara Falls and St. Catharine's General, all of which might be termed tertiary hospitals. The Ontario Street Site (formerly operated by Hotel Dieu) performs ambulatory surgery. Additional smaller hospitals exist in Fort Erie, Port Colborne and Niagara-on-the-Lake, two of which are considered "residual OR sites". In addition, the Shaver/Rehab Hospital was originally included in the group but is now operated by the Hotel Dieu.

There is one governance framework over these seven hospitals, which reportedly have approximately 30 physical operating rooms.

As the Health Services Restructuring Committee never resolved the function of Hotel Dieu which was a fully functioning hospital in the past, Dennis Timbrell was called in as an inspector. After almost two years (in the spring of 2005), agreement was reached that saw the NHS divest the Shaver/Rehab which was taken over by the Hotel Dieu Hospital; the Ontario Street Site (formerly the HDH Site) was then converted to an ambulatory surgical centre and "Prompt Care" which is open from 8:00 a.m. to 10:00 p.m. The Niagara Health System at the St. Catharine's General site took over the Hotel Dieu physicians and activity, creating significant problems in supply and demand of healthcare services at the St. Catharine's site. As of the fall of 2005 i.e. one year ago, <u>all</u> acute in-patient care at Hotel Dieu was transferred to the St. Catharine's General site.

There are ongoing critical risks and shortages of nurses, anesthesiologists, and specialists in specific areas. That has prompted the provision of on-call subsidies in pediatrics and anaesthesia. Some stipends are provided to administrative leaders in the medical field, but there seems to be little transparency in that regard, and only modest compensation for potentially major administrative positions.

Previous reviews and planning

Management and front line health-care providers in the NHS have had many opportunities in recent years to offer feedback and advice on the developing plan for healthcare in the Niagara region. A number of specialties including Ophthalmology, Orthopedics, General surgery, Urology and Obstetrics and Gynecology have examined the possibilities of collaboration and consolidation of services within the region. While these discussions reached variable maturation, the surgical team has not yet to this date brought forward a comprehensive plan to administration. While some clinical areas such as the Department of Medicine and Critical Care have achieved agreement in important areas of collaboration within the NHS, Surgical Services has clearly fallen behind others in achieving similar success. Although some surgeons stated that a majority of surgical specialties had agreed to consolidate during a process two years ago, we were not able to see any planning documents that supported those decisions. Arrangements have apparently been made with the Ministry of Health to fund specific initiatives such as a cancer center and the cardiac cath lab, with additional funds being raised locally through hospital foundations. This subject was not pursued in any further detail. We understand that there will be a major retreat of the board of trustees in January 2007 at which time guiding principles will be established for clinical programs to investigate and develop plans for Centres of Excellence, to be confirmed once a master plan is developed.

Surgeons in the region have been cooperating with the Ontario Wait Time strategy (WTIS), and in fact report wait times in all domains at or below the provincial mean. The number of procedures performed in NHS hospitals is prodigious, with over 35,000 documented operations for the fiscal year 2005-2006. It is felt that approximately 75-80% of these were outpatient procedures (day surgery), but this statistic was not confirmed.

An operative/perioperative coaching team visited in the last year to provide detailed feedback on day-to-day operations. Many recommendations were made, but these were primarily generic, rather than site-specific.

The NHS was also recently examined by a CCHSA accreditation team, and major concerns were raised about specific areas within the surgical specialties. The operative/perioperative accreditation barriers related to terms of reference of surgical committees, the development of surgical indicators for regular review, a centralized wait list process monitored by a central source, a clear policy related to informed consent, and increased awareness of the need for patient safety, especially surgical site infections.

This external review committee feels that the recommendations by the accreditation panel as well as the coaching group should be taken seriously and adopted as priorities; any overlapping recommendations that this external review

committee makes will serve as an emphasis of issues we feel particularly important.

Current budgetary issues

The NHS is a complex amalgamation of seven active institutions with many elective and emergent surgical demands in both out-patient/day surgery and in-patient settings. The NHS was not projected to balance its budget in the last year. Of particular concern remains nursing overtime. Therefore, a major mandate of this review included possible steps that would predictably maintain or improve quality of care and at the same time achieve savings.

Guiding principles supported by the reviewers

During the review, we articulated a number of important principles we feel are important to observe in any complex health care organization, but which we felt are particularly pertinent to the NHS situation. These might be grouped in the sections of *planning* and *operations:*

Planning :

1. Communication at all levels is critical to success.
2. Any planning expected of the members of the Department of surgery at NHS must be preceded by an articulation by the senior management team of a clear vision, mission and values of the NHS as a whole.
3. All development of concepts of structure and function must be patient-centred..
4. The need for an *inclusive* approach (internal and external communities and stakeholders) to major planning and implementation increases with the *complexity* of the system
5. Branding must be NHS- related and secondarily site-related within the NHS.
6. Transportation either for patients or health care workers should not be a major determinant in planning for health care in the Niagara peninsula.
7. Concentration of ambulatory surgery at the fewest number of institutions possible is cost-effective and quality-effective. Ideally, ambulatory and in-patient surgery should be separated.
8. All decisions regarding planning must be based on good data. Data acquisition must be a top priority. In addition, input from all stakeholders must be sought.
9. In times of change, some will be inconvenienced.
10. Processes are easy to change; cultures are not.

11. In any large, geographically diverse healthcare organization, adequate anesthetic and surgical coverage is challenging. Ideally, all clinicians should have responsibilities at all sites to maximize flexibility; the reviewers realize that in the case of the NHS, universal adoption of such a principle is unrealistic at this time, but nevertheless should be considered when clinicians are recruited and credentialed.

Operations

1. Access to hospital resources such as beds and operating time is a privilege, not a right, for anesthesia and surgery.
2. The operating room is the most complex work environment in a hospital, and depends on precarious personal relationships among many diverse personalities.
3. Anesthesiologists, nurses and other health-care workers live in the OR while surgeons visit.
4. Anesthesiologists and surgeons having the opportunity to work in the NHS should sign a "credentialing commitment contract" in which resources are available as service coverage is provided.
5. Day-to-day operations in operating suites must be based on an equal TEAM partnership among surgeons, nurses and anesthesiologists. Each must expect support from the other
6. A critical mass of activity in various areas is necessary for high-quality care.
7. Achieving budget targets is critical, and overtime of health-care workers must be minimized.
8. All policies must be clearly articulated, written and communicated across all sites at NHS.
9. The operating room day with respect to length and staffing must be respected.
10. Individuals (leaders, managers) who are responsible and accountable must be identified, and enabled to make decisions based on well-articulated policies.
11. Middle manager positions must have manageable portfolios.
12. All processes within an operating room must follow universally accepted standards.
13. Risks to the delivery of patient care are greatest with the loss of nurses and anesthesiologists, and less with loss of surgeons.

Interviews were held with senior management, surgeons, nursing focus groups, site leadership, operating room nursing leadership, CPD director, charge nurses and anesthesiologists. As stated, we will provide feedback from these various encounters, and recommendations in each case.

OR Data

The acquisition of accurate data is critical to decision-making in surgical services. We were provided with surgical procedure data from the fiscal year 2005-6, and partial data for the current year; however, there were limitations which were discovered, and so any conclusions drawn can only be based on what may be imperfect information. We also recognized that although the Greater Niagara General Hospital previously had useful up-to-date information on many Operating Room processes, this was no longer available since the NHS began to introduce a new IT system. The previous system used was the ESI system, which was apparently functional and well accepted; the Pisces system was introduced in the last two years and has not functioned nearly as well in the opinion of all interviewed. It was recognized that the PISCES system implementation was problematic and the team as been working for 5 months to correct any/all implementation issues.

Visits to NHS Hospitals

The reviewing team attended all hospitals in the NHS with the exception of the Ontario St. site. A separate account of each visit will describe those individuals met, the ensuing discussion, and important issues highlighted.

Douglas Memorial Hospital in Fort Erie

In the last complete fiscal year, the two operating rooms at this site performed 1098 outpatient operations, consisting of 720 Ophthalmology procedures, and other day surgery including obstetrics and gynecology (D&C, diagnostic laparoscopy, TA's, tubal ligations etc.), Urology (cystoscopy, prostate biopsy), orthopedic surgery (arthroscopy) , and general surgery (laparoscopic cholecystectomy, hernias, breast biopsies, endoscopy). Of the two rooms, one functions daily, and a second room is used twice per month for Urology and Ophthalmology.

Individuals interviewed:

- The surgeons who operate at this site are encouraged to have a short operative list followed by an outpatient clinic designed to focus on patients referred by local general practitioners.
- Anaesthesia is provided by a general practitioner/anesthesiologist, and the anesthesia given is generally conscious sedation for cataracts, general anesthetic for a minority of operations.
- The emergency department is open 24/7, and stabilizes and transfers all potential surgical patients to other sites.
- Equipment appears to be a significant problem, and the oral surgeon who comes actually brings in his own set of instruments. There is frequent flash sterilization necessary because of insufficient numbers of instrument trays. In fact there are five sets of cataract instrument trays to cover eight operations in a day.

and indicated that previous discussions amongst the NHS ophthalmologists led to a declaration of a preference for one site. However, no one could agree on a specific site, and the group finally proposed that a newly constructed freestanding unit would be appropriate for the delivery of eye surgery in the NHS. A wide variety of eye surgery is in fact practiced at the Fort Erie site, with retinal detachment surgery performed elsewhere.

- The nurses at this site feel that the clinic and the operating rooms serve the local public very well. They feel that the operating room is quiet, safe and efficient. No quality or outcome data were reviewed.

Port Colborne General Hospital

Individuals interviewed: see list for Douglas Memorial Hospital (combined)

A separate tour of this facility was provided

In the last fiscal year, 908 outpatient procedures were performed at this site. These consisted of 173 endoscopies performed by internal medicine specialists, 158 TURP's and Cystoscopies by Urology, 44 dental surgery cases, and 517 Ophthalmology cases by a single ophthalmologist,

- There are four operating rooms built around a central core, and generally one functions each day. Similar to the Douglas Memorial site, outpatient clinics are conducted by the surgeons who perform day surgery in these operating rooms.
- Sterile packs are handled well, coming from CSR via elevator.
dental instruments are frequently brought individually by the dental surgeon.
- The charge nurse is now attempting to hire a housekeeper to wash the operating room cupboards. When the operating room functions, it usually finishes at approximately 13:30.
- No quality or outcome data for this site were reviewed.
- The emergency department is open 24/7, and reportedly is relatively busy, seeing approximately 24,000 cases per year. There is a four bed intensive care unit.

Greater Niagara General Hospital

This site has six physical operating rooms, with one being employed as a "roving" storage area. Four or five operating rooms are active each day, with approximately 80-90% of cases being outpatient day surgery. Most are general anesthetics, with local anesthetic rooms reserved for Mondays and Tuesdays. Two rooms run until 16:30, and one room for emergencies on evenings. All anesthesiologists are fellowship-trained.

The 5910 operations performed at this site in the 2005-2006 fiscal year consisted of 789 general surgery operations (hernias, laparoscopic cholecystectomy, laparoscopic bowel resections, APR's, breast, thyroid, and varicose veins), 856 orthopedic procedures (total joints, fractures, arthroscopy), 375 plastic surgery operations (reduction mammoplasty, various hand procedures), 1377 Urology procedures (cystoscopy, TURP), 965 OBS/GYN including many gynecologic procedures, 386 ENT, 800 Ophthalmology, and approximately 350 dental/oral surgery operations. In addition, there were over 4000 endoscopic procedures, approximately 30% by an internist, and the rest by general surgeons. There is no Vascular Surgery or Thoracic surgery performed at this site. Surgeons and especially anesthesiologists have stated that they would prefer that cesarean sections be performed on the obstetrical floor rather than in the operating room. In fact, there has been some discussion of

expanding Urology Services, and perhaps deemphasizing the importance of OBS/GYN and dental surgery.

Pediatric surgery is performed by surgeons in ENT, Urology, general surgery and dental surgery.

Surgeons interviewed:

- They recognize that porters are required to move patients in and out of the operating room; the reviewers were concerned that this function is often falling to the nurses rather than the surgeons.
- Surgeons feel that nurses are spending an inordinate amount of time on computers in the operating room entering data--however, they are skeptical about how useful the data derived really is.
- Surgical equipment is a major issue, both replacement of existing instrumentation and the acquisition of new technology.
- Surgeons perform day surgery cases that require monitoring until 21:00. Some feel however, that many minor procedures should be carried out in a specific minor procedure room rather than the main operating room.
- A concern was expressed that one particular urologist admits most patients when other urologists do not.
- The relationships between surgery and anaesthesia appear to be positive.
- The surgeons state that they are very much in favor of rationalization of services in the region.
- There was an expression of continual frustration of "Nothing being done" with respect to regional planning, while the surgeons are feeling burned out from constant clinical pressures.
- There has been orthopedic cross-coverage with Welland, but surgeons generally felt that Welland was difficult to get to both for health care providers and for the patients themselves.
- All are well aware that the hospital is over budget, but they state categorically that this hospital performs 30% of the work in NHS with 20% of the budget. They therefore feel very strongly that they are underbudgeted.
- Some have heard that there is a move to centralize OBS at other hospital sites, and they state that they carry out twice the deliveries in comparison to Welland, and more than the St. Catharine's General site. However, they had been assured by that none of the three obstetrical sites will be closed.

-The load on anaesthesia at this site is significant, but the relationship with surgeons appears to be strong.
- A chronic pain clinic run by a retired doctor provides service in this area.
- This group was particularly concerned about potentially moving obstetrics, gynecology and pediatrics away from the site, as it would affect other surgical services such as Orthopedics and Otolaryngology.

- The current nurse manager is the 14th manager in 10 years. There is a very young nursing staff, and there are significant concerns about retention.
- Chart assembly is viewed as a significant problem, in that nurses receiving patients each morning are constantly finishing charts, chasing blood work, and even finding consents.
- There seems to be little coordination of outpatient surgery, in patient surgery, and especially those patients who may require monitoring postoperatively. This lack of coordination leaves nurses feeling very short staffed some days, overstaffed of others.
- There's no standard that patients must come to Pre-admission clinic, and some who are scheduled to come to the clinic simply do not show up. In particular,

- The nurses also noted that patients require a significant amount of high maintenance care.
- Surgeons starting their cases late and not respecting time in general continue to be a major problem in the opinions of the nurses. In particular, Drs.

- Nurses are particularly concerned about their responsibility to inform surgeons of such administrative details, when they feel that this should be the job of the surgeon in chief.
- The nursing staff is very concerned about " forced overtime " that becomes necessary when cases run unexpectedly late.
In the past, late days were monitored by the previous information system, but such data is now unavailable unless tracked by hand.
- Nurses are not allowed to call in to an active operating room to speak to an anesthesiologist or surgeon, creating inefficiencies in patient care and certainly in nurses' work.

The operating rooms are old, and there was a plan in the last 10 years to demolish the operating rooms and replace them with a new facility. However, this plan did not come to fruition, and subsequent discussion involved the expansion of the operating room facility and replacement of 2 endoscopy rooms adjacent to the OR space.

- One particular unusual feature of this operating suite is that a " garage" room each day, as nurses move equipment out of one unused room into another unused room for that particular shift while the first unused room becomes active.
- The OR policies are seen to be incomplete, and some feel that the policy manual is outdated by approximately 15 years. For instance, there is no official policy on MRSA case protocol, and the nurses feel that policies are different in the various NHS sites. They feel they should be developed by the individual directing the Infection Control initiative
- The recurring issue of consent was also discussed.

- In the opinion of the nurses, the CPD has not been a good service, and has been taken out of the OR management process. It now reports to Materials Management. There are no case carts, and like other operating rooms in the region, there remains a significant amount of flash sterilization.
- There is a 4 hour turnaround in CSD rather than two.
- Restricted and unrestricted areas are not separated, and storage rooms are present outside the operating room, necessitating bringing orthopedic supplies into the operating room after they have crossed a non-sterile area.
- There has apparently been very little purchased from a capital equipment list and the cost of repairs is escalating.
- It has apparently been difficult to track repairs and a cautery machine has been traded back-and-forth from endoscopy to the operating room.

The emergency department is very busy for surgery, and there are 34 in patient beds on the Brock unit including four flex beds, eight ICU beds and six step down beds.
- There are ongoing pressures because of medical admissions, but elective operations are seldom cancelled.

- Nursing workload is of great concern, as in addition to their regular duties, they are porters, bed movers, and patient-lifters, sometimes of the immobile patients. The orthopedic patients, who make up a significant percentage of the in-patient surgery are very taxing, with complex medical diseases and epidurals in virtually every patient.
- The operating day will often start with up to 10 patients who do not have a designated bed available at the time of their surgery--despite this, operations are seldom cancelled. This problem is exacerbated by the presence of medical bed spacers, even though the unit has apparently been designated as "closed".
- The nurses feel very proud that they use the " best care maps in the NHS " which lead to acceptable length of stay for both hip and knee replacement surgeries.
- They are concerned, however, that now that charts have been moved from the bedside to a central area, charting has been less efficient. The staffing ratio in general is thought to be very poor, especially if a nurse is managing both acute postoperative patients as well as complex medical patients.

- They feel that the response to their concerns has been inadequate, especially when many nurses have come back from sick time or disability and are on modified light duty.
- The hospital is currently censored by ONA, but those issues were not pursued further.

Welland County Hospital

In the last fiscal year 2005-2006, surgeons in this operating room carried out 5387 operations in the main operating room, and over 5000 procedures in minor OR's. The types of major OR procedures were as follows; general surgery 428 (laparoscopic cholecystectomy, hernias, bowel resections, breast, thyroid), orthopedic surgery 493 (total joints, shoulder, spine surgery, fractures), plastic surgery 292, Urology 1723 (cystoscopy, TURPs, cystectomy, nephrectomy), obstetrics and gynecology 658, Otolaryngology 483 and Ophthalmology 1292. In the minor operating rooms, over 3000 endoscopies, 660 minor plastic surgical procedures and gynecologic colposcopies were the most frequent operations performed. Pacemakers have recently been added to the operative list, but few have been performed to date; nurses have been appropriately oriented to this activity.

Anesthesiologists interviewed:

- The anesthesia department is under significant stress, as they now have effectively 3.5 full-time anesthesiologists.
- The emergency department is extremely busy, and there is a growing demand to perform " add-on " surgery.
- Night coverage has become a significant problem, and if the anesthesiologist is busy, the following days elective list is threatened.
After a weekend on call, the anesthesiologist is usually assigned to a cataract room, somewhat less taxing.
- If an add-on case is proposed, it is performed if that is the desire of the surgeon. One of the irritants is that surgeons will not use their elective operative time consistently, and so on occasion the anesthesiologist is left with no list, whereas at other times there is simply too much work.
- Although there is occasional help from greater Niagara Hospital, this group has major concerns about the future.
- The importance of providing anaesthesia services to cataract surgery was emphasized by this group, as that particular field is a lucrative yet somewhat less demanding activity.

Nurses interviewed:

- According to the nurses, there are major issues with regard to coverage at this site. They have the potential to run 5 active rooms, and staffing is reasonably strong at 3.5 nurses per room. After 15:00 they can run two rooms until 5:00 p.m. However, add-on surgery has become a real problem.
- The add-on surgery can be booked far in advance, even one week prior to the date. This occurs especially on Wednesdays l with gynecologic procedures.
- The nurses feel that in times requiring decision-making regarding add-on cases, cases not finishing on time etc., they do not get sufficient support from the surgeon in chief.
- They feel they require block time for urgent cases, and certainly better access to rehabilitation beds.
- The operating room nurses are concerned that their manager is not OR-trained, and because she has so many other commitments on the inpatient floor, she is simply not present in the operating room.

- Like nurses in the other operating rooms, they feel that they " must keep the surgeons happy ".
- Nurses in fact even attend to prepping and draping patients prior to surgery.
- They are also concerned that decisions around the equipment are made by individuals other than those who actually work in the operating room; in other words, uninformed decisions are being made.
- They use computerized picklists, case carts, and have a reliable ORM booking/documentation system. The Pre-admission clinic is well-organized; all patients coming to the operating room have visited that clinic and invariably arrive for surgery with completed documentation in their charts.
-The nurses report that the large number of endoscopies can only be performed because the nurses themselves are cleaning the scopes.
-They feel they require a support person to attend to these tasks.
- They're also concerned about standards within the endoscopy unit, particularly about the drying of scopes.

The in-patient floor consists of 30 surgical beds, which was decreased from a total of 40 beds in the past. There has always been significant pressure from medical beds spacers, but despite that, they have never had to cancel surgery because of a lack of beds. An infection control nurse covers both Port Colborne and Welland County Hospital.

In addition an intensive care unit has eight beds, two step down beds, and six telemetry beds.

<u>Surgeons interviewed</u>:

- The surgeons themselves at this site are concerned that they have never seen as a strategic plan for NHS.
- They were never consulted about the development of surgical services at the St. Catharine's site.
- They feel strongly that they could expand surgical activity at the Welland County Hospital site, and point particularly to Urology as performing very complex work.
- They are concerned about late morning starts for elective cases, excessively slow turnover time between cases especially after hours procedures.

- They felt that the standard should be to make the surgical incision at 0800, but that is seldom achieved.
- The surgeons feel that the charge nurse does not " take charge " but were unclear as to the role that the surgeon in chief might play.
- Equipment continues to be a problem especially as they are now performing advanced laparoscopic procedures in such divisions as Urology.
- They all feel that the surgeons and administration at the St. Catharine's site have " a superiority complex ".
- They occasionally share call with the Niagara Falls site especially in orthopedics, but to cover the whole region from one site would be unacceptable to the orthopedic surgeons, as this would involve approximately 50 calls on a weekend.
- The gynecologists had previously met (12 in the region), and decided that they would prefer a one-site model.

The Ontario St. site

The reviewers did not visit this site specifically, but understand that all acute care has been transferred to the St. Catharine's General site. At the Ontario St. site only Ophthalmology, plastics and Urology operations are performed in 2-3 operating rooms which are adequately staffed. There exist additional large operating rooms which have not functioned at this site since the transfer.

St. Catharine's General Hospital

Nurses interviewed:

- There is a 14 day cutoff for surgical bookings, but this policy is not enforced.
- Anaesthesia consultations are somewhat complicated by the fact that the anesthesiologist wants to see the patient that he/she will actually anesthetize.
- There is no organized anaesthesia clinic, and so doctors leave between cases to carry out consultations.
- When they do carry out their consultations, there is a concern about privacy and confidentiality in the preoperative clinics. There are approximately 8-10 consultations per day required at St. Catharine's general, and 3-6 at the Ontario

St. site. The consultations are in effect for one month, and if the operation is cancelled, the consultation has to be repeated.
- Charts are often incomplete when the patient comes to surgery.
- Add-on cases may wait for several days in a row before being done, as the operating room is extremely busy every day. Add-on cases are especially problematic
- Surgical assistants are not always available, especially on off-hours. Surgeons are sometimes assisted only by the scrub nurse on add-on cases.
- Overtime for nursing continues to be a significant problem.
- The clear definitions of A, B and C emergency cases are required, and must be categorized by the surgeons themselves..
- Because of add-on cases going very late, patients are often kept in the PACU (PARR) until the early morning hours and then discharged home.
- It is felt that surgeons are trying to do too much as day surgery, and concerns are expressed about those patients who have to be admitted either after the day operation, or after they go home prematurely.

Anesthesiologists interviewed:

- The anesthesiologists felt that they had an effective organization with rationalization prior to the Health System Restructuring, but this has deteriorated since HSRC.
- They are under great pressures to do more cases, and in addition cover Vascular Surgery as well as Thoracic surgery.
- The anesthesiologists at St. Catharine's feel that the surgeons at Greater Niagara do not welcome them.
- They feel that the surgeons in Welland cancel cases, and that 3.5 anesthesiologists are simply not enough to cover emergent cases.
- They feel that " administration " has micromanaged the recruitment of anesthetists, and they actually hired an anesthetist without consultation with the professional group.
- The St. Catharine's group feel that they work very well together, and that they need more flexibility at the St. Catharine's site than they have currently.

Surgeons interviewed:

- The surgeons at the St. Catharine's site feel that communication between management and surgeons has been virtually nonexistent.
- They feel that the St. Catharine's site manages over 50% of the patients in the Niagara region, but are continually compromised.
- Emergency lists are such that many patients such as those with fractured hips, are on the emergency list for days at a time. There has been no regulation to ensure that these patients are done sooner, either from administration or as a policy articulated by the surgeons themselves.
- Obstetrics and gynecology apparently underwent an external review, and a proposal was made to amalgamate the three sites. One surgeon indicated that this is in fact a good plan, and that the board of trustees is now contemplating its acceptance and implementation. There was a clear desire on the part of obstetricians to be considered separate from surgical services.
- The ophthalmologists clearly would prefer a separate freestanding facility to deliver their surgical services.

Recommendations

The following recommendations are made on the basis of the information received prior to and during the review, and on the feedback from all those interviewed. We understand that the current atmosphere, as in many healthcare organizations, is emotionally charged, and we have tried to draw on our individual experiences in similar situations. A common assertion during our visit was that we in large academic centres could not understand the issues peculiar to the Niagara region; on the other hand, we found that the vast majority of concerns were ones that require solutions that are generic, rather than focused on either community or academic settings. Our recommendations will be classified in terms of ***general and planning, preadmission and booking, surgery, anesthesia, nursing and equipment and physical facilities***

General and Planning

Recommendation 1: *Major change. The reviewers recognize that although the NHS has been structured to offer medical services across a large region, the political reality of many strong local municipal governments may make important decisions difficult to implement. As a result, if critical decisions regarding consolidation and rationalization of services become impossible, an external Ministry of Health consultation may be required before the NHS can advance.*

Recommendation 2: *NHS as a single entity. Ideally, the NHS should function both administratively and medically as a single organization and not as several independent hospitals. The medical staff in the surgical program need to be first and foremost members of the regional NHS departments in addition to their historical smaller individual hospitals. The authority for planning, resource allocation, recruitment etc. must rest with the regional departmental heads.*

Recommendation 3: Credentialling. All medical staff (anesthesiologists and surgeons) must be credentialled as NHS physicians with privileges at all surgical sites within the NHS as well as at their own "home" hospital(s). This will facilitate cross coverage and movement between sites as the priorities and surgical needs within the NHS change. Medical staff appointments and reappointments must be contingent on following NHS policies and directives.

Recommendation 4: Priorities. The NHS must give the surgical program and its component departments direction as to the priorities, expectations and limitations within which the surgical program must operate.

Recommendation 5: Accreditation issues. The NHS and specifically the surgical program must immediately start to address the concerns raised by the accreditation team. Failure to address these issues promptly may lead to loss of accreditation.

Recommendation 6: Coaching team recommendations. The NHS and specifically the surgical program must start to implement the changes suggested by the wait list coaching teams. Failure to address these changes may result in compromise of funding to the NHS surgical program from the MOHLTC's wait list initiatives.

Recommendation 7: Data collection. A top priority for the NHS is a comprehensive process for accurate and timely data capture at all institutions. This would include not only perioperative and operative data detailing performance in patient centered care but also financial data pertaining to all components of the patient experience. Cost per case reporting at all sites will be required in the near future by the Ministry of Health.

Recommendation 8: a TEAM approach. The operations of surgical services at NHS must be a collaborative process among management, surgeons, nurses and anesthesiologists. The data described in the previous recommendation must be used by all members of the team and all members must be accountable; the variances in quality, workload and finances must be tracked and continually managed on an ongoing basis. The same approach must be adopted for the strategic planning for the region, especially since the new St. Catharine's site must have the appropriate surgical volumes and case mix.

Recommendation 9: Strategic plan. Senior management including
te, and the surgical program, led by
must immediately engage in developing a strategic plan that will guide the surgical planning in the effective use of all the surgical sites within the NHS over both the short term (under 1 year), intermediate (1 to 5 yr) and the long term (over 5 yr or whenever the new St. Catharine's hospital is commissioned).

Recommendation 10: Communication. Communication of all activities must be a top priority, and be a major responsibility of senior management. The overall vision, mission, values and planning priorities must be articulated by a process led by the TEAM above and communicated to all members of the organization on a regular basis through mailings, e-mail, conferences, town hall meetings, "sharepoint", newsletters etc. This approach is especially important at a time of change.

Recommendation 11: Clarity of management roles. The management positions such as chief of staff, surgeon in chief, regional departmental heads, nurse managers etc. must be clearly defined and communicated. The surgeon in chief as advised by the regional perioperative/operating room committee must assign OR time and be empowered to alter that assignment based on data (wait times and utilization data) and the organization's priorities.

Recommendation 12: Leadership. Reevaluate and if necessary, change current leaders in NHS management, surgery, anesthesia and nursing so that NHS-oriented professionals can be placed in these positions. All leaders should be given specific role descriptions and the resources and authority to carry out those roles. All leaders should be adequately compensated for their leadership activities and they should be held accountable for that activity.

Recommendation 13: Closure of surgical services. We recommend that the Fort Erie and Port Colborne sites should be closed to surgical activity.This recommendation is based on patient care concerns related to small critical volumes. The advantages of this move include cost savings of health-care workers, elimination of transport of instruments from site to site, more and improved, up-to-date instrument trays, better consistent sterilization techniques, standardization of all processes within the operating and perioperative areas, and improved patient care if problems arise during surgery. The reviewers fully realize that the current operating rooms at both Fort Erie and Port Colborne are pleasant venues for the staff and patients, but any untoward event under current circumstances would be indefensible if modern standards are not met.

Recommendation 14: Transfer of services. Transfer all surgical services from the Fort Erie and Port Colborne sites to Welland County Hospital. There is a need at that site for increased and consistent levels of surgical activity and more stable anesthetic services, both of which will be bolstered by the transfer.

Recommendation 15: Increase operating capacity. Open 1-2 operating rooms previously closed at the Ontario Street site, recognizing that the pressures at the current St. Catharine's site are intolerable for patients and healthcare providers. This increased day surgery activity should be mainly for "add on patients" from the St Catherine's site but if it is not fully utilized it should be open to surgeons who operate primarily at other sites for their add on cases. .

Recommendation 16: Functional plan. The surgical program must develop a functional plan, capacity analysis and a plan for the distribution of resources and services for the new St. Catherine's site and the region. It should be noted that the reviewers did not receive any information concerning a functional plan, capacity analysis, or distribution of resources/services for the current nor new St. Catharine's site.

Recommendation 17: New St. Catharine's site. The surgical services at the new St Catharine's site must not simply be a compilation of those that previously existed at the old St Catharine's General and Hotel Dieu sites but must serve and reflect the needs of the region in light of establishing centres of excellence and consolidation of services to reflect modern operating room practices e.g. separation of ambulatory and in-patient surgical service, consolidation of women's health, paediatric surgery, ophthalmology surgery and total joint arthroplasty surgery etc.

Recommendation 18: Infection control. Current surgical care and indeed current threats of various infections both in the environment and the hospital setting require that an infection control team be in place for the Niagara region. At the very least, this would consist of an expert medical specialist, a nurse specialist, and appropriate representation at each hospital site.

Recommendation 19: Standardized policies. The surgical program must develop standardized policies and procedures for the perioperative services. These policies must be written and circulated and be available in a Policy and Procedures Manual at all surgical sites for easy reference.

Preadmission and booking:

Recommendation 20: Preadmission Clinics. Each surgical site should have both day and evening preadmission clinics for optimal patient care. These clinics should be staffed primarily by nurses but each site also needs specific

anesthesiology staffed clinics. Nurses should be allowed to order testing and investigations as the clinical situation indicates and according to medical directives from the Department of Anesthesiology.

Recommendation 21: Preadmission clinics. There should be an NHS-wide policy regarding patient referral to the Pre-admission assessment clinic and for preoperative testing. All charts should be assembled in a standardized format prior to the date of surgery. Surgeons and anesthesiologists failing to comply with the policy should face consequences.

Recommendation 22: Anesthesia Preadmission clinics. An anesthesiology staffed preadmission clinic with appropriate privacy should be organized and coordinated with the Pre-admission clinic at each site as staffing allows. As a general principle anesthesiologists do not need to specifically consult on patients they will eventually personally anesthetize . Anesthesiology should agreed to which patients should be referred to the preadmission clinic and what investigations and laboratory tests are needed. These guidelines should be communicated to all of the surgical staff.

Recommendation 23: Booking. There should be a coordinated and standardized approach to booking at each site for inpatient and day surgery cases. This would allow the appropriate nursing and anesthesia staffing.

Recommendation 24: Unused OR time. If operating room time is not to be used by a surgeon, it must be given up a specific amount of time in advance, so that the block may be booked by another surgeon or service.

Recommendation 25: Booking policies. All booking policies should be in the Policy and Procedures Manual and should be strictly followed.

Recommendation 26: Day Surgery. Exclusion criteria for day surgery need to be reviewed and followed. Concerns were raised that at the OSS site there was a higher than expected unanticipated patient readmission rate.

Surgery:

Recommendation 27: Role descriptions. All surgeons should have a clear written role description that is agreed to at the time of appointment or reappointment to the NHS. A condition of reappointment to staff must be an agreement to follow the role description and adherence to the rules and policies of the surgical program

Recommendation 28: Efficient use of OR time. Surgeons and anesthesiologists must respect operating room schedules. They must arrive on time and finish at or before the scheduled time. Appropriate data collection will document the variances, and steps must be taken to adjust the resources offered to delinquent clinicians.

Recommendation 29: Decisions. Day-to-day decisions in the operating room should be made by individuals assigned to that task. Ideally, this would consist of a triumvirate of one rotating surgeon, an anesthetic coordinator, and a nurse coordinator. The decisions of this group would be final. If the team cannot come to a decision about an issue, the surgeon in chief should be the final arbiter. In particular, add-on cases must be reviewed carefully as they relate to overtime, urgency of the case, etc.

Recommendation 30: Add-on cases. Add-on cases must be given a deadline by which they have to be done, or taken off the list, or performed as an elective booked procedure, even if they need to " bump " another case.

Recommendation 31: Bad news. If the decisions must be communicated to the patient (e.g. it delays, cancellations), this is the responsibility of the surgeon, not the nurse, regardless of the cause of the problem.

Recommendation 32: Policy manual. An NHS-based operating room policy manual that is consistent, standardized and available is an urgent priority.

Recommendation 33: Surgical standards. Surgeons should prepare standards within their own specialty for length of cases, length of stay etc., and review these on an ongoing in basis.

Recommendation 34: Emergency case Urgency. The definition and implementation of emergency case urgency, ie. A, B, C must be reviewed, standardized and enforced throughout the NHS hospitals.

Recommendation 35: Operating room assistants. Surgeons must be responsible for ensuring that they have adequate operative assistance. Surgical assisting is not the responsibility of the scrub nurse.

Recommendation 36: Surgical Leave and Vacation. Surgeons must give adequate notice to the operating room and management of their individual absences for whatever reason. This will allow other surgeons to 'pick up" the operating blocks and would also allow anesthesiologists and nursing to coordinate their vacations.

Anesthesia:

Recommendation 37: *Role description. All anesthesiologists should have a written role description that outlines their clinical and call duties and assignment to anesthesia activity within the NHS*

Recommendation 38: *Regional Department of Anesthesiology. The regional Department of Anesthesiology should be strengthened and supported by the NHS with administrative and financial support. The regional Department should be the policy making body for the delivery of quality anesthesiology services within the NHS.*

Recommendation 39: *Responsibility of the Head. The head of the Department of Anesthesiology should have responsibility for anesthesiology recruitment, anesthesiology resource allocation, delivery of anesthesiology services and anesthesiology quality improvement within the NHS*

Recommendation 40: *Anesthesia for Cataract Surgery. It was reported that at the Port Colborne site it was routine practice to administer general anesthesia to half of the patients presenting for cataract surgery. If this is true then the practice must be reviewed immediately by the head of the Department of Anesthesiology.*

Recommendation 41: *Add On Cases. At the Welland site a major complaint was the pressure to do add on cases (that were not true emergency cases) late into the evening or night. As the anesthesiologist on call at night is scheduled to work the next day this places an undue burden on them. This must stop. The opening of additional operating room capacity at the OSS might allow decanting of some of these add on cases if it were open to surgeons from across the NHS.*

Recommendation 42: *Vacation. At the Welland site, anesthesiologists were reportedly pressured not to take vacations in order to keep the operating room running at full capacity. This must stop as anesthesiologists are entitled to time off work for vacation and for professional development. The regional Department of Anesthesiology should coordinate anesthesiology cross coverage between the sites to allow appropriate leave for vacations etc. The NHS may need to assist the Department in the recruitment of locums for vacation relief and may need to support the locums financially.*

Recommendation 43: *Vacations. Anesthesiologists must give adequate notice of their planned vacations or leaves and these leaves should be coordinated through the Departmental head so that there is minimal disruption to the operating room schedule. If anesthesiologists and nursing find that there is*

difficulty in arranging time off during times of high demand consideration should be given to closing or severely curtailing operations at one or more sites for a few weeks during the summer and Christmas holidays and March Break.

Recommendation 44: Recruitment. The Anesthesiology Department at NHS is at great risk with small groups of anesthesiologists at each site that do not routinely cross cover either for day assignments or evening or weekend call. The critical shortage of anesthesiologists at the NHS may curtail surgical activity unless additional qualified staff are recruited Recruitment must be a priority for the NHS. Recruitment of new anesthesiologists must be to the NHS hospitals and not to specific sites or hospitals. The departmental Head should lead the recruitment process with representation on the recruitment committee from all three major sites. Articulation of professional standards and selection of candidates must be left up to the members of the Department of Anesthesiology. The role description agreed to on recruitment of individual anesthesiologists should describe site(s) assignment etc. Recruitment should be to a level of staffing that would allow anesthesiologists to have the day off after call, normal vacations and also staff the preadmission clinics at each site and to supervise the acute pain services at each site. Perhaps the latter 2 functions could be combined.

Recommendation 45: Paediatric Anesthesiology: It was suggested that the volume of paediatric cases was small and that it did not provide adequate experience for each anesthesiologist to maintain their level of competency. This needs to be reviewed by the head of the Department of Anesthesiology. Consideration should be given to consolidating all paediatric cases at one site.

Recommendation 46: Breadth of practice. Anesthesiology staff should have access to the wide breadth of surgical activity at the NHS both for maintenance of professional competency and incomes. This is particularly important as services are consolidated or moved between sites. Failure to follow this principle will make recruitment of qualified anesthesiologists to the smaller sites at NHS difficult as these sites also have the most frequent call. This principle should be included in all role descriptions for new anesthesiologists to the NHS. Current staff should also be encouraged but not forced to work across the three major surgical sites as services are consolidated and/or transferred.

Recommendation 47: Acute Pain Service. At each of the 3 major sites individual anesthesiologists place patients on infusion pumps for pain control (PCA) or insert epidural catheters for post operative pain control as appropriate. There is no independently run pain service but individual anesthesiologists follow their own patients This is less than ideal practice but the volume of patients and the overall shortage of anesthesiologists at NHS leaves no practical alternative.

Each site also reported restrictions on the number of epidurals that could be run on the surgical wards. The NHS should hire nurses to coordinate and monitor patients on PCA and epidural infusions as part of the perioperative team approach to the delivery of anesthesia care These acute pain nurses would also have a major teaching role for the ward nurses. Hopefully this will allow an increased number of patients to receive appropriate post operative analgesia and assist the anesthesiologists in providing timely care.

Recommendation 48: Chronic Pain Service. The NHS should support a consolidated and fully equipped anesthesiology chronic pain clinic supported by physical and occupational therapists, psychologists and nursing. All anesthesiologists practicing chronic pain medicine in the NHS should have access to the clinic as directed by the head of the Department of Anesthesiology

Recommendation 49: Anesthesiology Equipment. Anesthesia gas machines, infusion pumps, drug carts etc. and practices should be standardized across the NHS. This is a major safety issue if anesthesiologists are at some date in the future to work at different sites within the NHS

Nursing:

Recommendation 50: Education. Educate all nurses on their scope of practice in accordance with the College of Nurses guidelines. These guidelines should be easily available for reference.

Recommendation 51: Nurse Educator. Recruit an operating room nursing educator for each of the 3 major surgical sites

Recommendation 52: Nurse Educator. Consider recruiting additional surgical nurse educators for the surgical in-patient units at Greater Niagara and Welland Hospitals. If the nurse manager's portfolio is manageable, there may not be a need for a separate nurse educator.

Recommendation 53: Involvement. Ensure nurses are involved in the planning and articulation of the mission, vision and strategic plan for NHS surgical program to achieve quality patient outcomes.

Recommendation 54: Communication. Ensure senior nursing leadership provide appropriate messaging on a continuing basis about the strategic direction and objectives of the surgical program and provide a feedback loop for all nurses.

Recommendation 55: *Partners in decisions. Ensure nurses are valued and empowered to be equal players in the decision making process among nurses surgeons and anesthesiologists for patient centered care.*

Recommendation 56: *Managers' portfolios. Ensure that Nurse Managers have a manageable portfolio and are seen as leaders, role models and support to the nursing staff*

Recommendation 57: Standards of practice. Ensure nurses are practicing to standards written by a universally accepted body. A written copy of the standards should be readily available at each surgical site.

Recommendation 58: Professional practice. Ensure nurses are responsible and accountable for patient care and not the work of ancillary staff, cleaning and transporting. Hire appropriate ancillary staff for the operating rooms and surgical wards.

Recommendation 59: *Workload. Explore staffing mix to ensure the correct staffing ratios on each shift and in each department.*

Recommendation 60: *Retention and recruitment. Explore ways to improve quality of work life to retain and recruit nurses i.e. no mandatory overtime, sufficient tools to do the job etc.*

Recommendation 61: *Career development. Offer ongoing nursing educational opportunities for self improvement and changes in technology.*

Recommendation 62: *Performance reviews. Carry out annual performance reviews for all nurses to ensure they are meeting the needs of patients and staff.*

Equipment:

Recommendation 63: *External review. An external review of all SPD Departments in the NHS should be carried out as soon as possible.*

Recommendation 64: *Review operations of all resources - facilities, human, instruments and equipment in the SPD areas within all NHS hospitals to identify possible opportunities for rationalization and consolidation.*

Recommendation 65: *Inventory. Develop an accurate inventory of instruments and equipment and supplies.*

Recommendation 66: Audit. Audit usage of instruments in trays [clean and dirty returned to SPD] and standardize all trays with few if any surgeon's personal preferences.

Recommendation 67: Standards of practice. Adopt universal standards of practice for decontamination and sterilization.

Recommendation 68: Educational program. Develop and implement an educational program for SPD workers in conjunction with recommended standards.

Recommendation 69: Pick lists. Review and revise pick lists with OR surgical team, nurses and surgeons.

Recommendation 70: Case cart system. Implement a closed case cart system for delivery of instruments and supplies to and from OR to SPD to confine and contain organisms.

Recommendation 71: Infection control. Review and revise all SPD policies with an infection control coordinator to ensure proper procedures are followed eg. scope washing, instrument cleaning, sterilization and reuse of single use devices.

Recommendation 72: Bar coding. Implement a bar coding system for equipment and supplies and an instrument tracking system.

Recommendation 73: SPD supervisor. Assign a SPD supervisor preferably with a clinical background and operating room experience to each site.

Recommendation 74: Staff SPD. Assign appropriate numbers of staff to each SPD for efficient and effective operations.

Recommendation 75: Reporting structure. Review the current reporting structure of SPD that bypasses the operating room management at each site.

Recommendation 76: Capital equipment. Articulate a clear plan for capital equipment needs: short term (one year) and long term (five years).

Physical Facilities:

While an assessment of the physical facilities at each site is beyond the scope of this review we would be remiss if we did not comment on some of our observations. The physical structure and mechanics in the operating rooms, day

surgery and recovery areas of both the Welland and Greater Niagara Hospitals needs to be fully assessed. After review, both may need significant upgrades.

The construction of a new St Catharine's Hospital offers great opportunities to improve the delivery of surgical services to the Niagara Peninsula. Hopefully services will be sited at the new facility based on principles of critical volumes, creating centres of excellence, need for interdependence, need for inpatient or tertiary services etc. and not upon geographical considerations. The new hospital should not be a recreation of the old St Catherine's and the old Hotel Dieu.

While the construction of the new hospital and the closure of the OSS and the old St. Catherines sites will negate the current problems at these two sites in the long term the Greater Niagara and Welland sites cannot be left behind. Both the Greater Niagara and Welland sites have major problems with inadequate storage space, inadequate supply and patient flow pattern and inadequate recovery or PACU capacity to name but a few of the limitations in these facilities, If these facilities do not have major renovations to correct these deficiencies they will not be able to support their current surgical volumes let alone allow for any growth or consolidation of services. The problem is most severe at the Greater Niagara Hospital.

Some temporary relief for both the Greater Niagara and Welland Hospital sites would be to move the large volumes of ophthalmology (mainly cataract surgery) and endoscopy out of the operating room suites

We cannot recommend what renovations or construction needs to be done at Greater Niagara nor Welland Hospitals until the regional functional plan for surgery is articulated.

We would expect that the functional plan would not be based upon a geographical division of the peninsula but would be based upon the creation of centres of excellence e.g. a Maternal/Child unit, one or two centres for ophthalmology, one or two centres for total joint replacement surgery, perhaps performing all or nearly all in-patient surgery at the new hospital site and most if not all of the ambulatory services at the Greater Niagara and Welland Hospitals.

The NHS will need to decide if it can afford to maintain three 24/7 operating room suites plus the OSS and whether one of the 3 sites could be converted entirely to an ambulatory surgical suite e.g. Welland. This might have significant operational efficiencies and cost savings. It also would lessen the stresses currently being placed on anesthesiology to cover 3 sites 24/7. Once a functional plan is agreed upon then the operating rooms, recovery and day surgery areas at the Greater Niagara and Welland Hospitals can be fully assessed and a master plan for their renovation or replacement could be recommended.

In the short term in addition to closing the operating rooms at Fort Erie and Port Colborne and the opening of 1-2 operating rooms at the OSS consideration should be given to transferring some of the current cataract volume from the St. Catherine's site to the Welland site to help stabilize surgical volumes there and relieve some of the pressures on the St Catherine's and OSS sites. This might have a secondary benefit of enticing some of the anesthesiology staff who currently work primarily at the St. Catherine's and OSS sites to work occasiolnally at the Welland site.

Respectfully submitted...

Betty Watt
John Cain
Bryce Taylor

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