

Hospital Report 2005: Acute Care
Women's Health Technical Summary

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Overview

As in previous Acute Care reports, *Hospital Report 2005: Acute Care* includes a section on women's health. The expanded women's health content in *Hospital Report 2005: Acute Care* resulted from a redevelopment process (2004/2005), which in turn, led to new and revised indicators, and for the first time, hospital-specific analyses for both sex-specific¹ and sex-sensitive indicators². These indicators are in addition to the provincial-level sex-stratified analyses of the core hospital-specific Clinical and Utilization Outcomes indicators (i.e. rate of medical readmissions, rate of surgical readmissions, surgical appropriateness for cholecystectomy), and to the sex-stratified analyses of indicators of Patient Satisfaction. Refer to the Acute Care Clinical and Utilization Outcomes and Patient Satisfaction technical summaries for a description of the integration of sex-based analyses into these core quadrants of *Hospital Report 2005: Acute Care*.

The mainstreaming of women's health into the *Hospital Report* series is made possible by the continuing leadership and funding support of the Ontario Women's Health Council (www.womenshealthcouncil.com).

This technical summary describes the methods underlying the women's health-related performance information featured in *Hospital Report 2005: Acute Care*.

Women's Health Clinical Utilization and Outcomes Indicators

The Women's Health section of *Hospital Report 2005: Acute Care* features several new and revised clinical utilization and outcomes indicators, organized across three key clinical areas: 1) Gynecological Conditions and Hysterectomy; 2) Labour and Delivery; and 3) Cardiac Care (by sex). These indicators of access/utilization, appropriateness, process quality, outcomes and equity were a result of a redevelopment process that occurred in 2004/2005.

As illustrated in Appendix A, a multi-phased iterative approach was used to select, develop and refine these indicators and analyses. This approach included a:

- systematic literature review;
- an expert panel meeting (chaired by Adalsteinn D. Brown);
- a two-round Delphi panel with a representative group of managers and clinicians from hospitals across Ontario (coordinated by hospital CEO-designated women's health champions); and,
- the reconvening of focused expert groups to validate and further define the final list of indicators.

¹ Sex-specific - relevant to one sex only (e.g. indicators of access to and outcomes of procedures to treat female gynecological conditions)

² Sex-sensitive – relevant to both sexes and to comparisons between the sexes (e.g. indicators of access to and outcomes of cardiac care)

Appendix B lists the expert panel members, their primary affiliations, and their contribution(s) to the process. Appendix C lists the acute care hospitals' that participated in at least one round of the two-round Delphi panel. A Delphi panel is a process used to measure consensus and to generate and integrate feedback from a group of knowledgeable individuals.

The initial selection and reduction of candidate indicators by the expert panel group was based on the following criteria: a) relevance to clinical quality and women's health; b) scientific soundness (i.e. based on the best available evidence). For the two-round Delphi panel process, the clinicians and managers rated the extent to which indicators reflected: a) appropriateness or outcomes of care provided to women in the hospital system; b) appropriateness or outcomes of hospital care provided to women at an individual hospital; c) issues of bias or equity in hospital care; and the extent which indicators could stimulate d) providers or hospitals or patients take action to improve care for women in Ontario hospitals. In the second round of the Delphi panel process, participants received a revised and reduced list indicators that emerged from their ratings and comments in the first round of the process, as well as information about their own and all other participants' ratings and comments from the first round. As part of the exercise of prioritizing a final list of indicators, the criteria of feasibility and measurability were introduced.

As noted, *Hospital Report 2005: Acute Care* includes a subset of women's health indicators that are grouped into three clinical areas: Gynecological Conditions and Hysterectomy, Labour and Delivery and Cardiac Care. These women's health indicators include indicators that have been featured in previous reports at a system level and have been reviewed and redeveloped through the panel process (for example, readmissions following hysterectomy, access to coronary angiography by sex), as well as women's health indicators that are being featured for the first time (for example, readmissions following labour and delivery, congestive heart failure readmissions by sex).

The initial list of candidate indicators considered in the early phases of the redevelopment panel process covered several additional clinical areas, including mental health, stroke, sexual health, urinary incontinence/urinary tract infections, musculoskeletal conditions (e.g. osteoporosis and falls), pain, and hospital utilization for ambulatory care sensitive conditions. Although several indicators in these clinical areas were endorsed during the panel process, they were not part of the final list of prioritized indicators. In order to maximize usefulness for the report's target audience (i.e. senior managers and clinicians), a cluster of indicators relevant to three priority women's health clinical groups in acute care were chosen. As such, final clusters of indicators were selected in the Gynecological Conditions and Hysterectomy, Labour and Delivery and Cardiac Care groups. The indicators developed in other clinical areas will be shared across the collaborative, and may be considered for future indicator redevelopment in acute care and other sectors.

As a result of the panel process, fifteen clinical indicators were selected across the three priority clinical groups:

- 5 in Gynecological Care and Hysterectomy;
- 6 in Labour & Delivery;
- 4 in Cardiac Care.

Within this group of fifteen indicators, varying levels of reporting (i.e. hospitals-specific and/or system-level³), timing of availability of indicators in the e-scorecard, inclusion in the 2005 Executive Report and decisions to and approaches performance allocations were chosen based largely on the type and nature of indicator. Table 1.0 provides an overview of these indicators, highlighting their status as revised (and previously reported indicators) or new indicators, as well as the level and timing of reporting, and the use and type of performance allocations. In addition, different types of risk-adjustment models were used for different types of indicators (rare event⁴ vs. non-rare event); this is further described in the risk-adjustment section of this technical summary.

In addition, within the three priority clinical groupings, several hospital-level or program-level indicators of process quality and service availability were considered. These are indicators that measure hospitals' reported use of evidence-based processes, practices and structures to provide the highest quality of and equitable care for women undergoing labour & delivery, procedures for benign uterine conditions and cardiac care. In order to ascertain this contextual information, that in turn provides a better understanding of performance on the cluster of clinical indicators in each clinical grouping, and informs quality improvement, a Women's Health Structures and Services (for each clinical area) survey was developed and disseminated to hospitals. This survey process is further described in the Women's Health Structures and Services section of this technical summary.

The e-scorecard is available for download (for participating Ontario hospitals only) from the Hospital Report website, www.hospitalreport.ca.

³ System-level reporting = reporting aggregated beyond the hospital level such as at the peer group, region and/or LHIN, and provincial levels

⁴ Rare events indicators = indicators with < 5% event rate

Table 1.0: Overview of Women’s Health Clinical Utilization and Outcomes Indicators for *Hospital Report 2005: Acute Care*

Indicator (Name and Type)	Status (Revised from Previous Indicators or New Indicators)	Level and Timing of (Public) Reporting in Executive Report	Timing of Reporting in the E-Scorecard (i.e. includes both Hospital-level and System-level reporting)	Application of Performance Allocations	Type of Performance Allocation
GYNECOLOGICAL CONDITIONS & HYSTERECTOMY					
Route of Hysterectomy – Difference between Vaginal and Abdominal <i>(Appropriateness of Practice/Process Indicator)</i>	Revised	Hospital-specific	By September 2005	No	N/A
Rate of adverse events for patients undergoing procedures for abnormal uterine bleeding and/or fibroids <i>(Outcome Indicator)</i>	New	Hospital-specific	By September 2005	Yes	Above average vs. Average vs. Below average
Rate of 30-day unplanned readmissions for patients undergoing procedures for abnormal uterine bleeding and/or fibroids <i>(Outcome Indicator)</i>	Revised	Hospital-specific	By September 2005	Yes	Above average vs. Average vs. Below average
Rate of select alternatives to hysterectomy versus rate of hysterectomy <i>(Practice/Access Indicator)</i>	New	None To be considered for system-level reporting in 2006 Report	2005/2006	N/A	N/A

Indicator (Name and Type)	Status (Revised from Previous Indicators or New Indicators)	Level and Timing of (Public) Reporting in Executive Report	Timing of Reporting in the E-Scorecard (i.e. includes both Hospital-level and System-level reporting)	Application of Performance Allocations	Type of Performance Allocation
Rate of hysterectomy with concurrent oophorectomy or salpingo-oophorectomy <i>(Appropriateness of Practice/Process Indicator)</i>	Revised	None To be considered for system-level reporting in 2006 Report	2005/2006	N/A	N/A
LABOUR & DELIVERY					
Rate of adverse events for patients undergoing labour and/or delivery <i>(Outcome Indicator)</i>	New	Hospital-specific	By September 2005	Yes	Above average vs. Average vs. Below average
Rate of 14-day unplanned readmissions (Total & by type of delivery) for patients undergoing labour and delivery <i>(Outcome Indicator)</i>	New	Total rate: Hospital-specific Rate by type of delivery (vaginal or c-section): System-level	By September 2005	Yes	Above average vs. Average vs. Below average
Rate of episiotomy <i>(Appropriateness of Practice/Process Indicator)</i>	New	None To be considered for system-level reporting in 2006 Report	2005/2006	N/A	N/A

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Indicator (Name and Type)	Status (Revised from Previous Indicators or New Indicators)	Level and Timing of (Public) Reporting in Executive Report	Timing of Reporting in the E-Scorecard (i.e. includes both Hospital-level and System-level reporting)	Application of Performance Allocations	Type of Performance Allocation
Rate of third and fourth degree vaginal tears <i>(Outcome Indicator)</i>	New	None To be considered for system-level reporting in 2006 Report	2005/2006	N/A	N/A
Rates of c-section (elective, non-elective) and operative vaginal delivery <i>(Utilization Indicator)</i>	Revised	None To be considered for system-level reporting in 2006 Report	2005/2006	N/A	N/A
Rates of vaginal birth after c-section (elective, non-elective; successful, failed) <i>(Utilization Indicator)</i>	Revised	None To be considered for system-level reporting in 2006 Report	2005/2006	N/A	N/A
CARDIAC CARE (BY SEX)					
Rate of access to coronary angiography by sex (Rate for Females, Rate Males, Value of Difference between sexes) <i>(Equitable access indicator)</i>	Revised	Hospital-specific	By September 2005	Yes	Statistically Significant Difference (i.e. unequal) vs. No Statistically Significant Difference (i.e. equal)

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Indicator (Name and Type)	Status (Revised from Previous Indicators or New Indicators)	Level and Timing of (Public) Reporting in Executive Report	Timing of Reporting in the E-Scorecard (i.e. includes both Hospital-level and System-level reporting)	Application of Performance Allocations	Type of Performance Allocation
Rate of 30-day readmissions for acute coronary syndrome by sex (Rate for Females, Rate Males, Value of Difference between sexes) <i>(Equitable outcome indicator)</i>	Revised	Hospital-specific	By September 2005	Yes	Statistically Significant Difference (i.e. unequal) vs. No Statistically Significant Difference (i.e. equal)
Rate of 30-day readmissions for congestive heart failure by sex (Rate for Females, Rate Males, Value of Difference between sexes) <i>(Equitable outcome indicator)</i>	New	Hospital-specific	By September 2005	Yes	Statistically Significant Difference (i.e. unequal) vs. No Statistically Significant Difference (i.e. equal)
Rate of access to drug-eluting stents for patients undergoing PTCA with stents (by Sex) (Rate for Females, Rate Males, Value of Difference between sexes) <i>(Equitable access indicator)</i>	New	None To be considered for system-level reporting in 2006 Report	2005/2006	N/A	N/A

Description of Data & Data Sources

The Women's Health Clinical Utilization and Outcomes indicators in *Hospital Report 2005: Acute Care* were derived from Canadian Institute for Health Information (CIHI) data that have been collected under consistent guidelines, by trained abstractors, in all acute care hospitals in Ontario. These data have been used extensively in previous reports on health care performance, and form the basis for many journal articles. The data undergo extensive edit checks to improve accuracy, but all errors cannot be eliminated. It is important to recognize the limitations of the measures of utilization and outcomes; they will only be as accurate as the data sources on which they are based. However, using these data to produce comparative performance information should lead to refinements and improvements in data quality over time.

Since April 1 2003, all Ontario day surgery abstracts have been submitted to the National Ambulatory Care Reporting System (NACRS) (prior to this they were submitted to the Discharge Abstract Database (DAD)). The NACRS database includes data from day surgery units, emergency departments, and other ambulatory care clinics. It uses a different approach for identifying day surgery cases than the DAD. Based on internal analysis and advice from Ontario hospitals, a methodology for capturing "day surgery" cases from NACRS was developed – for more information see the "Same Day Surgery Data in Ontario and use of a Qualifying Day Procedure Screen" sidebar below.

The record layout of the NACRS database is substantially different than the DAD. However, comprehensive analysis and re-formatting of the NACRS data was performed by CIHI to enable consistent analysis based on the two databases. NACRS same day surgery data was mapped to the DAD layout then joined with the DAD inpatient data to enable consistent analysis. Note that for many fields, imperfect 'mappings' were required to translate the NACRS data to the DAD layout. This may impede Ontario hospitals' ability to replicate results that include day surgery cases.

Same Day Surgery Data in Ontario and use of a Qualifying Day Procedure Screen

Effective April 1, 2003, all Ontario hospitals were mandated to report all ambulatory care data to the National Ambulatory Care Reporting System (NACRS) at CIHI. NACRS includes data acquisition and reporting standards intended for hospital- and community-based private and public ambulatory care activity that occurs in clinics, emergency departments, and day surgical units. These data are intended to support: management and operational decision making at the facility level; resource allocation decisions at a global and facility level; provincial and national comparisons; and the effective analysis of ambulatory care services.

Day surgery cases in NACRS are identified based on the MIS functional centres mandated by the Ontario Ministry of Health and Long Term Care (MOHLTC) for 'surgical day/night care'. As a result of investigations performed by CIHI and consultations with several hospitals in Ontario, it was determined that the results based on these criteria were not an accurate reflection of total day surgery activity. Therefore, the following approach for identifying day surgery cases in Ontario hospitals has been developed for the purposes of *Hospital Report 2005: Acute Care*.

Step 1: Identify all *potential* day surgery cases

Table 1: Potential day surgery cases		
	Criteria	Codes
Include	All NACRS Records	
Exclude	All unscheduled ER visits	Functional centre codes 71310, 72310, 73310 where the 'Scheduled ED Visit Indicator' = 'N'

Step 2: Exclude any non-qualifying same day surgery cases

Table 2: Qualifying same day surgery screen		
	Criteria	Codes
Exclude	Stillbirths	CMG 997 or Entry code = S
	Obstetrics and gynecological cases	CMG: 601-604, 606-611, 625-648
	Minor Spinal Procedures Major Spinal Procedures Nerve Injections Myelogram Minor Cardiac Procedures Major Cardiac Procedures Cardioversion Angiography Skin procedures Transfusions Chemotherapy Peritoneal dialysis Hemodialysis Procedure Cancelled Miscellaneous Ungroupable	DPG Code: 02 03 04 05 21 22 23 25 53 71 72 74 75 97 98 99

Note: NACRS data was grouped to CMGs and DPGs for the purpose of this report. In future years it is intended that the qualifying day surgery screen will be based on CACS groups to simplify validation of results by hospitals.

General Notes

- All possible 25 diagnoses and 20 procedure codes on the discharge abstract were used in the analysis. For 2003/04, note that all 10 possible diagnoses and procedure codes in NACRS are mapped over to the DAD format.
- Both inpatient and day surgery cases were used.

Data Quality Issues

- Although wound infection is an important indicator of post-procedure clinical quality, we are not including this diagnosis in these indicators as recent analysis at CIHI has indicated that there are significant data quality concerns regarding the use of the code T81.4 'Infection following a procedure, not elsewhere classified'. This analysis and subsequent chart audits show that the code has a high false-positive rate. CIHI has been conducting educational workshops for coders to address this issue and we anticipate that the data quality concerns will improve for future reporting. Note that this does not affect code O86.00^ 'Infection of obstetric surgical wound', therefore, we are still including this code in our analysis.

Coding Limitations

- In the Hysterectomy/Gynecological Conditions section, we frequently use Hysterectomy (all types) as an inclusion in either the numerator or denominator. Note that the code for partial hysterectomy, 1.RM.87.^ 'Excision partial, uterus and surrounding structures', also includes procedures other than partial hysterectomy (e.g. fibroidectomy, myomectomy) which we are not able to separate. Therefore, these cases may be including procedures other than a partial hysterectomy.

Diagnosis Typing for Numerator and Denominator

- **Numerator:** For the diagnosis code selection in the numerator for the Women's Health indicators (other than the adverse events related indicators), we want to capture diagnoses of interest as a type M (and not a type M and 2). For the adverse events related indicators, we generally are looking for the diagnoses of interest as a type 2. However, the Labour and Delivery section is an exception. As diagnosis typing from the Obstetrics chapter in Folio is unique from the other chapters, we are not applying any diagnosis typing criteria in the Labour and Delivery section for the **adverse events** indicators. For the diagnoses of interest, it is more appropriate for us to use the sixth-digit subclassification in Folio, which identifies the phase in which the patient is receiving care and whether or not delivery occurs within that episode of care. The diagnosis typing criteria for the numerators appear in the sections in the numerator definition for each indicator.

- **Denominator:** For all the denominator criteria (except for the Labour and Delivery section), patients were included in the diagnostically defined groups if the diagnosis of interest was coded as a type M diagnosis. However, since the goal was to identify conditions that developed before hospital admissions, if the M-diagnosis was also listed on the discharge abstract as a type 2 diagnosis, indicating that the most responsible condition developed after admission, the patient was excluded from the analysis. In order to identify patients who might have been admitted with the diagnosis of interest, but who had developed another most responsible diagnosis after admission, patients were also included if another diagnosis was coded as a type M and a type 2 (indicating that the M-diagnosis developed after admission) and the diagnosis of interest was coded as a type 1. For the Labour and Delivery section, the denominator criteria consists of patients with a diagnosis of interest as a type M (but not a type M and 2) or a type 1.

General Exclusions

	Criteria	Codes
Exclude:	Patients with a diagnosis of cancer listed on the discharge abstract*	ICD-10 C00-C43, C45-C96, D00-D09, D37-D48, Z51.0, Z51.1
	Patients with a diagnosis of AIDS/HIV listed on the discharge abstract*	ICD-10 B24, Z21
	Patients with a diagnosis of violent trauma listed on the discharge abstract*	ICD-10 V01-V99, W03, W06-W09, W11-W17, W20-W45, W49-W60, W64-W77, W81, W83-W94, W99, X00 - X39, X51-X54, X57-X99, Y00-Y09, Y35, Y36, Y87.0
	Patients without an Ontario residence	Postal Code that does not begin with: K, L, M, N, P
	Patients without a valid health insurance number	Number is validated through CIHI edits upon submission
	Patients less than 15 or greater than 84 years of age	
	For Labour and Delivery indicators only: Patients less than 13 or greater than 64	

* All diagnosis positions are included

Linking Cases Across Hospitals

The research report draws on data for all of Ontario's acute care hospitals. Transferring patients from one hospital to another is an important facet of health care in Ontario. Although transfers are relatively rare for surgical patients, they occur more frequently in medical patients. In order to avoid analyzing transfers as two separate hospitalizations, the basic unit of analysis studied in *Hospital Report 2005: Acute Care* is the episode of care. An episode includes all continuous hospitalizations in acute care hospitals, and can include transfers from one acute care hospital to another. The rules for transfers are as follows:

1. If the patient is admitted within 24 hours of discharge, and either of the institutions has coded it as a transfer, the case is considered as a transfer.
2. If the patient is admitted more than 24 hours following discharge, it is not considered a transfer and is treated as a new episode.

Unique patients are tracked from one hospital to another based on scrambled health card numbers.

Occasionally, when a patient is transferred from one facility to another, the discharge date/time from the first hospital may be later than the admission date/time from the second hospital. Similarly, some patients are transferred to a day-surgery facility while they are inpatients at another facility; while they receive the day-surgery, their bed at the inpatient facility stays open, waiting for their return. The methodology behind the episode building accounts for these kinds of transfers. In cases with a multi-hospital episode of care, LOS is calculated as follows:

(Last hospitalization discharge date - first hospital admission date) - ALC days in last hospitalization

Replication of Results by Ontario Hospitals

Similar to the Clinical Utilization and Outcomes quadrant, as part of the verification process for the Women's Health results, many participating hospitals go through a detailed validation of the values that underlie their performance allocations. This is an important step in ensuring the accuracy of the results, and helps to build confidence in the values presented in *Hospital Report: Acute Care*. However, for many of the indicators it is not possible to exactly replicate the results. This is due to the fact that the unit of analysis for the Women's Health section is an "episode of care", which can potentially span more than one acute care facility. As such, outcomes are attributed in specific ways for each indicator.

A special advisory panel of hospital chief executive officers and other stakeholders helped to develop rules for assigning outcomes to episodes of care involving more than one hospital. In each case, the rules were based on the principle that the hospital with the most control over the outcome should be assigned that outcome. However, the fact that so many hospitals are involved in the care of a single patient emphasizes the inter-linked nature of the hospital system. The following list explains how each outcome indicator is allocated, and to what extent hospitals can expect to replicate the results:

- **Readmissions** are attributed to the last hospital in the episode. For example, if an episode spans two hospitals – i.e. first they are admitted to Hospital A, then transferred to Hospital B, then discharged (marking the end of this episode of care) – then they are admitted to another hospital, Hospital C, within 28 days with a condition related to their original diagnosis in Hospital A, then Hospital B is assigned the readmission outcome for this patient. Because the readmission can be to any hospital in Ontario, hospitals will not likely be able to replicate the

numerator for any readmission indicators. They should be able to replicate some of the denominator, and a subset of the actual numerator (since they can count cases readmitted to their own facility).

- **Adverse Events** are attributed to the hospital treating the patient when the adverse event diagnosis developed. For example, if an episode spans three hospitals – i.e. first they are admitted to Hospital A, then transferred to Hospital B, then transferred to Hospital C, then discharged (marking the end of this episode of care) – and the patient has a valid adverse event in Hospital C, then only Hospital C will be assigned the adverse event outcome. Hospitals A and B will not have an adverse event assigned to them. Hospitals should be able to replicate most of the denominator – the inpatient cases - and a subset of the actual numerator. The denominator consists of both inpatient and day-surgery cases where the day-surgery case must have started as an inpatient in the episode of care. However, a hospital may not be able to replicate the entire numerator because a LOS cut-off (used as a screen to identify cases where the adverse event likely impacted the patient’s overall LOS) is compared to the episode LOS that cannot be calculated if the episode of care spans across different hospitals.
- **Access to Coronary Angiography** is attributed to the first hospital in the episode. Using this rule, hospitals that do not have their own cardiac catheterization facilities can receive credit for recognizing the need to access the technology. For example, if an episode spans two hospitals – small community Hospital A, then a transfer to large teaching Hospital B – and the patient receives a coronary angiography at Hospital B, it is actually Hospital A that is attributed with providing access to the advanced technology. As such, hospitals will not be able to replicate the numerator of this indicator. They should, however, be able to replicate a subset of the denominator. Hospitals may not be able to replicate the entire denominator because of transfers during the episode of care.
- **All other indicators** values are attributed to the hospital treating the patient where the condition captured in the numerator occurred.

Understanding the rules for attributing episodes to hospitals is important for interpreting hospital-specific results. If care for a specific patient group in a hospital rarely involves a transfer, then the number of episodes assigned to that hospital for the indicator should be very similar. However, if care for a specific patient group in a hospital frequently involves transfers, then the number of episodes assigned to the hospital for calculation of the indicator may be substantially different.

Indicator Definitions

This section includes definitions for all clinical women’s health indicators featured in *Hospital Report 2005: Acute Care*. Appendix D lists the definitions for all additional clinical indicators that will be available to hospitals in the E-scorecard in 2005/2006, and will be considered for system-level analyses in the 2006 Acute Care report.

1. Gynecological Conditions & Hysterectomy

a) Difference Between Vaginal and Abdominal Hysterectomies

The within-hospital normalized risk-adjusted difference between the numbers of vaginal (or laparoscopically assisted vaginal) and abdominal hysterectomies. The values for this indicator fall between 1 and -1: a value of 1 means that hospitals perform all vaginal hysterectomies; a value of -1 means that hospitals perform all abdominal hysterectomies; a value of 0 means that hospitals perform equal numbers of vaginal and abdominal hysterectomies. Although hospital-specific values are presented in the Executive Report, hospitals are not assigned performance classifications for these values.

This indicator value is calculated using the values of the observed numbers of (a) vaginal hysterectomies and (b) abdominal hysterectomies, (c) the expected numbers of vaginal and (d) abdominal hysterectomies performed, and (a + b) the total numbers of hysterectomies performed as well as (f) the crude provincial rates of vaginal hysterectomy and (g) abdominal hysterectomy.

Refer to the risk-adjustment section of this report for the basic formula for this indicator.

In terms of clinical definitions, the indicator has two main components – 1) vaginal and 2) abdominal hysterectomies for patients with benign uterine conditions, defined below.

- i. **Proportion of vaginal or laparoscopically-assisted vaginal hysterectomy in patients with abnormal uterine bleeding and/or fibroids who had a hysterectomy (used to calculate components a, c, f of the formula described above)**

Episodes (Numerator)		
	Criteria	Codes
Include:	Cases within denominator with:	
	Vaginal hysterectomy (or laparoscopically-assisted vaginal hysterectomy)	1.RM.89.AA, 1.RM.89.CA 1.RM.89.DA, 1.RM.91.CA

Cases (Denominator)		
	Criteria	Codes
Include:		Diagnosis Type M (but not M and 2), Type 1 (with another Dx type M and 2):
	Abnormal uterine bleeding	N92.^, N93.^
	Uterine fibroids	D25.^
	Any of the above diagnoses AND any of the following procedures:	
	Hysterectomy (total and radical)	1.RM.89.^, 1.RM.91.^

Cases (Denominator)		
	Criteria	Codes
Exclude:	Pelvic exenteration	1.PM.91.^
	Genital prolapse and pelvic sling	N81.^ (any diagnosis type on the abstract) and any of: 1.PL.74.AF.^, 1.PL.74.AL-FF, 1.PL.74.CA-XX-K
	Endometriosis of the bowel or pelvic cavity and bowel resection	N80.0-N80.5, N80.8 (any diagnosis type on the abstract) and any of: 1.NK.87.^, 1.NM.87.^, 1.NM.89.^, 1.NM.91.^
	Major procedures in pregnancy or childbirth	CMG 600
	General Exclusion Criteria (exclude if age < 15 or > 84 years)	(see section on General Exclusions of this report)

- ii. **Proportion of abdominal hysterectomy in patients with abnormal uterine bleeding and/or fibroids who had a hysterectomy (used to calculate components b, d, g of the formula described above)**

Episodes (Numerator)		
	Criteria	Codes
Include:	Cases within denominator with:	
	Abdominal hysterectomy	1.RM.89.LA, 1.RM.91.LA

Cases (Denominator)		
	Criteria	Codes
Include:		Diagnosis Type M (but not M and 2), Type 1 (with another Dx type M and 2):
	Abnormal uterine bleeding	N92.^, N93.^
	Uterine fibroids	D25.^
	Any of the above diagnoses AND any of the following procedures:	
	Hysterectomy (total and radical)	1.RM.89.^, 1.RM.91.^
Exclude:	Pelvic exenteration	1.PM.91.^
	Genital prolapse and pelvic sling	N81.^ (any diagnosis type on the abstract) and any of: 1.PL.74.AF.^, 1.PL.74.AL-FF, 1.PL.74.CA-XX-K
	Endometriosis of the bowel or pelvic cavity and bowel resection	N80.0-N80.5, N80.8 (any diagnosis type on the abstract) and any of: 1.NK.87.^, 1.NM.87.^, 1.NM.89.^, 1.NM.91.^
	Major procedures in pregnancy or childbirth	CMG 600
	General Exclusion Criteria (exclude if age < 15 or > 84 years)	(see section on General Exclusions of this report)

b) Percent of female patients experiencing adverse events during hospitalization for surgery/procedure for abnormal bleeding and/or fibroids (attributed to hospital treating patient when complication developed)

(Note: please see section on Replicating Results on for Ontario Hospitals for notes regarding replication of results for multi-hospital episodes of care for this indicator)

Episodes (Numerator)		
	Criteria	Codes
Include:	Cases within denominator with:	
	Death in hospital	Discharge Disposition code = '7'
OR	Type 2 diagnosis of any of the following conditions:	
	Sepsis	T85.7 and Y83 [^] (Type 9), T83.6 and Y83 [^] (Type 9), T80.2 and Y83 [^] (Type 9), T88.0 and Y83 [^] (Type 9)
	Anaphylactic reaction	T78.0 [^] , T78.1, T78.2, T80.5, T88.6
	Pelvic infection	N73.0, N73.2, N73.8, N73.9
	Peritonitis	K65. [^] , N73.3, N73.5
	Dehiscence	T81.3 and Y84 [^] (Type 9)
	Cardiopulmonary arrest	I46.0, I46.9
	Upper respiratory tract infection	J06 [^]
	Hemorrhage	T81.0
	Aspiration pneumonitis	J69.0, J95.4
	Fluid overload	E87.7
	Hyponatremia	E87.1
	Cerebral and pulmonary edema	G93.6, J81
	Injuries to urinary tract or gastrointestinal tract (e.g. bladder perforation, ureteral injuries, injuries to rectum and bowel)	K91.9, N99.8, N99.9, T81.2
	Bowel obstruction	K56.6
	Formation of uteroperitoneal fistulas	N82. [^]
	Venous thromboembolism	T80.1
	Urinary tract infection (UTI)	N39.0
	Fever over 39	R50. [^]
	Retention (and urinary complications following procedure)	R33 and Y83.1 (Type 9), N99.8, N99.9, T83.2, T83.5, T83.8, T83.9
	Paralytic ileus	K56.0
AND	Episode LOS greater than provincial median of 3 days	

Cases (Denominator)		
	Criteria	Codes
Include:	Uterine artery embolization	1.RM.13.GQ-C2
	Hysterectomy (all types)	1.RM.87.BA-AG, 1.RM.87.BA-AK, 1.RM.87.BA-GX, 1.RM.87.CA-AK, 1.RM.87.CA-GX 1.RM.87.DA-AG, 1.RM.87.DA-AK, 1.RM.87.DA-GX, 1.RM.87.LA-AK, 1.RM.87.LA-GX, 1.RM.89.^, 1.RM.91.^
	Endometrial ablation	1.RM.59.^
	Any of the above procedures AND any of the following diagnoses:	Diagnosis Type M (but not M and 2), Type 1 (with another Dx type M and 2):
	Abnormal uterine bleeding	N92.^, N93.^
	Uterine fibroids	D25.^
Exclude:	Bladder suspension (combined with hysterectomy)	1.PL.74.^ and 1.RM.89.^
	Vaginal repair	1.RS.80.^
	Pelvic exenteration	1.PM.91.^

Episodes (Numerator)		
	Criteria	Codes
	Genital prolapse and pelvic sling	N81.^ (any diagnosis type on the abstract) and any of: 1.PL.74.AF.^, 1.PL.74.AL-FF, 1.PL.74.CA-XX-K
	Endometriosis of the bowel or pelvic cavity and bowel resection	N80.0-N80.5, N80.8 (any diagnosis type on the abstract) and any of: 1.NK.87.^, 1.NM.87.^, 1.NM.89.^, 1.NM.91.^
	Major procedures in pregnancy or childbirth	CMG 600
	General Exclusion Criteria (exclude if age < 15 or > 84 years)	(see section on General Exclusions of this report)

Note:

- There is a limitation to using code T81.0 "Haemorrhage and haematoma complicating a procedure, not elsewhere classified" as it does not include hemorrhage due to procedures for prosthetic devices, implants and grafts.

c) Proportion of readmissions following surgical treatment/procedure for abnormal bleeding and/or fibroids within 30 days following discharge (attributed to last hospital in the episode)

Note: please see section on Replicating Results on for Ontario Hospitals for notes regarding replication of results for multi-hospital episodes of care for this indicator.

Episodes (Numerator)		
	Criteria	Codes
	Cases within denominator with:	
Include:	readmissions relevant to initial care within 30 days of discharge	Diagnosis Type M (but not M and 2)
	Sepsis	T85.7 and Y83 [^] (Type 9), T83.6 and Y83 [^] (Type 9), T80.2 and Y83 [^] (Type 9), T88.0 and Y83 [^] (Type 9)
	Anaphylactic reaction	T78.0 [^] , T78.1, T78.2, T88.6, T80.5
	Pelvic infection	N73.9, N73.8, N73.0, N73.2
	Peritonitis	N73.5, N73.3, K65 [^]
	Dehiscence	T81.3 and Y84. [^] (Type 9)
	Cardiopulmonary arrest	I46.0, I46.9
	Upper respiratory tract infection	J06 [^]
	Hemorrhage (and requirement for transfusion)	T81.0
	Aspiration pneumonitis	J69.0, J95.4
	Fluid overload	E87.7
	Hyponatremia	E87.1
	Cerebral and pulmonary edema	G93.6, J81
	Injuries to urinary tract or gastrointestinal tract (e.g. bladder perforation, ureteral injuries, injuries to rectum and bowel)	K91.9, N99.8, N99.9, T81.2
	Bowel obstruction	K56.6
	Formation of uteroperitoneal fistulas	N82. [^]
	Venous thromboembolism	T80.1
	Urinary tract infection (UTI)	N39.0
	Fever over 39	R50. [^]
	Retention (and urinary complications following procedure)	R33 and Y83.1 (Type 9), N99.8, N99.9, T83.2, T83.5, T83.8, T83.9
	Paralytic ileus	K56.0
Exclude:	Elective readmissions	Admission category equal to 'L'

Cases (Denominator)		
	Criteria	Codes
Include:		Diagnosis Type M (but not M and 2), Type 1 (with another Dx type M and 2):
	Abnormal uterine bleeding	N92.^, N93.^
	Uterine fibroids	D25.^
	Any of the above diagnoses AND any of the following procedures:	
	Uterine artery embolization	1.RM.13.GQ-C2
	Hysterectomy (all types)	1.RM.87.BA-AG, 1.RM.87.BA-AK, 1.RM.87.BA-GX, 1.RM.87.CA-AK, 1.RM.87.CA-GX 1.RM.87.DA-AG, 1.RM.87.DA-AK, 1.RM.87.DA-GX, 1.RM.87.LA-AK, 1.RM.87.LA-GX, 1.RM.89.^, 1.RM.91.^
	Endometrial ablation	1.RM.59.^

Cases (Denominator)		
	Criteria	Codes
Exclude:	Pelvic exenteration	1.PM.91.^
	Cases where the patient signed herself out or died	Discharge Disposition Code equal to 6 (sign out), 7 (death), or 9 (stillbirth)
	Major procedures in pregnancy or childbirth	CMG 600
	General Exclusion Criteria (exclude if age < 15 or > 84 years)	(see section on General Exclusions of this report)

2. Labour and Delivery

a) Proportion of women undergoing labour and/or delivery who experience adverse events

Note:

- The Obstetric chapter in Folio is unique in assigning the diagnosis type from other chapters. Since the patient can have a short LOS, type 1 and type 2 diagnoses are sometimes used interchangeably. As a result, we will not be using type 2 as a criteria for the adverse events listed, but rather we are relying on the selection of obstetrical codes that fall under the sixth-digit subclassification 'Delivered, with mention of postpartum condition', with the exception of the condition for uterine rupture. As there is no post-partum code available under this category, we will use the codes available under the sixth-digit subclassification 'Delivered, with or without mention of antepartum condition' for this condition.

- Please see section on Replicating Results for Ontario Hospitals regarding replication of results for multi-hospital episodes of care for this indicator.

Episodes (Numerator)		
	Criteria	Codes
Include:	Cases within denominator with:	any diagnosis type
	Endometritis	O23.502, O85.002
	Organ failure/ dysfunction	O74.202, O75.402, O75.882
	Sepsis	O85.002
	Uterine rupture	O71.101, O71.111, O71.181
	Eclampsia	O15.002, O15.102, O15.202
	Pulmonary or cardiac events (congestive heart failure, pulmonary edema, embolism)	O75.402, O99.402, O99.502
	Renal failure	O90.402
	Urinary tract infection (UTI)	O86.202
	Wound infection	O86.002
	Hemorrhage	O72.002, O72.102, O72.202
AND	Episode LOS greater than provincial median of 2 days	

Cases (Denominator)		
	Criteria	Codes
Include:	All patients admitted for delivery	5.MD.50.^- 5.MD.60.^
Exclude:	General Exclusion Criteria (exclude if age < 13 or > 64 years)	(see section on General Exclusions of this report)

- b) Rate of hospital readmissions within 14 days of discharge in women undergoing labour and delivery for all deliveries and stratified by type of delivery (vaginal, caesarean section).**

IN THE EXECUTIVE REPORT (*HOSPITAL REPORT 2005: ACUTE CARE*), THIS INDICATOR FOR TOTAL READMISSIONS (I.E. VAGINAL + C-SECTION) IS INCLUDED AT A HOSPITAL-SPECIFIC LEVEL (AND BY TYPE AT A PROVINCIAL-LEVEL). HOSPITALS MAY ACCESS THEIR OWN AND OTHER HOSPITALS' VALUES FOR READMISSIONS STRATIFIED BY TYPE OF DELIVERY IN THE E-SCORECARD.

Note: please see section on Replicating Results for Ontario Hospitals for notes regarding replication of results for multi-hospital episodes of care for this indicator.

- i) by vaginal delivery:**

Episodes (Numerator)		
	Criteria	Codes
Include:	Cases within denominator:	Diagnosis type M (not a type M and 2)
	Readmission related to initial labour and delivery within 14 days of discharge	
	Pre-existing hypertension complicating pregnancy, childbirth and the puerperium	O10.^04

Episodes (Numerator)		
	Criteria	Codes
	Pre-existing hypertensive disorder with superimposed proteinuria	O11.004
	Gestational [pregnancy-induced] oedema and proteinuria without hypertension	O12.^04
	Gestational [pregnancy-induced] hypertension without significant proteinuria	O13.004
	Gestational [pregnancy-induced] hypertension with significant proteinuria	O14.004
	Eclampsia	O15.204
	Unspecified maternal hypertension	2002-03 Code: O16.004
	Infections of genitourinary tract in pregnancy	2002-03 Codes: O23.^04
	Pre-existing diabetes mellitus, Type 1	O24.0^4
	Pre-existing diabetes mellitus, Type 2	O24.^04
	Pre-existing diabetes mellitus of other specified type	O24.2^4
	Pre-existing diabetes mellitus, of unspecified type	O24.3^4
	Diabetes mellitus arising in pregnancy	O24.4^4
	Diabetes mellitus in pregnancy, unspecified	O24.9^4
	Malnutrition in pregnancy	O25.004
	Maternal care for other conditions predominantly related to pregnancy	O26.^04
	Maternal care for known or suspected abnormality of pelvic organs	O34.^04
	Perineal laceration during delivery	O70.^04
	Other obstetric trauma	O71.^04
	Postpartum haemorrhage	O72.^04
	Retained placenta and membranes, without haemorrhage	O73.^04
	Complications of anaesthesia during labour and delivery	O74.^04
	Other complications of labour and delivery, not elsewhere classified	O75.^04, O75.884
	Puerperal sepsis	O85.004
	Other puerperal infections	O86.^04
	Venous complications in the puerperium	O87.^04
	Obstetric embolism	O88.^04
	Complications of anaesthesia during the puerperium	O89.^04
	Complications of the puerperium, not elsewhere classified	O90.^04
	Infections of breast associated with childbirth	O91.^04
	Other disorders of breast and lactation associated with childbirth	O92.^04
	Obstetric death of unspecified cause	O95.004
	Maternal infectious and parasitic diseases classifiable elsewhere but complicating pregnancy, childbirth and the puerperium	O98.^04
	Other maternal diseases classifiable elsewhere but complicating pregnancy, childbirth and the puerperium	O99.^04
	Mental and behavioural disorders associated with the puerperium, not elsewhere classified	F53.^
Exclude:	Elective readmissions	Admission category equal to 'L'

Cases (Denominator)		
	Criteria	Codes
Include:	All vaginal deliveries	5.MD.50.^- 5.MD.56.^
Exclude:	Cases where the patient signed herself out or died	Discharge Disposition Code equal to 6 (sign out), 7 (death), or 9 (stillbirth)
	General Exclusion Criteria (exclude if age < 13 or > 64 years)	(see section on General Exclusions of this report)

ii) by c-section:

Episodes (Numerator)		
	Criteria	Codes
Include:	Cases within denominator with:	Diagnosis type M (not type M and 2)
	Readmission related to initial labour and delivery within 14 days of discharge	
	Pre-existing hypertension complicating pregnancy, childbirth and the puerperium	O10.^04
	Pre-existing hypertensive disorder with superimposed proteinuria	O11.004
	Gestational [pregnancy-induced] oedema and proteinuria without hypertension	O12.^04
	Gestational [pregnancy-induced] hypertension without significant proteinuria	O13.004
	Gestational [pregnancy-induced] hypertension with significant proteinuria	O14.004
	Eclampsia	O15.204
	Unspecified maternal hypertension	2002-03 Code: O16.004
	Infections of genitourinary tract in pregnancy	2002-03 Codes: O23.^04
	Pre-existing diabetes mellitus, Type 1	O24.0^4
	Pre-existing diabetes mellitus, Type 2	O24.^04
	Pre-existing diabetes mellitus of other specified type	O24.2^4
	Pre-existing diabetes mellitus, of unspecified type	O24.3^4
	Diabetes mellitus arising in pregnancy	O24.4^4
	Diabetes mellitus in pregnancy, unspecified	O24.9^4
	Malnutrition in pregnancy	O25.004
	Maternal care for other conditions predominantly related to pregnancy	O26.^04
	Maternal care for known or suspected abnormality of pelvic organs	O34.^04
	Perineal laceration during delivery	O70.^04
	Other obstetric trauma	O71.^04
	Postpartum haemorrhage	O72.^04
	Retained placenta and membranes, without haemorrhage	O73.^04
	Complications of anaesthesia during labour and delivery	O74.^04
	Other complications of labour and delivery, not elsewhere classified	O75.^04, O75.884

Episodes (Numerator)		
	Criteria	Codes
	Puerperal sepsis	O85.004
	Other puerperal infections	O86.^04
	Venous complications in the puerperium	O87.^04
	Obstetric embolism	O88.^04
	Complications of anaesthesia during the puerperium	O89.^04
	Complications of the puerperium, not elsewhere classified	O90.^04
	Infections of breast associated with childbirth	O91.^04
	Other disorders of breast and lactation associated with childbirth	O92.^04
	Obstetric death of unspecified cause	O95.004
	Maternal infectious and parasitic diseases classifiable elsewhere but complicating pregnancy, childbirth and the puerperium	O98.^04
	Other maternal diseases classifiable elsewhere but complicating pregnancy, childbirth and the puerperium	O99.^04
	Mental and behavioural disorders associated with the puerperium, not elsewhere classified	F53.^
Exclude:	Elective readmissions	Admission category equal to 'L'

Cases (Denominator)		
	Criteria	Codes
Include:	All c-section deliveries	5.MD.60.^
Exclude:	Cases where the patient signed herself out or died	Discharge Disposition Code equal to 6 (sign out), 7 (death), or 9 (stillbirth)
	General Exclusion Criteria (exclude if age < 13 or > 64 years)	(see section on General Exclusions of this report)

3. Cardiac Care

For all cardiac indicators, the Executive Report and the E-Scorecard included the rates for women and men, the values of the differences between women and men on mean rates and the direction and statistical significance of these differences at hospital and provincial levels. The indicator quantifying the difference between rates for women and men [i.e. (F-M)/F] is the value of the difference between women and men attributable to sex - or a value for "equity".

In terms of interpretation, if this value [i.e. (F-M)/F] is negative (i.e. it may be the full range of negative values – from negative infinity to zero), males have higher rates than females; if this value is positive (i.e. it may be positive up to a value of 1), females have higher rates than males. A value of "0" is used as the benchmark as it represents true equity between women and men. Refer to the Performance

Rating section of this report for an explanation the methods used to evaluate hospitals based on sex differences on these cardiac indicators.

a) Rate of patients with acute myocardial infarction who receive coronary angiography within the episode of care, by sex

Note: For multi-hospital episodes of care, the technology use was attributed to the hospital to which the patient was admitted at the beginning of the episode of care. Please see section on Replicating Results on for Ontario Hospitals for notes regarding replication of results for multi-hospital episodes of care for this indicator.

Episodes (Numerator)		
	Criteria	Codes
Include:	Cases within denominator with:	
	Coronary angiography	3.IP.10.^

Cases (Denominator)		
	Criteria	Codes
Include:	Acute Myocardial Infarction (AMI)	I21.^, I22.^ (Diagnosis Type M (but not M and 2), Type 1 (with another Dx type M and 2))
Exclude:	Chronic renal failure/hepatic failure	K72.1, N18.^ (any diagnosis type on the abstract)
	Discharged alive and had an episode LOS less than 3 days	
	General Exclusion Criteria (exclude if age < 15 or > 84 years)	(see section on General Exclusions of this report)

b) Rate of readmissions to hospital within 30 days of discharge for patients with acute coronary syndrome by sex (attributed to last hospital in the episode)

Note: please see section on Replicating Results on for Ontario Hospitals for notes regarding replication of results for multi-hospital episodes of care for this indicator.

Episodes (Numerator)		
	Criteria	Codes
Include:	Cases within the denominator with:	Diagnosis type M (not type M and 2)
	readmission relevant to initial care (see list below)	
	Acute Myocardial Infarction (AMI)	I21.^, I22.^
	Other acute and subacute forms of ischemic heart disease	I24.^
	Old myocardial infarction (MI)	I25.2
	Angina pectoris	I20.^
	Unstable angina	I20.0
	Congestive heart failure	I50.0

Episodes (Numerator)		
	Criteria	Codes
	Other forms of chronic ischemic heart disease	I25.^
	Conduction disorders	I44.^, I45.^
	Cardiac dysrhythmias	I49.^
	Functional disturbances following cardiac surgery	I97.1
	Urinary tract infection	N39.0
	Stroke	I60.^ - I64
	Acute renal failure,	N17.^
	Hemorrhage, hematoma or seroma complicating a procedure	T81.0
	Vascular complications of medical care	T81.7 and Y84.^ (type 9)
	Cardiac complications during or resulting from a procedure	I97.1, I97.8, I97.9
	Respiratory complications during or resulting from a procedure	J95.88, J95.9
	Readmission occurred within 30 days of discharge	
Exclude:	Elective readmissions	Admission category equal to 'L'

Cases (Denominator)		
	Criteria	Codes
Include:		Diagnosis Type M (but not M and 2), Type 1 (with another Dx type M and 2)
	Acute Myocardial Infarction (AMI)	I21.^, I22.^
	Unstable angina	I20.0
	Cardiogenic shock	R57.0
Exclude:	Cases where the patient signed himself/herself out or died	Discharge Disposition Code equal to 6 (sign out), 7 (death), or 9 (stillbirth)
	Discharged alive AND had an episode LOS less than 2 days	
	General Exclusion Criteria (exclude if age < 15 or > 84 years)	(see section on General Exclusions of this report)

c) Rate of all-cause readmissions to hospital within 30 days of discharge for patients with congestive heart failure by sex (attributed to last hospital in the episode)

Episodes (Numerator)		
	Criteria	Codes
Include:	Cases within denominator with all-cause readmissions relevant to initial care within 30 days of discharge	
Exclude:	Elective readmissions	Admission category equal to 'L'

Cases (Denominator)		
	Criteria	Codes
Include:	Congestive heart failure	I50.0 (Diagnosis Type M (but not M and 2), Type 1 (with another Dx type M and 2)
Exclude:	Cases where the patient signed himself/herself out or died	Discharge Disposition Code equal to 6 (sign out), 7 (death), or 9 (stillbirth)
	General Exclusion Criteria (exclude if age < 15 or > 84 years)	(see section on General Exclusions of this report)

Performance Rating

Performance allocations for indicators of women's health in *Hospital Report 2005: Acute Care* were based on data from 2003/2004.

Gynecological Conditions and Hysterectomy and Labour & Delivery

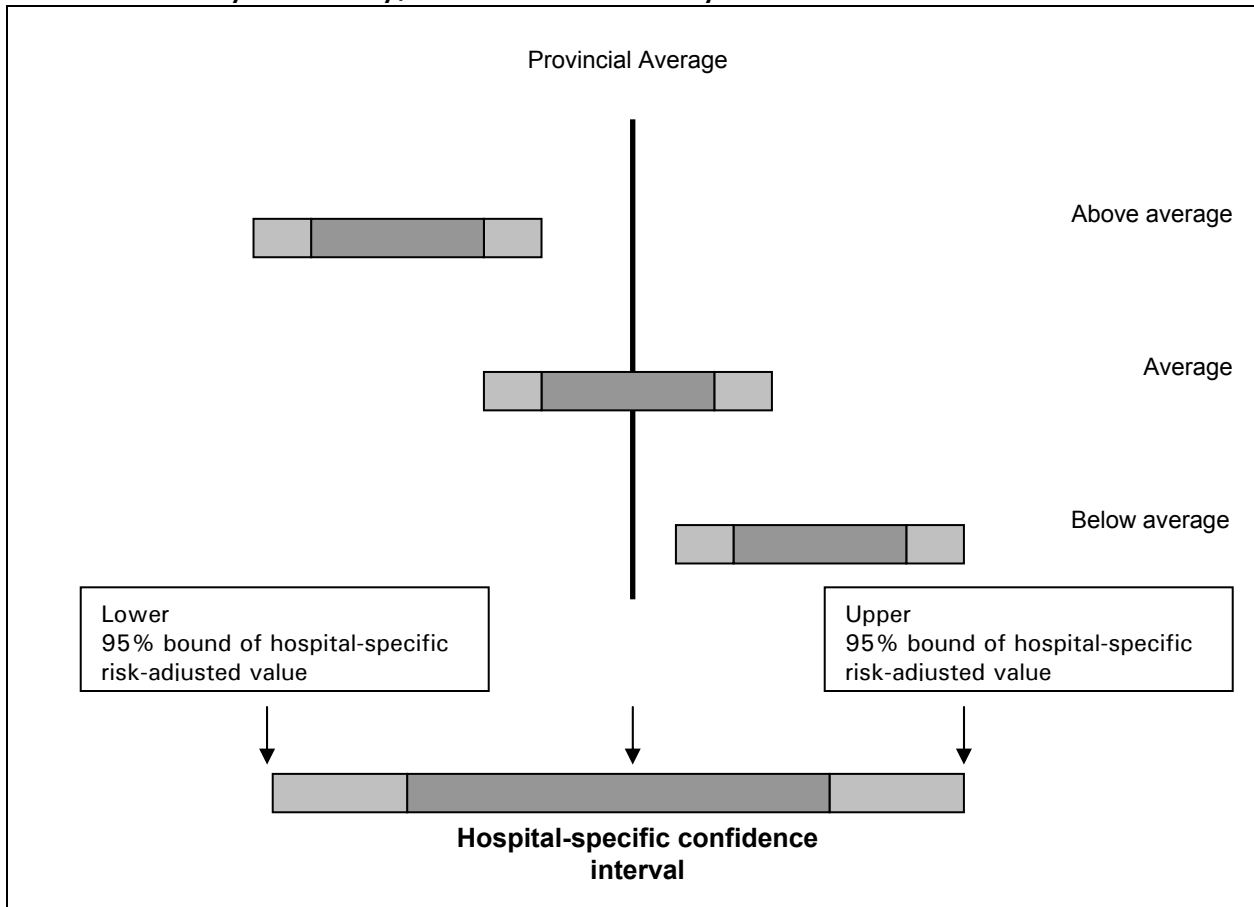
In *Hospital Report 2005: Acute Care*, a shaded cell designates a hospital's performance for each indicator; for women's health indicators in the gynecological conditions and hysterectomy, and labour and delivery groups, shading is based on categories of 'above average', 'provincial average', or 'below average' performance. These performance allocations are assigned using a 95% confidence interval around the hospital's risk-adjusted value (assessed against the provincial average, which serves as the benchmark). For these indicators, a lower value indicates better performance. However, no single set of measures should be taken as representative of overall hospital performance. Note that performance classifications were provided for all hospital-specific indicators in these sex-specific clinical groups in the 2005 Executive Report **except** for Route of Hysterectomy – Difference between Vaginal and Abdominal, and Rate of 14-day Readmissions for Labour & Delivery by type of delivery.

For these sex-specific indicators, performance allocations are assigned as follows:

- If the lower bound of the 95% confidence interval of the hospital's specific risk-adjusted value is above the provincial average, that hospital is classified as having *below average performance*.
- If the upper and lower bounds of the 95% confidence interval of the hospital's specific risk-adjusted value surround the provincial average value, the hospital is classified as having *average performance*.
- If the upper bound of the 95% confidence interval of the hospital's specific risk-adjusted value is below the provincial average value, that hospital is classified as having *above average performance*.

Figure 2.0 illustrates the methods used for assigning performance for these indicators.

Figure 2.0: Performance Rating Methodology for Indicators: Gynecological Conditions & Hysterectomy, and Labour & Delivery Indicators



Cardiac Care

For women's health indicators in the cardiac care group, shading is based on the statistical significance of the differences between women and men on the specific rates of access and readmissions. There are two categories of shading for these indicators – "statistically significant difference between women and men"⁵; AND "no statistically significant difference between women and men"⁶. Again, no single set of measures should be taken as representative of overall hospital performance.

As noted, for all cardiac indicators, the Executive Report and the E-Scorecard included the rates for women and men, the values of the differences between

⁵ shaded with below average colour as this is not preferred, and the direction of the difference is also indicated (F > M, M > F) along with the hospital-specific numeric value

⁶ shaded with above average colour as this is preferred and indicates better, or potentially more equitable performance

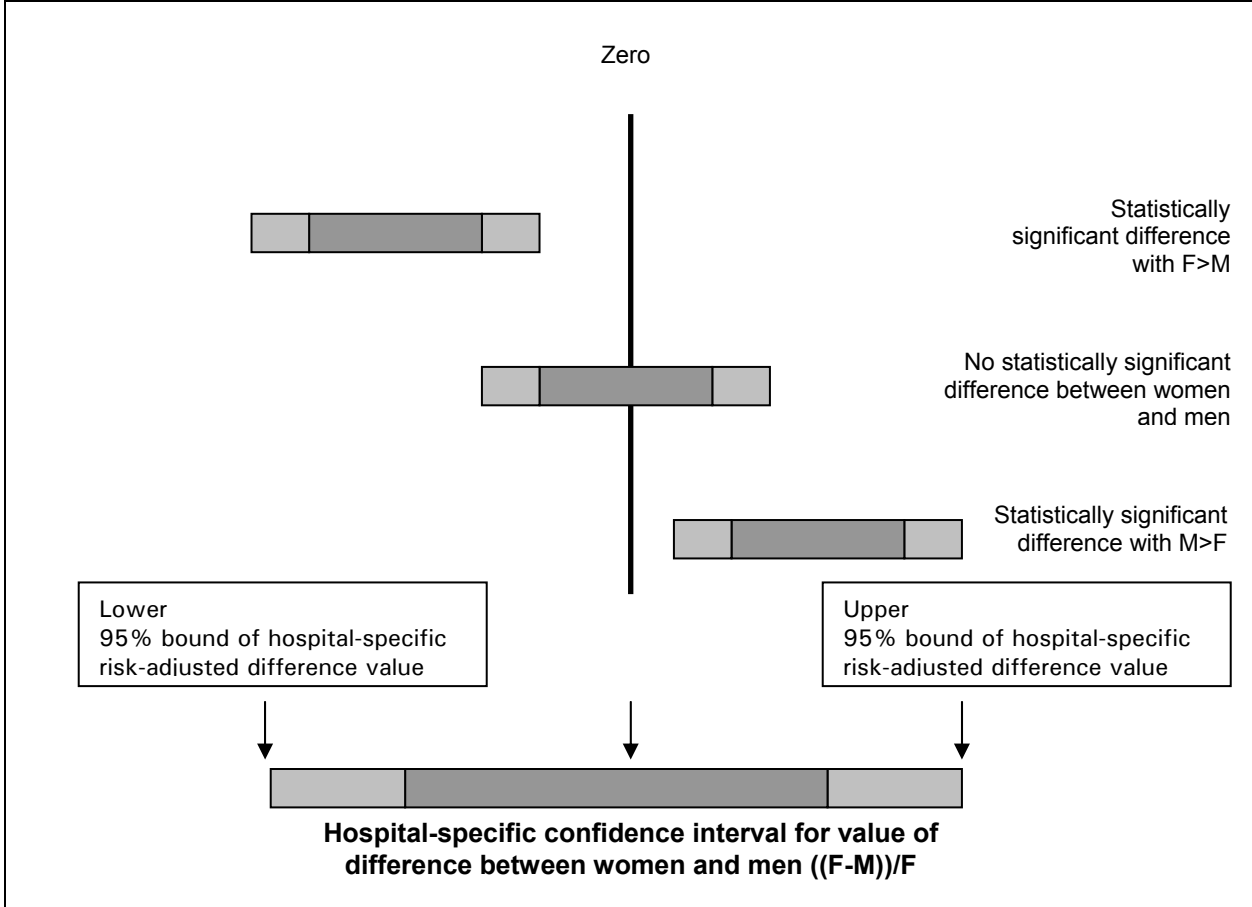
women and men on mean rates and the direction and statistical significance of these differences at hospital and provincial levels. The indicator quantifying the difference between rates for women and men [i.e. $(F-M)/F$] is the value of the difference between women and men attributable to sex (after factors such as age and co-morbidities are accounted for) - or a value for "equity". Performance ratings for these indicators are based on 95% confidence interval of hospital's risk-adjusted difference values. Again, in terms of interpretation, if this value [i.e. $(F-M)/F$] is negative (i.e. it may be the full range of negative values from negative infinity to zero), males have higher rates than females; if this value is positive (i.e. it may be positive up to a value of 1), females have higher rates than males. A value of "0" is used as the benchmark as it represents true equity between women and men.

For these sex-sensitive indicators, performance allocations are assigned as follows:

- If a hospital's 95% confidence value around their specific value of the difference between women and men for a given indicator surrounds zero, the hospital is classified as having no statistically significant sex difference.
- If a hospital's 95% confidence interval around their specific value of the difference between women and men for a given indicator does not include zero and is negative, then the hospital is said to have unequal (i.e. $M > F$) performance or a statistically significant sex difference, in which males have a higher rates than females.
- If a hospital's 95% confidence interval around their specific value of the difference between women and men for a given indicator does not include zero and is positive, then the hospital is said to have unequal ($F > M$) performance or a statistically significant sex difference, in which females have a significantly higher rate than males.

Figure 2.1 illustrates the methods used for assigning performance for these indicators.

**Figure 2.1: Performance Rating Methodology for Indicators: Cardiac Indicators
(Value of the Difference Between the Sexes – ((F-M)/F))**



For the first time, hospitals' actual numeric indicator values are presented, instead of performance symbols or value ranges, in the Executive Report. These values will give the reader a more accurate indication of each hospital's actual performance than in previous years.

In some hospitals, the low volume of specific types of care may raise issues of confidentiality for patients or physicians, or may put the hospital in a position where a small number of adverse events could have a large impact on observed readmission or appropriateness of care rates. Sample size affects performance allocations, especially for rare event-type⁷ indicators such as rates of adverse events and readmissions; hospitals with small numbers of patients may not have an adequate sample size to achieve above or below average performance. Performance allocations in this case (i.e. for small hospitals), therefore, may be an artifact of small numbers, as opposed to a true reflection of performance. In particular, small hospitals with zero events for readmissions or adverse events (for indicators in the Gynecological Conditions and Hysterectomy, and Labour and Delivery groups), may be classified as average performers not so much as a

⁷ Rare event indicators = indicators with < 5% event rate

reflection of their true performance, but rather because sufficiently large numbers of other small hospitals had similar rates. Additional work is underway to resolve this issue in advance of the 2006 Report; options such as combining the adverse events and readmissions indicators to enable larger numbers of events, and small hospitals to achieve performance beyond “average” are being considered.

In the hospital-specific section of *Hospital Report 2005: Acute Care*, hospitals are assigned a score of not reportable ('NR') in the following cases:

- If case volumes were less than five for a given patient group.
- For medical cases, if there were fewer than two 'most responsible physicians' providing care to patients within the patient group for the given indicator.
- For surgical cases, if there were fewer than two 'most responsible surgeons/physicians', AND fewer than five surgeons/anaesthetists/physicians involved in the care of patients within the patient group for the given indicator.
- For the indicator Route of Hysterectomy-Difference Between Vaginal and Abdominal, (NR) is due to <5 total hysterectomy cases.
- NR for the difference values-that is, (F-M)/F occurs when the number of cases is <5 for either females or males.
- NR for the difference value occurs when either of the rate(s) for males or females is zero.

Calculating Confidence Intervals

Tables 2.0, and 2.1 below display the formulas for calculating the 95% confidence intervals of the adjusted indicator values that were used to determine performance ratings, as described in the previous section.

The confidence intervals are based on the concept similar to that of standardized mortality ratios for the Gynecological Conditions and Hysterectomy, and Labour and Delivery indicators, and on attributable risk (i.e. (F-M)/F) for the cardiac care (by sex) indicators.

Table 2.0 Confidence Interval Formulas – Gynecological Conditions & Hysterectomy; Labour & Delivery

Indicator description	Confidence Interval Formulas (LCL = lower confidence limit UCL = upper confidence limit)
Rate of adverse events for patients undergoing procedures for abnormal uterine bleeding and/or fibroids	$\text{LCL} = I_{\text{observed}} * (1 - (1 / (9 * I_{\text{observed}})) - Z_{\alpha} / (3 * I_{\text{observed}} ** 0.5)) ** 3$ $\text{UCL} = (I_{\text{observed}} + 1) * (1 - 1 / (9 * (I_{\text{observed}} + 1))) + Z_{\alpha} / (3 * (I_{\text{observed}} + 1) ** 0.5) ** 3;$ <p>Where at least 1 event is assumed to have occurred.</p>
Rate of 30-day unplanned readmissions for patients undergoing procedures for abnormal uterine bleeding and/or fibroids	$\text{LCL} = I_{\text{observed}} * (1 - (1 / (9 * I_{\text{observed}})) - Z_{\alpha} / (3 * I_{\text{observed}} ** 0.5)) ** 3$ $\text{UCL} = (I_{\text{observed}} + 1) * (1 - 1 / (9 * (I_{\text{observed}} + 1))) + Z_{\alpha} / (3 * (I_{\text{observed}} + 1) ** 0.5) ** 3;$ <p>Where at least 1 event is assumed to have occurred.</p>
Rate of adverse events for patients undergoing labour and/or delivery	$\text{LCL} = I_{\text{observed}} * (1 - (1 / (9 * I_{\text{observed}})) - Z_{\alpha} / (3 * I_{\text{observed}} ** 0.5)) ** 3$ $\text{UCL} = (I_{\text{observed}} + 1) * (1 - 1 / (9 * (I_{\text{observed}} + 1))) + Z_{\alpha} / (3 * (I_{\text{observed}} + 1) ** 0.5) ** 3;$ <p>Where at least 1 event is assumed to have occurred.</p>
Rate of 14-day unplanned readmissions (Total & by type of delivery) for patients undergoing labour and delivery	$\text{LCL} = I_{\text{observed}} * (1 - (1 / (9 * I_{\text{observed}})) - Z_{\alpha} / (3 * I_{\text{observed}} ** 0.5)) ** 3$ $\text{UCL} = (I_{\text{observed}} + 1) * (1 - 1 / (9 * (I_{\text{observed}} + 1))) + Z_{\alpha} / (3 * (I_{\text{observed}} + 1) ** 0.5) ** 3;$ <p>Where at least 1 event is assumed to have occurred.</p>

Table 2.1 Confidence Interval Formulas – Cardiac Care

Indicator description	Confidence Interval Formulas (LCL = lower confidence limit UCL = upper confidence limit)
Rate of access to coronary angiography by sex ((F-M)/F Difference value)	$\text{LCL} = 1 - \text{RR} * \text{EXP}(Z_{\alpha} * ((1 - I_{f_adjusted}) / (N_f * I_{f_adjusted}) + (1 - I_{m_adjusted}) / (N_m * I_{m_adjusted})) * 0.5)$ $\text{UCL} = 1 - \text{RR} * \text{EXP}(-Z_{\alpha} * ((1 - I_{f_adjusted}) / (N_f * I_{f_adjusted}) + (1 - I_{m_adjusted}) / (N_m * I_{m_adjusted})) * 0.5)$ <p>Where RR = relative risk of male to females N_x = sample size where x = f if female or m if male I_{x_adjusted} = Adjusted rate where x = f if female or m if male</p>
Rate of 30-day readmissions for acute coronary syndrome by Sex ((F-M)/F Difference value)	$\text{LCL} = 1 - \text{RR} * \text{EXP}(Z_{\alpha} * ((1 - I_{f_adjusted}) / (N_f * I_{f_adjusted}) + (1 - I_{m_adjusted}) / (N_m * I_{m_adjusted})) * 0.5)$ $\text{UCL} = 1 - \text{RR} * \text{EXP}(-Z_{\alpha} * ((1 - I_{f_adjusted}) / (N_f * I_{f_adjusted}) + (1 - I_{m_adjusted}) / (N_m * I_{m_adjusted})) * 0.5)$ <p>Where RR = relative risk of male to females N_x = sample size where x = f if female or m if male I_{x_adjusted} = Adjusted rate where x = f if female or m if male</p>
Rate of 30-day readmissions for congestive heart failure by Sex ((F-M)/F Difference value)	$\text{LCL} = 1 - \text{RR} * \text{EXP}(Z_{\alpha} * ((1 - I_{f_adjusted}) / (N_f * I_{f_adjusted}) + (1 - I_{m_adjusted}) / (N_m * I_{m_adjusted})) * 0.5)$ $\text{UCL} = 1 - \text{RR} * \text{EXP}(-Z_{\alpha} * ((1 - I_{f_adjusted}) / (N_f * I_{f_adjusted}) + (1 - I_{m_adjusted}) / (N_m * I_{m_adjusted})) * 0.5)$ <p>Where RR = relative risk of male to females N_x = sample size where x = f if female or m if male I_{x_adjusted} = Adjusted rate where x = f if female or m if male</p>

Risk-Adjustment

In comparing hospital-specific rates of utilization/access and outcomes, it is important to take into account differences in patient characteristics that may vary systematically among hospitals. In clinical research, risk-adjustment occurs when patient scores are adjusted to remove pre-existing influences (e.g. case-mix groups, age), and hospital traits (i.e. volume). Risk adjustment modeling is a statistical technique that allows us to level the playing field when it comes to making comparisons across hospitals. However, this technique can never fully compensate for differences in hospital traits in the same way that randomization can achieve.

For each of the women's health indicators reported at a hospital-specific level, risk adjustment variables and techniques were selected on the basis of appropriateness and viability (i.e. sufficient numbers of events). This issue is particularly important because patients with certain characteristics are less likely to receive some specific treatments or to have positive clinical outcomes than other groups. If a hospital tends to serve a disproportionate number of such patients, it may be unfairly reported as having higher rates of undesirable events, when in fact, these rates may be comparable to another hospital with lower instances that simply serves a different population.

Given the paucity of events across many of the clinical and utilization women's health indicators, standard modeling techniques were deemed inadequate for purposes of risk adjustment. In order to compensate for indicators with rare events (< 5%), models better suited for this purpose were chosen. Two such models, Poisson and Negative Binomial regressions were used in the risk adjustment, subject to specific model criteria being met. For example when over-dispersion was evident, the Negative Binomial model was used. Otherwise the Poisson model was employed. In addition when sufficient events were available, logistic regression was the model of choice. In order to define the general framework for modeling purposes, all variables were categorized, and subsequently aggregated according to common patient characteristics. For each of the indicators listed in Table 3.0, the specific type of model (distribution and link) used in the risk adjustment is described. The link describes the functional relationship between the outcome and the linear combination of the predictor variables.

Table 3.0 Description of Risk-Adjustment Models

Indicator	Risk Adjustment Model (Distribution)	Risk Adjustment Model (Link)
Route of Hysterectomy – Difference between Vaginal and Abdominal	Negative Binomial regression	Log
Rate of adverse events for patients undergoing procedures for abnormal uterine bleeding and/or fibroids	Poisson regression	Log
Rate of 30-day unplanned readmissions for patients undergoing procedures for abnormal uterine bleeding and/or fibroids	Poisson regression	Log
Rate of adverse events for patients undergoing labour and delivery	Logistic regression	Logit
Rate of 14-day unplanned total readmissions for patients undergoing labour and delivery	Logistic regression	Logit
Rate of access to coronary angiography by sex ((F-M)/F Difference value)	Logistic regression	Logit
Rate of 30-day readmissions for acute coronary syndrome by sex ((F-M)/F Difference value)	Negative Binomial	Log
Rate of 30-day readmissions for congestive heart failure by Sex ((F-M)/F Difference value)	Negative Binomial	Log

For purposes of consistency the same model distribution was mirrored for both years of data included in the E-Scorecard (2002/2003, 2003/2004), as well as for corporate or site breakdowns.

Although much attention was paid to the structure of the data, two caveats are noted:

1. For cardiac care indicators rates were modeled separately for males and females. Although, this approach may not completely adjust for confounding effects between gender and the remaining risk factors, the effect on risk adjustment is minimal in effect.
2. The models did not account for admission or adverse events, which were associated with the same patient (Multiple admission rate). This issue is more pertinent for the cardiac care indicators and typically occurs for about 5% of the patient cohort. The effect of ignoring correlatedness of data is to reduce the effective sample size of the cohort. Given the small percentage of patients affected this was not considered to have a major impact on risk adjustment.

Finally, it is important to emphasize that risk-adjustment attempts to control for, but cannot entirely eliminate, the impact of differences in patients' pre-admission health status on performance. The expected performance is a relative measure. It describes the expected level of performance at an institution based on how well all institutions perform. Risk-adjustment only *reduces* the effect of differences in the patient population across hospitals; it cannot eliminate the effect of these differences completely. As a result, hospitals with the sickest patients may tend to score more poorly than other institutions, even after risk-adjustment. Likewise, hospitals that treat rare or highly specialized groups of patients may tend to score poorly, even after risk-adjustment. It is important to keep these caveats in mind when comparing hospital performance.

Candidate variables in each of the models consisted of gender, age (categorical) and Elixhauser co-morbidity variables. The Elixhauser co-morbidities are comprised of 30 disease groups (i.e. Pneumonia, Asthma, CHF, etc). For each of the indicators in the three clinical groupings, the corresponding variables used for risk adjustment are listed.

Models for Indicators – Gynecological Conditions and Hysterectomy		
Indicators	Variables or Pre-Existing Conditions	Age Categories or ICD-10-CA and Other Codes
Route of Hysterectomy – Difference Between Vaginal and Abdominal	Age	< 45, > = 45
Both indicators below have same variables in their risk-adjustment model: Rate of adverse events for patients undergoing procedures for abnormal uterine bleeding and/or fibroids AND Rate of 30-day unplanned readmissions for patients undergoing procedures for abnormal uterine bleeding and/or fibroids	Age	< 45, > = 45
	Hypertension (Uncomplicated)	I10.0
	Diabetes	E10.90,E11.9,E11.0,E13.9 E10.1,E11.1,E13.1,E14.1, E11.01,E13.01,E14.01,E10.2, E11.2,E13.2,E14.2,E10.3,E11.3, E14.3,E10.4,E11.4,E13.4,E14.4, E10.5,E11.5,E13.5,E14.5,E10.9, E11.9,E13.9,E14.9,O24.4,O24.0, O24.1,O24.3,O24.9
	Anemia	D50.0,D50.08,D50.1,D50.9, D51,D52,D64.9

Models for Indicators – Labour & Delivery		
Indicators	Variables or Pre-Existing Conditions	Age Categories or ICD-10-CA and Other Codes
Both indicators below have same variables in their risk-adjustment model:	Age	< 35, > = 35
	Conduction Disorders (Congestive heart failure, Left ventricular failure, heart failure unspecified)	I44.3,I44.7,I44.6,I45.1,I45.9, I45.6,I45.8,I47.1,I47.9,I48.0, I48,I49.9,R00.0,Z95.0,Z45.0
Rate of adverse events for patients undergoing labour and delivery	Chest Conditions	J40,J41,J42,J44,J43.0,J43.1,J43.2 J43.8,J43.9,J45.0,J45.1,J45.8,J45.9, J47,J67.0,J44.0,J60,J61,J62,J63,J66, J65,J68.4
	Neurological Disorders	G31.9,G20,G10,G25.5,G11.0, G11.1,G11.2,G11.3,G11.4,G11.8, G11.9,G12.0,G12.1,G12.2,G12.9, G35,G37.0,G37.8,G37.9,G40.3, G40.1,G40.2,G40.8,G40.9,G93.1, G93.4,R56.0,R56.8,R47.0
AND Rate of 14-day unplanned total readmissions for patients undergoing labour and delivery	Gestational Diabetes	O24.4,O24.0,O24.1,O24.3,O24.9
	Hypothyroidism	E03.0,E03.1,E00.0,E00.1,E00.2, E00.3,E00.4,E00.5,E00.8,E00.9, E89.0,E03.2,E03.8,E03.9
	Coagulation Disorders	D66,D69.1,D69.30,D69.38,D69.4, D69.5,D69.6
	Obesity	E66.8
	Anemia	D50.8,D50.1,D50.9,D51,D50.9, D51,D52,D64.9
	Neurotic Disorders	F34.1,F34.0,F43.2,F32.9

Models for Indicators – Cardiac Care		
Indicators	Variables or Pre-Existing Conditions	Age Categories or ICD-10-CA and Other Codes
All three indicators below have same variables in their risk-adjustment model:	Age	Females: < 65, > = 65, Males: < 55, > = 55
	CHF	I50.0,I50.1,I50.9
	Conduction Disorders	I44.3,I44.7,I44.6,I45.1,I45.9, I45.6,I45.8,I47.1,I47.9,I48.0, I48,I49.9,R00.0,Z95.0,Z45.0
Rate of access to coronary angiography by sex	Atherosclerosis	I70.0,I70.1,I70.2,I70.8,I70.9, I71.2,I71.4,I71.6,I71.9,I73.1, I73.8,I73.9,I77.1,K55.1,K55.9, Z95.8
AND	Hypertension (Uncomplicated)	I100
Rate of 30-day readmissions for acute coronary syndrome by sex	Hypertension (Complicated)	I50.0,I11,I13,N18,N19,I15.01, I15.10,I15.80,I15.81,I15.90,I15.91 I15.00,
AND	Chest Conditions	J40,J41,J42,J44,J43.0,J43.1,J43.2 J43.8,J43.9,J45.0,J45.1,J45.8,J45.9, J47,J67.0,J44.0,J60,J61,J62,J63,J66, J65,J68.4
Rate of 30-day readmissions for congestive heart failure by Sex ((F-M)/F Difference value)	Diabetes	E10.90,E11.9,E11.0,E13.9 E10.1,E11.1,E13.1,E14.1, E11.01,E13.01,E14.01,E10.2, E11.2,E13.2,E14.2,E10.3,E11.3, E14.3,E10.4,E11.4,E13.4,E14.4, E10.5,E11.5,E13.5,E14.5,E10.9, E11.9,E13.9,E14.9,O24.4,O24.0, O24.1,O24.3,O24.9
	Hypothyroidism	E03.0,E03.1,E00.0,E00.1,E00.2, E00.3,E00.4,E00.5,E00.8,E00.9, E89.0,E03.2,E03.8,E03.9
	Renal Failure	N17.0,N17.1,N17.2,N17.8,N17.9, N18.0,N18.1,N18.2,N18.8,N18.9, N19,Z94.0,Z99.2,Z49.1,Z49.2
	Anemia	D50.8,D50.1,D50.9,D51,D50.9, D51,D52,D64.9

In order to produce the adjusted indicator, the observed indicator rates are divided by the expected rates and adjusted to the provincial average. The specific adjusted indicators and their formulas are described below.

Indicator description	Indicator Formula (unadjusted and adjusted)
Route of Hysterectomy – Difference between Vaginal and Abdominal	$I_{\text{observed}} = \frac{(\# \text{ of Vaginal} - \# \text{ of Abdominal}) \text{ Hysterectomies}}{\text{Total \# of hysterectomies}}$ $I_{\text{adjusted}} = (I_{\text{observed}} / I_{\text{expected}}) * (\text{Provincial Rate})$
Rate of adverse events for patients undergoing procedures for abnormal uterine bleeding and/or fibroids	$I_{\text{observed}} = \frac{\# \text{ of adverse events}}{\# \text{ of patients undergoing procedures}}$ $I_{\text{adjusted}} = (I_{\text{observed}} / I_{\text{expected}}) * (\text{Provincial Rate})$
Rate of 30-day unplanned readmissions for patients undergoing procedures for abnormal uterine bleeding and/or fibroids	$I_{\text{observed}} = \frac{\# \text{ of 30 day readmissions}}{\# \text{ of patients undergoing procedures}}$ $I_{\text{adjusted}} = (I_{\text{observed}} / I_{\text{expected}}) * (\text{Provincial Rate})$
Rate of adverse events for patients undergoing labour and delivery	$I_{\text{observed}} = \frac{\# \text{ of adverse events}}{\# \text{ of patients admitted for L\&D}}$ $I_{\text{adjusted}} = (I_{\text{observed}} / I_{\text{expected}}) * (\text{Provincial Rate})$
Rate of 14-day unplanned total readmissions for patients undergoing labour and delivery	$I_{\text{observed}} = \frac{\# \text{ of 14 day total readmissions}}{\# \text{ of vaginal and c-section deliveries}}$ $I_{\text{adjusted}} = (I_{\text{observed}} / I_{\text{expected}}) * (\text{Provincial Rate})$
Rate of access to coronary angiography by sex	$F_{\text{adjusted rate}} = (F_{\text{observed}} / F_{\text{expected}}) * (\text{Provincial Rate})$ $M_{\text{adjusted rate}} = (M_{\text{observed}} / M_{\text{expected}}) * (\text{Provincial Rate})$ $I_{\text{adjusted}} = \frac{F_{\text{adjusted rate}} - M_{\text{adjusted rate}}}{F_{\text{adjusted rate}}}$
Rate of 30-day readmissions for acute coronary syndrome by sex	$F_{\text{adjusted rate}} = (F_{\text{observed}} / F_{\text{expected}}) * (\text{Provincial Rate})$ $M_{\text{adjusted rate}} = (M_{\text{observed}} / M_{\text{expected}}) * (\text{Provincial Rate})$ $I_{\text{adjusted}} = \frac{F_{\text{adjusted rate}} - M_{\text{adjusted rate}}}{F_{\text{adjusted rate}}}$
Rate of 30-day readmissions for congestive heart failure by sex	$F_{\text{adjusted rate}} = (F_{\text{observed}} / F_{\text{expected}}) * (\text{Provincial Rate})$ $M_{\text{adjusted rate}} = (M_{\text{observed}} / M_{\text{expected}}) * (\text{Provincial Rate})$ $I_{\text{adjusted}} = \frac{F_{\text{adjusted rate}} - M_{\text{adjusted rate}}}{F_{\text{adjusted rate}}}$

Women's Health Structures and Services Survey

In addition to the redeveloped clinical indicators highlighted in this report, a survey was devised and disseminated to hospital managers and clinicians asking them about the availability of services, and clinical processes and practices relevant to the three clinical areas of interest (i.e. Gynecological Procedures & Hysterectomy; Labour & Delivery; Cardiac Care). As noted, the purpose of this survey was to support the interpretation of clinical indicators presented in the women's health section of *Hospital Report 2005: Acute Care*. Several items on the survey reflect indicators that were strongly endorsed during the panel process, and are evidence-based, but were not available in routinely collected patient-level data. The survey was developed as part of the multi-phased redevelopment process outlined in Appendix A. A subset of expert panellists listed in Appendix B reviewed the survey, provided feedback, and participated in a pilot exercise to complete and return the survey.

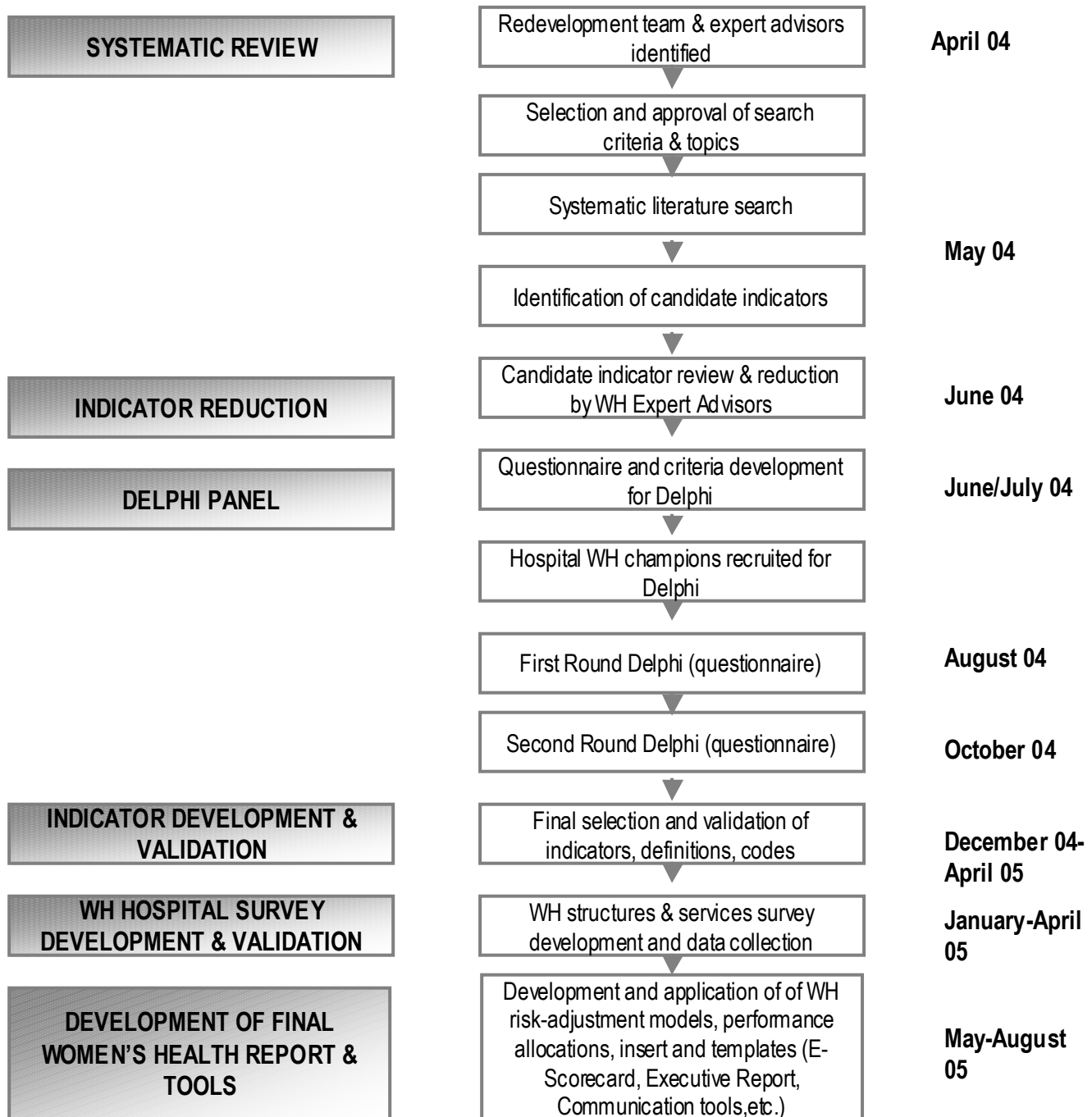
In late March 2005, 112 acute care hospitals received the final survey. The primary recipients of the survey were the CEO-designated women's health champion and/or the Hospital Report contact. These primary recipients were asked to identify the most appropriate clinician and/or manager to complete each section of the survey (i.e. Gynecological Procedures & Hysterectomy; Labour & Delivery; Cardiac Care), and to ensure that the survey was completed and returned to the Hospital Report Research Collaborative.

Response rates for the survey exceeded 80%, as outlined below. Hospitals were asked to respond indicating the availability of the relevant program/service and to complete the relevant sections of the survey.

- For the Gynecological Conditions and Hysterectomy section, n = 91 hospitals returned this section and n = 69 hospitals reported having a relevant program/service and responded to questions in this section;
- For the Labour & Delivery section, n = 98 hospitals returned this section and n = 81 hospitals reported having a relevant program/service and responded to questions in this section;
- For the Cardiac Care section, n = 96 hospitals returned this section and n = 82 hospitals reported having a relevant program/service and responded to questions in this section.

In early Fall 2005, all hospitals will receive a summary of their own and other hospitals responses to the survey to help stimulate information sharing and quality improvement. Refer to Appendix E for a copy of this survey.

Appendix A: Women's Health Redevelopment Process



Appendix B: Women's Health Expert (Panel) Advisors

Expert Advisor	Primary Affiliation(s)	Contribution to Women's Health Redevelopment Process
<p>Donna Stewart, MD</p> <p>*Hospital Report Research Collaborative, Women's Health Co-Investigator</p>	<ul style="list-style-type: none"> Professor and Chair of Women's Health, University of Toronto and University Health Network 	<ul style="list-style-type: none"> Reviewed and advised on the initial literature search strategy, panel composition, and criteria for the selection of candidate indicators for the panel process Participated in the expert panel meeting and advised on the relevance, soundness and feasibility of a series of candidate women's health indicators, and on next steps for the review and selection process Provided ongoing feedback on and validation for definitions of the final set of women's health indicators and questions on the structures and services survey
<p>Arlene Bierman, MD</p> <p>*Hospital Report Research Collaborative, Women's Health Co-Investigator</p>	<ul style="list-style-type: none"> Ontario Women's Health Council Chair of Women's Health, University of Toronto Inner City Health Research Unit, St. Michael's Hospital 	<ul style="list-style-type: none"> Reviewed and advised on the initial literature search strategy, panel composition, and criteria for the selection of candidate indicators for the panel process Participated in the expert panel meeting and advised on the relevance, soundness and feasibility of a series of candidate women's health indicators, and on next steps for the review and selection process Provided ongoing feedback on and validation for definitions of the final set of women's health indicators and questions on the structures and services survey
<p>Beth Abramson, MD</p>	<ul style="list-style-type: none"> Director, Cardiac Prevention Centre & Women's Cardiovascular Health (St. Michael's Hospital) Assistant Professor of Medicine, University of Toronto 	<ul style="list-style-type: none"> Participated in the expert panel meeting and advised on the relevance, soundness and feasibility of a series of candidate women's health indicators (i.e. particularly those related to cardiovascular disease and quality of cardiac care) Provided ongoing feedback on and validation for definitions of the final set of cardiac-related women's health indicators and questions on the structures and services survey

Expert Advisor	Primary Affiliation(s)	Contribution to Women's Health Redevelopment Process
Jennifer Blake, MD	<ul style="list-style-type: none"> • Professor of Obstetrics & Gynecology, University of Toronto • Head of Women's Health and Chief of Obstetrics & Gynecology, Sunnybrook & Women's College Health Sciences Centre 	<ul style="list-style-type: none"> • Provided feedback for the expert panel meeting and advised on the relevance, soundness and feasibility of a series of candidate women's health indicators (i.e. particularly those related to gynecological conditions and hysterectomy) • Provided ongoing feedback on and validation for definitions of the final set of gynecology-related women's health indicators and questions on the structures and services survey
Angela Cheung, MD	<ul style="list-style-type: none"> • Associate Director of University Health Network Women's Health Program & Director of University Health Network Osteoporosis Program • Assistant Professor of Medicine at the University of Toronto 	<ul style="list-style-type: none"> • Participated in the expert panel meeting and advised on the relevance, soundness and feasibility of a series of candidate women's health indicators
Donna Ciliska	<ul style="list-style-type: none"> • Professor of Nursing, McMaster University 	<ul style="list-style-type: none"> • Participated in the expert panel meeting and advised on the relevance, soundness and feasibility of a series of candidate women's health indicators
Harriet MacMillan, MD	<ul style="list-style-type: none"> • Associate Professor, Psychiatry & Behavioural Neurosciences • Associate Member, Clinical Epidemiology & Biostatistics and Director of Child Advocacy and Assessment Program, McMaster University 	<ul style="list-style-type: none"> • Provided feedback on the definitions of indicators related to screening protocols for sexual assault and domestic violence (relevant to the future redevelopment of women's health in the Emergency Department Report)
Joan Murphy, MD	<ul style="list-style-type: none"> • Division Head of Gynecologic Oncology, University Health Network • Associate Professor, Department of Obstetrics and Gynaecology, University of Toronto 	<ul style="list-style-type: none"> • Provided feedback on the selection of candidate indicators related to gynecological conditions (i.e. notably a candidate indicator on cervical cancer screening)
Mireille Norris, MD	<ul style="list-style-type: none"> • Internist/Geriatrician, Providence Health Care (Toronto) • Assistant Professor of Medicine, University of Toronto 	<ul style="list-style-type: none"> • Participated in the expert panel meeting and advised on the relevance, soundness and feasibility of a series of candidate women's health indicators

Expert Advisor	Primary Affiliation(s)	Contribution to Women's Health Redevelopment Process
Paula Rochon, MD	<ul style="list-style-type: none"> • Associate Professor of Medicine, University of Toronto • Senior Scientist and Assistant Director, Kunin Lunenfeld Applied Research Unit, Baycrest Centre for Geriatric Care • Scientist, Institute for Clinical Evaluative Sciences 	<ul style="list-style-type: none"> • Participated in the expert panel meeting and advised on the relevance, soundness and feasibility of a series of candidate women's health indicators
Diane Whitney, MD	<ul style="list-style-type: none"> • Vice President of Medical Affairs & Clinical Director Women's Program Centre for Addiction & Mental Health • Assistant Professor, University of Toronto & University of Western Ontario 	<ul style="list-style-type: none"> • Participated in the expert panel meeting and advised on the relevance, soundness and feasibility of a series of candidate women's health indicators, and particularly those related to mental health
Claire Bombardier, MD	<ul style="list-style-type: none"> • University Health Network • Professor of Medicine and Director of Division of Rheumatology, University of Toronto • Head of Division of Clinical Decision-Making & Health Care, Toronto General Research Institute 	<ul style="list-style-type: none"> • Provided feedback on candidate women's health indicators related to musculoskeletal conditions
Moira Kapral, MD	<ul style="list-style-type: none"> • Internist, University Health Network • Assistant Professor of Medicine, University of Toronto • Scientist, Institute for Clinical Evaluative Sciences 	<ul style="list-style-type: none"> • Provided feedback on candidate women's health indicators related to stroke
C. Ruth Wilson, MD	<ul style="list-style-type: none"> • Professor, Department of Family Medicine, Queen's University • Chair of the Ontario Family Health Team Action Group 	<ul style="list-style-type: none"> • Participated in the expert panel meeting and advised on the relevance, soundness and feasibility of a series of candidate women's health indicators
Terry O'Driscoll, MD	<ul style="list-style-type: none"> • Chief of Staff, Sioux Lookout Meno Ya Win Health Centre • Preceptor, Northwestern Ontario Medical Program and Family Medicine North 	<ul style="list-style-type: none"> • Provided ongoing feedback on and validation for definitions of the final set of women's health indicators and questions on the structures and services survey in the area of labour and delivery

Expert Advisor	Primary Affiliation(s)	Contribution to Women's Health Redevelopment Process
Alan Bocking, MD	<ul style="list-style-type: none"> • Chief of Obstetrics & Gynecology, Mount Sinai Hospital • Chair of Department of Obstetrics & Gynecology, University of Toronto 	<ul style="list-style-type: none"> • Provided ongoing feedback on and validation for definitions of the final set of women's health indicators and questions on the structures and services survey in the area of labour and delivery
Nicholas Leyland, MD	<ul style="list-style-type: none"> • Chief of Obstetrics & Gynecology, St. Joseph's Health Centre • Assistant Professor, Department of Obstetrics & Gynecology, University of Toronto 	<ul style="list-style-type: none"> • Provided ongoing feedback on and validation for definitions of the final set of women's health indicators and questions on the structures and services survey in the area of gynecological conditions and hysterectomy
Lynn Wilson, MD	<ul style="list-style-type: none"> • Chief, Family and Community Medicine, St. Joseph's Health Centre (Toronto) • Associate Professor of Family and Community Medicine, University of Toronto 	<ul style="list-style-type: none"> • Participated in the expert panel meeting and advised on the relevance, soundness and feasibility of a series of candidate women's health indicators
Catherine MacKinnon, MD	<ul style="list-style-type: none"> • Obstetrician, Brantford • Obstetrics and Gynecology Faculty Member, University of Western Ontario • Chair of Society of Obstetrics & Gynecology Clinical Practice Obstetrics Committee 	<p>Provided ongoing feedback on and validation for definitions of the final set of women's health indicators and questions on the structures and services survey in the area of labour and delivery</p>

Appendix C: Acute Care Hospitals Participating in Delphi Panel Process

Almonte General Hospital
Arnprior & District Memorial Hospital
Blind River District Health Centre
Bluewater Health
Brant Community Healthcare System
Cambridge Memorial Hospital
Campbellford Memorial Hospital
Carleton Place and District Memorial Hospital
Dryden Regional Health Centre
Englehart & District Hospital
Grand River Hospital
Grey Bruce Health Services
Guelph General Hospital
Hamilton Health Sciences Corporation
Hanover & District Hospital
Headwaters Health Care Centre
Hôpital Général de Hawkesbury & District General Hospital Inc.
Hopital Montfort
Hopital Notre-Dame Hospital
Hopital Regional de Sudbury Regional Hospital
Hotel Dieu Health Sciences Hospital, Niagara
Hotel Dieu Hospital (Kingston)
Hotel-Dieu Grace Hospital (Windsor)
Humber River Regional Hospital
Huron Perth Healthcare Alliance
Huron District Hospital - North Simcoe Hospital Alliance
Joseph Brant Memorial Hospital
Kemptonville District Hospital
Kingston General Hospital
Kirkland and District Hospital
Lakeridge Health
Listowel & Wingham Hospitals Alliance
Leamington District Memorial Hospital
London Health Sciences Centre
Markham Stouffville Hospital
Nipigon District Memorial Hospital
Norfolk General Hospital
North Bay General Hospital
North Wellington Health Care
North York General Hospital
Northumberland Hills Hospital
Orillia Soldiers' Memorial Hospital
Pembroke General Hospital
Penetanguishene General Hospital

Peterborough Regional Health Centre
Red Lake Margaret Cochenour Memorial Hospital
Riverside Health Care Facilities Inc.
Ross Memorial Hospital
Royal Victoria Hospital
Sault Area Hospitals
Sensenbrenner Hospital
South Bruce Grey Health Centre
South Muskoka Memorial Hospital
Southlake Regional Health Centre
St. Francis Memorial Hospital
St. Joseph's Health Centre (Toronto)
St. Joseph's Healthcare Hamilton
St. Mary's General Hospital (Kitchener)
St. Michael's Hospital
St. Thomas-Elgin General Hospital
South Bruce Grey Hospital
Strathroy Middlesex General Hospital
Sunnybrook & Women's College Health Sciences Centre
Temiskaming Hospital
The Credit Valley Hospital
The Ottawa Hospital
The Scarborough Hospital
Thunder Bay Regional Hospital
Timmins & District Hospital
Toronto East General Hospital
Trillium Health Centre
University Health Network
West Haldimand General Hospital
West Lincoln Memorial Hospital
West Parry Sound Health Centre
William Osler Health Centre
Winchester District Memorial Hospital
Windsor Regional Hospital
Woodstock General Hospital
York Central Hospital

Appendix D: Additional Indicators (to be added to E-Scorecard in 2005/2006 and considered for System-level reporting in *Hospital Report 2006: Acute Care*)

1. Gynecological Conditions & Hysterectomy

a) Rate of select alternatives to hysterectomy versus rate of hysterectomy

i. Proportion of patients with abnormal uterine bleeding and/or fibroids as the only uterine problem who undergo select alternatives to hysterectomy

(Note: This component will be used to calculate a difference value of the proportion of: **use of/access to hysterectomy alternatives for patients with abnormal uterine bleeding and/or fibroids** to the proportion of: use of/access to hysterectomy for patients with abnormal uterine bleeding and/or fibroids)

Episodes (Numerator)		
	Criteria	ICD-10 Codes
Include:	Cases within denominator with:	
	Endometrial ablation	1.RM.59.^
	Uterine artery embolization	1.RM.13.GQ-C2

Cases (Denominator)		
	Criteria	Codes
Include:		Diagnosis Type M (but not M and 2), Type 1 (with another Dx type M and 2):
	Abnormal uterine bleeding	N92.^, N93.^
	Uterine fibroids	D25.^
Exclude:	Endometriosis of the bowel or pelvic cavity	N80.0-N80.5, N80.8 (any diagnosis type on the abstract)
	Pelvic exenteration	1.PM.91.^
	Major procedures in pregnancy or childbirth	CMG 600
	General Exclusion Criteria (exclude if age < 15 or > 84 years)	(see section on General Exclusions of this report)

Note:

- The Women's Health Expert Panel (gynecology) wanted to include hysteroscopic myomectomy (1.RM.87.BA-^)^ in the numerator for indicator 1a as it is a hysterectomy alternative. However, this code also includes subtotal, partial hysterectomy, which is in indicator 1b. As a result of this code limitation, it was decided to leave out hysteroscopic myomectomy in indicator 1a and include it in 1b. However, note that code 1.RM.87.^ may contain myomectomy cases in the results for indicator 1b. For the future,

we are making a public submission request for review to the Classification Advisory Committee (CAC) to make a separate code for hysteroscopic myomectomy. This is an important distinction for this indicator as a myomectomy preserves fertility, whereas, a subtotal hysterectomy does not.

- In addition, the Women’s Health Expert Panel (gynecology) originally wanted to exclude patients with previous ablation, myomectomy, resection, uterine artery embolization (within past two years) from the denominator, however, in the new classification system format for ICD-10-CA/CCI in DAD, it is not possible to capture this information. Therefore, we may be including women who have had “previous alternative to hysterectomy” cases in the denominator.

ii. Proportion of patients with abnormal uterine bleeding and/or fibroids as the only uterine problem who undergo hysterectomy

(Note: This component will be used to calculate the ratio of the proportion of: use of/access to hysterectomy alternatives for patients with abnormal uterine bleeding and/or fibroids to the proportion of: **use of/access to hysterectomy for patients with abnormal uterine bleeding and/or fibroids**)

Episodes (Numerator)		
	Criteria	Codes
Include:	Cases within denominator with:	
	Hysterectomy (all types)	1.RM.87.BA-AG, 1.RM.87.BA-AK, 1.RM.87.BA-GX, 1.RM.87.CA-AK, 1.RM.87.CA-GX 1.RM.87.DA-AG, 1.RM.87.DA-AK, 1.RM.87.DA-GX, 1.RM.87.LA-AK, 1.RM.87.LA-GX, 1.RM.89.^, 1.RM.91.^

Cases (Denominator)		
	Criteria	Codes
Include:		Diagnosis Type M (but not M and 2), Type 1 (with another Dx type M and 2):
	Abnormal uterine bleeding	N92.^, N93.^
	Uterine fibroids	D25.^

Cases (Denominator)		
	Criteria	Codes
Exclude:	Endometriosis of the bowel or pelvic cavity	N80.0-N80.5, N80.8 (any diagnosis type on the abstract)
	Pelvic exenteration	1.PM.91.^
	Major procedures in pregnancy or childbirth	CMG 600
	General Exclusion Criteria (exclude if age < 15 or > 84 years)	(see section on General Exclusions of this report)

Note:

- The Women's Health Expert Panel (gynecology) wanted to include hysteroscopic myomectomy (1.RM.87.BA-^) in the numerator for indicator 1a as it is a hysterectomy alternative. However, this code also includes subtotal, partial hysterectomy, which is in indicator 1b. As a result of this code limitation, it was decided to leave out hysteroscopic myomectomy in indicator 1a and include it in 1b. However, note that code 1.RM.87.^ may contain myomectomy cases in the results for indicator 1b. For the future, we are making a public submission request for review to the Classification Advisory Committee (CAC) to make a separate code for hysteroscopic myomectomy. This is an important distinction for this indicator as a myomectomy preserves fertility, whereas, a subtotal hysterectomy does not.

b) Proportion of women with abnormal uterine bleeding and/or fibroids undergoing hysterectomy with concurrent oophorectomy or salpingo-oophorectomy

Episodes (Numerator)		
	Criteria	Codes
Include:	Cases within denominator with:	
	Total hysterectomy with salpingo-oophorectomy or oophorectomy	1.RM.89.^ and 1.RD.89.^ or 1.RB.89.^
	Radical hysterectomy with salpingo-oophorectomy or oophorectomy	1.RM.91.^ and 1.RD.89.^ or 1.RB.89.^

Cases (Denominator)		
	Criteria	Codes
Include:		Diagnosis Type M (but not M and 2), Type 1 (with another Dx type M and 2):
	Abnormal uterine bleeding	N92.^, N93.^
	Uterine fibroids	D25.^
	Any of the above diagnoses AND any of the following procedures:	

Cases (Denominator)		
	Criteria	Codes
	Hysterectomy (all types)	1.RM.87.BA-AG, 1.RM.87.BA-AK, 1.RM.87.BA-GX, 1.RM.87.CA-AK, 1.RM.87.CA-GX 1.RM.87.DA-AG, 1.RM.87.DA-AK, 1.RM.87.DA-GX, 1.RM.87.LA-AK, 1.RM.87.LA-GX, 1.RM.89.^, 1.RM.91.^
Exclude:	Pelvic exenteration	1.PM.91.^
	Genital prolapse and pelvic sling (exclude if age < 15 or > 84 years)	N81.^ (any diagnosis type on the abstract) and any of: 1.PL.74.AF-^, 1.PL.74.AL-FF, 1.PL.74.CA-XX-K
	Endometriosis of the bowel or pelvic cavity	N80.0-N80.5, N80.8 (any diagnosis type on the abstract)
	Major procedures in pregnancy or childbirth	CMG 600
	General Exclusion Criteria	(see section on General Exclusions of this report)

Note: The Women's Health Expert Panel (gynecology) originally wanted the indicator definition to strictly include bilateral oophorectomy or salpingo-oophorectomy, however, the Location Attribute, which identifies bilateral cases, is not a mandatory data element in DAD. It is only mandatory in 2003/04 for the oophorectomy procedure.

2. Labour and Delivery

a) Rate of episiotomy

Episodes (Numerator)		
	Criteria	Codes
Include:	Cases within denominator with:	
	Episiotomy	5.MD.50.GH, 5.MD.53.JE, 5.MD.53.KJ, 5.MD.53.KL, 5.MD.53.KN, 5.MD.53.KS, 5.MD.54.KJ, 5.MD.54.KL, 5.MD.54.KN, 5.MD.54.NF, 5.MD.55.KJ, 5.MD.55.KL, 5.MD.55.KN, 5.MD.55.KR, 5.MD.56.GH, 5.MD.56.PA, 5.MD.56.PB, 5.MD.56.PC, 5.MD.56.PD, 5.MD.56.PE, 5.MD.56.PF, 5.MD.56.PG, 5.MD.56.PH, 5.MD.56.PJ

Cases (Denominator)		
	Criteria	Codes
Include:	All vaginal deliveries	5.MD.50.^ - 5.MD.56.^
Exclude:	General Exclusion Criteria (exclude if age < 13 or > 64 years)	(see section on General Exclusions of this report)

b) Rate of third and fourth degree vaginal-perineal tears/lacerations during labour and delivery

Episodes (Numerator)		
	Criteria	Codes
Include:	Cases within denominator with:	any diagnosis type
	3rd degree tears	O70.201
	4th degree tears	O70.301

Cases (Denominator)		
	Criteria	Codes
Include:	All vaginal deliveries	5.MD.50.^ - 5.MD.56.^
Exclude:	General Exclusion Criteria (exclude if age < 13 or > 64 years)	(see section on General Exclusions of this report)

Note: Coding and recording the degree of vaginal-perineal tears/lacerations by the operator may not be clearly identified so comparisons may be difficult.

c) Rates of c-section (elective, non-elective) and operative vaginal delivery(Utilization Indicator)

i. Proportion of women admitted for delivery who deliver by caesarean section during/after trial of labour

Episodes (Numerator)		
	Criteria	Codes
Include:	Cases within denominator with:	any diagnosis type
	Caesarean section during/after trial of labour (primary and repeat)	O66.401, O66.491

Cases (Denominator)		
	Criteria	Codes
Include:	All patients admitted for delivery	5.MD.50.^- 5.MD.60.^
Exclude:	General Exclusion Criteria (exclude if age < 13 or > 64 years)	(see section on General Exclusions of this report)

ii. Proportion of women admitted for delivery who deliver by elective caesarean section (primary and repeat)

Episodes (Numerator)		
	Criteria	Codes
Include:	Cases within denominator with:	Diagnosis type M
	Elective caesarean section (primary and repeat)	O32.^01, O33.^01, O34.^01, O34.291, O34.^02, Z37.^ and 5.MD.60.^ and Admission Category = 'L'

Cases (Denominator)		
	Criteria	Codes
Include:	All patients admitted for delivery	5.MD.50.^- 5.MD.60.^
Exclude:	General Exclusion Criteria (exclude if age < 13 or > 64 years)	(see section on General Exclusions of this report)

iii. Proportion of women undergoing labour who deliver by operative vaginal delivery (forceps and/or vacuum extraction)

Episodes (Numerator)		
	Criteria	Codes
Include:	Cases within denominator with:	
	Forceps and/or vacuum extraction	5.MD.53.^, 5.MD.54.^, 5.MD.55.^, 5.MD.56.NN, 5.MD.56.NR, 5.MD.56.NW, 5.MD.56.PC, 5.MD.56.PF, 5.MD.56.PJ

Cases (Denominator)		
	Criteria	Codes
Include:	Patients undergoing vaginal delivery	5.MD.50.^ - 5.MD.56.^
Exclude:	General Exclusion Criteria (exclude if age < 13 or > 64 years)	(see section on General Exclusions of this report)

	Criteria	Codes
Include:	All patients admitted for delivery	5.MD.50.^ - 5.MD.60.^
Exclude:	General Exclusion Criteria (exclude if age < 13 or > 64 years)	(see section on General Exclusions of this report)

d) Rates of vaginal birth after c-section (elective, non-elective; successful, failed)(Utilization Indicator)

i. Percent of women with prior transverse lower segment caesarean who undergo a trial of labour with a vaginal birth after caesarean section (VBAC)

Episodes (Numerator)		
	Criteria	Codes
Include:	Cases within denominator with:	any diagnosis type
	VBAC	O75.701

Cases (Denominator)		
	Criteria	Codes
Include:	Patients with prior transverse lower segment caesarean	Type M (not M and 2) or type 1: O34.201, O75.701
Exclude:	General Exclusion Criteria (exclude if age < 13 or > 64 years)	(see section on General Exclusions of this report)

ii. Percent of women with prior transverse lower segment caesarean who undergo a trial of labour, tried VBAC but ended up with c-section

Episodes (Numerator)		
	Criteria	Codes
Include:	Cases within denominator:	any diagnosis type
	Failed VBAC	O66.401

Cases (Denominator)		
	Criteria	Codes
Include:	Patients with prior transverse lower segment caesarean	Type M (not M and 2) or type 1: O34.201, O75.701
Exclude:	General Exclusion Criteria (exclude if age < 13 or > 64 years)	(see section on General Exclusions of this report)

iii. Percent of women with prior transverse lower segment caesarean who are admitted for delivery with an elective caesarean section

Episodes (Numerator)		
	Criteria	Codes
Include:	Cases within denominator:	any diagnosis type
	Elective caesarean	O34.201 and 5.MD.60.^ and Admission Category = 'L'

Cases (Denominator)		
	Criteria	Codes
Include:	Patients with prior transverse lower segment caesarean	Type M (not M and 2) or type 1: O34.201, O75.701
Exclude:	General Exclusion Criteria (exclude if age < 13 or > 64 years)	(see section on General Exclusions of this report)

3. Cardiac Care

a) Proportion/ratio of patients with acute coronary syndrome who receive percutaneous transluminal coronary angioplasty (PTCA) with stent, by drug-eluting stent, by sex

Episodes (Numerator)		
	Criteria	Codes
Include:	Cases within denominator with:	
	PTCA with drug-eluting stent	1.IL.35.HH-T9 and 1.IJ.50.GQ-OA (2003-04 Code) or 1.IJ.50.GS-BD (2002-03 Code)

Cases (Denominator)		
	Criteria	Codes
Include:	PTCA with stent	1.IJ.50.GQ-OA (2003-04 Code) or 1.IJ.50.GS-BD (2002-03 Code)
	Any of the above procedures AND any of the following diagnoses:	Diagnosis Type M (but not M and 2), Type 1 (with another Dx type M and 2):
	Acute Myocardial Infarction (AMI)	I21.^, I22.^
	Unstable angina	I20.0
	Cardiogenic shock	R57.0
	Coronary artery disease	I25.1^
Exclude:	General Exclusion Criteria (exclude if age < 15 or > 84 years)	(see section on General Exclusions of this report)

Appendix E

Women's Health: Structures and Services Survey

Labour and Delivery, Gynecological Care/Hysterectomy, and Cardiac Care

Using the instructions outlined below, please complete and return the attached survey. The information you and your organization will share will be valuable for stimulating the sharing of best practices and quality improvement.

- Arrange for the appropriate sections of the survey to be distributed and completed by **the Chief and/or Program Director/Manager** of the service or program in question. We recommend that both the Chief and Program Director/Manager of the service or program complete and sign-off on the survey responses:

Please indicate which of the following programs/services your institution offers.

- Labour and Delivery → Complete **Section A**
- Gynecological and Sexual Health → Complete **Section B**
- Cardiac Care → Complete **Section C**

- Complete the **Faxback Form** enclosed in this package indicating the names and contact information of the designated respondents for each Section of this survey. Please return this completed faxback form to the Hospital Report Research Collaborative (HRRC) at (fax) **416-978-1466** before **April 15th, 2005**. If your hospital does not have any one or more of the three services/program areas, please indicate this on the faxback sheet.
- Ensure that all completed sections of the survey are faxed or e-mailed to HRRC at **(416) 978-1466** or christina.porcellato@utoronto.ca before **April 25th, 2005**.

Note: Survey sections may be collected and returned as a **single package to HRRC** or, if preferred, **individual sections may be submitted directly to HRRC by the designated respondent(s)**. We have outlined the return options at the end of each section of the survey; **for each section, please check the return option that you would like your designated respondent(s) to follow.**

Labour and Delivery

Section A

We encourage you to submit any supplementary information with your completed survey (i.e. copy of protocols, tools, policies).

1. Please indicate the level of neonatal care that your hospital is equipped to provide (check one)?

- Level I Community care
(Birthing centres and hospitals with low risk maternity services capable of responding to the unanticipated emergency for mother and newborn)
- Level II Community care
(Units with low to moderate risk maternity services, ability to provide expert resuscitation and stabilization of the newborn for unanticipated emergencies, together with ongoing care for relatively stable infants)
- Level II Regional care
(Units co-located with regional paediatric centres, with specific neonatal and subspecialty paediatric expertise, capable of responding to unanticipated emergencies and the ongoing care of moderate risk mothers and infants)
- Tertiary care
(Centres with neonatal and sub-specialty expertise providing care to high risk mothers and infants, including those requiring specific diagnostic and therapeutic interventions)

2. Does your hospital participate in a regional perinatal program? If so, please indicate to which of the following programs your hospital holds membership?

Our hospital does not participate in a regional perinatal program.

OR check all that apply

- Regional Child Health Network
- Perinatal Partnership Program of Eastern and Southern Ontario (PPESO)
- Regional Perinatal Outreach Program of Southwestern Ontario
- Other, please specify below:

3. How does your unit evaluate maternal pain levels during each of the following stages of labour and delivery?

		Check one per row		
		Pain levels are not formally evaluated.	Pain levels are evaluated without use of a standardized scale.	Pain levels are evaluated based on a standardized scale.
During labour:	Vaginal delivery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Caesarean delivery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Postpartum		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. Please indicate the types of assessment techniques your labour and delivery and postpartum units currently use to evaluate maternal pain levels?

Check all that apply	Check all that apply		
	During vaginal delivery	During caesarean delivery	Post-partum
<input type="checkbox"/> Visual scoring scale	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Verbal analogue scale	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Other pain assessment tool(s), please specify below:			
1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. Which of the following conditions does your labour and delivery unit monitor with the administration of pain medication (check all that apply)?

- Sedation (when an opioid medication is administered with a local analgesia)
- Level of motor blockage during regional analgesia
- Nausea and vomiting post-procedure
- Nausea and vomiting following additional bolus doses of medication
- Postdural puncture headache after regional block administration
- Urinary retention and bladder distension (observation and palpation)

6. In what proportion of babies are cord blood gases measured on your labour and delivery unit? (please check one):

- All (100%) babies have blood taken for measurement of cord blood gases
- Most (>50%) babies have blood taken for measurement of cord blood gases
- Some (10-50%) babies have blood taken for measurement of cord blood gases
- Few or no babies (<10%) have blood taken for measurement of cord blood gases

7. Please indicate how fetal well-being is assessed within your labour and delivery unit (check all that apply).

- Intermittent auscultation
- Continuous EFM using an internal monitor
- Continuous EFM using an external monitor
- Scalp stimulation
- Scalp sampling
- Fetal pulse oximetry

8. Women in active labour benefit from the continuous presence of a professional. What measure of care does your nursing staff currently provide during a majority (>75%) of deliveries (check one)?

- One-to-one nursing is not provided during active labour. → Skip to Question 10
- Policies and procedures indicate one-to-one nursing should be provided during labour, however this standard is not always able to be achieved.
- One-to-one nursing is provided only during active labour (2nd and 3rd stages).
- One-to-one nursing is provided during active labour and in the first hour postpartum.
- Other, please specify below:

9. What policies or procedures has your hospital put in place to ensure nurses have the capability of providing one-to-one support during active labour (check all that apply)?

- Minimum staffing requirements have been established
- Other, please list below

10. Which of the following elements, listed in the first column of the table below, are included within the discharge protocol used to **guide the provision of postpartum follow-up and referral** at your hospital. Using the remaining columns of the table, please indicate the extent to which each element of the discharge protocol is used during patient care?

- A standardized discharge protocol does not exist at our hospital.

OR complete the following table

Check all that apply	Choose one per row				
	Protocol under development	Protocol is used during the care of:			
		Few patients (<10%)	Some patients (10-50%)	Most patients (>50%)	All patients (100%)
<input type="checkbox"/> Standardized criteria (e.g. Edinburgh Postpartum Depression Scale) for the assessment of patients at risk for postpartum depression (PPD)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Smoking cessation counseling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Breast-feeding program	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. Which of the following components are included in the breast-feeding program at your hospital?

- A breast-feeding program is not offered at our hospital.

OR check all that apply

- Educate mothers about the benefits and management of breastfeeding

- Help mothers initiate breastfeeding within a half-hour of birth
 - Teach mothers how to breastfeed, and how to maintain lactation even if they should be separated from their infants
 - Unless medically indicated, give newborn infants no food or drink other than breast milk
 - Practice rooming-in: allow mothers and infants to remain together 24 hours a day
 - Encourage breastfeeding on demand.
 - Give no artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants
12. Does your hospital monitor, measure, and report **clinical utilization and quality outcomes** related to **labour and delivery practices** (check one)?
- Data on clinical utilization and outcomes are not available. → Skip to Question 14
 - Data on clinical utilization and outcomes are available but indicators are not monitored or reported.
 - Data on clinical utilization and outcomes are available and indicators are reported back to clinicians and managers for review, monitoring of clinician, unit, program, or organizational performance.
13. Please indicate the source(s) that is (are) used to monitor individual clinical utilization and quality outcomes **for labour and delivery patients** (check all that apply).
- External source (*Hospital Report, Niday Perinatal Database, etc.*)
 - Internal source (chart audits, routinely collected administrative data, etc.)
 - Other, please list below
-
-
-

14. Does your hospital collect, measure, and report **satisfaction of labour and delivery patients** (check one)?
- Patient satisfaction data are not available.
 - Patient satisfaction data are available but indicators are not monitored or reported.
 - Patient satisfaction data are available and indicators are reported back to clinicians and managers for review, monitoring of clinician, unit, program, or organizational performance.

Thank you for taking time to complete this section of the survey.

To return this completed section of the survey:

- Fax to the Hospital Report Research Collaborative at **416-978-1466** or e-mail to christina.porcellato@utoronto.ca; OR
- Return this completed section of the survey to your Hospital Report Contact or Women's Health Champion

Gynecological Care and Hysterectomy

Section B

We encourage you to submit any supplementary information with your completed survey (i.e. copy of protocols, tools, policies).

1. Please indicate if any of the following procedures are performed at your hospital for patients with benign uterine conditions? (check all that apply)

- Vaginal hysterectomy
- Laparoscopically assisted vaginal hysterectomy
- Myomectomy
- Abdominal hysterectomy
- Uterine artery embolization
- Endometrial resection
- Endometrial ablation
- None of the above procedures are performed

2. Does your hospital provide structured preoperative information to patients before hospitalization for (surgical) therapies for benign uterine conditions (check one)?

- Yes
- No → Skip to Question 5

3. How is preoperative information provided to patients (check all that apply)?

- Verbally during a preoperative consultation appointment
- Prepared information sheets and pamphlets
- Other, please specify below

4. What type of preoperative information does your hospital require surgeons to present to patients prior to hospitalization (check all that apply)?

- Available treatment options
- Physical and psychosocial effects (including complications, fertility issues, etc.)
- Surgeon's past experience
- Volume of similar procedures performed annually at the hospital
- Other, please specify below

5. Is there a standardized protocol within your hospital related to any of following care procedures? To what extent is the protocol used to treat patients with benign uterine conditions?

Check all that apply	Check one per row					
	Procedure not performed at our hospital	Protocol under development	For the treatment of benign uterine conditions, a protocol is used for the care of:			
			Few patients (<10%)	Some patients (10-50%)	Most patients (>50%)	All patients (100%)
<input type="checkbox"/> Route and method for hysterectomy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Post-operative hysterectomy care	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Route and method for myomectomy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Post-operative myomectomy care	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Uterine embolization	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Endometrial resection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Endometrial ablation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Postoperative pain management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Discharge planning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Does your hospital monitor, measure, and report **clinical utilization and quality outcomes for patients treated for benign uterine conditions** (check one)?

- Data on clinical utilization and outcomes are not available.
- Data on clinical utilization and outcomes are available but indicators are not monitored or reported.
- Data on clinical utilization and outcomes are available and indicators are reported back to clinicians and managers for review, monitoring of clinician, or unit, program, organizational performance.

7. Please indicate the source(s) that is (are) used to monitor individual clinical utilization and quality outcomes **for patients treated with benign uterine conditions** (check all that apply).

- External source (e.g. *Hospital Report*)
- Internal source (chart audits, routinely collected administrative data, etc.)
- Other, please list below

Thank you for taking time to complete this section of the survey.

To return this completed section of the survey:

- Fax to the Hospital Report Research Collaborative at **416-978-1466** or e-mail to christina.porcellato@utoronto.ca; OR
- Return this completed section of the survey to your Hospital Report Contact or Women's Health Champion

Cardiac Care

Section C

We encourage you to submit any supplementary information with your completed survey (i.e. copies of protocols, tools, policies).

1. Please indicate the extent to which your hospital currently uses discharge protocols for follow-up care for patients with acute coronary syndrome (acute myocardial infarction (AMI), unstable angina) (check one).

- No protocols** have been developed → Skip to Question 3
- Protocols have been developed but are used to care for **few** patients (<10%).
- Protocols have been developed and are used to care for **some** patients (10-50%).
- Protocols have been developed and are used to care for **most** patients (>50%).
- Protocols have been developed and are used to care for **all** patients.

2. Which of the following guidelines and/or procedures are included within the protocol (check all that apply)?

- Prescription for Aspirin, Beta-Blocker, drug for hyperlipidemia, ACE inhibitors, Angiotensin Receptor Blocker, or Anti-Platelet treatment
- Cholesterol screening post MI
- Screening for depression after MI
- Referral for cardiac rehabilitation

3. Does your hospital have its own cardiac rehabilitation program?

- No
- Yes → Please describe

4. Does your hospital use an **automatic referral system** for cardiac rehabilitation (i.e. all patients are referred to a program closest to home)?

- No
- Yes → Please describe

5. Does your hospital offer an ambulatory care program for patients with congestive heart failure?
- No → Skip to Question 7
- Yes
6. Which of the following components are included in your hospital's ambulatory congestive heart failure program (check all that apply)?
- Coordination, care and surveillance by a skilled nurse or physician
- Patient education on compliance, medication, exercise
- Access to physician/nurse via telephone support
- Other
- _____
- _____
- _____
7. Are data (and indicators) on the utilization and clinical quality and outcomes of cardiac care **collected, disaggregated** by sex, **reported** back to clinicians and monitored at your hospital (check one)?
- Data on the utilization and clinical quality and outcomes of cardiac care are not available.
- Data on the utilization and clinical quality and outcomes of cardiac care are available but indicators are **NOT** disaggregated by sex and **NOT** monitored or reported back to clinicians and managers.
- Data on the utilization and clinical quality and outcomes of cardiac care are available and indicators are reported back to clinicians and managers and monitored but are **NOT** disaggregated by sex.
- Data on the utilization and clinical quality and outcomes of cardiac care are available and indicators are disaggregated by sex and reported back to clinicians and managers for review, monitoring of clinician, unit, program, or organizational performance.

Thank you for taking time to complete this section of the survey.

To return this completed section of the survey:

- Fax to the Hospital Report Research Collaborative at **416-978-1466** or e-mail to christina.porcellato@utoronto.ca; OR
- Return this completed section of the survey to your Hospital Report Contact or Women's Health Champion