

Hospital Report 2005: Emergency Department Care
Clinical Utilization and Outcomes Technical Summary

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Overview

Hospital Report 2005: Emergency Department Care reports on 4 performance indicators at the hospital level. One new performance indicator will be reported at the system level in the public reports and will also be included in the E-scorecard at the hospital level (each hospital will be able to view their own indicator values along with the provincial mean). The 2005 report also introduces two new areas where development work for future indicators is in progress.

For the first time, the 2005 report will include data from two years, fiscal 2002/2003 and 2003/2004. The data from the 2003/2004 fiscal year includes the period in which SARS took place, affecting emergency departments (EDs) across Ontario, especially those in the Greater Toronto Area (GTA). In accordance with an overall Hospital Report approach, no special adjustments or exclusions have been applied to the data for this year to adjust for SARS. However, variances and trends in ED utilization are highlighted to demonstrate the effect of SARS during this period.

In addition, for the first time, a Women's Health section is integrated into the ED Report. This section includes information about ED utilization stratified by sex, and all indicators in the Clinical Utilization and Outcomes quadrant stratified by sex. Sex-stratified data and analyses are provided at a provincial level in the Executive Report, and at a hospital and aggregate levels (i.e. peer group, regional and provincial) in the E-Scorecard.

Sex is biological maleness and femaleness. Gender is made up of multiple dimensions, and reflects the interaction of sex with other economic, cultural, environmental, social characteristics (e.g., age, income, ethnicity, social support), as well as roles ascribed to the sexes, and relations between the sexes. Because of the limited availability of other gender-related variables in routinely collected hospital data, the analysis is limited to sex. Pursuing gender-based analysis is an important long-term goal.

This *Technical Summary* provides a detailed description of the methods used to select, calculate, and compare the 2005 indicators across Ontario emergency departments participating in this report.

This year's report builds on the previous ED reports (2001 and 2003), and includes measures of ED utilization across Ontario, and indicators targeted at 3 clinical groups – asthma, ankle injuries, and pneumonia. Recent development work has been undertaken to refine the original methodology including the conversion of all codes from ICD 9 to ICD 10; enhancements to the data analysis process; and, the addition of a new ankle x-ray indicator resulting from the earlier work of an expert panel.

As in the 2003 report, risk adjustment techniques have been applied to the hospital-level Clinical Utilization & Outcomes (CUO) indicators to control for differences in patient characteristics, which can vary across EDs. These techniques cannot, however, completely eliminate the impact of case-mix differences among institutions.

Methodology

Data Sources

The National Ambulatory Care Reporting System (NACRS) forms the basis for the information on CUO indicators. NACRS is managed by the Canadian Institute for Health Information (CIHI). Every time a patient is registered at an Ontario ED, a NACRS record is generated for that visit and submitted to CIHI. NACRS data used in this Report are derived from the 2002/2003 and 2003/2004 fiscal years (April 1st to March 31st of the given fiscal year). Each of these years contains over 4.5 million records. All ED patients who are subsequently admitted to hospital have a second summary abstract created in a separate database – the Discharge Abstract Database (DAD). The DAD is also managed by CIHI and data from the DAD were linked with information from NACRS to provide comprehensive information on the patient’s entire stay in hospital including both the ED visit and the inpatient stay. Both the NACRS and DAD data accessed for this Report are protected by privacy and confidentiality policies that ensure that patients and caregivers cannot be individually identified.

Data Quality

Some inconsistencies continue to exist in the way the data elements are interpreted and coded by hospitals. However, Hospital Report investigators continue to work closely with CIHI to assess and improve the quality of the NACRS data. Based on these ongoing data quality initiatives, NACRS continues to be a reliable and important source of information for measuring and reporting ED performance. Continued use of NACRS and ongoing collaborative data quality improvement efforts, will lead to further refinements in the data elements, data coding, and eventually in data quality.

Data Inclusion/Exclusion Criteria

Data from all eligible EDs in Ontario that contribute to the NACRS database were used to calculate provincial, peer group, and LHIN averages. The hospital-level indicator results include data from 91 of the 124 hospital corporations that voluntarily agreed to participate in the Report (note that one participating corporation did not submit data to NACRS during the study period). This participation rate, which includes 85.7% of the total ED visits in 2003/04, is similar to the participation rate in the 2003 report.

Records with invalid Ontario health card numbers, or records that were exact duplicates of an existing record were excluded from further analysis, while individuals with missing values for individual data elements were excluded from specific analyses. As well, all records with negative ages or an age greater than 105 years were excluded. The final 2002/2003 dataset included 4,908,059 ED visits and the final 2003/2004 dataset included 4,671,317 ED visits. The inclusion and exclusion criteria are summarized in the following table:

General Inclusions/Exclusions:

	Criteria	Codes/Comments
	Start with full NACRS 2002-2003 and 2003-2004 datasets	
Include:	All cases with valid Ontario health card number (HCN)	Must have a valid IKN (ICES encrypted code for those records with a valid (HCN)
Include:	All cases with primary functional centre recorded as emergency department	Visit Functional Centre = '71310'
Include:	All cases from valid acute care emergency departments	Do not include cases from mental health facilities, outpatient clinics, or other ambulatory services
Exclude:	All exact duplicate records for a single visit	Duplicate records will be excluded if they match a first occurrence exactly for date/time of registration, encounter number, functional centre code
Exclude:	All cases greater than 105 years old and those that have negative ages	As a data quality check, all records that have a negative recorded age or an age greater than 105 years old are excluded

A Snapshot of Ontario Emergency Departments

Emergency departments provide care to a wide range of patients. The indicators included in this report provide a snapshot of care in Ontario EDs, and were selected with input from the ED Advisory Panel. To present patient characteristics in a more meaningful way, some NACRS data elements were recoded to group information together for presentation. For example, age was recoded into defined age groups, and length of stay was changed to length of stay ranges. This year, the age groupings have been broken down further for the under 20 year olds, to better capture utilization and disease patterns for paediatric patients. These recoded data elements were then used in utilization analyses to describe patient characteristics and the services used by ED patients.

Measures Describing Patient Characteristics and Services Used:

Patient Characteristics: The following measures describe the clinical characteristics of ED patients.

- Acuity – urgency rating assigned at the time of patient triage to designate priority for ED care, based on definitions in the Canadian Triage Acuity Scale (CTAS) ratings. The same CTAS system is used in all Ontario EDs.
- Diagnostic Data – type of problem or condition that brought the patient to the ED, defined in the codes contained in ICD 10. Codes are based on the final ED diagnosis, and are assigned after care is completed in the ED.

Services Used: EDs serve as an interface between communities and hospitals, and important aspects of ED care include how patients arrived in the ED, how long they stayed, and where they went after the completion of their ED care.

- Mode of Arrival –whether the patient arrived at the ED by ambulance or some other means of transportation.
- ED Length of Stay - the time from triage of the patient by ED staff until the time the patient was discharged from the ED. For ED patients who are admitted to hospital, ED length of stay includes the time from patient triage until the time the patient was assigned inpatient status in the hospital computer system; patients transferred from one ED to another are excluded from the length of stay analysis. The delay until the patient physically leaves the ED for a hospital bed is not included.
- Disposition – Patients were identified as either dying in the ED, transferred to another ED, admitted to hospital, transferred to another outpatient service within the same hospital, left without visit completion, or discharged from the ED.

These data elements and descriptive measures, with their associated categories, are listed in the table below.

Data Elements and Derived Variables used to Measure Patient Characteristics and Services Used:

DESCRIPTION	MEASURE	CATEGORIES
Patient Characteristics	Age Group	0-90 days 3-24 months 2-4 years 5-9 years 10-14 years 15-19 years 20-44 years 45-64 years 65-84 years 85+ years
	(Derived variable)	
	Sex	Male Female Other
	Diagnostic Groups Based on ICD 10 Codes	Infectious and Parasitic Diseases (A00-B99) Endocrine/Metabolic/Immunity (E00-E90) Mental Disorders (F00-F99) Circulatory System (I00-I99) Respiratory System (J00-J99) Digestive System (K00-K93) Genitourinary System (N00-N99) Pregnancy/Childbirth/Perinatal (O00-O99) Skin/Subcutaneous Tissue (L00-L99) Musculoskeletal System (M00-M99) Symptoms and Signs (R00-R99)
	(Derived variable)	Injury (S00-T98) Poisoning (T33-T78) Central Nervous System (G00-G99) Eyes and Ears (H00-H95)

		Factors Influencing Health Status (Z codes)	
DESCRIPTION	MEASURE	CATEGORIES	
	Triage Level (Based on CTAS scores)	Resuscitation (CTAS score 1)	Emergent (CTAS score 2)
		Urgent (CTAS score 3)	Semi-Urgent (CTAS score 4)
		Non-Urgent (CTAS score 5)	
Services Used	Arrival by Ambulance	Yes	No
	Length of Stay Groups (Derived variable)	LOS < 1 hour	1 ≤ LOS < 2 hours
		2 ≤ LOS < 4 hours	4 ≤ LOS < 8 hours
		8 ≤ LOS < 24 hours	LOS ≥ 24 hours
	End of Visit Disposition (Derived variable - See below for definitions)	Admitted to Inpatient	Transferred to a different ED for care
		Left before visit completion	Dead (death in the ED; or dead on arrival)
		Intra facility transfer	Discharged (Does not fall into any above category)

Categories for Recoding Patient Disposition:

In some cases, the ED disposition coding may be incorrect. Decision rules were developed to re-code patient disposition from the ED. The decision rules were based on a combination of time differences, NACRS disposition codes and DAD records. These rules include:

- Transfer to inpatient from the ED:
 - ◆ This category involves NACRS to DAD linkages;
 - ◆ Includes all cases for admits to same institution and admits to different institution;
 - ◆ Includes all cases with 0 - 2 hour time difference;
 - ◆ Includes all cases with negative time differences from – 24 hr to 0 hrs;
 - ◆ Includes all cases with time difference >2 hours to 12 hours, where both NACRS (VD= 6,7,8) and DAD (Entry=E) indicated a transfer to inpatient;
 - ◆ No cases with a time difference of 12 hours or greater are included.
- Transfer from one ED (NACRS1) directly to a second (different) ED (NACRS2):
 - ◆ This category involves NACRS to NACRS linkages;
 - ◆ Includes all cases where the visit disposition category recorded in the first NACRS record was 6 or 7, AND where the time difference between NACRS1 and NACRS2 fell between negative 24 hours to plus 2 hours;
 - ◆ Includes all cases where the visit disposition category recorded in the first NACRS record was 8, AND where the time difference between NACRS1 and NACRS2 fell between negative 24 hours to plus 12 hours.
- Left before visit completion:

- ◆ This category involves single NACRS records;
- ◆ Includes all cases where the visit disposition category recorded in the NACRS record was one of the following:
 - 2 – Left without being seen or treated by a service provider;
 - 3 – Left after triage but not seen by physician or primary care provider;
 - 4 – Left after triage and assessment but without treatment; and,
 - 5 – Left after initiation of treatment but before completion and against medical advice.
- Death in the ED:
 - ◆ This category involves single NACRS records;
 - ◆ Includes all cases where the visit disposition category recorded in the NACRS record was 10 (death in the ED) or 11 (dead on arrival) to the ED.
- Intra facility transfer:
 - ◆ This category involves single NACRS records;
 - ◆ Includes all cases where the visit disposition category recorded in the NACRS record was one of the following:
 - 12 – Intra facility transfer to day surgery;
 - 13 – Intra facility transfer to the Emergency Department;
 - 14 – Intra facility transfer to clinic.
- Repeat visit to the same or different ED:
 - ◆ This category involves NACRS to NACRS linkages, excluding ED transfer cases (above);
 - ◆ Includes all cases where subsequent ED registration occurs at the same or different institution, and is based on the last NACRS record in the index episode of care;
 - ◆ Includes only cases where registration date/time are different for the original ED visit (NACRS 1) and the subsequent ED visit (NACRS 2);
 - ◆ Includes all cases with a time difference from negative 24 hours to plus 28 days where a second NACRS record is found after an index visit.

Selection of Emergency Department Patient Groups and Clinical Indicators

In order to make the indicators relevant, information was gathered from the literature and from a series of consultations with ED physicians and nurse managers to identify clinical conditions (diseases and symptoms) frequently assessed and treated in Ontario EDs for which appropriate care could have important implications for treatment and patient outcomes. This information on potentially relevant indicators was combined with an analysis of the data elements available from NACRS to define a set of feasible indicators.

The CUO indicators used in this year's hospital-level report describe either the process or the outcomes of care for three conditions: asthma, ankle injury, and pneumonia. These three clinical conditions cover a range of ages and complexity, and represent approximately 4.3% of annual ED visits for each of the two reporting years.

In addition to asthma, ankle injuries, and pneumonia, further development work is being conducted on indicators for Transient Ischemic Attacks (TIA) in the adult population and for a variety of clinical conditions seen in the ED for the paediatric population. To support this development work and set the stage for the future introduction of indicators in these two areas, utilization data is presented in the 2005 ED report on each of these populations.

Definitions of the Three Indicator-Level Clinical Conditions in this Report:

Emergency Department Condition-Specific Patient Groups

Asthma: a disease of the lungs with swelling and narrowing of the airways. It may lead to wheezing, shortness of breath, and other symptoms.

Ankle Injuries: blunt trauma sustained to the ankle or foot area.

Community Acquired Pneumonia (CAP): an infection of the lungs resulting in shortness of breath, fever, and an abnormal chest x-ray.

Clinical Condition Definitions and Sample Size:

CONDITION	ICD-10 CODES & AGE RESTRICTIONS
Asthma	Main Problem: J45 OR
02/03: N = 66,709	Main Problem: R05, R06.0, R06.2, J96 or I46
03/04: N = 64,956	AND dx10code2 or dx10code3 = J45
	Age Restriction: 1 to 64 years
Ankle Injury	Main Problem: S82.3-S82.9, S86, S90.0, S90.3, S90.7, S90.8, S90.9, S93.2, S93.4, S93.6, S96, S99
02/03: N = 122,803	Age Restriction: 5 to 84 years
03/04: N = 115,817	
Pneumonia	Main Problem: J13, J14, J15, J18 OR
02/03: N = 35,973	Main Problem: J96, R05, R06.0, R06.2, G47.3, R09.2
03/04: N = 36,610	AND dx10code2 or dx10code3 = J13, J14, J15, J18
	Age Restriction: 20 to 84 years
Transient Ischemic Attack (TIA)	Main Problem: G45 EXCLUDING G45.4
02/03: N = 8,193	Age Restriction: 20 to 85+ years
03/04: N = 7,361	

Note: Main Problem refers to the first diagnosis entered into NACRS.

Clinical Performance Indicators for 2005

Clinical Utilization and Outcome Indicators for 2005:

Asthma:

- The proportion of patients discharged from the ED with a diagnosis of asthma who have an urgent or emergent return visit for asthma or a related condition to any ED within 24 hours of the initial ED discharge.
- The proportion of patients discharged from the ED with a diagnosis of asthma who have an urgent or emergent return visit for asthma or a related condition to any ED between 24 and 72 hours after the initial ED discharge.

Ankle and Foot Injuries:

- The proportion of patients with an ankle or foot injury who receive an x-ray of the ankle or foot at the first ED visit.
- The proportion of patients who do not receive an x-ray at the initial visit and who return to any ED within 7 days with the same condition, and subsequently receive an x-ray on the return visit.

Pneumonia:

- The proportion of pneumonia patients seen in the ED who are admitted with an ED diagnosis of pneumonia and who then have an inpatient stay of ≤ 2 days.

Changes to Clinical Performance Indicators for 2005:

As part of the continuing evolution of the CUO measures, the chest pain indicators reported at the hospital-level in Hospital Report 2003: Emergency Department Care have not been included in this year's report, the two pneumonia indicators have been combined into one, and one new ankle injury indicator has been added.

Deletions:

- ❖ The three chest pain indicators have been excluded in this year's report due to coding changes from ICD 9 to ICD 10. These changes were so significant that the chest pain cohort could not be defined, nor the sample sizes matched with the 2003 report, with any confidence. As well, a new data element called 'chief complaint' (primary reason for accessing the ED) was incorporated into the 2003/04 NACRS dataset. The most common chief complaint in the adult population is chest pain. In the future, chief complaint will be incorporated in the redevelopment of chest pain indicators.

Additions:

- ❖ A new ankle and foot injury indicator has been introduced at the system level in the 2005 report. This indicator measures the proportion of patients who do not receive an ankle or foot x-ray on their first visit to the ED and then who subsequently return to an ED within 7 days with the same problem, and receive an ankle or foot x-ray on the return visit. This indicator has been introduced as part of an overall initiative to

build suites of indicators around clinical conditions, in order to provide a more comprehensive picture of ED quality of care. Viewed in conjunction with the original ankle x-ray indicator, this new indicator will enable measurement of the proportion of ankle injury patients who should have received an x-ray on the initial visit, but did not.

Changes:

- ❖ Pneumonia: The proportion of pneumonia patients seen in the ED who are admitted and who remain in hospital for 2 days or less. This indicator is a product of the two pneumonia indicators used in the 2003 report (namely, the proportion of pneumonia patient admitted to hospital from the ED and the proportion of admitted patients who have an inpatient length of stay of < 2 days).

Risk Adjustment:

Clinical utilization and outcome indicator results may differ between hospitals simply due to the variability in patient population characteristics across EDs. In order to provide a fair basis for comparison of performance across hospitals, statistical methods are applied to “risk-adjust” the rates of performance for each hospital to account for these differences in patient characteristics. For this report, risk-adjustment techniques were applied for the following characteristics: age, sex, and acuity (triage) levels. There are limits to any risk adjustment strategy. These techniques will reduce the effects of the patient characteristics on the results, but will not eliminate all differences. The factors used for risk adjustment in this report are described in the following table along with the detailed indicator definitions.

Definitions of Clinical Utilization and Outcome Performance Indicators:

OUTCOME	Definition (NACRS, DAD)	Risk Adjustment
ASTHMA		
Early Recurrent Visit (< 24 hrs)	Second visit meets the following criteria: Main Problem: J45 OR Main Problem: R05, R06.0, R06.2, J96 or I46 AND dx10code2 or dx10code3 = J45 Triage: CTAS score 1, 2, or 3 Time: within 0 to 24 hours of discharge	Sex (male, female) Triage: 1&2, 3, 4&5 Age: 1-5, 6-12, 13-18, 19-44, 45-64
Later Recurrent Visit (24 – 72 Hrs)	Second visit meets the following criteria: Main Problem: J45 OR Main Problem: R05, R06.0, R06.2, J96 or I46 AND dx10code2 or dx10code3 = J45 Triage: CTAS score 1, 2, or 3 Time: within 24 to 72 hours of discharge	Sex (male, female) Triage: 1&2, 3, 4&5 Age: 1-5, 6-12, 13-18, 19-44, 45-64

ANKLE INJURY		
X-ray rate (initial visit)	Main Problem: S82.3-S82.9, S86, S90.0, S90.3, S90.7, S90.8, S90.9, S93.2, S93.4, S93.6, S96, S99 Intervention: 3VQ10, 3WA10, 3WG10 (CCI)	Sex (male, female) Triage: 1&2, 3, 4&5 Age: 5-12, 13-18, 19-44, 45-64, 65-84
Return X-ray rate (return visit)	Initial Visit: ➤ Main Problem: S82.3-S82.9, S86, S90.0, S90.3, S90.7, S90.8, S90.9, S93.2, S93.4, S93.6, S96, S99 ➤ NO Intervention code: 3VQ10, 3WA10, or 3WG10 (CCI) Return Visit: ➤ Main Problem: S82, S86, S90.0, S90.9, S93.0, S93.2, S93.4, S96, S99 ➤ Intervention code: 3VQ10, 3WA10, or 3WG10 (CCI) ➤ Visit start time within 7 days (168 hours) of initial visit end time	Sex (male, female) Triage: 1&2, 3, 4&5 Age: 5-12, 13-18, 19-44, 45-64, 65-84
PNEUMONIA		
Inpatient length of stay ≤ 2 days	Follow-up record: ➤ Inpatient record with admit time within 2 hours of initial visit end time or admit time within 12 hours of initial visit end time and index visit disposition of 06, 07, or 08. ➤ Total inpatient LOS ≤ 2 days, calculated as inpatient discharge date/time minus inpatient admission date/time ➤ Inpatient disposition is not death, transfer, or left against medical advice	Sex (male, female) Triage: 1&2, 3, 4&5 Age: 20-44, 45-64, 65-74, 75-84

Reporting Hospital Level Results

In the 2005 report, performance on the four hospital level indicators is measured at both the corporate level and the individual ED site level. The results are presented as box plots, based on the rate per 100 visits, and include the median values for the indicators as well as the distribution of values for all EDs that submitted data for five or more cases.

Box Plot Interpretation

The indicator data in this section is presented in “box-and-whisker plots”, which are graphic displays of the (observed) performance rates across all hospitals that are included in the analysis. The box plots display the variability in the rates per 100 visits across hospitals. The line inside the box reflects the median hospital rate, indicating that 50% of the hospitals had higher rates and 50% had lower rates. Similarly, the left and right outlines of the box mark the 25th and 75th percentile rates, respectively. The “whiskers” extending from both ends of the box display the minimum and maximum hospital rates. The boxes and whiskers do not include the values for hospitals that are considered extreme outliers – that is, those hospitals whose rates are greater than one and one-half box lengths from the edges of the box. These outliers are represented as circles outside the whiskers.

It is important to remember that both the indicators and the data source require ongoing refinement and validation. The calculation and release of these indicator rates is an important step in an ongoing process to develop sound, relevant and feasible, ED clinical outcome indicators. It is anticipated that publication of these indicators will facilitate improved data quality and lead to more in-depth examinations of the delivery of ED clinical care by hospitals.

Calculations for Box Plots and Ratings

Observed Rate: # observed occurrences / total # cases

Expected Rate: # expected occurrences / total # cases

Calculating Rate per 100 Visits:

Rate per 100 visits = risk adjusted rate per ED multiplied by 100.

95% Confidence Intervals Calculation:

Upper CI = Observed rate + 1.96 SE Lower CI = Observed rate - 1.96 SE

where SE = Standard Error of the Mean

Performance Classification Assignment

Along with the numeric indicator values on a hospital-by-hospital basis, the 2005 report also includes a shaded background that indicates whether the hospital's score on that indicator reflected above average performance, average performance, or below average performance. The performance classification for the two asthma and the pneumonia indicator was assigned by first calculating hospital specific expected values, which are based on a combination of the provincial mean and the hospital specific sample size. These hospital-specific expected indicator values were then compared with the confidence interval around the individual hospital's observed indicator value. If the expected indicator value was above the upper end of the confidence interval, an above average performance classification was assigned. If it was below the lower end of the confidence interval, a below average performance classification was assigned. Finally, if the expected value fell within the confidence interval, an average performance classification was assigned. For the ankle injury indicator, the application of validated decision rules in multiple centres has found that the rate of ankle and foot x-rays should be between 60-62%. Therefore, for this indicator, a hospital is considered above average if the confidence interval around its observed rate includes 60-62%.

Reporting Results (by sex) for Women's Health

Provincial-level means for women and men were included in the women's health section of the Executive Report. In addition, the Report included an analysis of the rates for women and men, the values of the differences between women and men on mean rates and the statistical significance of these differences at a provincial level. 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". At initial release, the E-scorecard included hospital-level risk-adjusted means and components by sex for each indicator. As the E-scorecard is updated, it will include the sex difference values $[(F-M)/F]$ for each indicator and an indication of the direction (i.e. $F>M$ or $M>F$) and the statistical significance of these values at a hospital level. In the interim, participating hospitals may access their own and other hospitals' difference values and the direction (i.e. $F>M$ or $M>F$) and statistical significance of these differences for each indicator on a password-protected database at <http://www.hospitalreport.ca/participants.html> (see Women's Health - Emergency Department 2005).

The interpretation of these data and notes about suppression will accompany this database. 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 to infinity), 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. Furthermore, if a hospital's 95% confidence interval around their specific value of the difference between women and men for a given indicator includes zero, then the hospital is said to have no statistically significant sex difference for that indicator (which is preferred). 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.

All boxplots in the Women's Health section of the Executive Report were weighted by sample size.

No performance classifications are provided for the Clinical Utilization and Outcomes indicators stratified by sex in the Executive Report.

The Executive Report also indicated whether high performing hospitals have statistically significant sex differences across indicators, including those in the Clinical Utilization and Outcomes quadrant.