



Report on Adult Percutaneous Coronary Interventions (PCI) in Ontario: October 2011 - March 2016

April, 2018

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About CorHealth Ontario

In 2016, the Cardiac Care Network of Ontario and the Ontario Stroke Network merged to form one organization, with a mandate spanning cardiac, stroke and vascular care in the province. On June 22, 2017, after a year of transition, the new entity became CorHealth Ontario. CorHealth Ontario proudly advises the Ministry of Health and Long-Term Care, Local Health Integration Networks, hospitals, and care providers to improve the quality, efficiency, accessibility and equity of cardiac, stroke and vascular services for patients across Ontario. For more information, visit corhealthontario.ca.

This report was prepared by CorHealth Ontario, in collaboration with the Institute for Clinical Evaluative Sciences (ICES). The results and conclusions presented in this report are those of the authors and should not be attributed to the funding agencies.

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Executive Summary

In collaboration with the Institute for Clinical Evaluative Sciences (ICES), CorHealth Ontario has been monitoring and reporting on trends in the case-mix and outcomes of patients receiving select cardiac procedures since 1994. In 2003, CorHealth Ontario began monitoring and reporting on trends and quality of care for patients undergoing Percutaneous Coronary Interventions (PCI) in Ontario.

For this report, CorHealth Ontario worked with ICES to monitor trends in the case-mix and outcomes of patients receiving PCI in Ontario from 2011-2016. In this current study, the outcomes of patients undergoing PCI procedures at each PCI centre in Ontario were examined for the years 2011/2013, 2013/2014, 2014/2015, and 2015/2016 and compared to the provincial averages for the same time period. The intention of this report, when paired with regular dialogue among providers, is to help stimulate quality improvement activities both at the provincial level and within individual cardiac centers in the province of Ontario.

This study found that patients receiving PCI in Ontario remained relatively constant in terms of baseline characteristics across the study period of 5 years. There were some observed differences in some baseline characteristics for emergent PCI versus non-emergent PCI patients (e.g., age, STEMI prevalence, comorbidities). Overall, the outcomes for patients receiving PCI during the five year period in Ontario were considered to be comparable to ranges reported in other jurisdictions. All-cause mortality rates following PCI procedures were generally low, with the highest mortality rates observed in emergent PCI cases.

Background

Over the past 10-15 years, there has been a significant increase in the number of PCI procedures in Ontario, due in part to advances in technology, including drug eluting stents, imaging and procedural skills. As more patients are undergoing PCI for the treatment of coronary artery disease, we want to ensure that a framework is in place to monitor and report on the quality of care and outcomes of PCI in Ontario.

This report is based on data that includes all PCI procedures for the years of 2011/2013, 2013/2014, 2014/2015, 2015/2016. PCI procedures are defined by two categories:

1. **Emergent PCI Procedures:** includes primary PCIs, rescue PCIs and pharmacoinvasive PCIs or PCIs presenting with shock
2. **Elective or Non-Emergent PCI Procedures:** includes all other PCI procedures that do not meet the emergent criteria

The primary outcomes included observed and risk-adjusted rates of the following:

- 30-day all-cause mortality
- 1-year all-cause mortality

The observed unadjusted rates were also reported for the following outcomes:

- Repeat PCI at 30-days and 1-year post-procedure
- Coronary Artery Bypass Graft (CABG) Surgery 30-days and 1-year post-procedure
- CABG or repeat PCI at 30-days and 1-year post-procedure
- All cause readmission (among those who survived to discharge) at 30-days and 1-year post-procedure
- In-hospital red blood cell transfusion among patients who did not have CABG during index hospitalization

By linking CorHealth Ontario PCI registry data to the hospital discharge data from the Canadian Institute for Health Information (CIHI) discharge abstract database (DAD) and CIHI Same Day Surgery (SDS) database, outcomes could be analyzed at the hospital level with adjustment for case mix. Patients who had a valid health card number in the linked CorHealth/CIHI data set were also linked to the Ontario Registered Persons Database (RPDB) and the Ontario Health Insurance Plan (OHIP) database to support these analyses.

Time Frame 2011 – 2016

To evaluate PCI outcomes for the given time period, we included all patients who had a PCI between October 1, 2011 and March 31, 2016, inclusive. For the year 2011, data is shown for October 1, 2011 to March 31, 2012 to accommodate the previous data report ending in September 2011. All subsequent years followed the fiscal year of April 1 to March 31.

PCI Centres in Ontario

There are currently 17 hospitals in Ontario with the capability to perform PCI procedures:

- Hamilton Health Sciences (HHS) - Hamilton
- Health Sciences North (HSN) – Sudbury
- Kingston General Hospital (KGH) – Kingston
- London Health Science Centre (LHSC) – London
- Niagara Health System (NHS) – St. Catharines
- Peterborough Regional Health Centre (PRHC) – Peterborough
- Rouge Valley Health System (RVHS) – Scarborough
- Southlake Regional Health Centre (SRHC) – Newmarket
- St. Mary's General Hospital (SMGH) – Kitchener
- St. Michael's Hospital (SMH) – Toronto
- Sunnybrook Health Sciences Centre (SHSC) – Toronto
- Thunder Bay Regional Health Sciences Centre (TBRHSC) – Thunder Bay
- Trillium Health Partners (THP) – Mississauga
- University Health Network (UHN) – Toronto
- University of Ottawa Heart Institute (UOHI) – Ottawa
- William Osler Health System (WOHS) – Brampton
- Windsor Regional Hospital (WRH) – Windsor

Niagara Health System is the newest PCI program in Ontario and started performing PCI in 2014. As the data presented in this report include PCI procedures from October 2011 to March 2016, the results of this newest PCI program are only included for the fiscal years of 2014/15 and 2015/16. Windsor Regional Hospital, Peterborough Regional Health Centre, Rouge Valley Health System, Thunder Bay Regional Health Sciences Centre, William Osler Health Centre, and Niagara Health System do not have on-site cardiac surgery capacity and are considered Stand-Alone PCI (SA-PCI) centres. CorHealth Ontario has developed specific criteria to support the planning and implementation of SA-PCI programs in Ontario.

Methods

Methods used were similar to those of previous reports¹ and additional details are provided in Appendix A.

General Comments

This report details most of the observed and risk-adjusted outcomes previously reported¹, including 30-day and 1-year all-cause mortality rates after both emergent and non-emergent PCI procedures. This report does not describe the post-procedure complications of renal failure and stroke, as was previously reported, due to concerns with the ability of administrative data to accurately attribute these events to the PCI procedure.

Statistical models to predict all-cause mortality rates were modeled using logistic regression. As in previous PCI reports prepared jointly by CorHealth Ontario and ICES, the risk models were derived using the most recent data available.

When reporting data, with all descriptive tables and outcomes tables, if the frequency was ≤ 5 or if the small cells can be re-calculated, the values were suppressed and reported in the table as " ≤ 5 " or given a range according to standards in place to comply with privacy legislation.

For Niagara Health Systems, data collection for PCI cases started in the 2014/15 fiscal year.

Refer to Appendix A for additional details on Model Development, Analysis, and Data Linkage.

Data Sources

In order to maximize the availability of complete data, information on demographic, cardiac and non-cardiac risk factors was obtained using both the CorHealth Ontario Registry and the administrative data sources including CIHI DAD, SDS, and RPDB.

The following risk factors were taken from the CorHealth Ontario Registry:

- Left Ventricular Ejection Fraction (LVEF)
- CCS Class
- Creatinine concentration
- Coronary anatomy
- Smoking history

- CAD type
- CVD
- COPD
- Diabetes
- Dialysis
- CHF
- Hypertension
- Hyperlipidemia
- Previous MI

Age, sex, and date of death were obtained from RPDB. In-hospital all-cause mortality status, discharge date, and Charlson score were derived from the CIHI DAD.

The following comorbidities were identified by combining the CIHI and CorHealth indicators and assuming a comorbid condition was present when it was indicated by either source:

- Previous PCI/CABG
- PVD
- Renal disease

For the analysis, missing information was interpreted as the absence of a risk factor and therefore a high level of missing data could make patients at some centres appear healthier than they actually were. It is therefore in each centre's best interest to minimize the amount of missing data submitted to the CorHealth Ontario Registry to ensure the accuracy of their patients are accurately reflected. Although left ventricular ejection fraction (LVEF) and serum creatinine are commonly used for risk adjustment, they were not used in this report due to an abundance of missing data for these two risk factors: LVEF data was missing in 60.2% of patient records and serum creatinine in 13.7% of patient records. The distribution of the missing data was not consistent across institutions therefore it was not possible to impute the missing data.

Results

Provincial results

The number of PCIs performed in Ontario over the timeframe studied for this report was:

Year	Volume
2011/13	32,981
2013/14	23,116
2014/15	23,590
2015/16	24,004
Total	103,691

*2011/13 includes procedures performed between October 1, 2011 and March 31, 2013; 2013/14, 2014/15, and 2015/16 represent a full fiscal year – April 1 to March 31.

The baseline characteristics of patients who received PCI in Ontario remained relatively constant from year to year over the five year study period. Baseline characteristics are presented in Tables 14a-c. The mean age of patients undergoing a PCI was 65.09 years (± 12.09) and the majority were male (72.1%). The majority of PCIs performed were non-emergent (76.9%), while 77.9% were same setting PCIs, indicating most patients received same day procedure services.

For this report, PCIs were subdivided into emergent and non-emergent PCIs. There were observed differences in some of the baseline characteristics for emergent PCI patients versus non-emergent PCI patients. Emergent patients had the following characteristics:

- Tended to be younger (62.46 versus 65.87 years)
- Had a lower prevalence of the following comorbidities:
 - Diabetes
 - Hypertension
 - Hyperlipidemia
 - Former smoker (but had a higher prevalence of current smoker)
 - COPD
 - MI
 - CHF
 - Cerebrovascular disease
 - PVD

- Renal disease
- Dialysis
- Previous PCI
- Previous CABG

PCI procedure characteristics also remained relatively constant from year to year over the five years of the study. Procedure characteristics are presented in detail in Tables 15a-c. There were differences observed in the utilization rates of the type of stent used (i.e., bare metal stents (BMS) or drug eluting stents (DES)). The rate of use of BMS decreased each year of the study, while the use of DES increased with each year of the study.

When looking at the procedure characteristics for emergent and non-emergent PCI procedures, some differences were observed. Emergent patients had the following characteristics:

- Were more likely to receive a BMS than a DES
- A greater proportion of cases with a length of stay ≥ 4 days
- A higher maximum lesion severity score
- Less likely to have a lesion in the left main coronary artery (LMCA), left circumflex artery (LCX), or a bypass graft

Overall, the outcomes for patients receiving a PCI during the five year period in Ontario were considered to be within ranges reported in other jurisdictions (See Discussion/Table 4). All-cause mortality rates (30-day and 1-year) were risk-adjusted and reported. All-cause mortality rates following PCI procedures were generally low overall, with cases of emergent PCI having the highest mortality rates. Table 1 summarizes the risk-adjusted all-cause mortality rates for the province of Ontario. A more detailed presentation of the data is illustrated in Tables 6-11.

Table 1. Summary of Ontario risk-adjusted all-cause mortality rates following PCI

Mortality Rate	Year	Total PCI	Emergent PCI	Non-Emergent PCI
30-Day Mortality	2011/2013	2.39 (2.23 - 2.55)	6.46 (5.92 - 6.99)	1.18 (1.05 - 1.31)
	2013/2014	2.33 (2.14 - 2.51)	6.33 (5.73 - 6.94)	1.14 (0.98 - 1.30)
	2014/2015	2.49 (2.30 - 2.68)	6.67 (6.06 - 7.28)	1.25 (1.09 - 1.41)
	2015/2016	2.68 (2.49 - 2.87)	6.63 (6.03 - 7.23)	1.47 (1.31 - 1.63)
1-Year Mortality	2011/2013	5.58 (5.35 - 5.81)	9.29 (8.67 - 9.90)	4.46 (4.22 - 4.69)
	2013/2014	5.47 (5.20 - 5.75)	9.33 (8.64 - 10.03)	4.32 (4.03 - 4.60)
	2014/2015	5.57 (5.30 - 5.84)	9.52 (8.82 - 10.23)	4.4 (4.12 - 4.68)
	2015/2016	5.95 (5.68 - 6.22)	9.77 (9.08 - 10.47)	4.79 (4.51 - 5.08)

See Tables 6-11 for a more detailed presentation of the data.

The following list summarizes the total observed, unadjusted rates for outcomes following all unique PCI procedures over the five year period (Tables 12 and 13):

- Repeat PCI at 30-days post-procedure: 4.7%
- Repeat PCI at 1-year post-procedure: 11.2%
- CABG 30-days post-procedure: 0.7%
- CABG 1-year post-procedure: 1.9%
- CABG or Repeat PCI at 30-days post-procedure: 5.4%
- CABG or Repeat PCI at 1-year post-procedure: 12.9%
- All cause readmission (among those surviving to discharge) at 30-days: 10.6%
- All cause readmission (among those surviving to discharge) at 1-year: 30.1%
- In-hospital red blood cell transfusion (among patients who did not have CABG index during hospitalization): 2.6%

Not surprisingly, outcomes were found to be worse for patients undergoing an emergent PCI than patients undergoing a non-emergent PCI (Table 12 and 13), with the exception that the 1 year repeat PCI, and 30-day all-cause readmission rates were relatively similar for both groups, and 1-year all-cause readmission rates were slightly worse for patients undergoing non-emergent PCI.

Comparison of Cardiac Centre Results

Centre-specific risk-adjusted all-cause mortality rates were relatively consistent for PCI between all cardiac centres in the province of Ontario. Table 2 illustrates the provincial range of 30-day and 1-year risk-adjusted all-cause mortality rates reported following Total PCIs, Emergent PCIs and Non-Emergent PCIs. A more detailed presentation of the data including observed and risk-adjusted mortality rates reported at each individual cardiac centre and for each individual year of the study can be found in Appendix B. Table 3 illustrates the variation of other PCI outcomes across the individual cardiac centers in Ontario. However, these rates are not risk-adjusted and potential differences in patient case-mix should be considered when making comparisons between these outcomes between cardiac centres.

Table 2. Range of Risk-Adjusted All-Cause Mortality Rates for PCI across Individual Cardiac Centres in Ontario in 2011/16

	Total PCI	Emergent PCI	Non-Emergent PCI
30-day mortality	1.66 – 3.44	4.59 – 9.65	0.77 – 1.99
1-year mortality	3.99 – 6.72	7.56 – 13.36	2.68 – 5.33

For a more detailed presentation of the data see Appendix B Tables 6-11

Table 3. Range of Post-Procedural Outcomes for PCI across Individual Cardiac Centres in Ontario in 2011/16

	Total PCI	Emergent PCI	Non-Emergent PCI
Readmissions			
30-day all-cause readmission	7.7 – 16.1	8.3 – 18.4	7.5 – 18.2
1-year all-cause readmission	23.5 – 36.3	21.5 – 37.1	24.6 – 36.5
Revascularization			
30-day repeat PCI	2.0 – 9.4	2.4 – 17.4	1.8 – 8.0
1-year repeat PCI	5.4 – 16.4	5.7 – 22.0	5.2 – 15.7
30-day repeat CABG	0.2 – 2.0	0.1 – 5.9	0.1 – 0.7
1-year repeat CABG	1.2 – 3.4	2.2 – 8.1	0.8 – 2.4
30-day repeat PCI or CABG	2.4 – 9.7	3.2 – 18.3	1.9 – 8.2
1-year repeat PCI or CABG	6.8 – 17.8	8.3 – 24.1	5.9 – 16.9
Complications			
Blood transfusions - Red Blood Cells*	1.4 – 3.6	2.8 – 7.7	0.8 – 2.9

For a more detailed presentation of the data see Appendix B Tables 12 and 13; *Blood transfusions excludes patients who received a CABG post-PCI; Due to suppression and ranges, some of the values listed in this table are not the true minimum and maximum values.

Discussion

This report represents the continued aim to provide a more detailed effort to track and report the case-mix and outcomes of patients undergoing PCI procedures in the province of Ontario. The main conclusions of this report are that Ontario has relatively low mortality rates following PCI procedures and that generally PCI centres in the province are performing well, with the majority of cardiac centres not found to be consistent statistical outliers.

The purpose of this PCI Outcomes Report is to support ongoing quality improvement activities at the provincial level as well as at the individual cardiac centres. These types of outcomes reports will continue to evolve in order to provide the most current and relevant data back to the cardiac service providers and other key stakeholders. Based on previous recommendations, this work continues to differentiate and risk-adjust PCI procedures by CAD type (i.e., STEMI, NSTEMI, unstable angina, etc.). This report also continues to report outcomes for emergent and non-emergent PCIs and identifies that Emergent PCI procedures were associated with less favorable results in most outcomes. Although this finding was not surprising given the clinical presentation of emergent patients, these results continue to highlight the need to focus future quality improvement initiatives on outcomes specific to emergent patient populations.

In order to more accurately represent the entire process of care, additional information beyond the reporting of all-cause mortality rates was provided. Outcomes such as, post-PCI revascularization, post-procedure complications, and all-cause readmission rates were reported. Results for these outcomes were generally very low with the exception of a relatively higher rate of 1-year all-cause readmission among those who survived to discharge. Future work will be required to identify the proportion of these readmissions that are attributable to a cardiac diagnosis and to determine if these readmissions are preventable.

Results in Context

The New York State Department of Health releases annual reports detailing outcomes following PCIs performed in New York State^{2,3}. Table 4 below illustrates a comparison between the 30-day mortality rates reported by the New York State Department of Health and those reported provincially within our study. Observed, unadjusted all-cause mortality rates reported by Ontario are higher than those reported in New York State. However, the risk-adjusted all-cause mortality rates reported in Ontario are relatively consistent with the

range of risk-adjusted mortality rates for the PCI centres reported by New York State. Please note that this comparison does have some limitations, including a difference in risk adjustment models used by New York State compared to those used in the current study. The time periods reported also differ, with New York State focused on PCIs performed from 2011-2013 and 2012-2014, while our report documents PCIs from 2011/13 to 2015/16. Despite these limitations, this comparison is useful to illustrate that 30-day mortality rates in Ontario are reasonable and comparable to those reported in other jurisdictions.

Table 4. Comparison of observed unadjusted and risk-adjusted 30-day mortality rates between Ontario and New York State following all PCIs

Jurisdiction	Time Period	Observed Unadjusted	Range of Risk-Adjusted Values for Individual PCI Centres
New York	2011-2013	1.04	0.00-3.26
	2012-2014	1.11	0.00-2.62
Jurisdiction	Time Period	Observed Unadjusted	Risk-Adjusted Provincial Average
Ontario	2011/13	2.36	2.39
	2013/14	2.41	2.33
	2014/15	2.5	2.49
	2015/16	2.63	2.68

Limitations

The non-mortality related outcomes presented in this report (readmissions, revascularization and blood transfusion rates) are provided as observed unadjusted rates, and are not risk-adjusted. As a result, these outcomes should be considered observational and are not intended to be used to directly compare the performance of individual cardiac centres against the provincial average, given that differences in rates may not be significant and there may be other factors that should be taken into account. Future work will focus on developing more robust risk-adjustment models to accommodate more detailed comparisons between hospitals and the provincial results.

A limitation of the study was the amount of missing data observed for selected clinical risk factors. The LVEF was missing in 60.2% of all cases and creatinine concentrations were missing in 13.7% of all cases. Due to the high amount of missing data, these variables had to be excluded from the risk-adjustments models. Renal dialysis was used as a surrogate for creatinine concentrations. Both LVEF and creatinine are considered to be important clinical factors and would most likely have a significant impact on risk adjustment for PCI patients. Hospitals with a higher degree of missing data in these variables may be under-representing the true risk profile/acuity of the patients they serve. However, the ROC

values for the risk-adjustment models used were still quite high, indicating that the risk-adjustment models used were appropriate. CorHealth will continue to work with its member hospitals to improve the quality and completeness of CorHealth data in the cardiac registry.

A number of other potentially important variables were not included in the risk-adjustment models due to unavailable data. Variables such as ethnicity, socioeconomic status, frailty, cardiac arrest and whether the patient was an inpatient vs. an outpatient, while most likely affect PCI outcomes, were excluded from the model as CorHealth did not have access to these data.

Finally due to relatively low all-cause mortality rates measured following PCI, it now takes potentially only a few extra deaths for a hospital to become a “statistical outlier”. Distinguishing between true outlier hospitals versus statistical outlier hospitals is becoming an increasing challenge. As such, for this report an analysis of statistical outlier hospitals was not presented as there wasn’t confidence that any statistical outliers identified were in fact clinical outliers.

Despite these limitations, PCI outcomes reports are still necessary and important. This province wide PCI outcomes report provides both cardiac care providers and the general public with important information regarding the positive outcomes of PCI in this province and aids in identification of areas of improvement.

Conclusions

In summary, this report provides an evaluation of the outcomes of PCI services in the province of Ontario and at individual PCI centres from 2011-2016. For the past 20 years, CorHealth Ontario has worked with participating hospitals and care providers to improve the quality, efficiency, access and equity in the delivery of adult cardiac services in Ontario. As part of CorHealth Ontario’s new corporate strategy, a key strategic direction established for the organization is to measure and report on quality and outcomes for cardiovascular care. As a first step towards this strategic direction, CorHealth plans on initiating a Quality Performance Measurement & Monitoring (QPMM) Cycle with all 20 advanced cardiac programs in Ontario to provide a platform for regular measuring and monitoring of quality metrics for cardiac care across the province. The QPMM initiative is being developed in conjunction with ongoing cardiac planning processes with all 20 advanced cardiac programs and their associated LHINs, with oversight from the MOHLTC. In addition to reporting on quality of care (safe, effective, timely, efficient, equitable, and patient-centered), through this process we will also share key information of patient outcomes.

Where feasible and/or appropriate quality of care will be linked with these outcomes. We look forward to continuing to work together with all stakeholders to ensure that all Ontarians have access to the highest possible quality of cardiac care.

References

1. Oakes Garth, JF Marquis, DT Ko, H Guo, and Kori Kingsbury (2012). Report on Adult Percutaneous Coronary Interventions (PCI) in Ontario, October 2008-September 2011. Cardiac Care Network of Ontario.
2. Percutaneous Coronary Interventions (PCI) in New York State 2011-2013. (2016). New York State Department of Health.
3. Percutaneous Coronary Interventions (PCI) in New York State 2012-2014. (2017). New York State Department of Health.

APPENDIX A

Additional Methods

Model Development and Analysis

The model development techniques used were similar to those in previous reports¹. These models were created to permit statistical adjustment for patient case-mix at each centre prior to the comparison of outcomes.

For the mortality models, the concordance (c) statistic was provided to indicate the discriminative ability of the risk-adjustment model, which is equal to the area under the receiver operating characteristic (ROC) curve. C-statistics for the mortality models are presented in Appendix C Table 7. The Hosmer-Lemeshow goodness-of-fit statistic was used to assess the calibration of the risk-adjusted model. Calibration refers to the agreement between observed outcomes and predictions.

Risk adjusted outcomes by cardiac centre were calculated as the observed outcome divided by the expected outcome for an institution multiplied by the observed outcome for the province for the five year period. The overall expected outcome by institution was calculated as the sum of the individual expected outcomes for each individual centre. The observed mortality at a hospital is the number of actual deaths at the specific hospital whereas the expected mortality for each hospital is the number of deaths expected (or predicted) with the actual patient case-mix at the hospital. Risk-adjusted outcomes can be interpreted as the outcome that would be expected if each centre's case mix were identical to the provincial average. An outlier indicates that a hospital had a significantly higher (or lower) mortality than the average Ontario PCI mortality, after adjusting for case-mix severity.

Individual risk adjustment models were developed for 30-day all-cause mortality and 1-year all-cause mortality for each of the overall, emergent and non-emergent cohorts. The final set of variables in each model for each indicator was based on clinical judgement and statistical selection however the following risk factors were included as candidate variables when developing the risk-adjustment models:

- Age
- Sex
- CCS class
- Coronary Artery Disease (CAD) type
- Diabetes
- Hypertension
- Hyperlipidemia
- Smoking
- Previous Myocardial Infarction (MI)
- Congestive Heart Failure (CHF)
- Cerebrovascular Disease (CVD)
- Peripheral Vascular Disease (PVD)
- Renal disease
- Dialysis
- Previous CABG/PCI
- Stent type
- Cardiogenic shock

NOTE: Although left ventricular ejection fraction (LVEF) and serum creatinine are commonly used for risk adjustment, they were not used in this report due to an abundance of missing data for these two risk factors: LVEF data was missing in 60.2% of patient records and serum creatinine in 13.7% of patient records. The distribution of the missing data was not consistent across institutions therefore it was not possible to impute the missing data. CorHealth will continue to work with hospitals to ensure the accuracy and completeness of data entered into the CorHealth Registry for each PCI patient.

Data linkage

Table 5 outlines the data linkage steps and the processes used to generate the final data sets. Data linkages between CorHealth Ontario records and CIHI discharge abstracts were performed on health card number, institution and procedure dates. Provincial health card numbers were converted to a unique ICES encrypted Health Card Number (IKN) and used for data linkage.

To create the final analysis data set, records found in the CorHealth Ontario database but not in the CIHI database were excluded. Non-Ontario residents or patients with an invalid health card number were also excluded. The outcome analysis data set was further restricted to those cases with a unique PCI procedure. For this definition a case had to (a) be identified as a PCI procedure in CorHealth Ontario data and (b) have a procedure code for PCI in the same hospital on the same date in its linked CIHI record. One year readmission rates were not calculated for fiscal year 2015/16 due to inadequate follow-up.

APPENDIX B

Table 5. Summary of data linkage and cohort creation

CorHealth Ontario data from Oct. 2011 – March 2016		
1. Use the following to identify PCI procedures in CCN		
• Offlisting Details	Catheterization Lab	PCI→Field is replaced with Scheduled PCI and SSPCI
• Offlisting Details	Catheterization Lab	Scheduled PCI
• Offlisting Details	Catheterization Lab	Staged PCI
• Offlisting Details	Catheterization Lab	Same Sitting PCI (SSPCI)
• Offlisting Details	Catheterization Lab	Primary PCI (pPCI)
• Offlisting Details	Catheterization Lab	Pharmaco-Invasive PCI (FPCI)
• Offlisting Details	Catheterization Lab	Rescue PCI (RPCI)
2. Identified 92,070 unique PCI procedures of 108,631 observations in CorHealth Ontario		108,631
3. Link CIHI DAD or SDS data to get the hospitalization for each procedure; remove aborted PCI procedures		104,021
4. Exclude patients <18 years of age at procedure time or who died before procedure date; exclude non-Ontario residents, and OHIP ineligible patients on PCI date		103,691
The final cohort for analysis		103,691

*Emergent PCI is defined as CCS/ACS class 'Emergent', or shock (or CIHI record of cardiogenic shock during PCI hospitalization)

**Non-Emergent PCI is defined as all PCI procedures not satisfying the Emergent criteria

Table 6a. Observed and risk-adjusted 30-day all-cause mortality rates for all PCI procedures between 2011/13 to 2015/16

Cardiac Centre	Volume	Observed Rate	Expected Rate	Adjusted Rate (95% CI)
HHS	10,965	2.38	2.8	2.09 (1.84 - 2.35)
HSN	6,393	1.94	1.57	3.04 (2.58 - 3.49)
KGH	4,271	3.21	2.65	2.98 (2.55 - 3.42)
LHSC	5,519	2.50	2.65	2.32 (1.95 - 2.70)
NHS	828	0.85	0.93	2.24 (0.53 - 3.95)
PRHC	3,578	2.21	2.57	2.12 (1.64 - 2.59)
RVHS	6,187	3.07	3.02	2.51 (2.18 - 2.83)
SHSC	7,787	2.93	2.63	2.75 (2.44 - 3.06)
SMGH	4,574	1.62	2.40	1.66 (1.22 - 2.10)
SMH	6,482	3.05	2.40	3.14 (2.78 - 3.49)
SRHC	9,454	2.53	2.55	2.45 (2.15 - 2.74)
TBRHS	2,920	1.95	1.79	2.69 (2.05 - 3.33)
THP	8,217	2.32	2.26	2.53 (2.2 - 2.87)
UHN	6,800	2.04	2.05	2.46 (2.09 - 2.84)
UOHI	10,333	2.25	3.01	1.84 (1.58 - 2.1)
WOHS	6,689	2.77	2.22	3.07 (2.7 - 3.44)
WRH	2,694	2.82	2.02	3.44 (2.83 - 4.05)
Ontario	103,691	2.46		

Note: blank cells indicate data was not available.

Table 6b. Observed and risk-adjusted 30-day all-cause mortality rates for all PCI procedures in 2011/13

Cardiac Centre	Volume	Observed Rate	Expected Rate	Adjusted Rate (95% CI)
HHS	3,810	2.41	2.65	2.15 (1.72 - 2.58)
HSN	2,227	1.84	1.55	2.81 (2.05 - 3.56)
KGH	1,355	4.21	2.98	3.33 (2.64 - 4.03)
LHSC	2,008	1.99	2.50	1.88 (1.27 - 2.49)
NHS	N/A	N/A	N/A	N/A
PRHC	907	0.88	1.97	1.05 (0.03 - 2.08)
RVHS	2,005	2.84	2.99	2.25 (1.70 - 2.79)
SHSC	2,478	2.82	2.61	2.56 (2.02 - 3.09)
SMGH	1,372	1.24	2.60	1.12 (0.39 - 1.85)
SMH	2,163	3.19	2.42	3.11 (2.53 - 3.70)
SRHC	2,867	2.69	2.46	2.58 (2.06 - 3.09)
TBRHS	1,008	1.59	1.7	2.2 (1.14 - 3.26)
THP	2,889	2.18	2.58	1.99 (1.48 - 2.5)
UHN	2,410	2.28	2.02	2.66 (2.05 - 3.27)
UOHI	3,318	2.38	2.92	1.93 (1.48 - 2.37)
WOHS	1,335	1.27	1.8	1.67 (0.78 - 2.56)
WRH	829	2.41	1.69	3.38 (2.21 - 4.55)
Ont.	32,981	2.36	2.43	2.39 (2.23 - 2.55)

Note: NHS did not perform PCIs over this time frame.

Table 6c. Observed and risk-adjusted 30-day all-cause mortality rates for all PCI procedures in 2013/14

Cardiac Centre	Volume	Observed Rate	Expected Rate	Adjusted Rate (95% CI)
HHS	2,584	1.93	2.77	1.68 (1.16 - 2.20)
HSN	1,317	2.20	1.43	3.71 (2.67 - 4.75)
KGH	875	3.31	3.03	2.63 (1.76 - 3.50)
LHSC	1,231	2.92	2.92	2.41 (1.68 - 3.13)
NHS	≤ 5			
PRHC	917	2.18	2.54	2.06 (1.15 - 2.98)
RVHS	1,399	2.86	3.23	2.13 (1.49 - 2.77)
SHSC	1,690	2.9	2.88	2.42 (1.81 - 3.03)
SMGH	936	1.71	2.32	1.77 (0.80 - 2.74)
SMH	1,437	2.37	2.28	2.49 (1.73 - 3.26)
SRHC	2,111	2.18	2.56	2.04 (1.45 - 2.64)
TBRHS	667	1.2	1.82	1.59 (0.29 - 2.89)
THP	1,672	2.51	2.24	2.7 (1.97 - 3.42)
UHN	1,537	2.08	2.19	2.29 (1.56 - 3.02)
UOHI	2,403	2	3.04	1.58 (1.06 - 2.1)
WOHS	1,789	3.47	2.43	3.43 (2.77 - 4.09)
WRH	546-550	2.73	1.8	3.66 (2.23 - 5.09)
Ont.	23,116	2.41	2.55	2.33 (2.14 - 2.51)

Note: NHS results were suppressed due to low sample size.

Table 6d. Observed and risk-adjusted 30-day all-cause mortality rates for all PCI procedures in 2014/15

Cardiac Centre	Volume	Observed Rate	Expected Rate	Adjusted Rate (95% CI)
HHS	2,268	2.73	3.01	2.27 (1.71 - 2.82)
HSN	1,396	1.65	1.64	2.51 (1.53 - 3.48)
KGH	1,030	2.72	2.18	3.12 (2.12 - 4.12)
LHSC	1,114	2.78	2.65	2.63 (1.78 - 3.48)
NHS	365-369	0.82	0.87	2.34 (0.00 - 5.03)
PRHC	865	2.43	2.67	2.27 (1.31 - 3.24)
RVHS	1,410	3.69	3.08	3.00 (2.31 - 3.69)
SHSC	1,804	2.66	2.63	2.53 (1.88 - 3.18)
SMGH	990	2.02	2.46	2.05 (1.11 - 2.99)
SMH	1,450	3.10	2.56	3.03 (2.29 - 3.77)
SRHC	2,204	2.59	2.52	2.57 (1.95 - 3.19)
TBRHS	618	2.27	1.82	3.12 (1.7 - 4.53)
THP	1,746	2.58	2.06	3.12 (2.36 - 3.89)
UHN	1,468	1.91	2.1	2.28 (1.46 - 3.09)
UOHI	2,325	2.11	3.17	1.66 (1.13 - 2.2)
WOHS	1,922	2.81	2.29	3.07 (2.38 - 3.76)
WRH	611-615	1.63	1.85	2.21 (0.84 - 3.58)
Ont.	23,590	2.50	2.48	2.49 (2.30 - 2.68)

Table 6e. Observed and risk-adjusted 30-day all-cause mortality rates for all PCI procedures in 2015/16

Cardiac Centre	Volume	Observed Rate	Expected Rate	Adjusted Rate (95% CI)
HHS	2,303	2.48	2.88	2.26 (1.67 - 2.85)
HSN	1,453	2.13	1.68	3.33 (2.35 - 4.31)
KGH	1,011	2.27	2.36	2.54 (1.54 - 3.54)
LHSC	1,166	2.66	2.63	2.66 (1.79 - 3.54)
NHS	458	0.87	0.97	2.36 (0.00 - 4.75)
PRHC	889	3.37	3.11	2.85 (1.94 - 3.76)
RVHS	1,373	2.99	2.80	2.80 (2.03 - 3.58)
SHSC	1,815	3.36	2.41	3.67 (2.95 - 4.38)
SMGH	1,276	1.65	2.19	1.97 (1.04 - 2.90)
SMH	1,432	3.49	2.33	3.94 (3.11 - 4.77)
SRHC	2,272	2.60	2.67	2.55 (1.94 - 3.17)
TBRHS	627	3.03	1.87	4.27 (2.82 - 5.72)
THP	1,910	2.15	1.96	2.87 (2.07 - 3.67)
UHN	1,385	1.73	1.88	2.42 (1.47 - 3.38)
UOHI	2,287	2.45	2.94	2.19 (1.6 - 2.78)
WOHS	1,643	3.16	2.25	3.7 (2.9 - 4.5)
WRH	704	4.4	2.74	4.23 (3.15 - 5.31)
Ont.	24,004	2.63	2.42	2.68 (2.49 - 2.87)

Table 7a. Observed and risk-adjusted 30-day all-cause mortality rates for emergent PCI procedures between 2011/13 to 2015/16

Cardiac Centre	Volume	Observed Rate	Expected Rate	Adjusted Rate (95% CI)
HHS	3,295	6.04	6.36	6.19 (5.39 - 6.99)
HSN	445	9.44	6.38	9.65 (7.51 - 11.79)
KGH	753	8.90	6.53	8.88 (7.18 - 10.58)
LHSC	1,372	5.98	6.35	6.14 (4.91 - 7.38)
NHS	N/A	N/A	N/A	N/A
PRHC	723	5.95	6.78	5.72 (4.06 - 7.37)
RVHS	2,133	6.28	6.60	6.20 (5.24 - 7.17)
SHSC	1,564	8.5	7.69	7.21 (6.18 - 8.24)
SMGH	1,634	3.61	5.12	4.59 (3.30 - 5.89)
SMH	1,067	10.31	7.81	8.61 (7.38 - 9.84)
SRHC	2,739	5.81	6.19	6.11 (5.22 - 7.00)
TBRHS	432	5.09	6.31	5.26 (2.99 - 7.53)
THP	2,233	5.91	5.59	6.9 (5.85 - 7.94)
UHN	735	9.66	8.54	7.37 (5.99 - 8.76)
UOHI	3,120	5.1	6.63	5.01 (4.19 - 5.83)
WOHS	1,231	9.1	6.94	8.55 (7.31 - 9.78)
WRH	436	8.03	7.03	7.44 (5.39 - 9.5)
Ont.	23,912	6.52		

Note: blank cells indicate data was not available; NHS did not perform Emergent PCIs over this time frame.

Table 7b. Observed and risk-adjusted 30-day all-cause mortality rates for emergent PCI procedures in 2011/13

Cardiac Centre	Observed Rate	Expected Rate	Adjusted Rate (95% CI)
HHS	6.34	6.06	6.66 (5.19 - 8.13)
HSN	9.68	6.15	10.03 (6.37 - 13.69)
KGH	11.46	6.75	10.81 (8.00 - 13.63)
LHSC	5.95	6.28	6.04 (3.89 - 8.18)
NHS	N/A	N/A	N/A
PRHC	2.67	6.44	2.64 (0.00 - 6.27)
RVHS	6.27	6.38	6.26 (4.60 - 7.93)
SHSC	7.18	6.95	6.59 (4.72 - 8.46)
SMGH	2.88	5.13	3.59 (1.34 - 5.83)
SMH	10.99	7.84	8.94 (6.88 - 10.99)
SRHC	5.92	6.31	5.98 (4.31 - 7.66)
TBRHS	2.38	7.69	1.97 (0 - 6.31)
THP	5.21	5.9	5.63 (4.08 - 7.18)
UHN	11.4	8.68	8.37 (6.2 - 10.54)
UOHI	5.16	6.39	5.15 (3.69 - 6.6)
WOHS	12.05	9.1	8.44 (4.38 - 12.49)
WRH	4.41	7.14	3.94 (0 - 9.07)
Ont.	6.37	6.44	6.46 (5.92 - 6.99)

Note: NHS did not perform Emergent PCIs over this time frame; Annual volumes were suppressed due to small cell counts for some programs

Table 7c. Observed and risk-adjusted 30-day all-cause mortality rates for emergent PCI procedures in 2013/14

Cardiac Centre	Observed Rate	Expected Rate	Adjusted Rate (95% CI)
HHS	5.41	6.64	5.32 (3.72 - 6.93)
HSN	11.11	5.57	13.03 (7.59 - 18.46)
KGH	10.10	5.67	11.64 (6.51 - 16.76)
LHSC	7.23	7.32	6.45 (4.19 - 8.71)
NHS	N/A	N/A	N/A
PRHC	5.91	7.05	5.48 (2.44 - 8.51)
RVHS	6.39	7.15	5.84 (3.92 - 7.75)
SHSC	8.12	8.28	6.41 (4.37 - 8.45)
SMGH	3.92	4.87	5.25 (2.26 - 8.24)
SMH	9.78	7.17	8.91 (6.07 - 11.75)
SRHC	5.21	6.40	5.32 (3.47 - 7.17)
TBRHS	4.59	5.61	5.34 (0.47 - 10.22)
THP	6.44	5.69	7.39 (5.04 - 9.74)
UHN	9.94	9.57	6.78 (4.1 - 9.47)
UOHI	4.78	6.58	4.74 (3 - 6.48)
WOHS	9.61	7.07	8.88 (6.77 - 10.99)
WRH	9.09	6.97	8.52 (3.05 - 14)
Ont.	6.53	6.73	6.33 (5.73 - 6.94)

Note: NHS did not perform Emergent PCIs over this time frame; Annual volumes were suppressed due to small cell counts for some programs.

Table 7d. Observed and risk-adjusted 30-day all-cause mortality rates for emergent PCI procedures in 2014/15

Cardiac Centre	Observed Rate	Expected Rate	Adjusted Rate (95% CI)
HHS	6.73	6.20	7.17 (5.44 - 8.89)
HSN	6.52	6.82	6.32 (1.54 - 11.10)
KGH	6.19	6.24	6.56 (3.28 - 9.84)
LHSC	5.59	5.86	6.31 (3.37 - 9.26)
NHS	N/A	N/A	N/A
PRHC	6.22	6.03	6.82 (3.30 - 10.35)
RVHS	7.28	6.67	7.22 (5.16 - 9.27)
SHSC	8.86	7.61	7.7 (5.55 - 9.85)
SMGH	4.76	5.28	5.96 (3.20 - 8.72)
SMH	9.88	7.84	8.34 (5.81 - 10.86)
SRHC	5.89	6.05	6.43 (4.57 - 8.29)
TBRHS	3.23	5.45	3.92 (0 - 9.41)
THP	6.8	5.78	7.77 (5.4 - 10.15)
UHN	8.05	8.61	6.19 (2.99 - 9.38)
UOHI	5.19	6.87	4.99 (3.31 - 6.67)
WOHS	8.74	6.82	8.47 (6.22 - 10.72)
WRH	4.63	5.54	5.52 (0.78 - 10.26)
Ont.	6.61	6.46	6.67 (6.06 - 7.28)

Note: NHS did not perform Emergent PCIs over this time frame; Annual volumes were suppressed due to small cell counts for some programs.

Table 7e. Observed and risk-adjusted 30-day all-cause mortality rates for emergent PCI procedures in 2015/16

Cardiac Centre	Observed Rate	Expected Rate	Adjusted Rate (95% CI)
HHS	5.59	6.65	5.56 (3.93 - 7.19)
HSN	10.26	6.89	9.83 (5.96 - 13.70)
KGH	8.00	7.08	7.46 (4.13 - 10.8)
LHSC	5.05	5.85	5.70 (2.95 - 8.44)
NHS	N/A	N/A	N/A
PRHC	8.47	7.59	7.37 (4.19 - 10.55)
RVHS	5.16	6.30	5.41 (3.25 - 7.58)
SHSC	10.89	8.41	8.55 (6.32 - 10.78)
SMGH	3.29	5.19	4.19 (1.64 - 6.75)
SMH	10.22	8.37	8.07 (5.43 - 10.70)
SRHC	6.08	6.05	6.65 (4.91 - 8.39)
TBRHS	8.22	6.59	8.23 (4.33 - 12.14)
THP	6.07	4.66	8.59 (5.96 - 11.22)
UHN	7.84	7.15	7.24 (3.69 - 10.8)
UOHI	5.23	6.76	5.11 (3.35 - 6.87)
WOHS	8.22	6.42	8.45 (6.02 - 10.88)
WRH	10.82	7.84	9.12 (6.2 - 12.03)
Ont.	6.60	6.49	6.63 (6.03 - 7.23)

Note: NHS did not perform Emergent PCIs over this time frame; Annual volumes were suppressed due to small cell counts for some programs.

Table 8a. Observed and risk-adjusted 30-day all-cause mortality rates for non-emergent PCI procedures between 2011/13 to 2015/16

Cardiac Centre	Volume	Observed Rate	Expected Rate	Adjusted Rate (95% CI)
HHS	7,670	0.81	1.24	0.82 (0.57 - 1.06)
HSN	5,948	1.38	1.29	1.34 (1.07 - 1.61)
KGH	3,518	1.99	1.93	1.29 (1.00 - 1.57)
LHSC	4,147	1.35	1.48	1.14 (0.84 - 1.44)
NHS	828	0.85	0.90	1.17 (0.29 - 2.05)
PRHC	2,855	1.26	1.47	1.07 (0.71 - 1.44)
RVHS	4,054	1.38	1.10	1.57 (1.22 - 1.93)
SHSC	6,223	1.53	1.25	1.53 (1.26 - 1.8)
SMGH	2,940	0.51	0.82	0.77 (0.28 - 1.26)
SMH	5,415	1.63	1.30	1.56 (1.28 - 1.84)
SRHC	6,715	1.19	1.12	1.33 (1.05 - 1.60)
TBRHS	2,488	1.41	1.23	1.42 (0.99 - 1.86)
THP	5,984	0.99	1.01	1.22 (0.91 - 1.52)
UHN	6,065	1.12	1.18	1.19 (0.91 - 1.47)
UOHI	7,213	1.01	1.37	0.92 (0.69 - 1.16)
WOHS	5,458	1.34	1.23	1.36 (1.07 - 1.65)
WRH	2,258	1.82	1.14	1.99 (1.52 - 2.46)
Ont.	79,779	1.25		

Note: blank cells indicate data was not available.

Table 8b. Observed and risk-adjusted 30-day all-cause mortality rates for non-emergent PCI procedures in 2011/13

Cardiac Centre	Observed Rate	Expected Rate	Adjusted Rate (95% CI)
HHS	1.00	1.32	0.92 (0.54 - 1.30)
HSN	1.25	1.25	1.22 (0.77 - 1.68)
KGH	2.54	2.32	1.33 (0.88 - 1.79)
LHSC	0.89	1.46	0.74 (0.26 - 1.22)
NHS	N/A	N/A	N/A
PRHC	0.53	1.06	0.61 (0.00 - 1.43)
RVHS	1.00	1.05	1.16 (0.54 - 1.79)
SHSC	1.6	1.26	1.55 (1.09 - 2.02)
SMGH	0.23	0.90	0.32 (0.00 - 1.16)
SMH	1.61	1.28	1.54 (1.06 - 2.01)
SRHC	1.59	1.30	1.49 (1.05 - 1.92)
TBRHS	1.52	1.4	1.32 (0.67 - 1.96)
THP	0.72	1.02	0.86 (0.34 - 1.38)
UHN	1.12	1.15	1.19 (0.73 - 1.65)
UOHI	1.2	1.35	1.09 (0.67 - 1.5)
WOHS	0.56	1.34	0.51 (0 - 1.07)
WRH	2.23	1.29	2.1 (1.37 - 2.84)
Ont.	1.22	1.29	1.18 (1.05 - 1.31)

Note: NHS did not perform PCIs over this time frame; Annual volumes were suppressed due to small cell counts for some programs.

Table 8c. Observed and risk-adjusted 30-day all-cause mortality rates for non-emergent PCI procedures in 2013/14

Cardiac Centre	Observed Rate	Expected Rate	Adjusted Rate (95% CI)
HHS	0.49	1.16	0.49 (0.01 - 0.97)
HSN	1.62	1.28	1.47 (0.91 - 2.03)
KGH	2.45	2.51	1.13 (0.64 - 1.62)
LHSC	1.33	1.44	1.08 (0.47 - 1.68)
NHS	N/A	N/A	N/A
PRHC	1.12	1.21	1.07 (0.32 - 1.83)
RVHS	0.98	1.16	0.99 (0.31 - 1.66)
SHSC	1.5	1.35	1.29 (0.78 - 1.8)
SMGH	0.50	0.80	0.72 (0.00 - 1.74)
SMH	0.99	1.33	0.87 (0.32 - 1.41)
SRHC	0.99	1.08	1.06 (0.51 - 1.61)
TBRHS	0.54	1.17	0.53 (0 - 1.4)
THP	1.13	1	1.31 (0.69 - 1.93)
UHN	1.16	1.22	1.11 (0.58 - 1.64)
UOHI	0.83	1.43	0.67 (0.23-1.12)
WOHS	1.66	1.19	1.62 (1.09 - 2.16)
WRH	1.86	1.17	1.85 (0.92 - 2.79)
Ont.	1.16	1.27	1.14 (0.98 - 1.30)

Note: NHS did not perform PCIs over this time frame; Annual volumes were suppressed due to small cell counts for some programs.

Table 8d. Observed and risk-adjusted 30-day all-cause mortality rates for non-emergent PCI procedures in 2014/15

Cardiac Centre	Observed Rate	Expected Rate	Adjusted Rate (95% CI)
HHS	0.73	1.30	0.69 (0.16 - 1.22)
HSN	1.30	1.37	1.18 (0.62 - 1.73)
KGH	1.74	1.21	1.78 (1.02 - 2.54)
LHSC	1.81	1.56	1.44 (0.79 - 2.08)
NHS	0.82	0.86	1.17 (0.00 - 2.50)
PRHC	1.34	1.61	1.03 (0.32 - 1.74)
RVHS	1.83	1.19	1.90 (1.20 - 2.60)
SHSC	1.11	1.28	1.07 (0.54 - 1.61)
SMGH	0.47	0.82	0.71 (0.00 - 1.75)
SMH	1.67	1.44	1.44 (0.88 - 1.99)
SRHC	1.17	0.99	1.46 (0.85 - 2.07)
TBRHS	2.1	1.22	2.12 (1.18 - 3.05)
THP	1.27	0.96	1.64 (0.98 - 2.3)
UHN	1.21	1.26	1.19 (0.63 - 1.75)
UOHI	0.69	1.42	0.6 (0.12 - 1.08)
WOHS	1.3	1.18	1.37 (0.82 - 1.92)
WRH	0.99	1.02	1.2 (0.15 - 2.24)
Ont.	1.24	1.24	1.25 (1.09 - 1.41)

Note: Annual volumes were suppressed due to small cell counts for some programs.

Table 8e. Observed and risk-adjusted 30-day all-cause mortality rates for non-emergent PCI procedures in 2015/16

Cardiac Centre	Observed Rate	Expected Rate	Adjusted Rate (95% CI)
HHS	0.91	1.11	1.14 (0.50 - 1.79)
HSN	1.42	1.28	1.54 (0.91 - 2.18)
KGH	1.08	1.57	0.95 (0.22 - 1.68)
LHSC	1.77	1.48	1.66 (0.92 - 2.39)
NHS	0.87	0.92	1.31 (0.01 - 2.62)
PRHC	2.11	2.01	1.46 (0.77 - 2.14)
RVHS	1.87	1.02	2.56 (1.69 - 3.43)
SHSC	1.85	1.11	2.32 (1.68 - 2.96)
SMGH	0.82	0.77	1.48 (0.43 - 2.53)
SMH	2.24	1.16	2.68 (1.97 - 3.38)
SRHC	0.86	1.03	1.15 (0.48 - 1.83)
TBRHS	1.46	0.98	2.05 (0.84 - 3.27)
THP	0.96	1.05	1.26 (0.59 - 1.94)
UHN	0.97	1.08	1.25 (0.53 - 1.97)
UOHI	1.25	1.29	1.34 (0.76 - 1.92)
WOHS	1.78	1.23	2.01 (1.35 - 2.67)
WRH	1.96	1	2.73 (1.56 - 3.91)
Ont.	1.39	1.18	1.47 (1.31 - 1.63)

Note: Annual volumes were suppressed due to small cell counts for some programs.

Table 9a. Observed and risk-adjusted 1-year all-cause mortality rates for all PCI procedures between 2011/13 to 2015/16

Cardiac Centre	Volume	Observed Rate	Expected Rate	Adjusted Rate (95% CI)
HHS	10,965	5.50	5.98	5.18 (4.79 - 5.57)
HSN	6,393	4.99	4.89	5.76 (5.20 - 6.32)
KGH	4,271	6.58	5.83	6.36 (5.72 - 7.00)
LHSC	5,519	5.53	5.85	5.33 (4.78 - 5.88)
NHS	828	3.38	3.72	5.13 (3.27 - 6.99)
PRHC	3,578	5.95	6.15	5.46 (4.78 - 6.13)
RVHS	6,187	6.04	5.77	5.91 (5.38 - 6.44)
SHSC	7,787	7.02	6.31	6.27 (5.84 - 6.71)
SMGH	4,574	3.43	4.85	3.99 (3.30 - 4.68)
SMH	6,482	7.05	5.98	6.65 (6.15 - 7.14)
SRHC	9,454	5.31	5.46	5.49 (5.05 - 5.93)
TBRHS	2,920	5.68	5.08	6.31 (5.47 - 7.14)
THP	8,217	4.55	4.89	5.24 (4.74 - 5.74)
UHN	6,800	6.34	5.76	6.2 (5.71 - 6.69)
UOHI	10,333	5.3	6.27	4.77 (4.38 - 5.17)
WOHS	6,689	5.59	5.26	5.99 (5.47 - 6.52)
WRH	2,694	6.2	5.2	6.72 (5.89 - 7.56)
Ont.	10,3691	5.64		

Note: blank cells indicate data was not available.

Table 9b. Observed and risk-adjusted 1-year all-cause mortality rates for all PCI procedures in 2011/13

Cardiac Centre	Observed Rate	Expected Rate	Adjusted Rate (95% CI)
HHS	5.46	5.69	5.30 (4.64 - 5.97)
HSN	4.80	4.82	5.50 (4.56 - 6.45)
KGH	7.90	6.24	6.99 (5.91 - 8.06)
LHSC	5.58	5.81	5.30 (4.41 - 6.20)
NHS	N/A	N/A	N/A
PRHC	4.52	5.18	4.82 (3.38 - 6.27)
RVHS	5.19	5.63	5.09 (4.17 - 6.01)
SHSC	6.82	6.3	5.98 (5.21 - 6.75)
SMGH	2.70	4.84	3.08 (1.85 - 4.31)
SMH	7.44	5.99	6.86 (6.03 - 7.69)
SRHC	5.09	5.28	5.33 (4.53 - 6.13)
TBRHS	6.05	5.22	6.41 (5.05 - 7.76)
THP	4.67	5.17	5 (4.19 - 5.8)
UHN	6.22	5.63	6.11 (5.3 - 6.93)
UOHI	5.49	6.16	4.92 (4.23 - 5.61)
WOHS	4.04	5.02	4.45 (3.27 - 5.63)
WRH	5.79	5.27	6.07 (4.63 - 7.51)
Ont.	5.52	5.58	5.58 (5.35 - 5.81)

Note: NHS did not perform PCIs over this time frame; Annual volumes were suppressed due to small cell counts for some programs.

Table 9c. Observed and risk-adjusted 1-year all-cause mortality rates for all PCI procedures in 2013/14

Cardiac Centre	Observed Rate	Expected Rate	Adjusted Rate (95% CI)
HHS	4.57	5.73	4.41 (3.60 - 5.22)
HSN	4.78	4.56	5.80 (4.53 - 7.08)
KGH	6.63	6.60	5.56 (4.26 - 6.85)
LHSC	5.85	6.15	5.26 (4.15 - 6.37)
NHS	N/A	N/A	N/A
PRHC	6.11	5.96	5.67 (4.33 - 7.00)
RVHS	6.15	6.10	5.57 (4.52 - 6.62)
SHSC	8.28	6.81	6.73 (5.85 - 7.6)
SMGH	3.10	4.71	3.63 (2.11 - 5.16)
SMH	6.40	5.71	6.20 (5.14 - 7.26)
SRHC	5.07	5.64	4.97 (4.08 - 5.86)
TBRHS	3.6	4.93	4.04 (2.29 - 5.79)
THP	4.61	4.81	5.29 (4.21 - 6.38)
UHN	5.79	5.93	5.4 (4.42 - 6.39)
UOHI	5.04	6.28	4.43 (3.63 - 5.23)
WOHS	6.2	5.16	6.64 (5.63 - 7.66)
WRH	6.38	4.83	7.3 (5.36 - 9.23)
Ont.	5.53	5.69	5.47 (5.20 - 5.75)

Note: NHS did not perform Emergent PCIs over this time frame; Annual volumes were suppressed due to small cell counts for some programs.

Table 9d. Observed and risk-adjusted 1-year all-cause mortality rates for all PCI procedures in 2014/15

Cardiac Centre	Observed Rate	Expected Rate	Adjusted Rate (95% CI)
HHS	6.26	6.48	5.44 (4.63 - 6.26)
HSN	5.23	5.16	5.71 (4.54 - 6.87)
KGH	5.92	4.97	6.72 (5.27 - 8.16)
LHSC	4.49	5.62	4.50 (3.23 - 5.76)
NHS	2.45	3.65	3.78 (0.99 - 6.56)
PRHC	5.66	6.41	4.98 (3.65 - 6.32)
RVHS	7.09	6.00	6.66 (5.58 - 7.74)
SHSC	6.65	6.39	5.87 (4.97 - 6.77)
SMGH	3.43	4.94	3.92 (2.45 - 5.38)
SMH	6.48	6.38	5.73 (4.71 - 6.75)
SRHC	5.58	5.32	5.91 (4.98 - 6.84)
TBRHS	5.66	5.16	6.18 (4.37 - 7.98)
THP	4.58	4.67	5.53 (4.42 - 6.64)
UHN	6.95	6.01	6.51 (5.48 - 7.54)
UOHI	5.03	6.51	4.35 (3.55 - 5.16)
WOHS	5.67	5.29	6.04 (5.07 - 7.02)
WRH	5.07	4.98	5.74 (3.93 - 7.54)
Ont.	5.63	5.70	5.57 (5.30 - 5.84)

Note: Annual volumes were suppressed due to small cell counts for some programs.

Table 9e. Observed and risk-adjusted 1-year all-cause mortality rates for all PCI procedures in 2015/16

Cardiac Centre	Observed Rate	Expected Rate	Adjusted Rate (95% CI)
HHS	5.86	6.26	5.53 (4.66 - 6.40)
HSN	5.23	5.01	6.16 (4.95 - 7.37)
KGH	5.44	5.50	5.83 (4.42 - 7.25)
LHSC	6.09	5.80	6.20 (4.92 - 7.47)
NHS	4.15	3.76	6.51 (3.88 - 9.14)
PRHC	7.54	7.10	6.27 (4.98 - 7.56)
RVHS	6.12	5.38	6.71 (5.48 - 7.94)
SHSC	6.5	5.79	6.62 (5.63 - 7.62)
SMGH	4.47	4.89	5.40 (4.04 - 6.76)
SMH	7.68	5.82	7.79 (6.66 - 8.92)
SRHC	5.55	5.64	5.81 (4.88 - 6.74)
TBRHS	7.34	4.95	8.74 (6.81 - 10.68)
THP	4.29	4.76	5.32 (4.21 - 6.43)
UHN	6.5	5.56	6.9 (5.72 - 8.08)
UOHI	5.6	6.15	5.38 (4.49 - 6.26)
WOHS	6.09	5.53	6.5 (5.41 - 7.59)
WRH	7.53	5.6	7.94 (6.29 - 9.58)
Ont.	5.90	5.60	5.95 (5.68 - 6.22)

Note: Annual volumes were suppressed due to small cell counts for some programs.

Table 10a. Observed and risk-adjusted 1-year all-cause mortality rates for emergent PCI procedures between 2011/13 to 2015/16

Cardiac Centre	Volume	Observed Rate	Expected Rate	Adjusted Rate (95% CI)
HHS	3,295	8.68	9.30	8.84 (7.92 - 9.76)
HSN	445	13.03	9.23	13.36 (10.91 - 15.82)
KGH	753	11.42	9.14	11.83 (9.82 - 13.83)
LHSC	1,372	8.89	9.43	8.92 (7.52 - 10.33)
NHS	N/A	N/A	N/A	N/A
PRHC	723	10.37	10.37	9.47 (7.63 - 11.31)
RVHS	2,133	9.75	9.41	9.81 (8.69 - 10.93)
SHSC	1,564	11.89	11.35	9.92 (8.76 - 11.08)
SMGH	1,634	6.12	7.67	7.56 (6.07 - 9.04)
SMH	1,067	14.25	11.42	11.81 (10.42 - 13.20)
SRHC	2,739	8.69	8.99	9.15 (8.13 - 10.18)
TBRHS	432	9.03	9.18	9.31 (6.69 - 11.93)
THP	2,233	8.06	8.06	9.47 (8.25 - 10.69)
UHN	735	13.2	12.88	9.7 (8.18 - 11.22)
UOHI	3,120	7.88	9.39	7.95 (6.99 - 8.91)
WOHS	1,231	11.54	9.87	11.06 (9.63 - 12.49)
WRH	436	11.24	9.9	10.75 (8.35 - 13.14)
Ont.	23,912	9.47		

Note: blank cells indicate data was not available; NHS did not perform Emergent PCIs over this time frame.

Table 10b. Observed and risk-adjusted 1-year all-cause mortality rates for emergent PCI procedures in 2011/13

Cardiac Centre	Observed Rate	Expected Rate	Adjusted Rate (95% CI)
HHS	8.42	8.69	8.89 (7.19 - 10.59)
HSN	14.19	8.97	14.53 (10.34 - 18.72)
KGH	15.02	9.86	13.99 (10.82 - 17.15)
LHSC	8.70	9.53	8.38 (5.99 - 10.77)
NHS	N/A	N/A	N/A
PRHC	6.00	9.99	5.51 (1.56 - 9.47)
RVHS	8.97	9.26	8.90 (7.00 - 10.79)
SHSC	10.68	10.37	9.45 (7.37 - 11.53)
SMGH	5.00	7.49	6.13 (3.54 - 8.72)
SMH	15.11	11.65	11.91 (9.65 - 14.18)
SRHC	9.09	9.22	9.05 (7.15 - 10.96)
TBRHS	8.33	11.31	6.77 (1.9 - 11.64)
THP	7.55	8.45	8.2 (6.41 - 10)
UHN	14.34	12.9	10.21 (7.81 - 12.6)
UOHI	7.69	8.97	7.87 (6.17 - 9.57)
WOHS	13.25	12.89	9.44 (4.75 - 14.13)
WRH	8.82	9.93	8.16 (2.21 - 14.12)
Ont.	9.18	9.36	9.29 (8.67 - 9.90)

Note: NHS did not perform Emergent PCIs over this time frame; Annual volumes were suppressed due to small cell counts for some programs.

Table 10c. Observed and risk-adjusted 1-year all-cause mortality rates for emergent PCI procedures in 2013/14

Cardiac Centre	Observed Rate	Expected Rate	Adjusted Rate (95% CI)
HHS	8.05	9.57	8.07 (6.18 - 9.96)
HSN	11.11	7.95	13.42 (7.02 - 19.82)
KGH	12.12	7.94	14.65 (8.45 - 20.84)
LHSC	9.64	10.70	8.65 (6.03 - 11.27)
NHS	N/A	N/A	N/A
PRHC	11.33	10.65	10.21 (6.74 - 13.67)
RVHS	10.52	10.06	10.03 (7.75 - 12.31)
SHSC	12.61	12.38	9.77 (7.48 - 12.07)
SMGH	5.72	7.30	7.53 (4.05 - 11.00)
SMH	13.33	10.45	12.24 (8.94 - 15.54)
SRHC	8.91	9.31	9.18 (7.05 - 11.31)
TBRHS	5.5	7.99	6.61 (0.86 - 12.36)
THP	8.74	8.23	10.19 (7.45 - 12.92)
UHN	13.04	14.23	8.8 (5.88 - 11.72)
UOHI	8.01	9.31	8.25 (6.19 - 10.31)
WOHS	12.32	10.08	11.72 (9.26 - 14.18)
WRH	10.61	10.08	10.09 (3.75 - 16.44)
Ont.	9.60	9.73	9.33 (8.64 - 10.03)

Note: NHS did not perform Emergent PCIs over this time frame; Annual volumes were suppressed due to small cell counts for some programs.

Table 10d. Observed and risk-adjusted 1-year all-cause mortality rates for emergent PCI procedures in 2014/15

Cardiac Centre	Observed Rate	Expected Rate	Adjusted Rate (95% CI)
HHS	9.50	9.27	9.73 (7.79 - 11.67)
HSN	8.70	10.03	8.23 (2.90 - 13.56)
KGH	7.96	8.22	9.20 (5.17 - 13.22)
LHSC	8.74	8.71	9.53 (6.18 - 12.88)
NHS	N/A	N/A	N/A
PRHC	11.40	9.68	11.18 (7.43 - 14.93)
RVHS	10.19	9.47	10.21 (7.83 - 12.58)
SHSC	12.19	11.3	10.24 (7.88 - 12.59)
SMGH	6.44	7.98	7.66 (4.54 - 10.79)
SMH	12.65	11.32	10.61 (7.78 - 13.43)
SRHC	8.16	8.78	8.82 (6.69 - 10.94)
TBRHS	8.6	7.82	10.44 (4.09 - 16.79)
THP	8.74	8.25	10.06 (7.3 - 12.81)
UHN	13.42	13.21	9.64 (6.16 - 13.13)
UOHI	8.47	10.01	8.03 (6.14 - 9.92)
WOHS	11.31	9.65	11.12 (8.54 - 13.71)
WRH	9.26	8.21	10.71 (5.44 - 15.98)
Ont.	9.49	9.44	9.52 (8.82 - 10.23)

Note: NHS did not perform Emergent PCIs over this time frame; Annual volumes were suppressed due to small cell counts for some programs.

Table 10e. Observed and risk-adjusted 1-year all-cause mortality rates for emergent PCI procedures in 2015/16

Cardiac Centre	Observed Rate	Expected Rate	Adjusted Rate (95% CI)
HHS	8.84	9.85	8.70 (6.84 - 10.56)
HSN	16.24	9.84	15.98 (11.53 - 20.44)
KGH	10.29	9.97	9.99 (6.03 - 13.95)
LHSC	8.52	8.64	9.55 (6.35 - 12.75)
NHS	N/A	N/A	N/A
PRHC	11.86	11.12	10.34 (6.68 - 14.00)
RVHS	9.68	8.88	10.56 (8.00 - 13.12)
SHSC	12.87	11.95	10.43 (7.85 - 13.01)
SMGH	7.53	7.92	9.21 (6.31 - 12.12)
SMH	15.56	12.13	12.43 (9.40 - 15.45)
SRHC	8.60	8.69	9.59 (7.54 - 11.64)
TBRHS	12.33	9.71	12.31 (7.78 - 16.84)
THP	7.87	6.89	11.07 (7.98 - 14.16)
UHN	11.11	11.11	9.69 (5.8 - 13.59)
UOHI	7.41	9.42	7.62 (5.53 - 9.72)
WOHS	10.48	9.17	11.07 (8.22 - 13.93)
WRH	13.4	10.77	12.05 (8.57 - 15.53)
Ont.	9.69	9.39	9.77 (9.08 - 10.47)

Note: NHS did not perform Emergent PCIs over this time frame; Annual volumes were suppressed due to small cell counts for some programs.

Table 11a. Observed and risk-adjusted 1-year all-cause mortality rates for non-emergent PCI procedures between 2011/13 to 2015/16

Cardiac Centre	Volume	Observed Rate	Expected Rate	Adjusted Rate (95% CI)
HHS	7,670	4.13	4.52	4.11 (3.67 - 4.54)
HSN	5,948	4.39	4.58	4.30 (3.81 - 4.78)
KGH	3,518	5.54	5.22	4.77 (4.17 - 5.37)
LHSC	4,147	4.41	4.72	4.19 (3.62 - 4.77)
NHS	828	3.38	3.74	4.06 (2.58 - 5.55)
PRHC	2,855	4.83	5.04	4.30 (3.63 - 4.98)
RVHS	4,054	4.09	3.86	4.76 (4.11 - 5.41)
SHSC	6,223	5.8	4.93	5.28 (4.83 - 5.74)
SMGH	2,940	1.94	3.25	2.68 (1.82 - 3.53)
SMH	5,415	5.63	4.91	5.15 (4.66 - 5.63)
SRHC	6,715	3.93	4.08	4.32 (3.83 - 4.81)
TBRHS	2,488	5.1	4.61	4.97 (4.21 - 5.74)
THP	5,984	3.24	3.69	3.95 (3.4 - 4.5)
UHN	6,065	5.51	4.84	5.11 (4.65 - 5.57)
UOHI	7,213	4.19	4.84	3.88 (3.45 - 4.32)
WOHS	5,458	4.25	4.25	4.49 (3.96 - 5.01)
WRH	2,258	5.23	4.4	5.33 (4.53 - 6.13)
Ont.	79,779	4.49		

Note: blank cells indicate data was not available; NHS did not perform Emergent PCIs over this time frame.

Table 11b. Observed and risk-adjusted 1-year all-cause mortality rates for non-emergent PCI procedures in 2011/13

Cardiac Centre	Observed Rate	Expected Rate	Adjusted Rate (95% CI)
HHS	4.39	4.52	4.36 (3.64 - 5.08)
HSN	4.10	4.50	4.09 (3.26 - 4.92)
KGH	6.26	5.55	5.06 (4.02 - 6.10)
LHSC	4.71	4.80	4.40 (3.47 - 5.33)
NHS	N/A	N/A	N/A
PRHC	4.23	4.20	4.51 (3.05 - 5.98)
RVHS	3.15	3.67	3.84 (2.65 - 5.04)
SHSC	5.74	4.99	5.16 (4.35 - 5.97)
SMGH	1.29	3.18	1.82 (0.23 - 3.41)
SMH	5.89	4.86	5.44 (4.60 - 6.28)
SRHC	3.74	4.10	4.09 (3.22 - 4.96)
TBRHS	5.84	4.98	5.26 (4.07 - 6.45)
THP	3.29	3.65	4.04 (3.08 - 5)
UHN	5.19	4.7	4.96 (4.17 - 5.75)
UOHI	4.55	4.87	4.19 (3.42 - 4.95)
WOHS	3.43	4.49	3.43 (2.38 - 4.49)
WRH	5.52	4.99	4.96 (3.71 - 6.22)
Ont.	4.49	4.52	4.46 (4.22 - 4.69)

Note: NHS did not perform PCIs over this time frame; Annual volumes were suppressed due to small cell counts for some programs.

Table 11c. Observed and risk-adjusted 1-year all-cause mortality rates for non-emergent PCI procedures in 2013/14

Cardiac Centre	Observed Rate	Expected Rate	Adjusted Rate (95% CI)
HHS	3.12	4.17	3.22 (2.32 - 4.12)
HSN	4.37	4.41	4.26 (3.21 - 5.31)
KGH	5.93	6.27	4.06 (2.96 - 5.17)
LHSC	4.45	4.65	4.12 (2.92 - 5.32)
NHS	N/A	N/A	N/A
PRHC	4.62	4.62	4.30 (2.93 - 5.67)
RVHS	3.83	4.10	4.02 (2.76 - 5.27)
SHSC	7.13	5.23	5.86 (4.96 - 6.77)
SMGH	1.66	3.16	2.25 (0.41 - 4.10)
SMH	5.12	4.81	4.57 (3.58 - 5.56)
SRHC	3.56	4.20	3.64 (2.67 - 4.62)
TBRHS	3.23	4.36	3.18 (1.59 - 4.77)
THP	3.15	3.6	3.77 (2.61 - 4.92)
UHN	4.94	4.82	4.41 (3.47 - 5.34)
UOHI	3.78	4.92	3.31 (2.46 - 4.16)
WOHS	4.41	3.85	4.92 (3.85 - 5.99)
WRH	5.8	4.19	5.95 (4.2 - 7.7)
Ont.	4.30	4.47	4.32 (4.03 - 4.60)

Note: NHS did not perform PCIs over this time frame; Annual volumes were suppressed due to small cell counts for some programs.

Table 11d. Observed and risk-adjusted 1-year all-cause mortality rates for non-emergent PCI procedures in 2014/15

Cardiac Centre	Observed Rate	Expected Rate	Adjusted Rate (95% CI)
HHS	4.64	4.93	4.18 (3.26 - 5.10)
HSN	4.98	4.89	4.53 (3.55 - 5.52)
KGH	5.35	4.19	5.67 (4.27 - 7.08)
LHSC	3.02	4.60	2.92 (1.63 - 4.20)
NHS	2.45	3.68	2.95 (0.76 - 5.15)
PRHC	4.02	5.33	3.35 (2.02 - 4.68)
RVHS	5.49	4.23	5.78 (4.50 - 7.05)
SHSC	5.27	5.02	4.66 (3.74 - 5.59)
SMGH	1.74	3.21	2.41 (0.58 - 4.23)
SMH	5.18	5.37	4.29 (3.31 - 5.27)
SRHC	4.47	3.87	5.15 (4.09 - 6.20)
TBRHS	5.14	4.7	4.86 (3.23 - 6.49)
THP	3.3	3.57	4.11 (2.94 - 5.28)
UHN	6.22	5.21	5.3 (4.38 - 6.23)
UOHI	3.45	4.82	3.19 (2.28 - 4.09)
WOHS	4.24	4.16	4.54 (3.54 - 5.53)
WRH	4.17	4.23	4.37 (2.64 - 6.11)
Ont.	4.45	4.54	4.40 (4.12 - 4.68)

Note: Annual volumes were suppressed due to small cell counts for some programs.

Table 11e. Observed and risk-adjusted 1-year all-cause mortality rates for non-emergent PCI procedures in 2015/16

Cardiac Centre	Observed Rate	Expected Rate	Adjusted Rate (95% CI)
HHS	4.37	4.54	4.55 (3.53 - 5.57)
HSN	4.27	4.57	4.41 (3.33 - 5.49)
KGH	4.43	4.77	4.38 (3.03 - 5.73)
LHSC	5.18	4.78	5.12 (3.79 - 6.44)
NHS	4.15	3.77	5.20 (3.09 - 7.31)
PRHC	6.46	6.09	5.01 (3.75 - 6.27)
RVHS	4.30	3.52	5.76 (4.22 - 7.29)
SHSC	5.22	4.51	5.47 (4.46 - 6.49)
SMGH	2.94	3.43	4.05 (2.43 - 5.67)
SMH	6.21	4.63	6.33 (5.20 - 7.46)
SRHC	4.02	4.16	4.56 (3.49 - 5.64)
TBRHS	5.82	4.07	6.76 (4.8 - 8.72)
THP	3.21	3.91	3.88 (2.75 - 5)
UHN	5.93	4.7	5.95 (4.85 - 7.06)
UOHI	4.82	4.73	4.8 (3.83 - 5.77)
WOHS	4.88	4.57	5.05 (3.96 - 6.14)
WRH	5.29	3.89	6.42 (4.51 - 8.34)
Ont.	4.72	4.42	4.79 (4.51 - 5.08)

Note: Annual volumes were suppressed due to small cell counts for some programs.

Table 12a. All-cause readmission rates for all PCI patients who were discharged alive between 2011/13 to 2015/16

Cardiac Centre	Volume	30-day All Cause Readmission	1-year All-Cause Readmission
HHS	10,965	9.3	28.1
HSN	6,393	10.7	35.5
KGH	4,271	8.3	26.3
LHSC	5,519	7.7	25.5
NHS	828	8.6	26.4
PRHC	3,578	10.8	33.4
RVHS	6,187	9.2	25.8
SHSC	7,787	12.1	34.6
SMGH	4,574	11.3	23.5
SMH	6,482	10.6	32.3
SRHC	9,454	8.5	26.4
TBRHS	2,920	9.7	33.7
THP	8,217	16.1	31.2
UHN	6,800	10.4	36.3
UOHI	10,333	10.2	27.3
WOHS	6,689	11.9	34
WRH	2,694	12.4	32.3
Ont.	103,691	10.6	30.1

Table 12b. All-cause readmission rates for emergent PCI patients who were discharged alive between 2011/13 to 2015/16

Cardiac Centre	Volume	30-day All Cause Readmission	1-year All-Cause Readmission
HHS	3,295	10.6	28.5
HSN	445	12.2	31
KGH	753	10.3	26.9
LHSC	1,372	8.5	24.2
NHS	N/A	N/A	N/A
PRHC	723	14	33.9
RVHS	2,133	11.9	27.2
SHSC	1,564	18.4	37.1
SMGH	1,634	8.3	21.5
SMH	1,067	15.4	31.8
SRHC	2,739	9.4	25.7
TBRHS	432	10.2	35.7
THP	2,233	9.9	24.9
UHN	735	10.6	34.7
UOHI	3,120	11.1	26.4
WOHS	1,231	15.3	32.3
WRH	436	13.6	34.1
Ont.	23,912	11.4	28.1

*NHS did not perform Emergent PCIs over this time frame.

Table 12c. All-cause readmission rates for non-emergent PCI patients who were discharged alive between 2011/13 to 2015/16

Cardiac Centre	Volume	30-day All Cause Readmission	1-year All-Cause Readmission
HHS	7,670	8.7	27.9
HSN	5,948	10.6	35.8
KGH	3,518	7.9	26.1
LHSC	4,147	7.5	25.9
NHS	828	8.6	26.4
PRHC	2,855	10.1	33.3
RVHS	4,054	7.9	25.1
SHSC	6,223	10.7	34
SMGH	2,940	12.9	24.6
SMH	5,415	9.7	32.4
SRHC	6,715	8.1	26.6
TBRHS	2,488	9.6	33.5
THP	5,984	18.2	33.5
UHN	6,065	10.3	36.5
UOHI	7,213	9.8	27.6
WOHS	5,458	11.3	34.4
WRH	2,258	12.2	32
Ont.	79,779	10.3	30.7

Table 13a. Outcomes for all PCIs in Ontario from 2011/13 to 2015/16

Variable	HHS	HSN	KGH	LHSC	NHS	PRHC	RVHS	SHSC	SMGH	SMH	SRHC	TBRHS	THP	UHN	UOHI	WOHS	WRH	Ont.
Volume	10965	6393	4271	5519	828	3578	6187	7787	4574	6482	9454	2920	8217	6800	10333	6689	2694	103691
Revascularization																		
30-day repeat PCI	4.0	3.7	3.9	3.7	4.8	5.7	3.5	4.6	2.0	5.2	3.8	9.4	4.0	4.5	7.7	6.2	5.0	4.7
30-Day CABG	0.5	0.4	1.4	0.4	≤5	0.3	1.1	0.3	0.3	0.6	0.5	0.2	156-160*	0.5	0.5	0.6	0.9	0.7
30-Day PCI or CABG	4.5	4.1	5.2	4.1	5.2	6.0	4.6	4.9	2.4	5.7	4.3	9.7	5.9	4.9	8.2	6.8	5.8	5.4
1-year repeat PCI	9.5	11.4	8.1	8.5	10.5	14.4	9.0	11.3	5.4	15.7	9.8	16.4	8.4	13.9	12.4	16.4	11.6	11.2
1-year CABG	2.0	1.6	3.2	1.5	≤5	1.2	2.4	1.2	1.5	1.6	1.7	1.8	213-217*	1.7	1.6	1.9	2.8	1.9
1-year PCI or CABG	11.3	12.7	11.1	9.9	11.1	15.3	11.2	12.3	6.8	17.1	11.3	17.6	11.4	15.3	13.8	17.8	14.0	12.9
Complications																		
In-hospital red blood cell transfusion	2.4	2.0	2.8	2.8	1.4	2.6	3.1	2.7	1.5	2.5	2.1	3.3	2.1	3.4	3.6	2.8	2.9	2.6

*Measures were undertaken (i.e., suppression of other numbers) to ensure small cells could not be calculated; Cell counts ≤5 were suppressed to comply with privacy legislation.

Table 13b. Outcomes for all emergent PCIs in Ontario from 2011/13 to 2015/16

Variable	HHS	HSN	KGH	LHSC	NHS	PRHC	RVHS	SHSC	SMGH	SMH	SRHC	TBRHS	THP	UHN	UOHI	WOHS	WRH	Ont.
Volume	3295	445	753	1372	N/A	723	2133	1564	1634	1067	2739	432	2233	735	3120	1231	436	23912
Revascularization																		
30-day repeat PCI	5.9	7.4	10.4	4.4	N/A	9.0	6.2	9.4	2.4	8.2	7.4	17.4	9.5	7.3	12.1	11.7	6.9	8.1
30-Day CABG	1.3	1.6	4.6	1.0	N/A	≤5	2.5	1.1	0.8	1.9	1.1	≤5	5.9	3.1	1.3	1.7	2.8	2.0
30-Day PCI or CABG	7.1	8.8	14.9	5.5	N/A	9.5	8.8	10.5	3.2	10.1	8.5	18.3	15.4	10.3	13.3	13.4	9.6	10.0
1-year repeat PCI	11.2	11.0	14.0	7.6	N/A	14.8	10.7	15.1	5.7	17.0	12.5	22.0	12.1	13.9	14.8	19.8	12.8	12.7
1-year CABG	3.8	2.7	8.1	2.7	N/A	2.2	3.6	2.5	2.7	3.3	3.0	3.5	7.5	4.0	2.4	3.0	5.8	3.7
1-year PCI or CABG	14.7	13.1	22.0	10.2	N/A	16.8	14.1	17.2	8.3	20.2	15.4	24.1	19.3	17.7	16.9	22.2	18.2	16.1
Complications																		
In-hospital red blood cell transfusion	3.4	5.7	4.7	5.2	N/A	4.4	5.7	4.1	2.8	4.2	3.5	5.1	4.4	7.7	5.3	5.3	4.4	4.5

* Cell counts ≤5 were suppressed to comply with privacy legislation; NHS did not perform Emergent PCIs over this time frame.

Table 13c. Outcomes for all non-emergent PCIs in Ontario from 2011/13 to 2015/16

Variable	HHS	HSN	KGH	LHSC	NHS	PRHC	RVHS	SHSC	SMGH	SMH	SRHC	TBRHS	THP	UHN	UOHI	WOHS	WRH	Ont.
Volume	7670	5948	3518	4147	828	2855	4054	6223	2940	5415	6715	2488	5984	6065	7213	5458	2258	79779
Revascularization																		
30-day repeat PCI	3.2	3.4	2.5	3.4	4.8	4.9	2.0	3.4	1.8	4.5	2.4	8.0	1.9	4.1	5.9	5.0	4.7	3.7
30-Day CABG	0.2	0.4	0.7	0.2	≤5	0.2	0.4	0.1	≤5	0.3	0.2	≤5	0.4	0.2	0.2	0.3	0.5	0.3
30-Day PCI or CABG	3.4	3.7	3.2	3.6	5.2	5.1	2.4	3.5	1.9	4.8	2.6	8.2	2.3	4.3	6.0	5.3	5.0	4.0
1-year repeat PCI	8.9	11.4	6.9	8.8	10.5	14.2	8.1	10.2	5.2	15.5	8.7	15.5	6.9	13.9	11.4	15.7	11.4	10.8
1-year CABG	1.3	1.6	2.1	1.1	≤5	0.9	1.8	0.9	0.8	1.3	1.2	1.6	79-83*	1.4	1.2	1.7	2.4	1.4
1-year PCI or CABG	9.9	12.6	8.7	9.7	11.1	14.9	9.6	11.0	5.9	16.5	9.8	16.6	8.3	15.0	12.4	16.9	13.4	11.9
Complications																		
In-hospital red blood cell transfusion	1.9	1.7	2.4	2.0	1.4	2.2	1.7	2.4	0.8	2.2	1.6	2.9	1.2	2.9	2.9	2.2	2.6	2.1

*Measures were undertaken (i.e., suppression of other numbers) to ensure small cells could not be calculated; Cell counts ≤5 were suppressed to comply with privacy legislation.

Table 14a. Baseline characteristics for all PCIs in Ontario from 2011/13 to 2015/16

Variable	HHS	HSN	KGH	LHSC	NHS	PRHC	RVHS	SHSC	SMGH	SMH	SRHC	TBRHS	THP	UHN	UOHI	WOHS	WRH	Ont.
Volume	10965	6393	4271	5519	828	3578	6187	7787	4574	6482	9454	2920	8217	6800	10333	6689	2694	103691
Age																		
Mean \pm SD	65.17 \pm 12.23	64.78 \pm 11.31	64.75 \pm 11.83	64.87 \pm 11.93	67.01 \pm 10.81	66.80 \pm 11.99	63.95 \pm 12.49	67.50 \pm 12.51	63.03 \pm 11.66	65.82 \pm 12.12	64.44 \pm 12.05	65.55 \pm 11.83	63.62 \pm 12.12	66.19 \pm 12.10	65.31 \pm 12.16	64.81 \pm 11.80	64.21 \pm 11.90	65.09 \pm 12.09
Median (IQR)	65 (56-74)	65 (57-73)	65 (56-73)	65 (56-74)	67 (60-75)	67 (58-76)	63 (55-73)	67 (58-77)	63 (55-71)	66 (57-75)	64 (56-73)	65 (57-74)	63 (55-72)	66 (58-75)	65 (57-74)	65 (56-74)	64 (55-72)	65 (56-74)
<64	48.6	48.3	49.6	48.7	41.9	43.3	53.5	41.5	56.3	45.9	50.9	47.6	54.0	43.8	48.7	48.3	51.3	48.7
65-74	26.5	30.2	28.2	28.1	31.8	28.5	24.5	26.5	25.1	28.3	26.6	27.8	25.4	30.3	26.9	28.9	28.2	27.4
\geq 75	24.9	21.5	22.2	23.2	26.3	28.2	21.9	32.0	18.6	25.9	22.4	24.6	20.6	25.9	24.4	22.8	20.5	23.9
Sex																		
Female	29.9	29.0	31.5	29.0	32.6	31.6	27.3	28.1	26.2	25.5	26.3	29.3	25.3	25.5	27.4	29.0	30.5	27.9
Male	70.1	71.0	68.5	71.0	67.4	68.4	72.7	71.9	73.8	74.5	73.7	70.7	74.7	74.5	72.6	71.0	69.5	72.1
Ethnicity																		
Missing	100.0	49.2	89.4	40.5	100.0	36.6	52.5	47.4	64.9	62.4	69.8	73.8	39.1	47.7	99.9	45.0	42.9	63.6
CCS/ACS class (0, 1, 2, 3, 4 used for stable angina)																		
0	3.2	4.5	5.9	4.0	5.0	16.5	2.6	8.8	7.8	9.2	2.3	41.8	5.4	8.6	5.1	4.8	4.6	6.7
1	2.5	6.3	3.6	3.4	8.0	2.9	3.2	5.3	1.2	14.3	9.7	4.3	6.9	8.9	4.1	11.8	6.2	6.1
2	9.8	18.0	12.7	13.4	19.3	9.1	16.1	22.8	4.8	20.4	8.3	5.9	10.9	21.3	14.4	18.0	17.3	14.2
3	12.3	10.8	10.4	10.5	16.1	9.4	9.6	11.1	3.7	16.1	6.8	7.0	9.1	13.2	14.0	6.2	11.0	10.5
4	1.9	1.1	3.8	3.4	1.0	4.4	2.1	0.6	0.4	5.8	0.2	13.5	2.4	0.8	3.3	0.6	13.9	2.7
Low Risk	6.9	34.1	3.2	7.2	13.0	9.8	12.8	9.3	41.8	4.1	14.7	2.3	16.7	12.3	3.6	4.7	9.0	11.8
Inter- mediate Risk	22.7	12.1	909- 913*	23.5	25.7	11.2	11.2	18.5	2.1	7.0	23.5	5.4	16.9	18.9	1469- 1473*	29.4	19.5	17.1
High Risk	10.7	5.4	6.7	9.7	12.0	16.7	7.7	3.6	0.6	5.9	5.7	6.3	4.6	5.4	10.9	6.2	2.4	7.0
Emergent	30.0	6.9	17.4	24.7	0.0	20.2	34.3	20.0	35.7	16.4	28.9	13.6	27.1	10.7	30.2	18.4	16.1	22.9
Unknown	0.0	0.7	636- 640*	0.3	0.0	0.0	0.5	0.0	1.9	0.8	0.0	0.0	0.0	0.0	\leq 5	0.0	0.0	0.8
CAD Type																		
Elective, stable CAD	23.8	30.2	28.5	21.0	40.5	34.6	32.8	40.3	21.3	47.9	21.4	32.9	26.9	48.0	26.2	40.5	19.7	31.0
Unstable angina	15.2	15.5	19.8	18.1	20.8	15.9	7.7	17.7	10.5	13.7	23.8	22.6	17.2	19.5	14.6	13.9	27.5	16.7
NSTEMI	29.1	31.8	22.6	26.7	38.0	25.7	23.8	20.5	31.4	17.2	26.0	24.6	24.6	20.0	26.7	27.6	31.3	25.6
STEMI	31.4	20.8	26.2	32.7	0.7	23.1	35.1	20.5	36.7	19.1	28.2	19.2	30.9	10.9	30.2	18.0	19.6	25.6
Unknown	0.4	1.8	2.9	1.6	0.0	0.7	0.6	1.1	0.2	2.0	0.6	0.7	0.5	1.6	2.3	0.0	1.9	1.1
PCI Type																		
Scheduled PCI	7.9	17.8	3.9	21.3	1.8	7.0	29.2	29.5	12.1	27.6	22.5	15.3	17.1	35.0	9.0	15.5	16.9	18.2
Staged PCI	5.3	1.1	5.3	2.0	2.8	4.0	3.2	4.7	2.4	6.3	1.7	10.9	4.3	3.8	2.3	6.6	4.0	4.0
Same Setting PCI	86.8	81.0	90.9	76.7	95.4	89.0	67.6	65.8	85.5	66.0	75.7	73.9	78.6	61.2	88.7	78.0	79.1	77.9

Variable	HHS	HSN	KGH	LHSC	NHS	PRHC	RVHS	SHSC	SMGH	SMH	SRHC	TBRHS	THP	UHN	UOHI	WOHS	WRH	Ont.
Non Emergent	69.9	93.0	82.4	75.1	100.0	79.8	65.5	79.9	64.3	83.5	71.0	85.2	72.8	89.2	69.8	81.6	83.8	76.9
Emergent	30.1	7.0	17.6	24.9	0.0	20.2	34.5	20.1	35.7	16.5	29.0	14.8	27.2	10.8	30.2	18.4	16.2	23.1
FFR Use	2.6	3.1	8.8	3.8	3.7	5.5	4.4	5.8	1.2	5.2	12.5	4.1	3.4	5.7	3.7	2.7	6.5	4.9
LVEF																		
≥50%	26.5	23.5	17.3	23.8	37.7	31.3	18.9	37.2	19.2	34.2	24.2	12.2	27.5	57.0	5.3	36.3	49.9	27.1
35-49%	8.4	5.6	3.5	9.0	9.2	6.6	7.5	10.5	4.9	9.6	14.7	3.4	8.8	14.8	1.7	10.4	14.7	8.5
20-34%	2.7	2.8	1.5	3.5	2.4	2.6	3.2	4.7	1.3	4.2	6.5	1.0	3.3	7.0	0.5	3.5	6.5	3.5
<20%	0.4	0.8	0.4	0.6	≤5	0.7	0.8	1.2	0.2	0.6	0.9	≤5	0.9	1.3	0.1	0.8	1.0	0.7
Unknown or N	62.1	67.4	77.4	63.0	415-419*	58.8	69.6	46.4	74.4	51.4	53.7	2432-2436*	59.6	19.9	92.5	49.0	27.8	60.2
Creatinine																		
0-120	86.6	85.9	35.0	82.7	89.9	79.8	86.9	79.6	91.1	67.2	86.3	65.1	89.4	81.9	31.3	86.4	83.4	76.2
121-180	7.9	8.1	3.5	7.0	6.0	8.9	6.7	8.1	6.3	7.0	7.6	6.7	7.1	8.9	4.0	7.9	10.2	7.1
>180	3.2	3.1	1.1	2.9	3.0	3.0	2.9	3.6	1.2	3.6	2.3	2.7	2.6	5.1	1.9	4.3	2.9	2.9
Unknown	2.3	2.8	60.4	7.4	1.1	8.3	3.5	8.7	1.4	22.1	3.7	25.4	0.9	4.1	62.8	1.5	3.4	13.7
Comorbidities and risk factors																		
Diabetes	28.4	31.7	20.6	27.5	31.5	29.7	30.3	31.0	22.1	29.4	25.9	24.8	28.4	35.1	26.6	38.6	30.5	29.0
Hypertension	64.3	68.7	48.7	63.6	72.8	69.4	62.9	70.4	55.9	68.2	60.7	54.5	61.6	69.7	60.1	71.1	69.9	64.1
Hyperlipidemia	61.1	63.7	45.7	59.8	70.5	66.6	59.0	69.8	50.5	68.1	57.1	47.1	63.4	72.6	55.2	71.5	65.5	61.7
Current Smoking	27.4	28.3	19.1	26.3	24.6	29.4	23.3	17.6	31.9	19.2	23.8	25.9	21.4	15.8	37.2	16.4	26.4	24.4
Former Smoking	28.4	34.4	23.2	35.6	43.8	35.6	19.9	27.0	28.0	28.8	32.2	15.4	27.0	34.2	8.2	18.8	27.6	26.3
COPD	4.3	8.4	6.6	7.3	8.6	10.1	3.2	5.3	6.9	6.0	6.1	6.5	3.3	6.0	7.1	3.8	6.6	5.8
MI	20.7	27.3	23.2	30.5	27.4	28.7	26.5	28.5	24.1	30.1	27.3	16.8	23.0	29.6	7.1	28.3	31.9	24.4
CHF	5.8	5.5	5.2	6.3	5.6	5.8	3.6	9.0	3.1	6.9	4.4	2.8	4.6	9.6	7.0	6.5	6.2	6.0
CVD	8.5	7.8	4.4	6.5	9.3	8.3	3.8	7.1	3.9	6.2	4.9	3.5	4.5	6.8	6.2	5.4	6.5	6.1
PVD	6.0	8.5	5.8	6.1	7.2	9.8	3.1	6.6	3.8	7.3	4.9	5.5	4.5	8.0	6.4	4.8	5.0	6.0
Renal Disease	4.4	4.5	3.0	4.0	4.2	3.5	3.2	5.2	1.8	5.5	3.3	2.8	3.5	7.1	4.2	4.0	4.6	4.2
Dialysis	1.3	1.3	1.1	2.1	2.4	1.4	1.6	1.9	0.5	2.5	1.1	1.5	1.5	3.4	0.9	2.2	1.6	1.6
Previous PCI	26.5	29.6	26.0	22.1	29.2	28.3	19.0	27.5	15.0	28.9	23.6	20.0	23.0	30.8	16.7	26.8	22.3	24.3
Previous CABG	11.3	11.3	11.8	14.1	13.8	14.1	8.1	12.9	5.4	13.0	12.8	9.9	10.8	16.5	7.2	8.7	16.6	11.3
Charlson Score (Mean ±SD)	0.75 ±1.41	0.93 ±1.51	0.63 ±1.31	0.71 ±1.35	0.78 ±1.44	0.81 ±1.41	0.66 ±1.28	0.89 ±1.49	0.48 ±1.13	0.96 ±1.57	0.69 ±1.30	0.90 ±1.46	0.55 ±1.23	1.05 ±1.74	0.67 ±1.36	0.76 ±1.40	0.83 ±1.52	0.76 ±1.41
Coronary Anatomy																		

Variable	HHS	HSN	KGH	LHSC	NHS	PRHC	RVHS	SHSC	SMGH	SMH	SRHC	TBRHS	THP	UHN	UOHI	WOHS	WRH	Ont.
Non-Significant CAD (<70%)	0.1	≤5	0.2	≤5	0.0	0.6	0.0	0.3	≤5	1.0	0.0	≤5	0.1	≤5	0.7	≤5	0.8	0.2
Left Main ≥50%	3.6	3.3	5.5	4.8	4.6	4.3	2.8	3.8	2.1	4.1	3.6	2.4	3.9	3.9	4.3	2.9	4.3	3.8
Prox LAD ≥70%	20.3	12.8	22.9	32.1	21.6	28.0	18.2	29.9	18.5	14.6	22.5	18.6	18.6	19.6	19.4	21.9	22.0	21.0
Prox LAD 100%	4.5	2.4	4.2	5.7	4.5	4.9	4.5	6.6	3.9	2.4	4.6	2.0	5.0	2.4	3.9	4.5	5.0	4.2
Prox LAD CTO	0.3	0.8	≤5	0.6	1.0	2.9	0.2	0.4	≤5	1.0	0.3	1.3	2.3	2.2	0.1	0.1	0.4	0.7
Mid/distal LAD ≥70%	41.4	38.2	48.0	17.4	47.3	36.8	29.9	29.8	40.8	25.9	35.8	22.6	43.4	34.2	43.3	46.0	38.7	36.6
Mid/distal LAD 100%	7.6	6.0	6.7	3.3	6.0	6.5	6.6	6.0	7.5	4.0	4.7	2.4	8.4	4.5	7.8	6.6	7.6	6.2
Mid/distal LAD CTO	0.8	3.0	0.4	0.4	1.1	4.1	0.4	0.6	≤5	1.8	0.4	0.9	3.0	269-273*	0.4	0.3	0.4	1.3
Circumflex ≥70%	35.8	36.5	41.0	30.0	43.7	37.6	26.3	29.3	30.2	24.1	32.1	26.8	36.2	28.7	37.4	39.3	35.7	33.2
Circumflex 100%	7.4	5.6	7.3	5.5	9.1	7.6	6.6	6.5	5.6	5.0	4.1	3.2	7.6	3.9	7.8	6.8	6.5	6.2
Circumflex CTO	1.0	2.5	0.6	0.9	1.8	5.4	0.4	0.5	≤5	2.1	0.6	1.5	3.1	245-249*	0.3	0.7	0.4	1.4
RCA ≥70%	45.8	43.4	52.5	40.6	47.1	51.1	35.7	34.6	45.9	28.5	39.6	33.5	42.8	34.3	45.5	43.5	42.4	41.2
RCA 100%	14.0	10.2	12.7	10.6	12.8	15.8	12.6	10.8	12.5	7.3	8.5	5.1	13.4	7.2	12.8	11.3	10.7	11.1
RCA CTO	2.0	4.8	2.2	2.0	2.5	9.0	1.0	1.3	0.3	3.4	1.2	2.2	5.3	6.5	0.8	1.7	0.6	2.7
% Stent	96.5	95.1	94.0	96.0	97.5	97.1	94.6	96.4	97.5	92.5	96.5	94.3	97.4	95.0	95.2	94.7	96.0	95.6
Graft location among patients who had bypass surgery																		
Graft LAD	59.2	47.4	61.7	47.0	76.3	65.1	40.1	42.1	51.8	9.6	50.6	7.6	61.9	43.2	38.4	63.4	58.3	47.6
Graft Circumflex	28.5	21.7	40.1	13.5	30.7	30.6	15.7	18.6	13.0	5.1	36.0	6.2	34.3	22.3	17.3	32.6	27.1	23.8
Graft RCA	26.1	22.0	40.1	16.2	34.2	29.8	20.0	17.2	16.6	5.1	35.7	4.5	31.1	20.8	15.9	26.3	26.0	23.0
Number of diseased vessels (combined LAD, Circ, RCA) among patients who did not have bypass surgery																		
0	12.6	20.2	10.1	22.7	5.3	12.3	32.2	33.8	13.9	48.2	24.2	30.5	21.7	39.3	12.0	22.7	20.3	23.2
1	54.8	48.7	52.3	50.0	60.1	50.5	42.4	37.0	54.9	27.1	46.2	47.7	43.6	32.7	52.4	37.8	48.8	45.4
2	25.4	24.3	27.0	20.5	28.2	28.2	18.8	22.0	24.7	17.8	22.3	17.9	25.0	20.2	26.5	26.7	23.0	23.4
3	7.1	6.9	10.7	6.8	6.4	8.9	6.6	7.2	6.5	6.9	7.3	4.0	9.8	7.8	9.1	12.9	7.9	8.0

Data are presented as percentages, unless otherwise specified; *Measures were undertaken (i.e., suppression of other numbers) to ensure small cells could not be calculated; Cell counts ≤5 were suppressed to comply with privacy legislation.

Table 14b. Baseline characteristics for emergent PCIs in Ontario from 2011/13 to 2015/16

Variable	HHS	HSN	KGH	LHSC	NHS	PRHC	RVHS	SHSC	SMGH	SMH	SRHC	TBRHS	THP	UHN	UOHI	WOHS	WRH	Ont.	
Volume	3295	445	753	1372	N/A	723	2133	1564	1634	1067	2739	432	2233	735	3120	1231	436	23912	
Age																			
Mean ±SD	62.75 ±12.63	62.01 ±11.43	62.26 ±12.24	62.99 ±12.80	N/A	64.08 ±13.56	62.12 ±12.91	65.01 ±13.42	61.38 ±12.19	62.55 ±13.38	62.17 ±12.51	63.11 ±11.80	61.26 ±12.51	63.37 ±13.53	62.57 ±12.53	61.29 ±12.63	61.42 ±12.30	62.46 ±12.72	
Median (IQR)	62 (54-72)	61 (55-69)	61 (54-70)	63 (54-72)	N/A	63 (54-74)	61 (53-71)	64 (55-75)	60 (53-70)	62 (53-72)	61 (53-71)	62 (55-71)	60 (52-70)	63 (54-73)	61 (54-71)	60 (52-70)	60 (53-69)	61 (53-71)	
<64	57.4	60.7	60.2	55.8	N/A	53.0	60.5	52.3	62.3	59.0	60.3	56.5	63.4	54.1	59.1	63.0	62.8	59.1	
65-74	22.8	24.9	23.0	23.9	N/A	22.8	20.7	21.7	20.8	20.9	21.2	26.2	20.2	25.2	21.7	20.6	21.3	21.9	
≥75	19.8	14.4	16.9	20.3	N/A	24.2	18.8	26.0	16.9	20.1	18.5	17.4	16.4	20.7	19.2	16.4	15.8	19.1	
Sex																			
Female	28.3	23.8	28.0	27.8	N/A	30.2	24.6	25.3	23.0	22.4	22.0	27.3	21.0	23.3	25.6	20.8	28.2	24.8	
Male	71.7	76.2	72.0	72.2	N/A	69.8	75.4	74.7	77.0	77.6	78.0	72.7	79.0	76.7	74.4	79.2	71.8	75.2	
Ethnicity																			
Missing	100.0	47.2	91.4	40.0	N/A	36.4	59.4	57.6	70.6	71.6	79.7	65.7	33.8	54.3	100.0	33.0	40.4	68.6	
CAD Type																			
Elective, stable CAD	0.5	≤5	29-33*	≤5	N/A	2.4	1.0	0.8	2.0	2.7	0.3	3.9	0.5	≤5	1.1	4.1	≤5	1.2	
Unstable angina	0.4	0.0	4.8	0.4	N/A	1.2	0.9	6-10*	0.9	1.1	3.4	7-11*	≤5	1.4	0.5	1.5	3.2	1.2	
NSTEMI	5.2	2.9	10.1	5.4	N/A	6.2	4.8	2.8	5.4	4.2	9.5	10.2	5.3	7.9	2.7	12.8	4.6	5.9	
STEMI	93.8	96.6	80.6	93.6	N/A	90.2	93.2	95.7	91.7	91.9	86.1	83.1	94.0	89.9	94.8	81.6	90.1	91.4	
Unknown	≤5	≤5	≤5	≤5	N/A	0.0	0.0	≤5	0.0	0.0	0.6	≤5	≤5	≤5	1.0	0.0	≤5	0.3	
PCI Type																			
Scheduled PCI	≤5	≤5	≤5	2.0	N/A	≤5	0.8	0.9	0.4	2.2	0.4	≤5	0.4	9-13*	0.7	≤5	≤5	0.6	
Staged PCI	≤5	≤5	21-25*	1.1	N/A	14-18*	1.2	1.5	0.0	1.4	0.0	8-12*	1.7	≤5	2.6	42-46*	≤5	1.3	
Same Setting PCI	99.8	99.6	96.5	96.9	N/A	97.4	98.0	97.6	99.6	96.4	99.6	97.0	97.9	98.1	96.6	96.2	98.6	98.1	
FFR Use																			
	0.2	0.0	3.2	1.2	N/A	≤5	0.9	0.5	≤5	≤5	4.9	≤5	0.3	0.8	0.8	0.0	≤5	1.1	
LVEF																			
≥50%	2.1	1.3	2.5	6.3	N/A	3.2	1.9	2.2	0.9	5.1	8.1	2.3	4.3	25.4	1.4	5.1	35.3	4.7	
35-49%	4.4	1.3	0.9	6.9	N/A	2.6	8.0	1.3	0.7	4.4	23.4	1.9	3.5	17.6	1.1	3.9	26.4	6.6	
20-34%	1.3	1.6	0.9	3.4	N/A	1.2	4.4	1.3	≤5	2.5	11.4	≤5	1.4	11.6	≤5	3.6	14.7	3.3	
<20%	0.2	0.0	≤5	0.9	N/A	≤5	1.1	0.7	0.0	≤5	0.7	≤5	≤5	2.4	≤5	0.7	2.3	0.5	
Unknown or N	92.1	95.7	715-719*	82.6	N/A	*667-671	84.7	94.6	1604-1608*	934-938*	56.4	94.7	2022-2026*	43.0	97.4	86.7	21.3	84.9	
Creatinine																			
0-120	85.6	70.1	15.1	84.3	N/A	62.0	86.1	60.5	91.3	68.1	82.5	43.5	87.7	82.3	6.8	86.3	76.4	68.9	
121-180	7.1	7.6	1.1	6.8	N/A	7.6	6.0	6.3	6.7	6.7	8.3	3.9	9.0	8.3	1.6	8.9	13.8	6.5	
>180	3.3	15-18*	≤5	2.8	N/A	1.8	3.1	2.9	1.3	4.0	2.6	2.3	2.2	4.6	1.0	3.5	3.7	2.6	
Unknown	4.1	81-85*	626-30*	6.2	N/A	28.6	4.9	30.3	0.6	21.1	6.6	50.2	1.1	4.8	90.6	1.4	6.2	22.1	
Comorbidities and risk factors																			

Variable	HHS	HSN	KGH	LHSC	NHS	PRHC	RVHS	SHSC	SMGH	SMH	SRHC	TBRHS	THP	UHN	UOHI	WOHS	WRH	Ont.
Diabetes	20.4	20.9	13.7	19.8	N/A	18.1	24.6	23.8	18.6	22.9	19.1	10.2	20.7	24.9	19.9	30.5	21.6	21.0
Hypertension	46.7	56.2	35.1	51.7	N/A	53.8	49.8	57.2	46.9	54.5	48.1	25.7	49.0	54.6	46.8	57.3	51.8	49.2
Hyperlipidemia	36.1	52.1	27.6	40.2	N/A	42.0	43.1	47.4	37.3	43.0	36.8	20.6	45.5	45.6	33.6	57.0	39.4	40.1
Current Smoking	29.3	45.8	24.6	37.7	N/A	40.8	29.3	25.7	40.6	32.8	34.8	19.0	31.1	28.3	39.3	25.8	40.6	32.9
Former Smoking	19.2	22.2	9.8	23.0	N/A	21.6	10.6	15.0	16.8	15.1	19.5	7.4	17.6	21.9	6.6	12.4	13.1	15.5
COPD	2.4	8.1	2.0	4.7	N/A	5.5	1.3	2.8	5.5	4.9	3.3	2.8	1.5	6.0	4.2	2.5	2.5	3.3
MI	10.5	17.5	12.5	15.6	N/A	14.0	16.0	16.8	15.5	16.4	13.1	7.6	13.0	15.6	2.8	16.0	10.6	12.5
CHF	3.3	2.5	2.0	3.0	N/A	1.9	1.5	4.2	1.1	3.2	1.3	3.0	1.8	3.9	2.2	4.2	1.8	2.5
CVD	4.8	5.8	2.0	6.6	N/A	6.1	2.3	5.2	4.0	5.2	2.7	1.6	3.2	6.7	5.3	4.4	3.4	4.3
PVD	3.0	7.2	4.5	5.0	N/A	5.1	1.9	2.9	3.5	5.1	1.9	2.5	2.6	4.9	3.8	5.0	2.8	3.4
Renal Disease	1.8	1.8	1.1	2.3	N/A	1.9	2.0	3.4	1.3	2.9	2.0	1.6	2.1	4.2	2.4	1.9	2.1	2.2
Dialysis	0.5	≤5	≤5	1.5	N/A	≤5	0.8	1.1	0.4	2.0	0.5	≤5	0.8	1.6	0.5	1.0	1.4	0.8
Previous PCI	13.1	17.5	14.9	10.5	N/A	14.9	11.9	14.8	6.4	10.9	10.1	9.5	12.4	11.4	13.1	17.2	8.9	12.2
Previous CABG	3.2	4.0	5.4	3.5	N/A	4.6	3.3	4.5	2.4	3.6	4.3	4.2	3.0	5.3	2.1	2.3	3.7	3.4
Charlson Score (Mean ±SD)	0.40 ±1.07	0.37 ±0.95	0.41 ±1.14	0.37 ±1.03	N/A	0.51 ±1.23	0.38 ±1.03	0.49 ±1.27	0.29 ±0.92	0.53 ±1.25	0.34 ±1.02	0.49 ±1.23	0.30 ±0.95	0.67 ±1.66	0.42 ±1.11	0.39 ±1.09	0.43 ±1.15	0.40 ±1.10
Coronary Anatomy																		
Non-Significant CAD (<70%)	≤5	0.0	0.0	≤5	N/A	0.8	0.0	≤5	≤5	2.2	0.0	0.0	≤5	0.0	0.5	0.0	≤5	0.2
Left Main ≥50%	3.7	3.8	6.4	6.3	N/A	3.9	3.8	5.2	3.3	4.9	4.2	3.0	4.3	5.9	3.8	3.5	6.4	4.3
Prox LAD ≥70%	23.9	20.7	26.8	43.3	N/A	27.2	27.8	47.4	22.4	18.6	32.0	27.3	24.8	33.7	21.4	32.2	35.8	28.4
Prox LAD 100%	8.5	7.0	6.1	12.7	N/A	9.8	9.0	15.6	8.1	3.5	11.3	4.4	9.6	4.9	6.3	13.3	9.6	9.2
Prox LAD CTO	0.3	≤5	≤5	0.8	N/A	1.4	0.3	0.5	0.0	2.0	0.2	3.9	1.3	3.4	≤5	≤5	≤5	0.6
Mid/distal LAD ≥70%	46.7	41.1	51.5	22.3	N/A	37.2	44.9	47.2	48.8	35.7	49.2	28.5	54.2	56.9	47.6	58.7	49.8	46.3
Mid/distal LAD 100%	13.2	9.9	9.8	6.9	N/A	10.0	12.8	15.2	14.6	5.0	10.4	5.3	14.4	7.3	11.8	17.0	13.8	11.9
Mid/distal LAD CTO	0.6	≤5	≤5	1.1	N/A	1.2	0.4	1.2	≤5	2.2	0.3	1.6	1.9	4.6	≤5	≤5	≤5	0.9
Circumflex ≥70%	36.5	34.8	45.2	33.7	N/A	34.3	34.3	38.4	33.3	27.7	39.6	29.2	41.7	42.4	37.6	44.6	39.2	37.3
Circumflex 100%	10.2	7.2	10.1	9.3	N/A	9.1	10.1	10.2	8.8	5.0	7.8	5.6	9.0	6.7	8.8	11.5	7.8	9.0
Circumflex CTO	1.1	≤5	≤5	1.1	N/A	2.5	0.5	0.6	≤5	1.9	0.6	2.8	2.3	5.2	0.3	1.1	≤5	1.1
RCA ≥70%	58.3	63.8	63.7	55.2	N/A	58.5	52.9	52.2	57.8	39.0	56.4	50.2	58.3	55.4	53.6	56.6	54.8	55.4
RCA 100%	25.3	25.8	20.1	21.9	N/A	28.1	22.6	22.4	22.9	9.5	18.8	11.8	23.3	11.6	20.6	24.0	22.2	21.4
RCA CTO	1.8	3.1	2.0	2.8	N/A	3.3	1.4	1.5	0.4	5.3	0.9	6.5	3.9	8.3	0.5	29-33*	≤5	2.2
% Stent	94.5	91.7	89.6	94.4	N/A	96.1	90.5	94.6	95.5	90.0	96.0	94.7	96.6	92.5	95.1	93.6	92.2	94.1
Graft location among patients who had bypass surgery																		
Graft LAD	74.5	55.6	58.5	70.8	N/A	66.7	60.0	74.3	60.0	≤5	81.2	≤5	82.1	61.5	51.5	71.4	75.0	65.5
Graft Circumflex	32.1	≤5	39.0	12.5	N/A	27.3	22.9	18.6	25.0	≤5	50.4	≤5	31.3	43.6	24.2	35.7	≤5	29.1
Graft RCA	27.4	≤5	41.5	18.8	N/A	24.2	28.6	24.3	15.0	≤5	46.2	≤5	31.3	23.1	16.7	≤5	≤5	27.1
Number of diseased vessels (combined LAD, Circ, RCA) among patients who did not have bypass surgery																		
0	9-13*	≤5	4.4	4.5	N/A	4.8	3.4	3.2	0.6	30.4	1.2	6.3	2.6	3.0	4.2	4.1	1.9	3.9
1	1835-1839*	250-254*	46.8	58.7	N/A	55.9	58.8	52.7	60.1	37.2	55.4	66.2	49.9	49.0	55.1	44.5	55.0	54.2

Variable	HHS	HSN	KGH	LHSC	NHS	PRHC	RVHS	SHSC	SMGH	SMH	SRHC	TBRHS	THP	UHN	UOHI	WOHS	WRH	Ont.
2	30.2	29.0	29.4	25.2	N/A	28.6	26.9	31.1	28.6	22.4	29.8	21.3	29.4	30.6	28.3	29.3	28.8	28.5
3	11.9	11.2	19.5	11.7	N/A	10.7	10.9	13.0	10.7	9.9	13.6	6.3	18.1	17.4	12.4	22.2	14.3	13.4

Data are presented as percentages, unless otherwise specified. Blank cells indicate data was not available; *Measures were undertaken (i.e., suppression of other numbers) to ensure small cells could not be calculated; Cell counts ≤ 5 were suppressed to comply with privacy legislation.

Table 14c. Baseline characteristics for non-emergent PCIs in Ontario from 2011/13 to 2015/16

Variable	HHS	HSN	KGH	LHSC	NHS	PRHC	RVHS	SHSC	SMGH	SMH	SRHC	TBRHS	THP	UHN	UOHI	WOHS	WRH	Ont.
Volume	7670	5948	3518	4147	828	2855	4054	6223	2940	5415	6715	2488	5984	6065	7213	5458	2258	79779
Age																		
Mean ±SD	66.21 ±11.90	64.99 ±11.28	65.28 ±11.68	65.49 ±11.56	67.01 ±10.81	67.49 ±11.46	64.92 ±12.16	68.12 ±12.20	63.95 ±11.26	66.46 ±11.76	65.37 ±11.73	65.97 ±11.79	64.50 ±11.86	66.53 ±11.88	66.50 ±11.80	65.60 ±11.46	64.75 ±11.75	65.87 ±11.78
Median (IQR)	66 (57-75)	65 (57-73)	65 (57-74)	66 (57-74)	67 (60-75)	67 (59-76)	65 (56-74)	68 (59-78)	64 (56-72)	67 (58-75)	65 (57-74)	66 (57-75)	64 (56-73)	67 (58-75)	66 (58-75)	66 (57-74)	65 (56-73)	66 (57-75)
<64	44.8	47.4	47.4	46.4	41.9	40.8	49.9	38.8	53.0	43.3	47.1	46.1	50.5	42.5	44.2	44.9	49.1	45.6
65-74	28.1	30.6	29.3	29.5	31.8	29.9	26.5	27.7	27.4	29.8	28.8	28.1	27.4	31.0	29.1	30.8	29.5	29.0
≥75	27.1	22.0	23.3	24.1	26.3	29.2	23.6	33.5	19.5	27.0	24.1	25.8	22.1	26.5	26.7	24.3	21.3	25.4
Sex																		
Female	30.5	29.4	32.3	29.3	32.6	32.0	28.8	28.8	28.0	26.1	28.0	29.7	26.9	25.7	28.2	30.8	31.0	28.8
Male	69.5	70.6	67.7	70.7	67.4	68.0	71.2	71.2	72.0	73.9	72.0	70.3	73.1	74.3	71.8	69.2	69.0	71.2
Ethnicity																		
Missing	100.0	49.4	89.0	40.7	100.0	36.7	48.9	44.8	61.7	60.6	65.7	75.2	41.1	46.9	99.9	47.7	43.4	62.1
CCS/ACS class (0, 1, 2, 3, 4 used for stable angina)																		
0	4.5	4.8	7.1	5.3	5.0	20.6	3.9	11.1	12.1	11.0	3.2	49.0	7.4	9.7	7.4	5.9	5.5	8.7
1	3.6	6.8	4.3	4.5	8.0	3.6	4.8	6.7	1.8	17.1	13.6	5.1	9.4	10.0	5.9	14.5	7.4	8.0
2	14.0	19.4	15.5	17.9	19.3	11.4	24.6	28.5	7.5	24.4	11.7	6.9	15.0	23.8	20.6	22.0	20.6	18.5
3	17.6	11.6	12.6	13.9	16.1	11.7	14.6	13.9	5.7	19.2	9.5	8.2	12.5	14.8	20.1	7.6	13.1	13.6
4	2.7	1.1	4.6	4.5	1.0	5.5	3.2	0.7	0.6	6.9	0.3	14.7	3.3	0.9	336-340*	0.7	16.5	3.4
Low Risk	9.9	36.7	3.9	9.6	13.0	12.3	19.5	11.6	65.1	4.9	20.7	2.7	22.9	13.7	5.2	5.8	10.8	15.3
Intermediate Risk	32.5	12.9	25.8	31.2	25.7	14.0	17.0	23.1	3.3	8.4	33.0	6.2	23.2	21.2	20.4	36.0	23.2	22.3
High Risk	15.2	5.8	8.0	12.8	12.0	20.8	11.6	4.5	0.9	7.1	7.9	7.3		6.0	15.6	7.6	2.9	9.1
Emergent													6.2			0.0		
Unknown	0.0	0.8	631-635*	0.3	0.0	0.0	0.8	0.0	3.0	1.0	0.0	0.0	0.0	0.0	≤5		0.0	1.1
CAD Type																		
Elective, stable CAD	33.8	32.4	33.8	27.8	40.5	42.8	49.5	50.2	32.0	56.8	30.1	37.9	36.7	53.8	37.1	48.7	23.3	39.9
Unstable angina	21.6	16.6	23.0	23.9	20.8	19.6	11.2	22.0	15.9	16.2	32.2	26.1	23.5	21.6	20.7	16.7	32.2	21.3
NSTEMI	39.4	33.9	25.3	33.7	38.0	30.6	33.8	25.0	45.8	19.8	32.7	27.0	31.8	21.5	37.1	30.9	36.5	31.5
STEMI	4.6	15.1	14.5	12.6	0.7	6.2	4.4	1.6	6.1	4.7	4.5	8.1	7.3	1.3	2.3	3.7	5.9	5.9
Unknown	0.6	1.9	3.3	2.0	0.0	0.8	1.0	1.3	0.2	2.4	0.6	0.8	0.6	1.8	2.9	0.0	2.1	1.4
PCI Type																		
Scheduled PCI	11.3	19.2	4.6	27.6	1.8	8.6	44.1	36.7	18.7	32.7	31.6	17.8	23.4	39.0	12.5	18.9	20.1	23.4
Staged PCI	7.5	1.2	5.7	2.3	2.8	4.5	4.2	5.5	3.7	7.3	2.5	12.3	5.2	4.3	2.2	7.2	4.6	4.8
Same Setting PCI	81.2	79.6	89.7	70.1	95.4	86.9	51.7	57.8	77.6	60.1	66.0	69.9	71.4	56.7	85.3	73.9	75.3	71.8
FFR Use	3.6	3.3	9.9	4.6	3.7	6.8	6.3	7.1	1.8	6.1	15.6	4.7	4.6	6.3	5.0	3.4	7.6	6.1
LVEF																		
≥50%	36.9	25.1	20.4	29.6	37.7	38.4	27.8	46.0	29.3	39.9	30.8	13.9	36.1	60.8	6.9	43.3	52.7	33.9
35-49%	10.1	5.9	4.1	9.7	9.2	7.6	7.3	12.9	7.3	10.7	11.2	3.7	10.8	14.5	1.9	11.8	12.4	9.1

Variable	HHS	HSN	KGH	LHSC	NHS	PRHC	RVHS	SHSC	SMGH	SMH	SRHC	TBRHS	THP	UHN	UOHI	WOHS	WRH	Ont.
20-34%	3.3	2.9	1.6	3.6	2.4	3.0	2.6	5.6	1.9	4.5	4.4	1.1	4.0	6.5	0.6	3.5	5.0	3.5
<20%	0.5	0.8	0.3	0.5	≤5	0.8	0.7	1.3	0.4	0.7	1.0	≤5	1.1	1.2	≤5	0.8	0.8	0.7
Unknown or N	49.2	65.2	73.6	56.5	415-419*	50.2	61.6	34.3	61.1	44.2	52.5	2020-2024*	48.0	17.1	6523-6527*	40.5	29.1	52.8
Creatinine																		
0-120	87.1	87.1	39.3	82.2	89.9	84.4	87.4	84.4	91.0	67.0	87.9	68.9	90.0	81.8	41.9	86.4	84.8	78.4
121-180	8.2	8.2	4.1	7.1	6.0	9.2	7.1	8.6	6.0	7.1	7.3	7.2	6.4	9.0	5.0	7.6	9.6	7.3
>180	3.2	3.1	1.2	2.9	3.0	3.3	2.8	3.7	1.1	3.5	2.2	2.7	2.7	5.2	2.3	4.5	2.7	3.1
Unknown	1.5	1.6	55.5	7.8	1.1	3.2	2.7	3.3	1.9	22.3	2.6	21.1	0.9	4.0	50.8	1.5	2.9	11.2
Comorbidities and risk factors																		
Diabetes	31.9	32.5	22.1	30.0	31.5	32.7	33.3	32.8	24.1	30.7	28.6	27.3	31.3	36.4	29.5	40.4	32.3	31.5
Hypertension	71.9	69.6	51.7	67.5	72.8	73.3	69.8	73.7	61.0	70.9	65.9	59.4	66.4	71.6	65.9	74.3	73.3	68.6
Hyperlipidemia	71.9	64.6	49.6	66.3	70.5	72.8	67.4	75.5	57.9	73.1	65.5	51.6	70.1	75.8	64.5	74.8	70.5	68.2
Current Smoking	26.5	27.0	17.9	22.5	24.6	26.5	20.1	15.6	27.1	16.5	19.3	27.1	17.8	14.2	36.3	14.3	23.6	21.9
Former Smoking	32.3	35.3	26.0	39.8	43.8	39.1	24.7	30.1	34.3	31.5	37.3	16.8	30.5	35.6	8.9	20.2	30.4	29.5
COPD	5.1	8.4	7.6	8.2	8.6	11.2	4.3	5.9	7.7	6.2	7.3	7.2	4.0	6.0	8.3	4.1	7.4	6.6
MI	25.1	28.0	25.5	35.4	27.4	32.4	32.1	31.4	28.9	32.8	33.0	18.4	26.7	31.3	9.0	31.1	36.0	28.0
CHF	6.9	5.7	5.9	7.4	5.6	6.8	4.8	10.2	4.1	7.6	5.6	2.7	5.6	10.3	9.1	7.1	7.0	7.0
CVD	10.1	8.0	5.0	6.5	9.3	8.9	4.6	7.5	3.8	6.4	5.8	3.8	5.0	6.8	6.6	5.6	7.0	6.6
PVD	7.3	8.6	6.0	6.5	7.2	11.0	3.7	7.5	3.9	7.7	6.1	6.0	5.2	8.4	7.5	4.7	5.5	6.7
Renal Disease	5.5	4.7	3.4	4.6	4.2	3.9	3.8	5.6	2.1	6.0	3.8	3.0	4.0	7.4	5.0	4.5	5.0	4.8
Dialysis	1.7	1.3	1.3	2.3	2.4	1.6	2.0	2.1	0.5	2.6	1.3	1.7	1.8	3.6	1.0	2.5	1.6	1.9
Previous PCI	32.3	30.5	28.4	26.0	29.2	31.7	22.7	30.7	19.8	32.5	29.1	21.8	27.0	33.2	18.2	28.9	24.9	27.9
Previous CABG	14.8	11.8	13.2	17.6	13.8	16.5	10.7	15.0	7.0	14.9	16.3	10.9	13.7	17.8	9.4	10.2	19.0	13.7
Charlson Score (Mean ±SD)	0.91 ±1.50	0.97 ±1.53	0.68 ±1.34	0.82 ±1.43	0.78 ±1.44	0.88 ±1.44	0.81 ±1.37	0.99 ±1.52	0.59 ±1.22	1.05 ±1.61	0.84 ±1.37	0.97 ±1.49	0.65 ±1.31	1.10 ±1.74	0.78 ±1.44	0.85 ±1.45	0.91 ±1.56	0.87 ±1.48
Coronary Anatomy																		
Non-Significant CAD (<70%)	0.1	≤5	0.3	0.0	0.0	0.5	0.0	0.3	≤5	0.8	0.0	≤5	≤5	≤5	0.8	≤5	0.9	0.2
Left Main ≥50%	3.6	3.2	5.3	4.3	4.6	4.4	2.2	3.4	1.4	4.0	3.4	2.3	3.8	3.7	4.5	2.7	3.9	3.6
Prox LAD ≥70%	18.8	12.2	22.0	28.4	21.6	28.2	13.1	25.5	16.3	13.8	18.6	17.1	16.3	17.9	18.6	19.6	19.4	18.8
Prox LAD 100%	2.8	2.1	3.8	3.4	4.5	3.7	2.1	4.3	1.6	2.2	1.9	1.6	3.2	2.1	2.9	2.5	4.1	2.8
Prox LAD CTO	0.3	0.8	≤5	0.5	1.0	3.3	0.2	0.4	≤5	0.8	0.4	0.8	2.6	2.0	0.1	≤5	0.4	0.8
Mid/distal LAD ≥70%	39.2	38.0	47.2	15.7	47.3	36.7	22.1	25.4	36.3	23.9	30.4	21.6	39.4	31.4	41.4	43.2	36.6	33.7
Mid/distal LAD 100%	5.2	5.7	6.1	2.1	6.0	5.7	3.4	3.7	3.6	3.8	2.3	1.8	6.2	4.1	6.1	4.3	6.5	4.5
Mid/distal LAD CTO	0.9	3.1	0.4	0.2	1.1	4.8	0.3	0.5	≤5	1.7	0.5	0.7	3.4	232-236*	0.5	0.3	0.4	1.4
Circumflex ≥70%	35.5	36.6	40.2	28.8	43.7	38.4	22.2	27.0	28.4	23.3	29.0	26.4	34.1	27.0	37.3	38.1	35.1	32.0
Circumflex 100%	6.2	5.4	6.7	4.3	9.1	7.2	4.8	5.5	3.8	5.0	2.7	2.7	7.1	3.6	7.3	5.7	6.2	5.4
Circumflex CTO	1.0	2.7	0.6	0.8	1.8	6.2	0.3	0.4	≤5	2.2	0.6	1.2	3.4	206-210*	0.4	0.6	0.5	1.5
RCA ≥70%	40.4	41.9	50.1	35.8	47.1	49.3	26.7	30.2	39.2	26.5	32.8	30.6	37.1	31.8	42.0	40.5	39.9	36.9

Variable	HHS	HSN	KGH	LHSC	NHS	PRHC	RVHS	SHSC	SMGH	SMH	SRHC	TBRHS	THP	UHN	UOHI	WOHS	WRH	Ont.	
RCA 100%	9.1	9.0	11.2	6.9	12.8	12.7	7.4	7.9	6.7	6.8	4.3	3.9	9.8	6.6	9.4	8.4	8.5	8.1	
RCA CTO	2.1	4.9	2.2	1.8	2.5	10.4	0.8	1.3	0.3	3.0	1.3	1.5	5.9	6.3	1.0	1.5	0.6	2.8	
Graft location among patients who had bypass surgery																			
Graft LAD	57.8	47.2	62.0	45.4	76.3	65.0	36.9	39.7	50.2	9.6	47.3	7.0	60.2	42.5	37.1	63.0	57.7	46.2	
Graft Circumflex	28.2	22.0	40.2	13.5	30.7	30.8	14.5	18.6	10.6	5.2	34.5	5.1	34.5	21.6	16.6	32.5	27.4	23.4	
Graft RCA	26.0	22.0	40.0	16.0	34.2	30.1	18.7	16.6	16.9	4.8	34.5	3.7	31.1	20.7	15.8	26.9	25.8	22.7	
Number of diseased vessels (combined LAD, Circ, RCA) among patients who did not have bypass surgery																			
0	18.6	21.7	11.4	29.8	5.3	14.5	48.6	42.4	21.7	52.2	34.9	35.0	29.7	44.4	15.7	27.2	24.6	29.6	
1	53.5	47.9	53.6	46.6	60.1	49.0	33.0	32.6	51.8	24.8	41.9	44.2	40.9	30.4	51.1	36.1	47.3	42.5	
2	23.1	23.9	26.4	18.8	28.2	28.1	14.3	19.4	22.4	16.7	18.8	17.2	23.1	18.7	25.6	26.0	21.7	21.7	
3	4.8	6.5	8.6	4.8	6.4	8.4	4.1	5.5	4.1	6.2	4.4	3.6	6.3	6.5	7.6	10.6	6.5	6.2	

Data are presented as percentages, unless otherwise specified. Blank cells indicate data was not available; *Measures were undertaken (i.e., suppression of other numbers) to ensure small cells could not be calculated; Cell counts ≤5 were suppressed to comply with privacy legislation.

Table 15a. Procedure characteristics for all unique PCIs in Ontario from 2011/13 to 2015/16

Variable	HHS	HSN	KGH	LHSC	NHS	PRHC	RVHS	SHSC	SMGH	SMH	SRHC	TBRHS	THP	UHN	UOHI	WOHS	WRH	Ont.
Volume	10583	6079	4014	5300	807	3474	5855	7510	4458	5996	9123	2753	8006	6461	9836	6334	2586	99175
Stent type																		
BMS	32.7	42.6	23.8	33.6	10.7	36.3	38.2	21.9	38.6	26.0	33.1	36.8	24.5	32.4	12.4	26.9	27.8	29.3
DES	68.6	64.4	80.2	68.3	90.3	67.6	65.9	81.0	64.1	79.3	70.6	63.9	77.2	71.7	88.9	77.0	75.4	73.9
Length of Stay (Days)																		
≤1	38.8	38.1	38.1	32.1	59.5	49.0	47.8	54.3	48.3	57.8	37.2	44.3	44.8	51.4	32.6	44.9	47.8	43.5
2	16.5	15.8	18.4	13.8	5.6	17.9	18.0	11.9	13.2	9.2	16.0	7.8	7.5	13.5	8.6	11.9	8.3	13.0
3	15.3	13.0	14.9	20.3	9.9	12.8	14.1	10.7	16.2	10.6	15.8	12.9	15.2	8.2	13.8	13.9	13.4	13.8
≥4	29.3	33.0	28.7	33.8	25.0	20.4	20.1	23.1	22.3	22.4	31.0	35.1	32.4	26.8	45.0	29.3	30.5	29.7
Mean ±SD	3.58 ±7.73	3.79 ±5.38	3.54 ±8.48	4.00 ±8.42	2.28 ±4.23	3.21 ±13.63	3.01 ±8.04	3.84 ±14.43	2.54 ±4.28	3.29 ±8.92	3.63 ±6.30	4.45 ±12.47	3.37 ±6.23	4.00 ± 10.47	5.04 ± 9.47	3.75 ± 6.73	3.36 ± 6.91	3.70 ±8.85
Median (IQR)	2 (1-4)	2 (1-4)	2 (0-4)	3 (1-4)	0 (0-4)	2 (1-3)	2 (1-3)	1 (1-3)	2 (0-3)	1 (0-3)	2 (1-4)	2 (1-5)	2 (0-4)	1 (1-4)	3 (0-6)	2 (1-4)	2 (0-4)	2 (1-4)
Number of stents per procedure																		
1	64.3	52.7	56.6	66.5	62.8	55.8	66.9	55.0	72.4	50.1	54.8	59.6	58.7	50.3	58.8	49.6	61.6	58.1
2	25.4	29.2	28.9	24.8	26.8	27.6	23.7	28.2	21.5	28.3	27.4	27.8	27.0	28.9	27.6	32.2	25.3	27.2
≥3	10.2	18.1	14.4	8.7	10.4	16.6	9.4	16.8	6.1	21.6	17.8	12.6	14.3	20.8	13.6	18.2	13.1	14.7
Maximum lesion severity per procedure																		
A	4.4	194-198*	2.2	2.0	8.9	2.0	5.1	0.0	≤5	19-23*	1.2	11.6	4.5	138-142*	2.6	4.2	2.5	2.9
B1	19.6	42.0	64.5	42.1	24.5	26.1	30.7	0.0	719-723*	44-48*	17.4	42.5	25.3	16.5	38.1	20.2	26.2	24.9
B2	42.1	45.8	1.7	14.8	27.9	31.3	27.1	0.0	20.8	0.8	59.4	3.7	53.3	32.4	0.1	52.2	39.2	28.4
C	31.2	8.9	10.3	38.8	34.9	40.4	36.8	0.0	43.2	0.6	21.9	33.3	16.9	48.9	41.5	23.4	31.8	26.1
Missing	2.7	≤5	21.3	2.2	3.7	0.2	0.3	100.0	19.8	97.6	0.0	8.9	0.1	≤5	17.7	0.0	0.3	17.7
Number of stents per vessel																		
Mean ±SD	1.38 ±0.68	1.49 ±0.78	1.45 ±0.69	1.34 ±0.62	1.36 ±0.66	1.51 ±0.79	1.31 ±0.62	1.48 ±0.75	1.31 ±0.60	1.52 ±0.81	1.50 ±0.80	1.43 ±0.71	1.38 ±0.66	1.52 ±0.80	1.46 ±0.74	1.42 ±0.63	1.45 ±0.75	1.43 ±0.72
Median (IQR)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)
Number of stents per graft																		
Mean ±SD	1.37 ±0.69	1.47 ±0.88	1.39 ±0.81	1.51 ±0.82	1.35 ±0.87	1.56 ±0.90	1.27 ±0.55	1.50 ±0.89	1.40 ±0.67	1.35 ±0.63	1.47 ±0.77	1.42 ±0.77	1.45 ±0.87	1.43 ± 0.78	1.39 ± 0.72	1.60 ± 0.97	1.44 ± 0.72	1.44 ±0.80
Median (IQR)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-1)	1 (1-2)	1 (1-1)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)
Total stent length per procedure (mm)																		
Mean ±SD	29.81 ±18.07	30.72 ±20.26	29.66 ±18.50	30.97 ±18.23	29.29 ±17.54	33.22 ±20.89	27.46 ±16.43	36.53 ±23.70	28.63 ±15.99	38.52 ±25.63	37.21 ±25.09	34.57 ± 22.52	32.13 ±20.30	37.11 ± 24.54	35.09 ± 21.17	36.95 ± 21.90	29.59 ± 19.58	33.33 ±21.46
Median (IQR)	24 (16-38)	24 (16-39)	25 (15-38)	26 (18-38)	24 (16-38)	27 (18-43)	22 (16-33)	30 (18-48)	23 (18-35)	31 (18-50)	30 (18-48)	28 (18-45)	26 (18-41)	30 (18- 48)	28 (18- 45)	32 (20- 48)	23 (15- 38)	28 (18-42)
Mean stent length per procedure (mm)																		
Mean ±SD	20.05 ±6.39	17.63 ±5.84	18.30 ±6.34	21.49 ±6.81	19.48 ±6.64	19.89 ±6.15	18.89 ±5.29	21.41 ± 6.29	21.32 ±6.94	20.99 ±6.75	21.53 ±7.00	21.59 ±6.97	19.89 ±6.20	20.30 ±6.18	22.06 ±6.58	21.19 ±6.59	18.95 ±6.82	20.47 ±6.56
Median (IQR)	20 (16-24)	16 (13-20)	18 (14-22)	20 (15-26)	18 (16-22)	18 (15-23)	18 (15-22)	21 (16-26)	20 (15-26)	20 (15-25)	20 (16-26)	20 (16-26)	18 (15-24)	19 (16-24)	22 (18-26)	20 (16-26)	18 (14-23)	19 (15-24)
Maximum stent size per procedure (mm)																		

Variable	HHS	HSN	KGH	LHSC	NHS	PRHC	RVHS	SHSC	SMGH	SMH	SRHC	TBRHS	THP	UHN	UOHI	WOHS	WRH	Ont.
Mean ±SD	2.98 ±0.48	3.18 ±0.52	2.99 ±0.47	3.11 ±0.49	3.01 ±0.51	3.02 ±0.54	3.03 ±0.47	3.12 ±0.47	3.07 ±0.51	3.03 ±0.50	3.04 ±0.51	2.88 ±0.46	3.04 ±0.48	3.05 ±0.53	3.05 ±0.48	2.92 ±0.45	3.05 ±0.55	3.04 ±0.49
Median (IQR)	3 (3-4)	3 (3-4)	3 (3-4)	3 (3-4)	3 (3-4)	3 (3-4)	3 (3-4)	3 (3-4)	3 (3-4)	3 (3-4)	3 (3-4)	3 (3-3)	3 (3-4)	3 (3-4)	3 (3-4)	3 (3-3)	3 (3-4)	3 (3-4)
Minimum stent size per procedure (mm)																		
Mean ±SD	2.83 ±0.46	2.97 ±0.51	2.81 ±0.46	2.97 ±0.48	2.85 ±0.49	2.82 ±0.51	2.90 ±0.47	2.92 ±0.46	2.97 ±0.51	2.78 ±0.48	2.84 ±0.50	2.75 ±0.45	2.85 ±0.48	2.79 ±0.50	2.87 ±0.48	2.71 ±0.41	2.88 ±0.54	2.85 ±0.49
Median (IQR)	3 (3-3)	3 (3-4)	3 (3-3)	3 (3-3)	3 (3-3)	3 (3-3)	3 (3-3)	3 (3-3)	3 (3-4)	3 (3-3)	3 (3-3)	3 (3-3)	3 (3-3)	3 (3-3)	3 (3-3)	3 (3-3)	3 (3-3)	3 (3-3)
Access site																		
Radial	70.8	21.7	45.3	54.4	82.0	66.2	92.2	67.1	28.8	60.5	75.4	77.3	25.3	65.1	63.5	55.2	56.8	58.8
Femoral	30.0	75.8	55.0	47.0	19.0	38.6	9.2	26.5	72.8	40.0	25.2	20.8	75.6	34.3	40.0	45.2	43.9	41.6
Lesion locations																		
Right coronary artery (RCA)	35.3	36.5	37.8	37.1	31.5	36.0	37.0	33.0	38.4	35.2	36.1	37.8	36.9	34.6	36.2	36.8	34.9	36.0
Left main coronary artery (LMCA)	2.2	2.4	2.7	2.9	1.4	2.3	2.5	4.8	0.8	5.2	2.8	1.1	1.8	5.0	2.8	1.6	1.9	2.8
Left anterior descending (LAD)	42.5	42.8	43.2	38.2	43.4	40.9	43.6	46.3	41.2	47.4	44.9	40.4	46.9	47.0	44.5	51.4	40.3	44.4
Left circumflex artery (LCX)	24.8	31.5	25.7	24.7	28.9	27.3	25.1	27.6	21.3	28.2	27.8	28.5	28.7	29.9	24.9	31.5	27.7	27.2
Graft	3.6	4.5	4.0	4.2	5.7	5.3	2.8	4.0	1.8	0.6	4.1	2.1	3.2	5.1	2.6	2.4	4.0	3.4

Data are presented as percentages, unless otherwise specified; *Measures were undertaken (i.e., suppression of other numbers) to ensure small cells could not be calculated; Cell counts ≤5 were suppressed to comply with privacy legislation.

Table 15b. Procedure characteristics for all emergent PCIs in Ontario from 2011/13 to 2015/16

Variable	HHS	HSN	KGH	LHSC	NHS	PRHC	RVHS	SHSC	SMGH	SMH	SRHC	TBRHS	THP	UHN	UOHI	WOHS	WRH	Ont.
Volume	3113	408	675	1295	N/A	695	1930	1480	1560	960	2629	409	2156	680	2967	1152	402	22511
Stent type																		
BMS	42.0	75.5	35.7	46.6	N/A	47.8	50.2	34.6	51.5	42.3	46.5	50.4	38.7	47.5	18.8	33.5	27.6	40.5
DES	59.0	32.6	69.3	55.3	N/A	55.1	52.8	67.5	50.8	61.3	56.0	50.6	62.7	55.1	82.5	70.6	77.1	61.8
Length of Stay (Days)																		
≤1	8.5	4.9	10.1	4.8	N/A	6.6	7.1	6.4	3.8	6.4	6.2	11.5	3.5	6.9	5.5	9.3	19.7	6.6
2	36.2	15.0	34.4	21.1	N/A	31.1	28.2	21.5	23.7	16.6	30.5	11.5	8.1	7.9	15.3	26.7	5.2	22.9
3	26.1	21.6	26.5	36.1	N/A	28.2	29.5	28.6	34.6	31.3	28.6	25.2	28.8	20.0	28.0	25.0	27.4	28.5
≥4	29.1	58.6	29.0	38.1	N/A	34.1	35.2	43.4	37.9	45.8	34.8	51.8	59.6	65.1	51.2	39.0	47.8	41.9
Mean ±SD	4.37 ±8.66	6.68 ±8.92	4.17 ±5.60	4.86 ±7.06	N/A	5.56 ±26.67	4.95 ±11.26	6.17 ±19.38	4.42 ±5.09	5.53 ±9.03	4.68 ±8.56	6.20 ±12.27	6.17 ±8.63	8.94 ±20.05	6.39 ±11.31	5.23 ±9.19	5.63 ±12.04	5.40 ±11.56
Median (IQR)	3 (2-4)	4 (3-7)	3 (2-4)	3 (2-4)	N/A	3 (2-4)	3 (2-4)	3 (2-5)	3 (2-4)	3 (3-5)	3 (2-4)	4 (3-5)	4 (3-6)	4 (3-8)	4 (3-6)	3 (2-5)	3 (3-5)	3 (2-5)
Number of stents per procedure																		
1	64.6	53.9	54.7	68.3	N/A	56.5	72.4	57.9	70.8	61.3	58.3	57.9	64.5	54.9	61.4	49.6	57.5	62.1
2	25.9	28.7	31.3	24.9	N/A	27.6	20.8	29.8	22.9	24.6	27.2	31.3	27.0	27.6	26.5	34.1	29.9	26.6
≥3	9.5	17.4	14.1	6.8	N/A	15.8	6.8	12.3	6.2	14.2	14.4	10.8	8.5	17.5	12.1	16.3	12.7	11.2
Maximum lesion severity per procedure																		
A	2.1	≤5	1.0	0.6	N/A	≤5	3.2	0.0	0.0	≤5	0.6	4.2	1.1	≤5	1.3	1.8	≤5	1.2
B1	12.8	*109-113	61.2	29.4	N/A	15.7	30.4	0.0	12.2	≤5	14.5	36.2	16.0	80-90*	1042-1046*	12.7	10.4	19.5
B2	49.3	56.9	1.3	13.3	N/A	41.0	609-619*	0.0	22.0	≤5	62.3	4.6	1497-1501*	36.6	≤5	58.9	35.1	33.0
C	33.3	15.2	16.4	53.7	N/A	42.4	34.2	0.0	46.6	0.8	22.6	47.7	13.2	50.1	44.6	26.6	53.7	30.5
Missing	2.4	0.0	20.0	3.0	N/A	≤5	≤5	100.0	19.2	98.4	0.0	7.3	≤5	0.0	18.8	0.0	≤5	15.9
Number of stents per vessel																		
Mean ±SD	1.43 ±0.72	1.50 ±0.74	1.56 ±0.77	1.33 ±0.56	N/A	1.57 ±0.85	1.28 ±0.57	1.50 ±0.74	1.34 ±0.64	1.43 ±0.68	1.50 ±0.76	1.52 ±0.77	1.40 ±0.66	1.54 ±0.89	1.47 ±0.75	1.48 ±0.66	1.54 ±0.78	1.44 ±0.71
Median (IQR)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	N/A	1 (1-2)	1 (1-1)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)
Number of stents per graft																		
Mean ±SD	1.60 ±0.81	1.57 ±1.51	1.64 ±0.67	1.58 ±0.90	N/A	1.71 ±1.27	1.31 ±0.54	1.83 ±1.00	1.61 ±0.70	1.25 ±0.50	1.81 ±1.03	1.20 ±0.45	1.83 ±1.17	1.21 ±0.58	1.48 ±0.69	1.14 ±0.38	1.00 ±0.00	1.59 ±0.90
Median (IQR)	1 (1-2)	1 (1-1)	2 (1-2)	1 (1-2)	N/A	1 (1-2)	1 (1-2)	1 (1-3)	2 (1-2)	1 (1-2)	1 (1-3)	1 (1-1)	2 (1-2)	1 (1-1)	1 (1-2)	1 (1-1)	1 (1-1)	1 (1-2)
Total stent length per procedure (mm)																		
Mean ±SD	30.57 ±17.00	30.76 ±18.20	31.57 ±17.73	30.72 ±16.48	N/A	33.18 ±19.81	26.06 ±13.67	34.62 ±19.37	29.28 ±15.73	33.50 ±20.47	36.68 ±23.40	36.36 ±22.58	30.54 ±17.87	35.53 ±22.43	34.30 ±19.27	38.20 ±21.86	33.49 ±20.18	32.51 ±19.20
Median (IQR)	24 (20-38)	26 (18-39)	28 (18-42)	26 (18-38)	N/A	28 (18-42)	22 (18-30)	29 (20-44)	24 (18-36)	28 (18-41)	30 (18-46)	30 (19-46)	26 (18-38)	30 (18-46)	28 (18-42)	32 (22-49)	30 (18-41)	28 (18-40)

Variable	HHS	HSN	KGH	LHSC	NHS	PRHC	RVHS	SHSC	SMGH	SMH	SRHC	TBRHS	THP	UHN	UOHI	WOHS	WRH	Ont.
Mean stent length per procedure (mm)																		
Mean ±SD	21.04 ±6.18	18.34 ±5.35	19.80 ±6.65	22.15 ±6.59	N/A	20.47 ±5.97	19.38 ±5.26	22.09 ±6.07	21.63 ±6.66	21.46 ±6.72	22.67 ±7.13	23.00 ±7.26	20.91 ±6.25	20.73 ±5.81	22.59 ±6.55	22.37 ±6.52	21.09 ±6.78	21.46 ±6.48
Median (IQR)	20 (16-24)	18 (15-22)	18 (15-23)	22 (18-28)	N/A	19 (16-24)	18 (15-22)	22 (18-26)	21 (17-26)	21 (16-26)	22 (18-28)	22 (18-28)	20 (16-24)	20 (17-24)	22 (18-26)	22 (17-27)	20 (15-26)	20 (17-26)
Maximum stent size per procedure (mm)																		
Mean ±SD	3.03 ±0.48	3.27 ±0.51	3.06 ±0.47	3.16 ±0.48	N/A	3.10 ±0.54	3.11 ±0.48	3.16 ±0.46	3.15 ±0.53	3.10 ±0.51	3.13 ±0.52	2.98 ±0.47	3.14 ±0.48	3.13 ±0.55	3.11 ±0.49	3.03 ±0.48	3.21 ±0.54	3.11 ±0.50
Median (IQR)	3 (3-4)	3 (3-4)	3 (3-4)	3 (3-4)	N/A	3 (3-4)	3 (3-4)	3 (3-4)	3 (3-4)	3 (3-4)	3 (3-4)	3 (3-4)	3 (3-4)	3 (3-4)	3 (3-4)	3 (3-4)	3 (3-4)	3 (3-4)
Minimum stent size per procedure (mm)																		
Mean ±SD	2.89 ±0.46	3.09 ±0.53	2.89 ±0.49	3.03 ±0.48	N/A	2.92 ±0.52	3.00 ±0.48	2.99 ±0.46	3.05 ±0.53	2.92 ±0.49	2.95 ±0.52	2.84 ±0.45	2.99 ±0.49	2.90 ±0.53	2.95 ±0.49	2.82 ± 0.47	3.00 ± 0.56	2.95 ±0.50
Median (IQR)	3 (3-3)	3 (3-4)	3 (3-3)	3 (3-4)	N/A	3 (3-3)	3 (3-4)	3 (3-4)	3 (3-4)	3 (3-3)	3 (3-4)	3 (3-3)	3 (3-4)	3 (3-3)	3 (3-3)	3 (3-3)	3 (3-4)	3 (3-4)
Access site																		
Radial	70.9	20.1	42.2	56.2	N/A	71.1	93.4	66.1	20.4	64.0	76.8	85.1	10.9	70.7	53.8	43.3	64.4	57.5
Femoral	29.6	78.9	58.4	45.1	N/A	34.2	8.0	26.1	81.2	36.1	24.3	14.9	89.8	28.8	48.6	57.2	37.3	43.1
Lesion locations																		
Right coronary artery (RCA)	43.4	52.0	44.0	44.6	N/A	43.9	39.9	37.0	43.4	37.4	41.9	45.0	40.3	36.9	41.9	40.1	42.3	41.6
Left main coronary artery (LMCA)	1.4	≤5	1.8	1.1	N/A	1.4	2.3	2.7	0.6	3.1	2.1	0.0	1.2	4.7	1.7	1.7	≤5	1.7
Left anterior descending (LAD)	41.1	40.7	38.8	40.5	N/A	38.8	45.4	47.8	41.8	46.4	43.4	38.1	44.7	48.1	43.4	52.1	44.0	43.7
Left circumflex artery (LCX)	16.4	19.1	19.0	16.5	N/A	19.0	17.2	16.4	14.4	18.8	19.0	19.8	17.3	21.9	18.0	23.8	16.9	17.9
Graft	1.1	1.7	1.6	1.5	N/A	3.0	1.5	2.0	1.2	≤5	1.6	≤5	1.1	2.1	1.0	0.6	≤5	1.3

Data are presented as percentages, unless otherwise specified; NHS did not perform Emergent PCIs during this time frame; *Measures were undertaken (i.e., suppression of other numbers) to ensure small cells could not be calculated; Cell counts ≤5 were suppressed to comply with privacy legislation.

Table 15c. Procedure characteristics for all non-emergent PCIs in Ontario from 2011/13 to 2015/16

Variable	HHS	HSN	KGH	LHSC	NHS	PRHC	RVHS	SHSC	SMGH	SMH	SRHC	TBRHS	THP	UHN	UOHI	WOHS	WRH	Ont.
Volume	7470	5671	3339	4005	807	2779	3925	6030	2898	5036	6494	2344	5850	5781	6869	5182	2184	76664
Stent type																		
BMS	28.8	40.2	21.4	29.4	10.7	33.4	32.3	18.8	31.6	22.8	27.7	34.4	19.2	30.6	9.6	25.5	27.8	25.9
DES	72.6	66.7	82.4	72.5	90.3	70.7	72.4	84.4	71.2	82.8	76.5	66.2	82.5	73.7	91.7	78.5	75.1	77.4
Length of Stay (Days)																		
≤1	51.4	40.5	43.7	40.9	59.5	59.6	67.7	66.1	72.3	67.6	49.8	50.0	60.0	56.7	44.3	52.8	53.0	54.3
2	8.3	15.9	15.1	11.5	5.6	14.6	13.0	9.5	7.6	7.8	10.2	7.1	7.3	14.2	5.6	8.6	8.8	10.1
3	10.9	12.4	12.5	15.3	9.9	8.9	6.6	6.3	6.3	6.6	10.6	10.7	10.3	6.8	7.7	11.4	10.9	9.5
≥4	29.4	31.2	28.6	32.4	25.0	16.9	12.7	18.1	13.8	18.0	29.5	32.1	22.4	22.3	42.4	27.1	27.3	26.0
Mean ±SD	3.25 ±7.28	3.58 ±4.97	3.41 ±8.95	3.72 ±8.80	2.28 ±4.23	2.62 ±7.27	2.06 ±5.60	3.27 ±12.87	1.53 ±3.36	2.86 ±8.84	3.21 ±5.05	4.15 ±12.48	2.34 ±4.67	3.42 ±8.50	4.46 ±8.49	3.43 ±6.00	2.94 ±5.37	3.20 ±7.81
Median (IQR)	1 (0-4)	2 (1-4)	2 (0-4)	2 (1-4)	0 (0-4)	1 (1-3)	1 (0-2)	1 (1-2)	0 (0-2)	1 (0-2)	2 (1-4)	1 (1-4)	1 (0-3)	1 (0-3)	3 (0-6)	1 (1-4)	1 (0-4)	1 (1-4)
Number of stents per procedure																		
1	64.2	52.6	57.0	66.0	62.8	55.6	64.2	54.2	73.2	48.0	53.4	59.9	56.6	49.7	57.7	49.7	62.4	56.9
2	25.2	29.3	28.5	24.7	26.8	27.6	25.2	27.8	20.7	29.0	27.5	27.1	26.9	29.0	28.0	31.8	24.5	27.4
≥3	10.5	18.1	14.5	9.3	10.4	16.8	10.6	17.9	6.1	23.0	19.2	13.0	16.5	21.2	14.3	18.6	13.1	15.7
Maximum lesion severity per procedure																		
A	5.3	192-196*	2.4	2.5	8.9	65-69*	6.0	0.0	≤5	0.4	1.5	12.9	334-338*	133-137*	215-219*	4.7	64-68*	3.3
B1	22.5	43.0	65.2	46.2	24.5	28.7	30.8	0.0	18.3	0.8	18.6	43.6	28.7	16.9	39.3	21.9	29.1	26.5
B2	39.1	45.0	1.8	15.4	27.9	28.9	24.8	0.0	*581-585	0.9	58.3	3.5	47.3	31.9	≤5	50.8	40.0	27.1
C	30.3	8.5	9.1	34.0	34.9	39.8	38.0	0.0	41.3	0.5	21.7	30.8	18.2	48.8	40.2	22.7	27.7	24.9
Missing	2.8	≤5	21.5	1.9	3.7	≤5	0.4	100.0	20.2	97.4	0.0	9.2	≤5	≤5	1185-1189*	0.0	≤5	18.2
Number of stents per vessel																		
Mean ±SD	1.36 ±0.66	1.49 ±0.78	1.43 ±0.67	1.35 ±0.64	1.36 ±0.66	1.50 ±0.77	1.33 ±0.64	1.47 ±0.75	1.29 ±0.59	1.54 ±0.83	1.50 ±0.81	1.42 ±0.70	1.37 ±0.66	1.51 ±0.79	1.45 ±0.74	1.41 ±0.62	1.43 ±0.75	1.43 ±0.72
Median (IQR)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-1)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)
Number of stents per graft																		
Mean ±SD	1.35 ±0.67	1.47 ±0.86	1.38 ±0.82	1.51 ±0.81	1.35 ±0.87	1.54 ±0.85	1.26 ±0.55	1.46 ± 0.87	1.34 ±0.65	1.36 ±0.65	1.42 ±0.72	1.44 ±0.79	1.41 ±0.82	1.44 ±0.79	1.38 ±0.72	1.62 ±0.98	1.45 ±0.73	1.43 ±0.79
Median (IQR)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-1)	1 (1-2)	1 (1-1)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)	1 (1-2)
Total stent length per procedure (mm)																		
Mean ±SD	29.49 ±18.49	30.72 ±20.40	29.27 ±18.63	31.05 ±18.76	29.29 ±17.54	33.23 ±21.15	28.15 ±17.59	36.99 ±24.62	28.28 ±16.12	39.48 ±26.40	37.43 ±25.74	34.26 ±22.50	32.72 ±21.10	37.29 ±24.78	35.43 ±21.93	36.67 ±21.91	28.88 ±19.38	33.57 ±22.08
Median (IQR)	24 (16-37)	24 (16-39)	24 (15-38)	26 (18-38)	24 (16-38)	27 (18-43)	22 (16-35)	30 (18-48)	23 (18-33)	32 (18-51)	30 (18-48)	28 (18-45)	26 (16-42)	30 (18-48)	28 (18-46)	32 (20-48)	23 (15-36)	28 (18-43)
Mean stent length per procedure (mm)																		

Variable	HHS	HSN	KGH	LHSC	NHS	PRHC	RVHS	SHSC	SMGH	SMH	SRHC	TBRHS	THP	UHN	UOHI	WOHS	WRH	Ont.
Mean ±SD	19.64 ±6.43	17.58 ±5.88	17.99 ±6.23	21.27 ±6.86	19.48 ±6.64	19.75 ±6.19	18.64 ±5.29	21.24 ± 6.34	21.15 ±7.08	20.90 ±6.75	21.06 ±6.89	21.34 ±6.89	19.51 ±6.14	20.25 ±6.22	21.83 ±6.57	20.93 ±6.57	18.55 ±6.76	20.18 ±6.56
Median (IQR)	20 (16-24)	16 (13-20)	17 (14-22)	20 (15-26)	18 (16-22)	18 (15-23)	18 (15-22)	20 (16-26)	19 (15-26)	20 (15-25)	20 (15-26)	20 (15-26)	18 (15-23)	19 (16-24)	22 (18-26)	20 (16-25)	18 (14-23)	18 (15-24)
Maximum stent size per procedure (mm)																		
Mean ±SD	2.95 ±0.48	3.18 ±0.52	2.98 ±0.47	3.09 ±0.48	3.01 ±0.51	2.99 ±0.54	2.99 ±0.45	3.11 ±0.47	3.02 ±0.50	3.01 ±0.49	3.01 ±0.50	2.86 ±0.45	3.00 ±0.48	3.04 ±0.52	3.03 ±0.47	2.90 ±0.44	3.02 ±0.55	3.02 ±0.49
Median (IQR)	3 (3-4)	3 (3-4)	3 (3-4)	3 (3-4)	3 (3-4)	3 (3-4)	3 (3-3)	3 (3-4)	3 (3-4)	3 (3-4)	3 (3-4)	3 (3-3)	3 (3-4)	3 (3-4)	3 (3-4)	3 (3-3)	3 (3-4)	3 (3-4)
Minimum stent size per procedure (mm)																		
Mean ±SD	2.81 ±0.46	2.96 ±0.51	2.80 ±0.45	2.95 ±0.48	2.85 ±0.49	2.80 ±0.51	2.86 ±0.45	2.90 ±0.46	2.92 ±0.49	2.75 ±0.47	2.79 ±0.49	2.73 ±0.44	2.79 ±0.47	2.78 ±0.50	2.84 ±0.47	2.69 ±0.40	2.86 ±0.54	2.83 ±0.48
Median (IQR)	3 (3-3)	3 (3-4)	3 (3-3)	3 (3-3)	3 (3-3)	3 (3-3)	3 (3-3)	3 (3-3)	3 (3-3)	3 (2-3)	3 (3-3)	3 (3-3)	3 (3-3)	3 (3-3)	3 (3-3)	3 (3-3)	3 (3-3)	3 (3-3)
Access site																		
Radial	70.8	21.8	45.9	53.8	82.0	65.0	91.6	67.4	33.3	59.9	74.9	75.9	30.6	64.4	67.7	57.9	55.4	59.1
Femoral	30.1	75.6	54.3	47.7	19.0	39.7	9.7	26.6	68.4	40.7	25.5	21.9	70.4	34.9	36.3	42.6	45.1	41.1
Lesion locations																		
Right coronary artery (RCA)	31.9	35.4	36.5	34.7	31.5	34.0	35.6	32.0	35.7	34.8	33.8	36.6	35.7	34.3	33.7	36.1	33.6	34.4
Left main coronary artery (LMCA)	2.6	2.5	2.9	3.5	1.4	2.5	2.5	5.4	0.9	5.6	3.1	1.2	2.0	5.0	3.2	1.5	2.1	3.1
Left anterior descending (LAD)	43.1	42.9	44.1	37.4	43.4	41.4	42.8	45.9	40.9	47.6	45.4	40.8	47.7	46.9	44.9	51.2	39.6	44.6
Left circumflex artery (LCX)	28.2	32.4	27.0	27.3	28.9	29.4	29.0	30.3	25.0	30.0	31.3	30.0	32.9	30.8	27.9	33.2	29.7	29.9
Graft	4.6	4.7	4.5	5.0	5.7	5.9	3.5	4.5	2.1	0.7	5.1	2.3	4.0	5.5	3.3	2.7	4.6	4.0

Note: Data are presented as percentages, unless otherwise specified; *Measures were undertaken (i.e., suppression of other numbers) to ensure small cells could not be calculated; Cell counts ≤5 were suppressed to comply with privacy legislation.

APPENDIX C

Table 16. Odds ratios for 30-day all-cause mortality for all unique PCIs, in Ontario from 2011/13 to 2015/16

Effect	Odds Ratio	Lower 95% CL	Upper 95% CL
agegrp 65-74 vs 64 or less	1.936	1.724	2.174
agegrp 75+ vs 64 or less	3.233	2.891	3.616
sex M vs F	0.865	0.789	0.949
ccn_ccs 1 vs 0	0.775	0.51	1.177
ccn_ccs 2 vs 0	0.433	0.293	0.641
ccn_ccs 3 vs 0	0.564	0.388	0.822
ccn_ccs 4 vs 0	1.519	1.025	2.252
ccn_ccs E vs 0	4.607	3.4	6.241
ccn_ccs H vs 0	3.141	2.317	4.256
ccn_ccs I vs 0	1.426	1.052	1.931
ccn_ccs L vs 0	1.166	0.844	1.611
ccn_ccs U vs 0	4.416	2.918	6.683
ccn_cad_type NSTEMI vs Elective	1.469	1.167	1.848
ccn_cad_type STEMI vs Elective	2.765	2.161	3.538
ccn_cad_type Unknown vs Elective	2.842	2.022	3.993
ccn_cad_type Unstable angina vs Elective	1.145	0.895	1.464
ccn_creatin 121-180 vs 0-120	2.994	2.659	3.371
ccn_creatin >180 vs 0-120	4.396	3.78	5.113
ccn_creatin U vs 0-120	1.336	1.186	1.504
ccn_current_smoking 1 vs 0	0.879	0.782	0.988
ccn_former_smoking 1 vs 0	0.866	0.775	0.967
ccn_diabetes 1 vs 0	1.376	1.245	1.52
shock 1 vs 0	10.929	8.61	13.871
ccn_hyperlip 1 vs 0	0.824	0.748	0.908
ccn_copd 1 vs 0	1.351	1.152	1.584
ccn_prevmi 1 vs 0	1.158	1.032	1.299
ccn_chf 1 vs 0	1.592	1.386	1.827
pvd 1 vs 0	1.53	1.324	1.767
prevpci 1 vs 0	0.786	0.695	0.889
prevcabg 1 vs 0	0.83	0.696	0.989
stent_use 1 vs 0	0.313	0.26	0.377
stent_RCA 1 vs 0	1.011	0.88	1.161
stent_lm 1 vs 0	3.908	3.302	4.626
stent_lad 1 vs 0	1.444	1.267	1.647
stent_lcx 1 vs 0	1.34	1.177	1.525
stent_graft 1 vs 0	1.307	0.964	1.771
Charl	1.068	1.038	1.098

Table 17. Odds ratios for 1-year all-cause mortality for all unique PCIs, in Ontario from 2011/13 to 2015/16

Effect	Odds Ratio	Lower 95% CL	Upper 95% CL
agegrp 65-74 vs 64 or less	2.042	1.884	2.213
agegrp 75+ vs 64 or less	4.112	3.815	4.432
sex M vs F	0.91	0.855	0.97
ccn_ccs 1 vs 0	0.744	0.612	0.905
ccn_ccs 2 vs 0	0.593	0.503	0.701
ccn_ccs 3 vs 0	0.675	0.571	0.798
ccn_ccs 4 vs 0	1.197	0.968	1.48
ccn_ccs E vs 0	2.261	1.903	2.687
ccn_ccs H vs 0	1.672	1.414	1.976
ccn_ccs I vs 0	1.102	0.941	1.289
ccn_ccs L vs 0	0.968	0.82	1.142
ccn_ccs U vs 0	2.389	1.812	3.148
ccn_cad_type NSTEMI vs Elective	1.282	1.135	1.449
ccn_cad_type STEMI vs Elective	1.777	1.533	2.061
ccn_cad_type Unknown vs Elective	2.271	1.86	2.773
ccn_cad_type Unstable angina vs Elective	1.01	0.892	1.144
ccn_creatin 121-180 vs 0-120	2.224	2.047	2.416
ccn_creatin >180 vs 0-120	3.549	3.196	3.941
ccn_creatin U vs 0-120	1.222	1.122	1.332
ccn_former_smoking 1 vs 0	0.945	0.883	1.012
shock 1 vs 0	7.778	6.18	9.791
ccn_diabetes 1 vs 0	1.123	1.049	1.201
ccn_hyperten 1 vs 0	0.925	0.859	0.996
ccn_hyperlip 1 vs 0	0.873	0.811	0.939
ccn_copd 1 vs 0	1.575	1.431	1.734
ccn_prevmi 1 vs 0	1.243	1.156	1.337
ccn_chf 1 vs 0	1.782	1.635	1.943
ccn_cvd 1 vs 0	1.151	1.046	1.267
pvd 1 vs 0	1.474	1.342	1.619
prevpci 1 vs 0	0.828	0.767	0.894
prevcabg 1 vs 0	0.865	0.779	0.961
stent_use 1 vs 0	0.435	0.38	0.497
stent_RCA 1 vs 0	0.986	0.9	1.08
stent_lm 1 vs 0	2.608	2.302	2.956
stent_lad 1 vs 0	1.297	1.189	1.416
stent_lcx 1 vs 0	1.22	1.12	1.33
stent_graft 1 vs 0	1.293	1.085	1.542
Charl	1.27	1.248	1.292

Table 18. Odds ratios for 30-day all-cause mortality for emergent PCIs, in Ontario from 2011/13 to 2015/16

Effect	Odds Ratio	Lower 95% CL	Upper 95% CL
agegrp 65-74 vs 64 or less	1.863	1.607	2.16
agegrp 75+ vs 64 or less	3.123	2.698	3.615
sex M vs F	0.758	0.67	0.857
ccn_creatin 121-180 vs 0-120	4.132	3.531	4.835
ccn_creatin >180 vs 0-120	4.847	3.892	6.035
ccn_creatin U vs 0-120	1.437	1.248	1.654
ccn_current_smoking 1 vs 0	0.85	0.735	0.984
ccn_former_smoking 1 vs 0	0.877	0.749	1.027
shock 1 vs 0	6.913	5.438	8.788
ccn_diabetes 1 vs 0	1.455	1.269	1.667
ccn_hyperten 1 vs 0	0.893	0.781	1.02
ccn_hyperlip 1 vs 0	0.813	0.71	0.932
ccn_chf 1 vs 0	1.618	1.278	2.048
ccn_cvd 1 vs 0	1.221	0.987	1.512
pvd 1 vs 0	1.675	1.339	2.097
prevpci 1 vs 0	0.811	0.68	0.968
stent_use 1 vs 0	0.291	0.225	0.378
stent_RCA 1 vs 0	1.074	0.875	1.318
stent_lm 1 vs 0	5.063	3.902	6.569
stent_lad 1 vs 0	1.585	1.304	1.926
stent_lcx 1 vs 0	1.532	1.262	1.859
stent_graft 1 vs 0	1.173	0.729	1.887
charl	1.056	1.013	1.101

Table 19. Odds ratios for 1-year all-cause mortality for emergent PCIs, in Ontario from 2011/13 to 2015/16

Effect	Odds Ratio	Lower 95% CL	Upper 95% CL
agegrp 65-74 vs 64 or less	1.974	1.735	2.246
agegrp 75+ vs 64 or less	3.978	3.507	4.511
sex M vs F	0.771	0.693	0.858
ccn_creatin 121-180 vs 0-120	3.643	3.162	4.198
ccn_creatin >180 vs 0-120	4.198	3.427	5.143
ccn_creatin U vs 0-120	1.293	1.145	1.46
ccn_current_smoking 1 vs 0	0.867	0.763	0.986
ccn_former_smoking 1 vs 0	0.895	0.781	1.026
shock 1 vs 0	5.588	4.396	7.103
ccn_diabetes 1 vs 0	1.276	1.133	1.438
ccn_hyperten 1 vs 0	0.916	0.816	1.028
ccn_hyperlip 1 vs 0	0.81	0.72	0.911
ccn_chf 1 vs 0	1.66	1.34	2.056
ccn_cvd 1 vs 0	1.462	1.221	1.751
pvd 1 vs 0	1.616	1.322	1.974
prevpci 1 vs 0	0.788	0.672	0.924
ccn_copd 1 vs 0	1.539	1.246	1.901
ccn_prevmi 1 vs 0	1.178	1.015	1.367
stent_use 1 vs 0	0.331	0.262	0.418
stent_RCA 1 vs 0	1.036	0.863	1.244
stent_lm 1 vs 0	4.913	3.824	6.314
stent_lad 1 vs 0	1.627	1.366	1.938
stent_lcx 1 vs 0	1.465	1.231	1.744
stent_graft 1 vs 0	1.387	0.942	2.041
charl	1.253	1.21	1.297

Table 20. Odds ratios for 30-day all-cause mortality for all non-emergent PCIs, in Ontario from 2011/13 to 2015/16

Effect	Odds Ratio	Lower 95% CL	Upper 95% CL
agegrp 65-74 vs 64 or less	2.03	1.682	2.449
agegrp 75+ vs 64 or less	3.459	2.906	4.119
sex M vs F	0.997	0.865	1.148
ccn_ccs 1 vs 0	0.738	0.484	1.126
ccn_ccs 2 vs 0	0.424	0.286	0.626
ccn_ccs 3 vs 0	0.522	0.358	0.761
ccn_ccs 4 vs 0	1.259	0.845	1.875
ccn_ccs H vs 0	2.212	1.624	3.012
ccn_ccs I vs 0	1.08	0.794	1.468
ccn_ccs L vs 0	0.91	0.657	1.262
ccn_ccs U vs 0	3.324	2.123	5.205
ccn_cad_type NSTEMI vs Elective	2.007	1.549	2.602
ccn_cad_type STEMI vs Elective	5.79	4.342	7.72
ccn_cad_type Unknown vs Elective	2.256	1.486	3.426
ccn_cad_type Unstable angina vs Elective	1.526	1.168	1.993
ccn_creatin 121-180 vs 0-120	1.98	1.643	2.385
ccn_creatin >180 vs 0-120	3.696	2.992	4.567
ccn_creatin U vs 0-120	1.289	1.031	1.61
ccn_former_smoking 1 vs 0	0.879	0.758	1.02
ccn_diabetes 1 vs 0	1.269	1.097	1.468
ccn_copd 1 vs 0	1.417	1.161	1.73
ccn_prevmi 1 vs 0	1.191	1.022	1.387
ccn_chf 1 vs 0	1.698	1.428	2.019
pvd 1 vs 0	1.394	1.152	1.686
prevpci 1 vs 0	0.751	0.638	0.885
prevcabg 1 vs 0	0.804	0.647	0.998
stent_use 1 vs 0	0.331	0.25	0.44
stent_RCA 1 vs 0	0.972	0.799	1.182
stent_lm 1 vs 0	3.333	2.652	4.189
stent_lad 1 vs 0	1.309	1.091	1.571
stent_lcx 1 vs 0	1.155	0.967	1.38
stent_graft 1 vs 0	1.21	0.83	1.765
charl	1.09	1.049	1.132

Table 21. Odds ratios for 1-year all-cause mortality for all non-emergent PCIs, in Ontario from 2011/13 to 2015/16

Effect	Odds Ratio	Lower 95% CL	Upper 95% CL
agegrp 65-74 vs 64 or less	2.016	1.814	2.241
agegrp 75+ vs 64 or less	4.099	3.709	4.53
sex M vs F	0.985	0.911	1.065
ccn_ccs 1 vs 0	0.73	0.601	0.888
ccn_ccs 2 vs 0	0.587	0.497	0.692
ccn_ccs 3 vs 0	0.665	0.563	0.785
ccn_ccs 4 vs 0	1.17	0.946	1.446
ccn_ccs H vs 0	1.508	1.274	1.785
ccn_ccs I vs 0	1.018	0.869	1.193
ccn_ccs L vs 0	0.901	0.763	1.063
ccn_ccs U vs 0	2.073	1.555	2.764
ccn_cad_type NSTEMI vs Elective	1.398	1.231	1.587
ccn_cad_type STEMI vs Elective	2.262	1.91	2.678
ccn_cad_type Unknown vs Elective	2.036	1.645	2.52
ccn_cad_type Unstable angina vs Elective	1.085	0.956	1.232
ccn_creatin 121-180 vs 0-120	1.747	1.574	1.938
ccn_creatin >180 vs 0-120	3.198	2.825	3.619
ccn_creatin U vs 0-120	1.249	1.105	1.411
ccn_current_smoking 1 vs 0	1.119	1.011	1.237
ccn_hyperten 1 vs 0	0.919	0.834	1.012
ccn_hyperlip 1 vs 0	0.919	0.837	1.009
ccn_copd 1 vs 0	1.536	1.377	1.714
ccn_prevmi 1 vs 0	1.25	1.151	1.359
ccn_chf 1 vs 0	1.885	1.715	2.072
pvd 1 vs 0	1.446	1.302	1.607
prevpci 1 vs 0	0.834	0.764	0.91
prevcabg 1 vs 0	0.88	0.785	0.987
stent_use 1 vs 0	0.509	0.428	0.606
stent_RCA 1 vs 0	1.004	0.902	1.117
stent_lm 1 vs 0	2.106	1.817	2.441
stent_lad 1 vs 0	1.17	1.056	1.296
stent_lcx 1 vs 0	1.127	1.019	1.245
stent_graft 1 vs 0	1.183	0.974	1.436
Charl	1.291	1.267	1.317

Table 22. C-statistic values for logistic regression models.

Mortality Rate	Year	Ontario		
		Total PCI	Emergent PCI	Non-Emergent PCI
30-day mortality	2011/13 to 2015/16	0.86	0.80	0.84
1-year mortality	2011/13 to 2015/16	0.83	0.81	0.83