

Quality of Care in the Cardiac Catheterization Laboratory

Objective

To evaluate metrics of quality in Newfoundland and Labrador's (NL) Cardiac Catheterization (CC) Laboratory in an effort to match actual practice with best practice.

Methods

1. Data were obtained from APPROACH (a 16 year old cardiac care database) and MyCCath (an electronic ordering tool for CC).
2. Metrics for utilization, access, timeliness, and appropriateness were evaluated.

Results

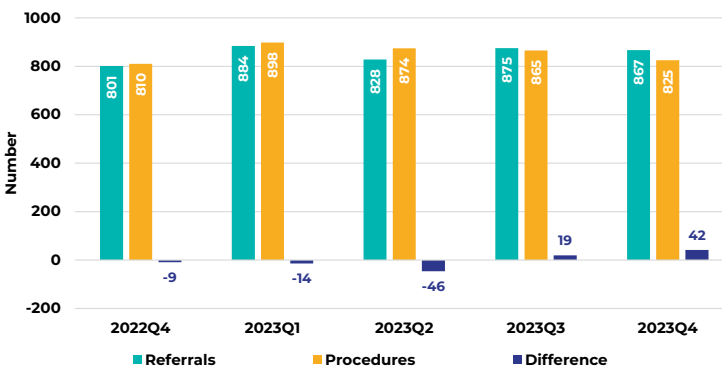


Figure 1. Difference Between Referrals for CCs and CCs Performed per Quarter in NL

- In 2023, there were 3,454 referrals and 3,462 CCs performed with a difference of -8 leading to a stagnant wait list.
- The waitlist has not decreased from Q4 2022 to Q4 2023.
- An increase in procedures is required to meet not only the current need, but also to reduce the waitlist.

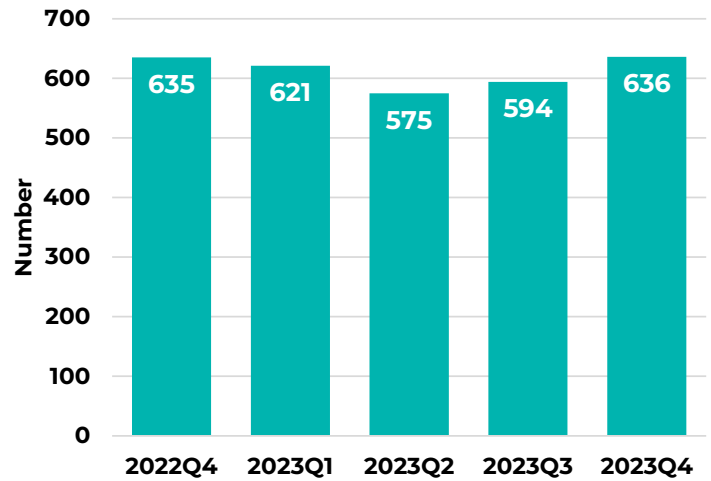


Figure 2. CC Waitlist Totals by Quarter

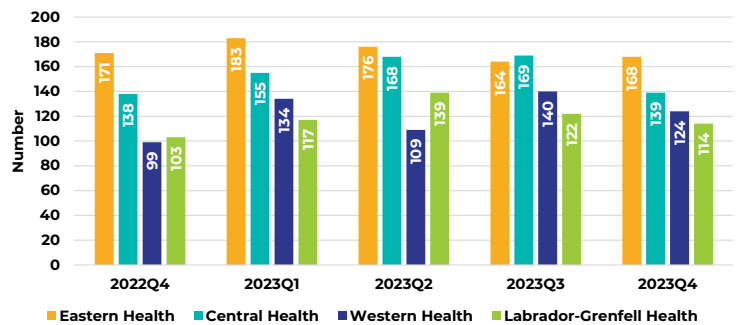


Figure 3. CCs Performed by Quarter and Region per 100k Population

- Rates for Eastern Health (EH) and Central Health (CH) are somewhat similar but substantially lower in Western Health (WH) and Labrador-Grenfell Health (LGH).

Table 1. Percentage of Patients Who Achieved Benchmark Time to CC From Start of Symptoms for Each Acute Coronary Syndrome by Province and Region in 2023

Symptom	Days	NL	EH	CH	WH	LGH
ST Elevation Myocardial Infarction (STEMI)	2	76	84	61	64	78
Non-ST Elevation Myocardial Infarction (NSTEMI)	7	58	75	40	26	18
Unstable Angina	7	60	75	42	23	19

- ST elevation myocardial infarction (STEMI) is an emergency. If the target for performing CC was two days, timeliness was relatively equitable by region.
- Non-ST elevation myocardial infarction (NSTEMI) and unstable angina are less urgent. If the target for these syndromes was seven days, timeliness of access was not optimal as the disparity across regions was substantial.
- Using rate of diagnosis of critical coronary artery disease as a surrogate for appropriateness, the rates for NSTEMI and STEMI are around 80%, whereas those for unstable angina and stable angina are less than 70%. These rates are acceptable.

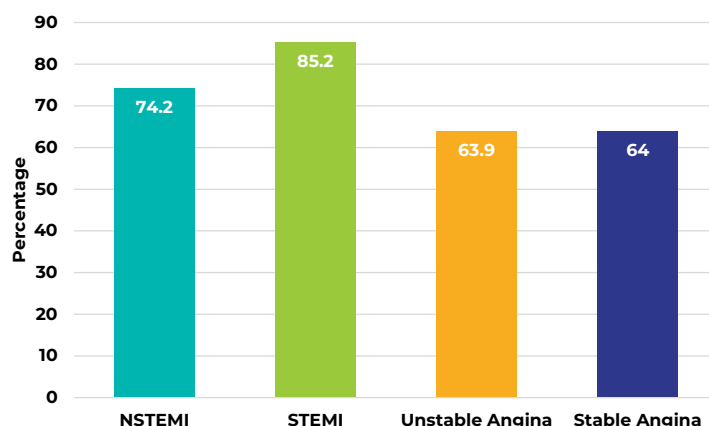


Figure 4. Percent of CC Procedures with a Finding of Critical Disease for NL, 2022

Conclusions

1. The CC program is unable to meet the needs of the NL population as shown by the sizeable and persistent waitlist and different timeliness of CC when analyzed by region. However, appropriateness of doing the procedure is reasonable. Improved access to CC will increase the need for coronary revascularization.