

Pre-Operative Testing in Patients Having Low-Risk Surgery by Regional Health Authority (2019)

Choosing Wisely Canada Recommendation

Don't perform standard baseline laboratory studies, electrocardiography or chest x-ray for asymptomatic pre-operative patients undergoing low-risk non-cardiac surgery.

Practice Points

1. In 2017, a medical directive to follow the Choosing Wisely Canada (CWC) recommendation was made at the two St. John's hospitals, which was associated with substantial reductions in INR tests and chest x-ray but continued high use of Hemoglobin (Hb) and serum creatinine (s.creatinine) tests.
2. Low-risk procedures are categorized as interventions of breast, female genital organs, musculoskeletal system, urinary system interventions, upper limb interventions, and other.

Data

Aggregate data were obtained from the NL Centre for Health Information (NLCHI) on the number of low-risk procedures undertaken in each Regional Health Authority (RHA) from 2015–16 to 2019–20. Pre-operative tests (s.creatinine, Hb, INR and chest x-ray) undertaken within 30 days prior to surgery were determined. The percentage of patients tested in 2019–20 were compared to the baseline in 2016–17.

Results

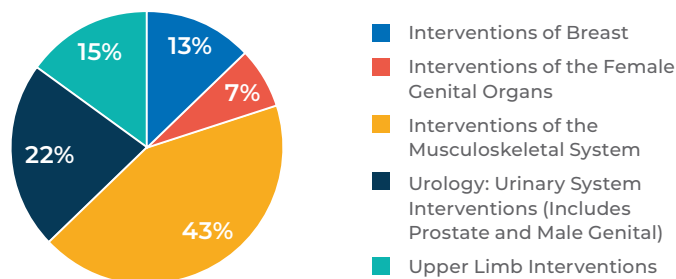


Figure 1. Per Cent Distribution of Low-risk Procedures by System in NL in 2019–20

- In 2019–20, there were 7,524 low-risk procedures undertaken, compared to 7,709 in 2016–17.
- The distribution of procedures by system in 2019–20 differed little from 2016–17.

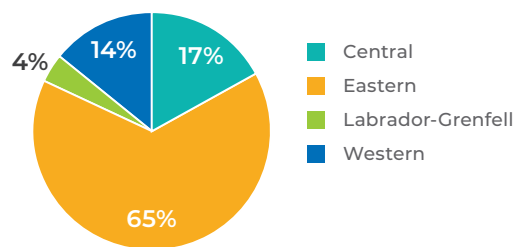


Figure 2. Per Cent Distribution of Low-risk Procedures Undertaken in Each RHA in 2019–20

- Compared to population size, proportionately more low-risk procedures were performed in Eastern Health (EH) and less in Labrador-Grenfell Health (LGH): 65.8% of procedures were performed in EH, which has 60.8% of the population, whereas 3.8% of procedures were undertaken in LGH with 7.0% of the population. In Central Health (CH), percentages were 16.7% and 17.5%, and in Western Health (WH), they were 14.2% and 14.7%, respectively.

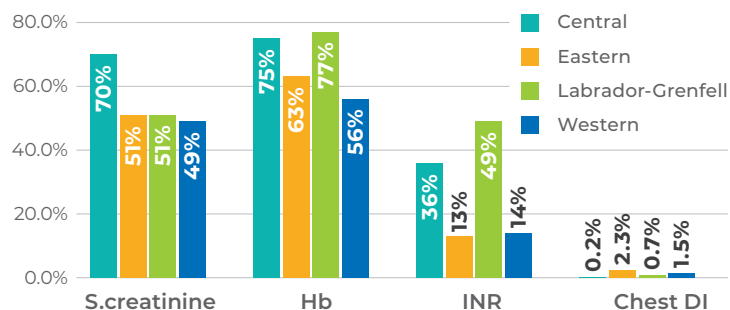


Figure 3. Per Cent of Patients Who Had Low-risk Procedures and a Pre-operative Test Undertaken Prior to Surgery Analyzed by RHA in 2019–20

- The per cent of patients with s.creatinine or Hb testing prior to low-risk surgery in the province was high (51% had s.creatinine, 61% Hb).
- INR testing was particularly high in CH and LGH, compared to EH and WH.
- Chest x-ray was performed infrequently (1.7% of patients in the province).

Conclusions

1. The majority of patients prior to low-risk surgery had s.creatinine and Hb tests.
2. Rate of INR testing varied by region, being high in CH and LGH.
3. Despite a medical directive in the St. John's hospitals, prior blood testing in EH remains high.