

# Patterns in Pre-Operative Testing for Low-Risk Surgery During a Medical Directive and COVID-19

## Choosing Wisely Canada Recommendation

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

## Methods

1. In 2016, Choosing Wisely Newfoundland and Labrador (CWNL) identified pre-op testing for low-risk surgeries as an area of low-value care and adopted the “Drop the Pre-op” campaign.
2. In January 2017, a medical directive was rolled out in two Eastern Health (EH) hospitals, St. Clare’s Mercy Hospital (SCMH) and the Health Sciences Centre (HSC).
3. In February/March 2020, COVID-19 forced restrictions on hospitals and clinics throughout the province.
4. In order to examine the effect of pre-operative testing patterns during both the medical directive and COVID-19 restrictions, rates of four pre-operative tests (Creatinine (CR), International Normalized Ratio (INR), Hemoglobin (Hb) and Chest X-Ray) were calculated from Apr 2016 to Feb 2021.

### HSC

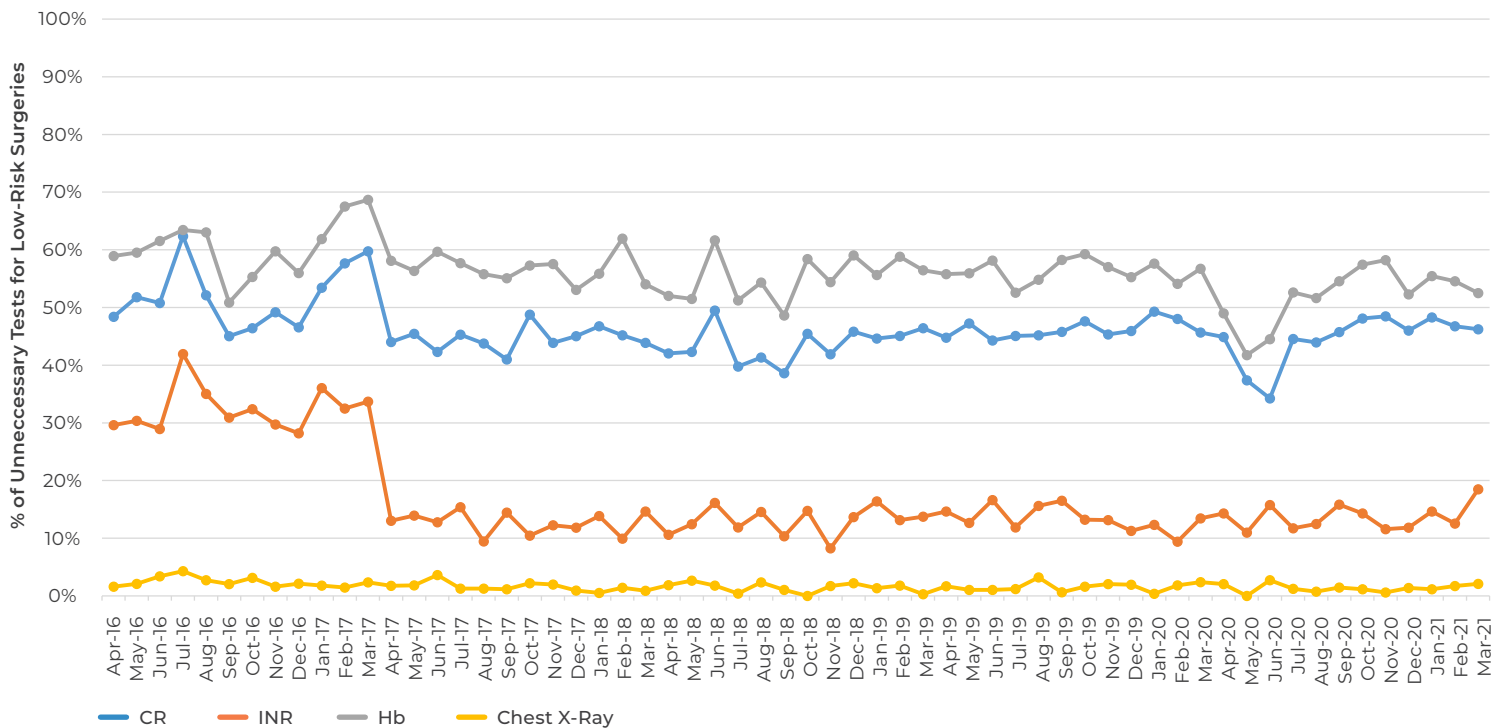


Figure 1. Rates of Pre-operative Tests for Low-Risk Surgeries at the HSC, Apr 2016 – Feb 2021

SCMH

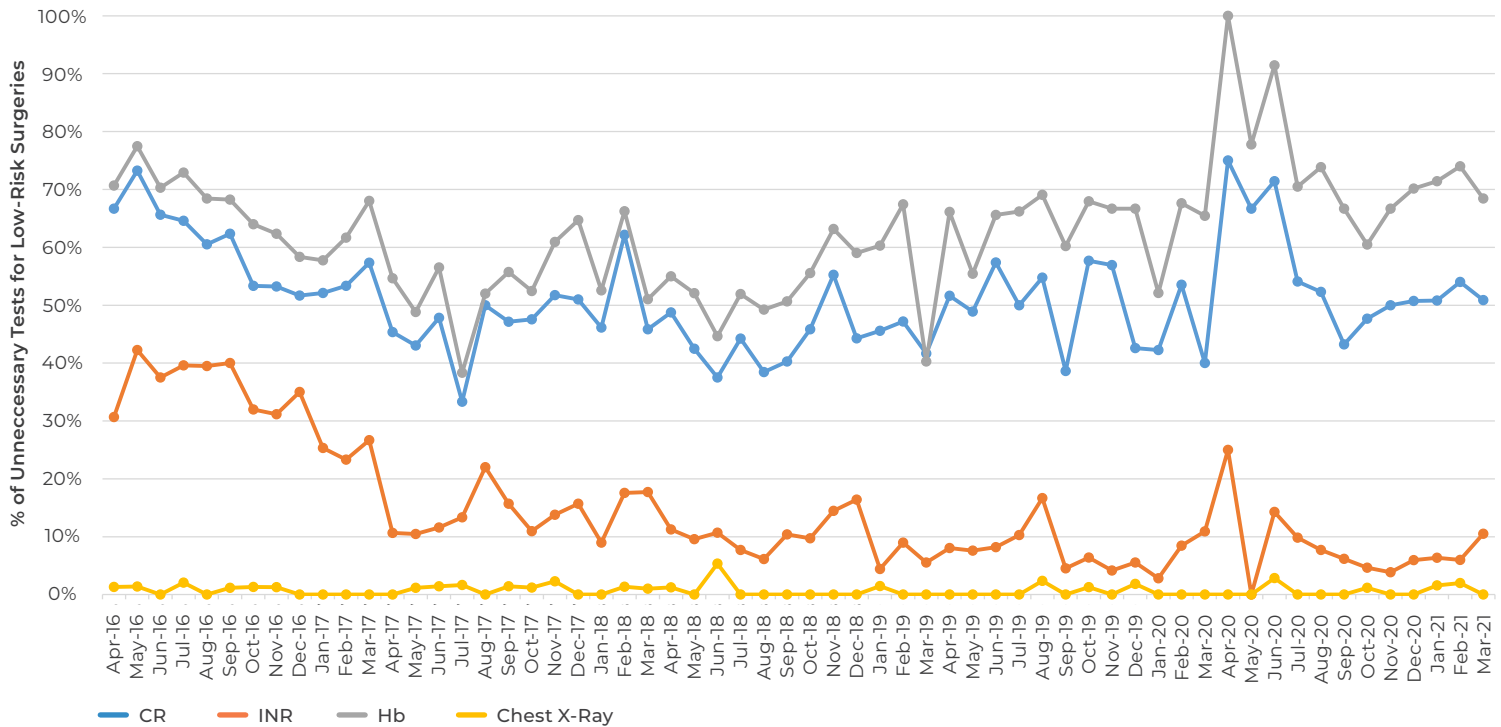


Figure 2. Rates of Pre-operative Tests for Low-Risk Surgeries at SCMH, Apr 2016 – Feb 2021

Results

- Testing patterns differed by hospital during both the medical directive and COVID-19 restrictions.
- At the HSC, there was a significant and sustained decrease in CR (14% absolute reduction), INR (19% absolute reduction) and Hb (12% absolute reduction) testing immediately following the medical directive (first quarter of 2017).
- At SCMH, there was a gradual reduction in CR (19% absolute reduction), INR (12% absolute reduction) and Hb (13% absolute reduction) testing in the months following the medical directive roll out (first two quarters of 2017).
- At the HSC, all tests decreased significantly during COVID-19 restrictions (Mar 2020) and then returned to previous rates by Jul 2020.
- At SCMH, testing decreased during COVID-19 restrictions, followed by an increase in testing rates from April – July 2020.

Conclusions

1. The response to the medical directive to follow Choosing Wisely Canada guidelines regarding pre-operative testing for low-risk surgeries resulted in clinically significant reductions in most tests at both the HSC and SCMH.
2. The patterns of pre-operative testing during COVID-19 restrictions were variable with reductions at HSC and increased rates at SCMH.