

*(Practice Points Special Edition, November 2020)*

# Interventions to Change Behaviour in the Use of Health Care Resources in NL

## Objective







To identify lessons learned from the evaluation of interventions that change behaviour in the use of health care resources.

## Practice Points

1. Quality of Care NL has compared clinical practice in multiple areas to best practice as defined by guidelines (including Choosing Wisely Canada). These areas include imaging (cardiac catheterization, peripheral artery testing, carotid artery testing, screening mammography, CT scanning), testing (biochemical, immunological, endocrine), drug use (antibiotics, proton pumps inhibitors, antipsychotics, benzodiazepines, thrombolytics in ischemic stroke), and various other interventions (colonoscopy, remote monitoring).
2. Interventions to change behaviour in the use of health care resources have included 1) audit, feedback, and academic detailing, 2) eTechnology, 3) implementation teams that change care processes, 4) system change.

## Results





### A. Audit, feedback, and academic detailing

-  Lower cardiac catheterization rates in stable angina.
-  No change in appropriateness of peripheral artery testing.
-  Persistence of low thrombolysis rates for ischemic stroke.
-  Reduction in urea and creatine kinase testing by family physicians (FPs).
-  Little change in ferritin testing in patients with normal hemoglobin by FPs.
-  Improvement in IgE testing.

- For every evaluation of FP's use of various health care resources, there is a group of 'over-users'; It is uncertain how many of these doctors examine their personal use in comparison to their peers when utilization data is sent by email or when delivered to them in-person by Quality of Care NL.





- Audit, feedback, and academic detailing has been associated with improvement in some areas but not in others.

### B. eOrdering and eTechnology

-  Increased rates of cardiac catheterization for acute coronary syndromes associated with eOrdering with equalization of rates across Regional Health Authorities.
-  eOrdering started for vascular lab for peripheral artery testing and for carotid artery testing.
-  Mobile app for antibiotic use associated with reduction in antibiotics use in hospitals.
-  Remote monitoring in patients with COPD and/or heart failure associated with fewer in hospital days and ER visits.

- eOrdering for cardiac catheterization and vascular lab testing and use of mobile apps and remote monitoring have been implemented with some indications of success.
- Remote monitoring in patients with serious disease is indicated.

### C. Implementation teams to improve process care

-  Improvement in thrombolysis rates in ischemic stroke in Health Sciences Centre and in Labrador.
-  Access to colonoscopy improved on utilization review in Eastern Health.
-  Time from abnormal screening mammography to final diagnostic test improved in Eastern Health and more recently in Central Health.
-  Improvement in length of hospital stay occurred during implementation of Early Recovery After Surgery guidelines for colorectal dissections but regressed on withdrawal of human resource.

- Implementation teams to improve care processes have been successful, but they are human resource intensive. The impact may be short lived without continued effort.

## D. System Change



Medical directive in pre-operative testing prior to low risk surgery decreased use of chest xrays and INR but not blood testing.



Decrease in antibiotic use for UTI in Long-Term Care Facilities (LTCFs).



Reduction of antipsychotic use in LTCFs.



Reduced urea, AST, LDH testing by FPs by taking test off requisition form.

- System change that creates a barrier to inappropriate use, like taking a test off the requisition form, were more effective than changes that do not include a barrier, such as programs to reduce antibiotic or anti-psychotic use in a long-term care facility or a medical directive to reduce testing.
- More broad-based system change to improve accountability for the use of health care resources may be necessary in hospitals, long-term care facilities and primary care.

## Conclusions

1. Audit, feedback and academic detailing can reduce unnecessary use of health care resources but its effectiveness is dependent on uptake by high users.
2. In areas where audit and feedback has not been successful, more aggressive interventions may be needed, such as eTechnology solutions, implementation teams to improve care processes, or system change.
3. eOrdering for blood testing and imaging is indicated, but require evaluation to ensure clinical practice matches best practice.
4. Some interventions depend on complex processes and failure of one step on the pathway will lead to poor quality. Consequently, evaluation of the entire care process will be necessary to identify the step/ steps that require intervention.
5. System changes that provide barriers to the provision of core value care may ultimately be necessary.
6. Consideration should be given to linking licensure with participation in audit and feedback, and to economic incentives that reward low use of low-value care.