

# An Introduction to Learning Health Systems

## Objective

One of the aims of NL SUPPORT is to promote Learning Health Systems for the province.

## Practice Points

1. Learning Health Systems (LHS) are systems in which “science, informatics, incentives, and culture are aligned for continuous improvement and innovation, with best practices seamlessly embedded in the delivery process and new knowledge captured as an integral by-product of the delivery experience” (Institute of Medicine, 2015).
2. LHS rely on vision, data, analytics, leadership, organization and culture to foster and achieve improvements in practice and systems of care.
3. LHS merge health care delivery with research, data science, and quality improvement processes continuously informed by practice and seeking to influence practice in turn.
4. The concept of the Eastern Health Regional Health Authority (RHA) as a “Living Lab” and the NL Centre for Health Information (NLCHI)’s development and subsequent use of the Electronic Health Record is consistent with a LHS.
5. Engagement of health care providers of all types is necessary in a LHS.

## Methods

1. NL SUPPORT will work with NLCHI and others to ensure that data necessary to evaluate current health care and efforts to improve it are available and used.
2. NL SUPPORT, through Quality of Care NL and Choosing Wisely NL, will support researchers, practitioners and policy and decision-makers in formulating, implementing and interpreting learning health cycles throughout the system.
3. NL SUPPORT will engage in training activities locally and nationally (via the Strategy for Patient-Oriented Research (SPOR) National Training Entity) and will support Health System Impact Fellows.

4. NL SUPPORT will work to increase the role and engagement of patients/citizens and health care providers in LHS activities and planning.

## Results

- Examples of current activities in support of a LHS in NL include the role of Quality of Care NL in supporting 1) the work of Health Accord NL, 2) the development and evaluation of a virtual care service for diabetes, 3) introduction and evaluation of electronic ordering systems, and 4) the multiple campaigns to reduce low-value care.



Figure 1. A Learning Health System

## Conclusions

1. In the coming five years, NL SUPPORT will strive to increase the assets and reduce the gaps towards developing a culture of LHS in NL.
2. Assets and gaps toward creating LHS in NL were summarized in a rapid evidence synthesis in early 2019. The report is available at: [https://www.mcmasterforum.org/docs/default-source/product-documents/rapid-responses/creating-rapid-learning-health-systems-in-canada---appendix-b11-nl.pdf?sfvrsn=1c2554d5\\_2](https://www.mcmasterforum.org/docs/default-source/product-documents/rapid-responses/creating-rapid-learning-health-systems-in-canada---appendix-b11-nl.pdf?sfvrsn=1c2554d5_2) (accessed 25 Jan 2021).