

Québec Research Fund - Health

Innovative Strategy Development Project (ISDP)

Title: Optimizing the Quality of Patient Care With a Flexible Hospital Organizational System

Institute Director: Roderick McInnes

Scientific Leader: François Béland

The Lady Davis Institute (LDI) of the Jewish General Hospital (JGH) in Montreal, Quebec, Canada, is embarking on a research program, coordinated with the JGH Transformational Change Initiative, aiming to add value to patient care. This initiative is related to three hospital challenges common to all contemporary healthcare systems: increased hospital productivity, hospital adaptation to the conditions of older persons and the impact of multiple chronic illnesses (MCI) on hospital clinical practices.

The value of patient care will be optimized to the extent that the hospital system reflects hospital activity based on the characteristics of patients that come through its doors, the care and services they receive from care providers, and the managerial decisions oriented towards optimized results of the interaction between patients and service providers. This is, therefore, the reverse of the usual perspective from which a hospital functions. Rather than trying to modify the parameters of the hospital system imposed on patients, care providers and managers, this approach ensures that the activities of patients, care providers and managers drive the hospital system; therefore, the hospital is in a constant state of adaptation.

The research program that has been developed seeks to: 1) contribute to the generation of knowledge required to carry out this transformation; 2) examine the processes of organizational change and observe impediments and factors critical to success; and 3) participate in strategies for the transfer, exchange and sharing of knowledge associated with activities related to transformational change. For purposes of the research program, the JGH has become a case, submitted for research, wherein multiple perspectives are used in a coordinated manner to derive an in-depth understanding of the innovative operational and clinical management processes in play as they are implemented and as they function. The extent of the organizational transformation and depth of the research program offer ideal conditions to apply the case study approach. This strategy enables us to develop, disseminate and implement major innovations in hospitals, for example, hospitals adapted to the needs of older persons.

The objective of the research program focuses on care trajectories, i.e. a patient's journey before, during and after a hospital stay. The axes or sub-objectives of the research program will utilize a comparative perspective to observe care trajectories, management processes and clinical practices pertaining to cancer patients with associated chronic illnesses.

The working hypothesis is that the presence of MCI greatly modifies the needs of patients visiting the hospital, clinical management of their care and hospital operational challenges and funding; yet, the hospital, in its current form, operates in inappropriate and counterproductive ways. A hospital must become a place reflecting innovative approaches to ensure that it is in a state of continuous adaptation to the major challenges posed by MCI, the aging of the population and healthcare funding. This general objective will be developed as four sub-objectives, each representing a research axis:

Axis A: Determination of care trajectories observed among patients to associate with them patterns of use of healthcare services, intensity and quality

Principal Investigators: F Béland, G Batist

The analytical objectives aim to obtain an estimate of associations between trajectories, quantity, use, healthcare costs and healthcare quality, and significant aspects such as referral to front-line physicians, monitoring of hospital episodes by specialist physicians, the use of hospital emergency wards, readmissions to hospital, and death.

Axis B: The association of clinical decision-making and management processes with care trajectories observed, and the use, costs and quality of care

Principal Investigators: JL Denis, L Lapointe

The objective is to more clearly understand the role of the various organizational factors in the production of healthcare and services, the experience of the patient and the performance of the organization. In the end, this research will determine the factors and processes conducive to the implementation of a hospital organization that is more productive and better adapted to handling complex cases.

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Axis C: Computer simulation of optimized ambulatory and hospital care trajectories, using agent models

Principal Investigators: L Rosenberg, JM Frayret

The objective of this axis is to develop a holistic decision-making model that incorporates the parameters of state of health and patient and healthcare system characteristics, in order to direct patients, upon admission to hospital, towards optimized care trajectories. The expected result is an innovative modelization of interactions between patients and the healthcare system expressed via the development and validation of a new care paradigm. This paradigm will shed light on the management of “capacity – demand” balances, waiting lists, unexpected consequences of innovations, improved quality and behaviour of stakeholders.

Axis D: The modification of clinical and management practices

Principal Investigators: R Grad, P Pluye

This axis is responsible for knowledge dissemination and exchange, collaboration with the Transformational Change Committee to implement the practices derived from research findings and the evaluation of knowledge dissemination and exchange processes with respect to clinical practice.

The results of the collaboration between the JGH Transformational Change Initiative and the research program should be an acceleration of hospital trajectories manifested, hypothetically, via increased efficiency and quality of care, and reduced average costs of hospital episodes. Thus, they are consistent with the JGH Transformational Change Initiative leitmotiv, i.e. care for the correct patient at the correct time in the correct place in the correct way, for the correct result, at lesser cost. This research organizational model based on practice settings is related to that found in healthcare systems and organizations, including the Veteran Health Administration and Kaiser Permanente, recognized for their major gains in performance, through the lessons they can teach healthcare systems.