



# Soutenance de thèse de doctorat de

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### «*Prioritizing patient's access to healthcare services*»

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VENDREDI

9 décembre 2016  
9 h 00

Local 3370  
Pavillon Adrien-Pouliot  
Université Laval

Ouvert à tous



## Prioritizing Patient's Access to Health Care Services



### Summary of the thesis:

Access to healthcare services and long waiting time is one of the main issues in most of the countries including Canada and the United States. Healthcare organizations can't increase their limited resources nor treat all patients simultaneously. Then, patients' access to these services should be prioritized in a way that best use the scarce resources. Some challenging aspects in patients' prioritization problem are; considering multiple conflicting criteria, incomplete and imprecise data, associated risks that threaten patients on waiting lists, uncertainties in clinicians' decisions, involving a group of decision makers' opinions, and system's dynamic behavior. Inappropriate prioritization of patients waiting for treatment, affects directly on inefficiencies in healthcare delivery, quality of care, and most importantly on patients' safety and their satisfaction. Inspired by these facts, in this thesis, we propose novel hybrid frameworks to prioritize patients by addressing a number of main shortcomings of current prioritization methods in the literature and in practice.

Through the application of the proposed comprehensive framework in the orthopedic surgery ward at Shohada University Hospital, and in an augmentative and alternative communication (AAC) clinical program called PACEC at the Institute for Disability Rehabilitation in Physics of Québec (IRDPO), we show the effectiveness of our approaches comparing the currently used ones. The implementation results prove that this framework can be adopted easily and effectively in other healthcare organizations as well.

In brief the results of this thesis could be beneficial for healthcare professionals to: i) evaluate patients' priority more accurately and easily, ii) determine policies and guidelines for patients' prioritization and scheduling, iii) manage waiting lists properly, iv) decrease the time required for patients' prioritization, v) increase equity and justice among patients, vi) diminish risks that threaten patients during waiting time, vii) consider group of decision makers' opinions in the prioritization procedure to prevent possible biases in decision-making, viii) involve patients and their families in the prioritization procedure to increase their satisfaction, ix) handle uncertainties in the decision-making procedure, and x) increase quality of care.