
CONFERENCE ABSTRACT

Big Data tools for integrated care and high-risk patient protection

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Background: Management decisions are currently based mostly on sets of KPI. Population-wide integrated care requires organizing across all healthcare levels, including home services. It is essential also to identify the patients at highest risk and that require highest levels of attention. Tools based on lists of unidimensional indicators are insufficient for these tasks. Many managers will recognize the need for more elaborate tools that help understand patients in their full context, and make more informed decisions.

Aims and objectives: To learn how new tools based on Big Data to assess the suitability of programs and resources for multilevel care. How they can be used to integrate knowledge from different sources, in a flexible way, according to the decision process in each case. And above all, how to ensure the protection patients with highest needs and risk.

Format: Professor Ricard Gavaldà is the director of a machine learning research group at Universitat Politècnica de Catalunya (Barcelona). Martí has a Master's degree in Data Science and has been working for over 5 years in EHR data analysis. They will accompany the workshop participants in a simulation of the design of an integrated care program.

10': Brief description of Big Data techniques for management, and presentation of the case: continued care in heart failure.

10': Group exercise to generate requirements for better management process.

30': How to use the modern data analytic tools to discover anomalies in resource use in a territory, distinct profiles of patients within one disease (heart failure), and predictive factors of readmission.

10': Moving from analysis to action in the real world.

Audience: Planners, managers, medical directors, and chiefs of clinical services. Feel free to bring your laptop to browse documentation and take notes, but is not mandatory.

Take away: Participants understand the potential of new tools for planning and managing complex health problems (such as heart failure): Identify profiles of patients at risk, mobility flows across the system, detection of anomalous patterns, and opportunities to improve resource usage.

Keywords: big data; decision making; highest risk patients; planning; data analysis
