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Conference Abstract

Data-driven integrated care in Clalit Health Services: Innovation in practice

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Abstract

Introduction: Lack of population-wide, integrated clinical data is often cited as a key limiting factor in achieving integrated approach to healthcare and as a central cause for fragmented care. Clalit Health Services ('Clalit') is the largest healthcare organization in Israel (>50% of the population are members), which owns and runs primary, specialty and hospital services, all which use integrated electronic medical records. To assess the potential of integrated data systems to drive innovation in integrated care, we assessed two case studies implemented and evaluated.

Methods: A comprehensive program to reduce readmissions rates of the entire population of 500,000 elderly members (100% of elderly members), was introduced in July 2012. The program used a set of real-time data tools to identify, on admission, patients at high risk of readmission (c-statistic=0.7), as well as an interoperable system for online data transfer from GP record to hospital view, an embedded discharge planning tools for direct hospital-clinic nurse-nurse communication, an alert to clinic on patient discharge and structured discharged patient telephone interview, enhanced home care teams, as well as a set of unified on-line unified process and outcome indicators.

An organization-wide quality-of-care disparity reduction program focused at >400,000 least-affluent members (lowest 10% of entire Clalit population), was implemented in 2009-2011. Members were selected using a composite measure of the most disparity-associated quality e-measures calculated directly from the EMR records, including metabolic disease control, vaccination and cancer early detection compliance. A combined top-down and bottom-up set of interventions approach was used to direct culturally-competent care with emphasis on local community involvement and enhancing multi-sectorial teamwork. A set of dedicated indicators was available on-line in each clinic and region to monitor and direct improvement efforts.

Results: Baseline integrated infrastructure allowed readmission rates that were lower compared with internationally available benchmarks. Rate of GP-clinic contact absence within a week of discharge has dropped following a year of the program implementation from 37% to 13%, with a 5% further reduction in elderly patients' readmission.

The disparity reduction program achieved a reduction of 60% in the difference in composite quality indicator score between the selected least-affluent members and their district peer averages, with sharper decline in Acute Myocardial infarction rates in the low-SES groups as compared with the population average.

Conclusions: Integrated data systems allow a wide potential for implementing innovations in care integration. Integrated data allows for innovative patient selection approach, in-depth program planning, real-time implementation support IT tools and real-time monitoring of intervention outcomes thus allowing multi-level effective intervention management. These approaches allow measurable outcomes of care integration programs, that are transferrable to systems which develop comparable data and IT integration capabilities.

Keywords

clinical data, data-driven, Clalit health services, integrated data systems
