
CONFERENCE ABSTRACT

Development of a Computerized Integrated-Care-Pathway System to Support People-Centred and Integrated Care: Usefulness of the Participatory Design Method

16th International Conference on Integrated Care, Barcelona 23-25 May 2016

Nicole Dubuc¹, Nathalie Delli-Colli¹, Lucie Bonin⁴, Cinthia Corbin¹, Isabelle Labrecque², Joanne Guilbault⁵, Valérie Guillot², Sebastien Lessard², Stéphane Dubuc³

1: Research Center on Aging, Canada;

2: Ministère de la Santé et des Services sociaux, Canada;

3: Centre intégré de santé et services sociaux Montérégie-Ouest, Canada;

4: Direction de la santé publique, Canada;

5: Centre de santé et d'expertise de Sherbrooke, Canada.

Background: Integrated service networks (ISNs) have gradually been established for older people in the province of Quebec, Canada. Despite many improvements in the organization of our health-care system, some gaps associated with assessing, planning, and delivering health care and social services reflecting the client's values and preferences have been underlined. To resolve this situation, we have conducted significant research that allowed the development of the content of Integrated Care Pathways (ICPs) specifically designed to meet the needs of frail and disabled older adults. ICPs constitute the core decision-support system providing guidance on appropriate actions for the specific clinical circumstances reflected by assessment and overview data. They are also linked to our existing instruments such as the Multiclientele Assessment Tool (OEMC; French acronym), including the Functional Autonomy Measurement System (SMAF) and the Iso-SMAF profile classification system. These ICPs aim at promoting fair access for frail and disabled elders with similar needs, providing support and prevention services, operating with a person-centred vision, and promoting independence in daily life for older persons living in the community. Since 2012, thanks to collaboration with a local home-care-service organization in developing an electronic prototype, we have incorporated ICPs provincially into the clinical and management computerized (French acronym: RSIPA) solution of Quebec's Ministry of Health and Social Services that supports the ISNs for the elderly population in our health- and social-services integrated centers. This presentation outlines the process and lessons learned from our experience to iteratively design an enhanced RSIPA solution based on ICPs.

Method: Over three years, users comprised of the interdisciplinary research-team members and public-health stakeholders worked with the developers using a multistage participatory-design (PD) method to iteratively design and develop an enhanced computerized RSIPA solution based on ICPs. The PD incorporated Quality Function Deployment into Soft Systems

Methodology (SSM). The process included focus groups; individual consultations with professionals from clinical settings; and regular, frequent meetings between the research team and the Ministry's informatics staff. Each phase of the design and development built on the preceding one, requiring the research team to provide feedback on a series of models and prototypes. At each meeting, a decision log was used and a normative framework for the new solution drafted. The normative framework is a reference document that supports the entry of standardized data into a computerized solution as well as their use for informational purposes.

Results: Results from this process include the following design specifications and modifications to the RSIPA solution. ICPs are organized according to a dynamic process: (1) needs assessment and assessment of risk/protection factors with standardized data; (2) a synthesis providing a data-collection summary with alerts and supporting goal identification through a process of shared decision making; (3) planning of interventions from a client-centered view with an individualized offer of services out of a continuum of needs (prevention, empowerment, social participation, and compensation); (4) coordination, delivery, and follow-up of services that can be rapidly adjusted; and (5) identification of variances between what is proposed, expected, and completed within the offer of services related to each need, as well as the revision and adjustment of plans. Aggregating these data over needs and services and analyzing the variances in ICPs enable managers to better determine met and unmet needs in their populations; make informed choices in supporting a diversified offering adapted to these needs; offer a continuum of clinical information using certain performance indicators making it possible to monitor the performance and continuous improvement of practices; foster the complementarity of services; and enter into appropriate agreements with public, private, and community partners.

Discussion: Computerization is a key component for successful ICP implementation. This system will streamline the collection of essential data in clinical settings while offering a way to control the source and quality of the data entered; facilitate the aggregation, viewing, and extraction of these data according to user needs; and, lastly, offer the possibility to merge this information with other databases or data sources. It will also facilitate the exchange of information and the clinical decision-making process. Once aggregated, the data will also support managers in organizing teamwork and follow-up for clients.

Conclusion: The new Quebec RSIPA solution incorporating our ICPs is a promising example of technologies that support integrated-care delivery through better assessment, planning, organization, and monitoring.

Keywords: autonomy; integrated-care-pathways; computerization; people-centred; best practices
