Sustainable implementation of e-health enabled interdisciplinary collaboration

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

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Introduction: Integrated care can prosper from e-health solutions that hold a vast potential for increasing effective information sharing and communication: collaboration. This is in particular the case in the care for elder persons: a growing population often in need of a variety of care, health monitoring and social support. However, despite promises and almost 20 years of investing in e-health deployment and research, implementing e-health often proofs to be more complex and arduous than anticipated.

Like many other international initiatives, several pan-European consortia have been implementing e-health enabled integrated care solutions for elderly care. End of 2014, three European Commission (EC) co-funded and large-scale e-health Projects (CAREWELL, BEYOND SILOS and SMARTCARE) started combining efforts and sharing experiences.

Based on a preliminary scoping study and in line with suggestions in recent literature, this ‘SYNERGY’ research project has set out with a focus on challenges relating “organizational and human factor characteristics of sustainable implementation of e-enabled integrated care”. The mutual goal of the Projects is to ‘synergize’ into:

(a) Set of Implementation Indicators to prepare for and monitor sustainable implementation activities and
(b) Implementation Toolkit with strategies and instruments.

Methods: This project entails a mixed methods approach combining the following phases and procedures:

1. Scoping study

Based on a preliminary online survey (within the Projects), several discussions with (change management and implementation) experts, review of current leading literature and discussions with researchers this phase depicted the scope of this project.

2. Systematic Literature Search
A comprehensive protocol for a systematic literature research was developed to investigate reported experiences and evidence for implementation interventions as well as indicators for implementation preparation and monitoring, with a specific focus on engagement of physicians as well as assessment tools related to interdisciplinary collaboration and integrated care.

2a. Field study (1) - Online Survey

Implementation teams at all 22 participating European regions were asked to respond to an extensive online survey to inventory ‘implementation challenges’ resulting in qualitative and qualitative data on implementation barriers/facilitators and interventions.

2b. Field study (2) - Expert Interviews

An international selection of field experts with knowledge and experience on e-health enabled integrated care is subject to 1-on-1 semi-structured interviews, investigating their experiences and suggestions, e.g. on sustainable implementation strategies.

2c. Field study (3) – Pilot study

A field study will be performed in one of the participating regions. Based on local change management needs, a tailored set of implementation tactics will be rolled out to enhance implementation, while investigating usability in a field setting and observing related dynamics related.

3. Validation Outcomes

After syntheses, study results will be validated based on expert focus groups and online Delphic consultations within a substantial number of stakeholders. During this validation process study results will be tested for usability.

Progress report: Early findings in this research confirm an imperative need for a more comprehensive insight into the ‘black box’ of organizational dynamics relating the implementation of e-health enabled integrated care teams. In particular the role of physicians seems to be rated as crucial.

Discussion: These findings are in lined with suggestions of a number of researchers that indicate the importance of the effects of e-health on roles and responsibilities in care delivery. An important question seems to emerge challenging to what extent ‘e-health implementation’ is about a combination of (a) process redesign, (b) (training use of) new technologies and (c) change management strategies, e.g. engaging professionals. The sheer complexity of e-health implementation might imply the consequences of the ‘disruptive innovation’ as it has been described before.

We have indications that the currently internationally emerging field of ‘medical leadership’ might also be relevant to the field of e-health implementation.

Conclusion: This EC co-funded research aims to add to more in depth comprehension of strategies of e-health implementation that result in the change that is needed, in particular related to integrated care teams. Building on experiences and lessons learned within three large scale European Projects, final study results will be made available through an indicator
set and an implementation toolbox. These deliverables are to help novice regions in Europe - and beyond - in preparing and executing implementation in a sustainable manner.

To this point, these researchers are convinced that future research should investigate even more along the lines of the current study, in particular into relatively uncharted fields of sustainable integration of professional roles and responsibilities and those of clients, patients and informal carers, collaborating in the ‘broader integrated care team’.

**Keywords:** change management; medical leadership; virtual teamwork; interdisciplinary collaboration; implementation; assessment