International Journal of Integrated Care – Vol. 9, 15 April 2009 – ISSN 1568-4156 – http://www.ijic.org/

Thesis summary

Sharing is caring: integrating health information systems to support patient-centred shared homecare

Maria Hägglund
Uppsala: Acta Universitatis Upsaliensis, 2009, pp. 98, (Digital Comprehensive Summaries of Uppsala Dissertations from the Faculty of Medicine; no. 414), Thesis Uppsala University, Sweden, ISBN 978 91 554 7390 7

In the light of an ageing society with shrinking economic resources, deinstitutionalization of elderly care is a general trend. As a result, homecare is increasing, and increasingly shared between different health and social care organizations. In this thesis, it is argued that in order to be truly patient-centred, care that is shared between different care provider organizations needs to be integrated. For different participants involved in shared care to gain a holistic view of the patient care process, it is necessary to provide support for information sharing and cooperation between different actors and organizations, including health and social care professionals and patients and their relatives.

The aims of this thesis were therefore to study information and communication needs in patient-centred shared homecare, to explore how integrated information and communication technology (ICT) can support information sharing, and to analyze how current standards for continuity of care and semantic interoperability meet requirements of patient-centred shared homecare.

The results presented in the thesis are derived from the action research project OLD@HOME. The project focused on providing a seamless and consistent information and communication flow within homecare of elderly patients through the establishment of a virtual health record (VHR). An action research approach, characterized by an emphasis on change and close collaboration with practitioners, patients and their relatives, was used. Five groups of participants in shared homecare of elderly were involved; (1) patients receiving homecare (n=2), (2) relatives of patients in the homecare area (n=4), (3) assistant nurses working with home help service (HHS) (n=14), (4) district nurses (DN) (n=4), and (5) general practitioners (GP) (n=3). Interviews, observations and group seminars with different themes were used.

Studying one specific homecare setting closely, important intersection points where information is/or needs to be exchanged between involved actors were identified, including shared care planning, consultations, delegation of duties and coordination of planned activities. Both *general administrative information* and *patient-specific information* are needed by different actors involved in homecare of elderly. *General administrative information* includes descriptions of homecare organization and governing rules and regulations. *Patient-specific information* that needs to be shared includes: contact information of different care providers involved in the patients care; care plans set up for the patient; the patient's current medications; risk factors; notes in different records; summaries of the patient's current status and health history; social service contracts; assessments of homecare needs; and calendar information (i.e. planned activities).

The information that needs to be shared was described as shared information objects, such as a *shared care plan* and a *shared prescription (or medication) record*. In order to enable information sharing an integration architecture making shared information available through integration of existing health information systems was designed and implemented using a user-centred design process. Mobile VHR applications, including web applications for DNs and GPs as well as patients and relatives, and PDA applications for HHS, enabled a seamless flow of information between involved actors. The applications were used in the homecare setting for a period of 5 months to evaluate and validate the VHR. Participating care professionals expressed that the VHR had improved their work situations. Increased understanding of the entire work process and improved cooperation within the team were noted as positive outcomes. Patients and relatives were also positive, considering the tool to be very important and greatly increasing safety and trust.

Moreover, the underlying information model for a shared care plan was mapped against current standards, i.e. CONTsys (the continuity of care standard EN 13940-1) and the open EHR standard for sharing of electronic health record information. Some important discrepancies were identified between the OLD@HOME results and current standards for continuity of care, stressing the importance of evaluating standardized models against requirements of evolving healthcare contexts.

In conclusion, the thesis gives important insights into what type of information needs to be shared in the context of shared homecare. The thesis also provides a case that shows how mobile access to aggregated information from current feeder systems and documentation at the point of need can enable more patient-centred information systems in shared homecare.

The results presented in this review are based on the author's thesis presented at Uppsala University on 13 February 2009.

Full text available from: http://publications.uu.se/abstract.xsql?dbid=9527

Further articles by this author in the International Journal of Integrated Care:

Hägglund M, Scandurra I, Moström D, Koch S. Bridging the gap: a virtual health record for integrated home care. International Journal of Integrated Care [serial online] 2007 Jun 27; 7. Available at: http://www.ijic.org/.

Maria Hägglund
Health Informatics Centre, Department of Learning, Informatics, Management and Ethics, Karolinska Institutet, Stockholm, Sweden
E-mail: maria.hagglund@ki.se