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“Person-centred health care resting on digitization and systematic processes”

Authors: Senior Lecturer Karin Ahlin, Professor Kristen Snyder

Presenter: Senior Lecturer Karin Ahlin, Institution Computer and Information Systems, Mid Sweden University, Östersund

Email: karin.ahlin@miun.se



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Systems developer program Gothenburg University 1984 – 1987

Working on the business side 1986 – 2011

Programmer systems developer, project management, development manager
(R&D ERP systems and distribution and logistics of pharmaceutical)

Own business Open Innovation

ODI node Gothenburg 2011 - 2021

Project Management Chalmers 1998 - 1999

IT management Gothenburg University 2008 – 2011

Visiting researcher and instructor at Michigan State University 2014 – 2016

PhD at Mid Sweden University 2020, “The benefits of Digital Technical Information”

Post Doc Karlstad University focusing on e-health





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Our group focuses on e-health in various perspectives. The foundation is that the context has a health approach combined, whether it is on a general level, like this study, or more specific, such as stroke rehabilitation. The health approach is always combined with digitalization in some ways, whether it is software or hardware, like an information system or communication sensors. Added to this can be systematic processes, such as stakeholders' value.

We are always interested in further networking, please approach us on Karin.ahlin@miun.se



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Article:

Introduction and motivation

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Introduction

Person-Centered model of health Care (PCC) is stimulating innovation in the organization, delivery, and management of services and changing the relationship between patient and healthcare worker by increasing collaboration.

As part of the Swedish national vision, “In 2025, Sweden will be the best in the world at using opportunities offered by digitalization and e-health to make it easier for people to achieve good and equal health and welfare.” [1].

In the field of information systems, studies in human communication online reinforce the complexity of participation in a digitally supported environment [2]. Use of digital technologies requires knowledge and competence to achieve the intended high quality of collaboration [3], [4]. In the field of quality management, innovations are taking place through service design and value co-creation, which involve the end-user in the needs assessment and design of services



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Introduction

By this we suggest that an interdisciplinary approach, combining perspectives from Information Systems and Quality Management will contribute valuable new insights about how health care systems can transform to a PCC designed to balance the pragmatic and the social value-based.

Therefore, the aim of this position paper is to highlight central elements from both theoretical perspectives to contribute with insights about how welfare technology can be used as a driving force to transform and innovate health care system.

We base our position paper on interventions and innovations within home-care for older persons.



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State of the art - Introduction

In this state of the art, we present research on the application of digital technologies in health care as part of the paradigm shift to PCC. The research illustrates the need for a broader approach to developing PCC, which we suggest can be addressed by drawing on the knowledge processes and tools from information systems and quality management.

The state of art is divided into the following areas: Detailing PCC, Digitalization and Value Co-creation in Health Care, Model of prerequisites for participating in the digital society, and Quality Management and Value Co-Creation



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State of the art - Detailing PCC

Haglund [1] defines “people-centered health care as an approach to care that consciously adopts the perspectives of individuals, families, and communities, and sees them as participants as well as beneficiaries of trusted health systems that respond to their needs and preferences in humane and holistic ways” ([1], pp. 1).

Dimensions of PCC: “1) Respect for patients’ values, preferences and expressed need; 2) Coordination on and integration on of care; 3) Information, communication and education; 4) Physical comfort; 5) Emotional support and alleviation of fear and anxiety; 6) Involvement of family and friends; 7) Transition and continuity 8) Access to care”. ([5], pp. V).



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State of the art - Detailing PCC

Under the Swedish healthcare reform Näravård (“Accessible Health Care”) [6] regional governments are redesigning health care systems to provide greater accessibility to care, and stimulate patient co-involvement. Value is placed on the individual, and recognizes co-creation as an important ingredient to better understanding of the needs of the individual. Included in the reform is a recognition that health care services can and should also aim to promote greater equality and the possibility for individuals to live more independently, taking charge of their health [6].

The WHO [7], cautions the need to strike a balance between technological solutions and human social connection. They state, “Digital health interventions should complement and enhance health system functions through mechanisms such as accelerated exchange of information, but will not replace the fundamental components needed by health systems such as the health workforce, financing, leadership and governance, and access to essential medicines.



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State of the art - Digitalization and Value Co-creation in Health Care

In the area of PCC, value co-creation and service design methods have been explored to foster patient-involvement [8], [9], [10], [11], [12]. Yet as [8] found, the rhetoric still outweighs the practice. They found that patients have the ability to contribute to development of their care, but that systematic processes, methods and tools to enable patient co-creation were often lacking.

Other studies of innovation health among the elderly draw similar conclusions about the lack of patient involvement. In a Swedish study, [13] provide a critical reflection on the promises and realities of digital care among the elderly, in particular in rural communities. Through an examination of innovations in the “Virtual Health Care Room”, they note that digital health services are not always accessible for everyone, and that they can also lack a PCC perspective.



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State of the art - Digitalization and Value Co-creation in Health Care

In a study of digital solution to support adherence to daily medication intake among the elderly (over 65 years of age), Crawford et al. [12] found that participants were open to technology. However, factors that need to be improved upon include access, patient-specific solutions and designs. As well, gender and educational background affected patient experience. Their findings also demonstrated a positive relationship between autonomy and digital solutions.

Other related studies, where access to services was examined, reveals complexities in the challenges that are both person specific and organizational. Wildenbos et al. [14] found that although access to technology was made available, rates of usage and adoption were low and inconsistent. Among the barriers they identified through a systematic literature review were, cognition, physical ability, perception and motivation.



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State of the art - Model of prerequisites for participating in the digital society

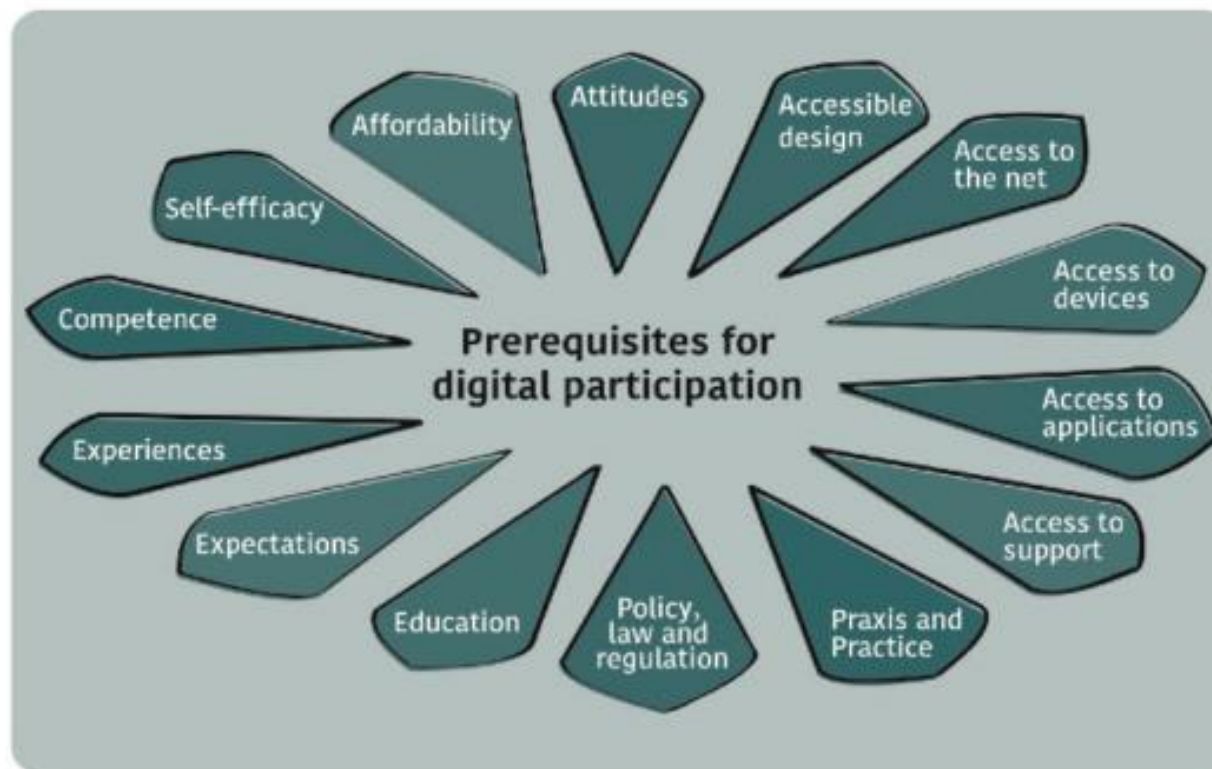


Fig. 1. Prerequisites for Digital Participation [15]



State of the art - Quality Management and Value Co-Creation

Quality management is a systems approach to organizational, service and product development with the primary intent to meet and exceed customer needs [16], [17]. In recent years, traditional approaches to customer satisfaction have been expanded by digitalization and service design to focus on value co-creation [18].

In a recent study of digitalization and quality management, [8] argue the need for research to go beyond focus on technological innovations to the impact on business models, and organizational systems that support value co-creation. Seen within a system view, digital solutions impact both internal structures, systems and processes as well as interactions between external factors. Referring to [19] they include the following levels of interaction: process level, organizational level, business domain and societal level.

Findings from their study recommend levels and forms of digitalization that need to be further examined and developed to achieve the balance between organizational efficiency and creating customer value.



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Conclusion

This position paper demonstrated the need for continued research into the ways in which welfare technology can be used to achieve the Swedish E-health vision 2025, and in particular with older populations. While there is good evidence of advancement and innovation in the application of digital solutions in health care, evidence also pointed to a lack of knowledge about how to engage patients in health care planning and development. Also, systematic processes need to be further developed to balance goals of organizational efficiency with patient value. Therefore we emphasized that understanding user-design for developing PCC are keys to transformation in health care.



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