What Are We Talking About When We Talk About Information-Driven Care? A Delphi-Study on a Definition

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Abstract. In Sweden, the term *information-driven care* has recently been put forward by healthcare organizations and researchers as a means for taking a comprehensive approach to the introduction of Artificial Intelligence (AI) in healthcare. The aim of this study is to systematically generate a consensus definition of the term information-driven care. To this end, we are conducting a Delphi study utilizing literature and experts' opinions. The definition is needed to enable knowledge exchange on information-driven care and operationalize its introduction into healthcare practice.

Keywords. Information-driven care, information driven care, artificial intelligence, Delphi study

1. Introduction

New ways of providing and organizing care by the means of deploying Artificial Intelligence (AI) hold great potential to alleviate contemporary healthcare challenges [1]. While the technical aspects of AI are often highlighted, the realization of its potential in healthcare depends on its implementation and integration into everyday practice [2]. For a successful utilization of AI in healthcare, there is a need to advance theory and empirical evidence regarding its deployment by bringing together insights from research and practice focusing on both technical, health, and social aspects [3].

In Sweden, the use of the term *information-driven care* has recently been put forward by Halmstad University and Region Halland as a means for taking a comprehensive approach to the utilization of AI in healthcare [4]. The idea behind the term holds potential, but to date, there are no research publications stating what 'information-driven care' is. To operationalize the term – to go from hype and hope to usefulness in practice – a clarification of its meaning is needed. This study aims to develop a systematically generated consensus on a definition of the term based on current literature and the views of leaders and strategists in Swedish healthcare.

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2. Methods

To systematically generate a consensus on the definition of the term information-driven care based on the views of leaders and strategists in Swedish healthcare we will conduct a Delphi-study [5]. The participants will be recruited through a national network on developing information-driven care in practice. The study will be reported according to the Conducting and Reporting of Delphi Studies (CREDES) standard [6]. For the purpose of the Delphi-study we will carry out a preparatory literature review.

3. Results

This study is currently ongoing. The results will provide clarification on the definitions of information-driven care. Furthermore, the results will reflect experts' opinion on the definition of information-driven care.

4. Discussion

Successful operationalization and knowledge exchange concerning terms or concepts in research demand that they are defined and described. For the use of the term information-driven care to support introduction of AI in healthcare it needs to be more well defined. The current work addresses this issue.

5. Conclusion

This paper presents the ongoing work of a Delphi-study for generating a consensus on a definition of the term information-driven care. To our knowledge, it is the first study that addresses the definition of the term information-driven care.

References

[1] Mehta N, Pandit A, Shukla S. Transforming healthcare with big data analytics and artificial intelligence: A systematic mapping study. JBI. 2019 Dec;100:103311: 1-14, doi: https://doi.org/10.1016/j.jbi.2019.103311

[2] Nilsen P, Reed J, Nair M, Savage C, Macrae C, Barlow J, Svedberg P, Larsson I, Lundberg L, Nygren J. Realizing the potential of artificial intelligence in healthcare: Learning from intervention, innovation, implementation and improvement sciences. Front. Health Serv. 2022 Sept; 2:1-8, doi: 10.3389/frhs.2022.961475

[3] Svedberg P, Reed J, Nilsen P, Barlow J, Macrae C, Nygren J. Toward Successful Implementation of Artificial Intelligence in Health Care Practice: Protocol for a Research Program. JMIR Res. Protoc. 2022 Mar;11(3):e34920: 1-13, doi: doi:10.2196/34920

[4] Halmstad University. IDC – Information Driven Care 2022 [Retrieved December 2022 from: https://www.hh.se/english/research/research-programmes/idc---information-driven-care.html.]

[5] Hasson F, Keeney S, McKenna H. Research guidelines for the Delphi survey technique. J Adv Nurs. 2000 Oct;32(4):1008-15, doi: 10.1046/j.1365-2648.2000.t01-1-01567.x

[6] Jünger S, Payne SA, Brine J, Radbruch L, Brearley SG. Guidance on Conducting and REporting DElphi Studies (CREDES) in palliative care: Recommendations based on a methodological systematic review. Palliat Med. 2017 Sep;31(8):684-706. doi: 10.1177/0269216317690685