Assignment 2

Updated 27.02.24

A goal in the course is to develop a framework that enables you to understand and navigate problems and solutions related to health data. Because the health data landscape is complex, the framework needs to account for the interconnectedness between different aspects of the healthcare system and other contextual factors that impact the production, processing, use, and sharing of data. In lecture 1, we introduced the foundation of the framework through a visual model (Figure 1). You can return to the lecture slides to refresh your memory: https://www.uio.no/studier/emner/matnat/ifi/IN5090/v24/slides/lecture1-2.pdf

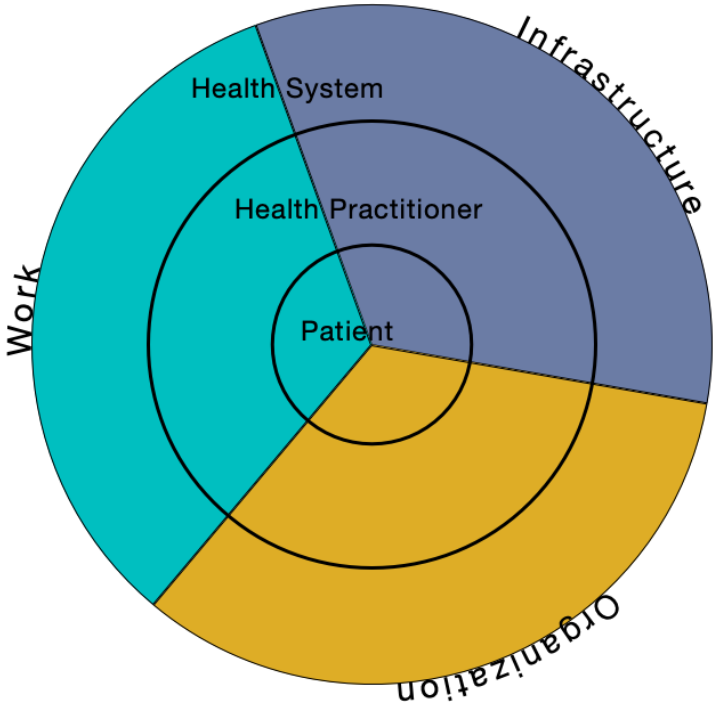


Figure 1: A model for understanding and navigating the production, processing, use, and sharing of data

The assignment is to analyse a case of your choice, based on the framework. To help you get started, you can read the example case at the bottom of this document.

You can start by discussing which of the three sectors of the circle is most important: Are the challenges described in the case related to the infrastructure, to the way work is performed, or to the organization of the work (teams, departments, organizations)? You can also ask questions relating to the three concentric circles: Is the patient experience affected, is the healthcare service

changed, or does this impact the larger health system? And you can continue to ask e.g.: Who has to do extra work now? Are some challenges caused by the current infrastructure? If we want to change the existing solution, where do these changes need to be implemented? And you should continue to explore whether there are other questions we can ask based on the framework.

You will discuss your text with two other groups, and you will get feedback from the group teachers.

To do the assignment, follow these steps:

1. Make sure the group includes participants with experience from practice in a health care setting
2. In the group, discuss each other's experience from practice. Describe challenges related to data (e.g., challenges with producing relevant data, sharing data internally or with other organizations), projects that participants have been involved in related to health data, or maybe innovative ways data have been used.
3. Choose one of the experiences (or create a synthesis between similar experiences) and create a case description of it (approximately 1 page). This should include a description of the context, what data was used for, which activities that were involved, and any experienced challenges.
4. Analyze and discuss the case using the course framework and related syllabus (1-2 pages).
5. Complete and submit the text by 23:59 March 19 to:
    a. margunn@ifi.uio.no
    b. You peer groups (assigned in group session)

Tips

- You can use ChatGPT, GPT UiO (gpt.uio.no) or other generative AI tools to help you describe your case. This does not mean that the whole case should be generated, but you can experiment with the chat tools based on facts and experiences from your case. Remember to write in the assignment what you have used the tool for.
- Remember to add references when you refer to literature, also when it is included in the syllabus.
- This assignment is highly relevant for the exam!

Example case description:

Context:

This case unfolds within a home care service provider that relies on an outdated, yet critical, legacy information system to manage patient care records. The legacy system, developed several decades ago, has become deeply ingrained in the organization's operations and infrastructure. Despite its reliability for basic functions, the system's age and the cost of potential upgrades or replacements have deterred significant modernization efforts.

The Challenge:

Home care nurses play a pivotal role in the provision of care, often visiting patients in their homes to assess their needs and provide necessary services. A crucial part of their duty involves documenting any specific patient requirements or risks in the healthcare information system, ensuring a comprehensive care plan is in place. However, a gap between required documentation practices and the functionality of the system has recently become visible to central home care leaders: the inability to register a patient's need for assistance in the event of a fire.

When the home care nurses have complained, they have been told that the system's inflexibility and the cost of development hinders adding new functionalities. In home care district “Apple”, the head nurse has, therefore, devised a workaround. Nurses are instructed to input this critical safety information into an existing field within the system that is designated for a completely different purpose. This field, originally intended to document another aspect of patient care, now doubles as a makeshift repository for fire assistance needs.

This unconventional solution has led to several complications. Firstly, the repurposing of the system field has introduced ambiguity and inconsistency in patient records. Information crucial to patient safety is obscured by being placed in an unrelated field, making it difficult for other healthcare providers to recognize and act upon this need.

Moreover, the lack of formal training and standardized procedures for using this workaround has exacerbated the problem. New and existing nurses in the Apple district receive minimal guidance on how to correctly enter and retrieve this vital information, leading to variability in how it's documented and increasing the risk of oversight. This inconsistency not only compromises patient safety but also places a strain on the nurses, who must remember the correct process amidst their other duties.