

Assignment 3

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The goal in the IN5090 course is to develop knowledge that enables you to understand and navigate problems and solutions related to health data. Because the health data landscape is complex, this entails accounting 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 a descriptive model of the topics of the course (Figure 1). You can return to the lecture slides to refresh your memory.

In brief, what we want to communicate with the model is that:

- Health data enables changes and innovations in healthcare (e.g., new forms of services)
- Health data does not emerge by itself, it needs to be enabled (e.g., through work and standardization)
- Health data is produced and used by patients, health practitioners, and by the health system (e.g., research, quality management), and in the interactions between these groups.

The different themes of the lectures and the connected syllabus all represent aspects of these issues.

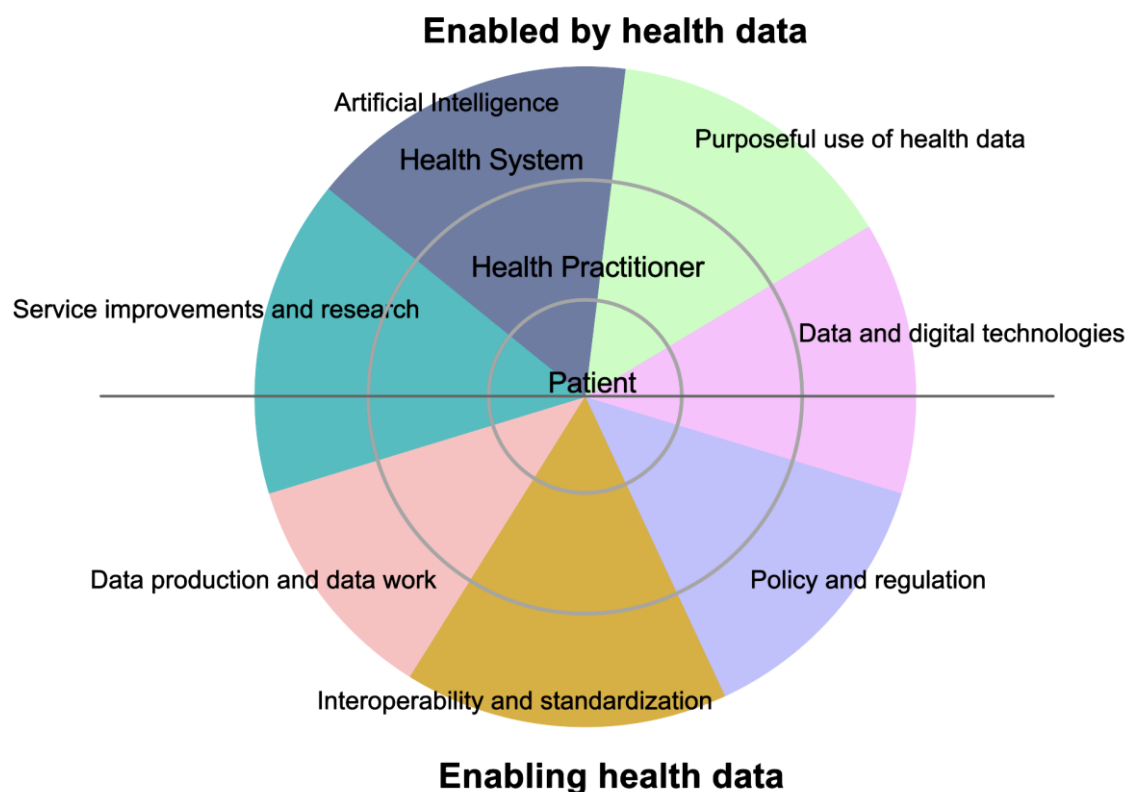


Figure 1: The course model describing the production, processing, use, and sharing of data

The assignment is to analyse a case of your choice, based on the course syllabus and lectures, and present it to the class. To help you get started, you can read the example case at the bottom of this document.

When you analyse your case, you can start by discussing which of the sectors of the circle in the model is most important: Are the challenges described in the case related to for example, data production and data work, standardization, or some other issue? 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.

To do the assignment, follow these steps:

1. Create a small group, 3-4 people (max 4). Make sure your group includes participants with experience from practice in a health care setting
2. In the group, discuss the experiences participants with health background have from practice. Describe challenges related to health 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. 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 syllabus. Refer to the course model and explain why you have chosen specific themes to discuss.
5. Create presentation (approximately 10-15 minutes) where you present the case and analysis.

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 presentation what you have used the tool for.
- Remember to add references when you refer to literature, also when it is included in the syllabus. The last slide of the presentation should have your references.
- 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.