


# Chapter 17

## Transforming Healthcare With Patient–Centric and AI–Powered Personalized Medicine

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### ABSTRACT

*The chapter delves into the fundamental principles and obstacles of patient-centered care, population-centered care, data-driven healthcare, and personalized healthcare. It explores these domains' intersections and potential synergies and identifies unexplored opportunities. It also highlights the difficulties of maintaining a patient-centric approach when employing AI systems in healthcare and the advantages of pharmacogenomics in creating customized drug therapy, which is crucial for personalized care.*

### INTRODUCTION

A patient is an individual who receives healthcare services. It is important to remember that every patient is unique with their own identity, history, cultural background, and personal experiences. When a person becomes a patient, they do

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not stop being a person. They take on the role of a patient, which pertains to their specific interactions with healthcare professionals.

Therefore, it is essential to differentiate between “person” and “patient.” A person is a whole individual, while “patient” refers to the specific role a person plays in the healthcare system. Patients are not defined solely by their medical condition or diagnosis. They are individuals with their own unique needs, preferences, and values.

Moreover, patient empowerment is a crucial concept in patient-centered care literature. It refers to a process through which patients gain greater control over decisions and actions that affect their health. Empowered patients feel well-informed (Stewart, 2001a,b) and entitled to take action and contribute to their care. Patient empowerment is a prerequisite for patient-centered care, as it ensures that patients participate actively in their healthcare journey.

It is important to note that patients are already powerful and autonomous individuals in their own lives. They do not need to be “empowered” by healthcare professionals.

However, power imbalances between patients and care professionals can create challenges in delivering patient-centered care (Street Jr et al., 2009). Patient-centered care addresses these power imbalances by providing patients with the support and resources they need to participate in their care actively (Kaba & Sooriakumaran, 2007).

Some phenomena can lead healthcare professionals to “ignore the person” and disempower patients. These phenomena work together and include depersonalization, bracketing of the person, standardization and productization, empathy and compassion fatigue, and the challenges faced by vulnerable and marginalized populations.

Depersonalization occurs when healthcare professionals disregard or erase individual traits or symbols of identity, such as a patient's name or personal history, and deny them agency. Differences in personal and cultural backgrounds can also make it difficult for professionals to empathize with patients.

Bracketing of the person can occur when healthcare professionals focus solely on a patient's biology or medical condition, neglecting the personal relationship. That can make the patient feel invisible and irrelevant to the situation.

Standardization and productization refer to using evidence-based guidelines and standardized care pathways to ensure technical care quality, but without tailoring to the individual patient's needs, values, and preferences. That can turn care into a transaction rather than a relationship, denying the patient and the professional personhood.

Empathy and compassion fatigue can occur when healthcare professionals become overwhelmed by a patient's suffering and create a mental distance between themselves and the patient. That can lead to emotionally stunted interactions that fail to address the patient's personal needs.

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