Introduction to Healthcare Processes

So far in this course, we have discussed how different types of data provide us with complimentary snapshots of a patient's health. The ability to characterize individuals much more precisely, through precision medicine, allows us to identify key differences across human populations, and to act accordingly in health care provision. This is stratified healthcare. Some important questions here include the following. How is it best to structure the delivery of care for patients with a particular condition? How can we stratify such care pathways for different types of patients? And how can we improve the provision of health care services? All these questions can be answered with the use of process modelling. Processes are at the heart of healthcare services and the provision of quality care, depends on the effective and efficient execution of processes. Healthcare processes are complex, dynamic, multidisciplinary, and often ad hoc and hence their management and coordination is a challenging task. Process modeling allows us to better understand how processes are organized. By analyzing processes, we can deepen this understanding, manage the complexities involved, and experiment with different approaches for process improvement. In the next few videos, we'll learn how we can model processes, how we can analyze them, and how we can automatically discover them based on existing data. Our focus will be on healthcare processes, but the techniques and methods that we'll learn are applicable to a wide range of processes in the life sciences, from biological processes to clinical trials and surgical robots.