When patients are transferred between hospitals or departments, information about and responsibility for the specific patient are handed over to ensure optimal diagnosis, treatment and care. Similarly, the important flow of information must also be ensured in connection with the many internal transitional situations that occur in a department, for example in connection with duty shifts. If important information is lost in these situations, if uncertainty arises regarding who is responsible for the patient, or if the organization in which the handover takes place is not geared to administer the handover, then there is a risk of reduced efficiency, poor quality, and even harm to the patient. It can therefore be assumed that patient handovers are among the most hazardous procedures within the health system. From a clinical perspective and with a focus on human factors, this Ph.D. project investigates patient handovers from ambulance to hospital, within the hospital, and between hospitals. The project defines patient handovers as situations where the responsibility for a patient's diagnosis, treatment and care is transferred – completely or partly, temporarily or permanently – from one healthcare person to another. The project is apparently the first comprehensive study to examine all hospital-related handovers from several data sources using both a quantitative and qualitative approach. The Ph.D. project consists of five studies based on a literature review and empirical data from three sources. The project has developed and validated a taxonomy that captures types of failures in patient handovers and their underlying causes. The three sources of data used in the project are: 1) interviews with clinicians about the factors that influence patient handovers; 2) selected adverse event reports registered in the Danish Patient Safety Database (DPSD) describing failures in patient handovers; and 3) Root Cause Analyses (RCA) that investigate failures in patient handovers in four of the five regions in Denmark. The project has identified eight factors that have an important influence on patient handovers: communication, information, organization, infrastructure, professionalism, responsibility, team awareness and culture.