Robotic Assistance in Nursing Care: Survey on Challenges and Scenarios

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Abstract : Robotic assistance in nursing care is an increasingly important area of research and development. Facing a shortage of labor and an increasing number of people in need of care, the German Nursing Care Innovation Center (Pflegeinnovationszentrum, PIZ) aims to address these challenges from the side of technology. Little is known about nurses experiences with existing robotic assistance systems. Especially nurses perspectives on starting points for the development of robotic solutions, that target recurring burdensome tasks in everyday nursing care, are of interest. This paper presents findings focusing on robotics resulting from an explanatory mixed-methods study on nurses experiences with and their expectations for innovative technologies in nursing care in stationary and ambulant care facilities and hospitals in Germany. Based on the findings, eight scenarios for robotic assistance are identified based on the real needs of practitioners. An initial system addressing a single use-case is described to show perspectives for the use of robots in nursing care.

Keywords : robotics and automation, engineering management, engineering in medicine and biology, medical services, public health-care

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