Patient Safety in Pediatrics: an ergonomic solution for safer care of children – the case of the Pediatric Teaching Hospital of Florence and the pediatric regional network
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Scope: Patient Safety in Pediatrics is a very relevant issue which requires lots of specifications comparing to the actions and solutions designed for the adults. The Teaching Hospital for Pediatrics of Florence, in collaboration with the Centre for Patient Safety of the Tuscany Region, has developed a joint program of activities for promoting safer care for children, based on ergonomics and human factor principles and methodology. Based on an institutional agreement, covered by regional investments, the collaboration is aimed at: defining and experimenting patient safety practices for paediatrics; developing and delivering training courses based on the principles of ergonomics and human factor applied to patient safety; developing new protocols for quality of the pediatric regional network.

Project organization: The project is coordinated by the clinical risk manager of the Pediatric Teaching Hospital (trained in Ergonomics and Human factor with an advanced course held by the university) and the project leaders for the Centre for Patient Safety that is an expert in Ergonomics applied to healthcare. Also the project involves other specialists in human factor: an architect and a designer with a master in Ergonomics, that are responsible for the evaluation of the existing spaces and cognitive artifacts supporting the daily activities and for the elaboration of new tools and use of the spaces; facilitators for patient safety (nurses and doctors working at the sharp end) inside the hospital who are trained in ergonomic and human factor with a course of 40 hours.

Human Factors topics covered: system ergonomics design of the entire program based on the ergonomic approach, Assessment and evaluation of solutions for patient safety from an ergonomic point of view, User centred design for the elaboration of new solutions.

Project phases: Definition of users’ need, from an ergonomic and human factor point of view, for each patient safety practice or other intervention introduced and contextualized; elaboration of the solution; pilot of the solution with a participatory approach; evaluation of the pilot (observation on the field and evaluation by the users; definition of the solution and introduction of the solution through training and observation of the real use; monitoring and evaluation over time.

Conclusion: As a result in the last 2 years, we introduced more than ten patient safety practices (preventing falls, preventing and managing pressure ulcers, managing galenic solutions, managing interruption during drug administration, managing infection, structuring handover among clinicians, preventing nutritional risks, managing central venous lines, etc.), through their contextualization based on an ergonomic approach, and we conducted training sessions at the regional level on some strategic issues (pediatric trauma management, pediatric patient falls, prevention of clinical deterioration in children).