Abstract:

Background: In nursing practice, flushing the catheters pre and post-drug administration is considered an important clinical procedure to prevent complications, and requires the use of several syringes to comply with international standards of care. We envisioned an innovative double-chamber syringe that enables the filling and administration of both solutions. Following current international recommendations, the development of new medical devices should integrate Health Technology Assessment. The Human-centred design is usually used for that assessment purposes, as a method that actively include end-users in the devices development process.

Method: Application of the Human-Centred Design through the involvement of nurses in the initial stages of the device development in order to accomplish the initial stages of Technology Readiness Level. A multi-method approach was used, including literature/guidelines review, focus groups with end-users and expert panels.

Results: The involvement of nurses enabled the definition of user requirements and contexts of use, as well as the evaluation of design solutions and prototypes in order to accomplish with usability and ergonomic features of the medical device.

Conclusions: Significant contributions were made regarding the final design solution of this innovative double-chamber syringe.

Reference: