

Standardization of the urinary catheterization process and staff training through the PrevenIRAS plan

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Each year there are 4.1 million healthcare-associated infections (HAI) **across Europe**, accounting for an **additional 16 million days of hospitalization** for patients. **Urinary tract infections (UTIs) are the third most common type of hospital infections in Spain**, representing between 15 and 20% of HAIs. 70% of these UTIs are associated with urethral catheters. With 1 in 8 of all patients in Spanish hospitals requiring catheters, there is a clear opportunity to significantly reduce HAIs by ensuring best practice hygiene compliance around the catheterization process.

With up to 65-70% of HAIs considered preventable, infection prevention is a priority in healthcare. The Bellvitge Hospital Emergency Department, Barcelona conducted a study with HARTMANN, implementing a standardized urinary catheterization protocol, focusing on the critical times when infection is most likely to occur.

The standardized process was based on five key steps to prevent infection:

- Ensuring that the urinary catheterization has been indicated
- The catheter has been inserted aseptically
- Keeping the system closed at all times
- Keeping the circuit permeable, always placing the bag under the bladder
- Assessing the need for catheterization on a daily basis and removing it when it is no longer necessary.

Actions implemented at Bellvitge Hospital:

- 1.** Standardization of the urinary catheterization protocol from the perspective of patient safety, taking into account the key times when HAIs can be prevented.
- 2.** Training of healthcare workers.
- 3.** Assessment of suitability of materials and method of work by Hartmann.

Project stages:

- 1.** Pre-catheterization: following the catheterization insertion indications.
- 2.** Insertion procedure: train staff in the standardized procedure.
- 3.** Post-catheterization: defining indications, maintenance and removal of the catheter.

An observational study took place to check compliance with the protocol both before and after standardization, and staff satisfaction was also measured.

Methodology:

The study was conducted at Bellvitge University Hospital's Emergency Department for 30 months. The participating population was nursing and auxiliary staff. 50 direct observations and surveys took place.

The study was structured around material analysis, training programs, review of the existing protocol a standardized protocol created with a focus on critical times for patient safety and baseline observations (75 observations over seven months). There was also a four-day training course, six face-to-face sessions involving 122 nurses and auxiliary staff and also an e-learning platform for continuing education. A total of 109 surveys were conducted. 50 post-intervention observations and 30 surveys took place. Finally, the results were analyzed and published.

An application was designed for healthcare workers on their tablets to directly collect data. **Each step of the new way of working was also translated into infographics, and posted at strategically important locations as helpful, timely reminders for staff.**

Another essential component of the project was selecting the most suitable products for catheterization and placing them in the best position for safe, efficient patient care. HARTMANN's MediSet Advance was chosen for the job, together with Sterillium® Med and Eurodispenser 3 Flex.

Pre-publication results of the standardization of the urinary catheterization process:

- Protocols are not performed as well as believed.
- Adherence to hand hygiene has increased by 17 points compared to the score achieved previously, reaching a threefold increase in compliance around the aseptic insertion of the catheter.
- Key actions for patient safety also improved by an average of 18 points.
- Standardization of the urinary catheterization process, hand-in-hand with ongoing training and product suitability improves compliance with the protocol, increasing adherence to hand hygiene and helping to prevent HAIS.

Healthcare workers' opinions:

- 90% of healthcare workers were satisfied with the implementation of the plan and 100% believe that the plan increased the safety of healthcare workers and patients.
- 97% would recommend the implementation of a program like this one and 85% will use the acquired knowledge.

Conclusions from the conference:

- HAIS is a serious public health problem affecting 15% of hospitalized patients.
- Standardization of processes, ongoing training and the suitability of materials are key elements in the prevention of HAIS.
- The implementation of a program based on process standardization (PrevenIRAS Plan) improves the satisfaction of healthcare workers and compliance with protocols.

