

Experience Story: How Do We Re-Implement What Has Been Implemented?

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Abstract. Since 2017, the Hospital Italiano de Buenos Aires, has a “Workstation on Wheels” project where nurses can access to a mobile application in order to register the drug’s administration, vital signs and complete an early warning assessment scale of the hemodynamic state of the patient. Although the overall objective was to achieve at least 95% drug registration through this system, their use did not remain stable over time. Therefore, it was necessary to create an interdisciplinary team to make a diagnosis of the project situation and reasons for the low use rate. In this process, a re-implementation of the barcoding administration system was carried out, focusing on the nursing staff maintaining the use of the system over time. The aim of this paper is to describe the experience and lessons learned in the process of re-implementing the drug barcoding system at the patient’s bedside.

Keywords. BCMA, implementation, nurses, Workstation on Wheels

1. Introduction

The Hospital Italiano de Buenos Aires (HIBA) is an institution accredited by the Joint Commission International. In 2015 the implementation of the correct drug identification system was carried out through the technique of “barcoding” or reading with a QR code scanner on desktop devices [1]. Then, in 2017, mobile devices (tablets) were incorporated into “Workstation on Wheels” (WOWs) structures with transferable tray [2]. The mobile application is developed with IONIC as source code. This implementation was carried out in various hospitalization sectors, both pediatric and adult, including intensive care and general sectors. Although the overall objective was to achieve at least 95% drug registration through this system, usage did not remain stable over time. Therefore, it was necessary to create an interdisciplinary team to make a situation diagnosis. In this process, a re-implementation of the barcoding administration system (BCMA) was carried out, focusing on the nursing staff maintaining high system use over time. The aim of this paper is to describe the experience and lessons learned in the process of re-implementing the drug barcoding system at the patient’s bedside.

2. Methods

At first, the different areas involved in the BCMA project belonging to the

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Department of Health Informatics (DIS) of the HIBA were convened. Forming a transdisciplinary team of 2 informatic nurses, an informatic physician, two computer technicians, a network technician, a programmer and a designer. Tours around the sectors were organized to inquiry nurses about the reasons behind low system usage.

3. Results

During this process, several strategies were used. On one hand, those oriented to organizational change management and training of professionals, and on the other, strategies related to the adaptation, support and operation of technological equipment.

Regarding change management and training: Incorporation of nursing supervisors to dynamics work, group and individual training, tracking users, training material development, communication lines, help desk, communication and dissemination.

Related to adaptation, support and operation of IT equipment: A technical team consisting of specialists in mobile devices and WiFi networks was put together. They reviewed each HIBA inpatient sector to detect failures. Changes were made to the network, to improve broadcast and connectivity. Software improvements were made together with the development team. Applications to restrict general use of the devices were used, allowing only the BCMA application to run.

4. Conclusions

The management of organizational change is the basis for a large-scale implementation that can modify staff workflow [3]. Communication improvement between parties involved in the project showed great changes at the organizational level. It enabled exchange spaces, allowing them to work more fluently. Empowering both nurses and technicians to form a single work team. It generated a feeling of belonging on both sides. It was very important to generate a communication channel in order to provide users with a space to report failures or malfunctions. It was also important for this channel to allow the tracking of tickets, generating improvements in response times and more durable solutions. With active listening, opportunities for improvement can be detected, such as the potential incorporation of functionalities already implemented in the desktop EHR to the bedside workflow, such as risk assessment [4].

References

- [1] Maydana T, Giraldo L, González Z, Schachner B, Mayan J, Luna D, et al. BarCode Medication Administration in ICU: Learning from Our Nurses. *Stud Health Technol Inform.* 2017;245:1095–8.
- [2] Giraldo L, Schachner B, Luna D, Benítez S. Exploring Nurses' Perceptions and Expectations Toward a BCMA Implementation Using a Mobile App and Workstations as a Change Management Strategy. *Stud Health Technol Inform.* 2018;250:134–8.
- [3] Slotnisky D. Transformación digital: cómo las empresas y los profesionales deben adaptarse a esta revolución. Digital House. Coding School.; 2016. 184 p.
- [4] Watzlawick P, Bavelas JB, Jackson DD. Teoría de la comunicación humana: interacciones, patologías y paradojas. Editorial y Librería Herder; 1993. 260 p.