

Implementing an eMAR Through the Use of an eTesting Team Created from Front-Line Staff

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Background: The use of electronic medication administration records has been set forth as an industry standard to improve patient safety. Yet many of these efforts miss their mark on a number of measures. Without a deliberative process in both development and training, technology may merely automate a flawed system. At worst, flawed electronic systems and inadequate staff training and preparation may increase the risk of harm to patients.

Process: We involved front-line staff in every stage of the project. They helped inform our initial steps; analyzing current workflow, defining key principles, and reviewing available electronic products. We concluded that none would meet all of our requirements and launched a process to create a home-grown product (eMAR) that would increase safety and efficiency of the medication administration process and provide real-time, accurate information to clinicians and patients about medications.

Development occurred over many months, in a dynamic iterative fashion. As the eMAR emerged, we convened an “eTesting Team,” composed of clinical nurses and pharmacists who met with the development team during weekly all-day sessions. They used current clinical experiences, practice standards, and knowledge of workflow to test and re-test the application, making recommendations for enhanced usability.

The eTesters also developed classroom training and worked with project leads to design and implement a broad training plan for all users. They supported each of the go-lives during a phased roll-out, helping to ensure that there were no disruptions in medication administration and that all staff felt comfortable with the new process.

Results: To date, we have had fifteen successful unit rollouts. The participation of the eTesting Team has been key to the project’s success. Nursing time motion studies show that, following implementation, nurses spent more time at the bedside, even while actual time to administer medications remained flat. We have achieved a consistent rate of 96% or more for bar-code scanning, including for the high risk areas of the Emergency Department and PACU.

Conclusions and Recommendations: We believe deployment of front-line staff in testing and support roles during a practice change has multiple advantages and broad applicability. Not only does it help ensure a user-friendly, functional product, but it also provides built-in leadership and development opportunities for clinical staff. This improvement project demonstrates that using our team of eTesters plays an important role in bringing electronic medication administration to the hospital environment.

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