

# Nursing time spent before and after the implementation of eMAR/bedside barcoding

## The Problem

- The implementation of bedside barcoding and eMAR (Electronic Medication Administration Record) have been shown to improve patient safety by reducing certain types of medication administration errors
- Starting in 2013, BIDMC began a hospital-wide implementation of these two practices
- It is unknown what effect (if any) the implementation of these processes would have on how nurses spend their day
  - On medication-related tasks
  - Overall patient care
  - Time spent in the patient's room

## Aim/Goal

The aim of this project was to quantify how nurses spent their time before bedside barcoding/eMAR implementation to how they spent their time after bedside barcoding/eMAR were implemented.

## The Team

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## The Interventions

- A time in motion study was created with bedside nursing input to define the tasks that a nurse performs throughout their shift
- The studies were conducted using Workstudy+ software using an iPad mini. Data was then downloaded and analyzed using Microsoft Excel.
- The baseline study was conducted for 5 shifts (4 day/1 evening) on the 5 Stoneman unit prior to eMAR implementation
- The same time study was then conducted roughly 6 months after the implementation of eMAR implementation for 5 shifts (4 day/1 evening) on the 5 Stoneman unit.

## The Results/Progress to Date

	<i>Before eMAR</i> <i>(per 8 hour shift)</i>	<i>After eMAR</i> <i>(per 8 hour shift)</i>
<b>Non-medication patient care</b>	<b>65 minutes</b>	<b>63 minutes</b>
<b>MAR interaction</b>	<b>25 minutes</b>	<b>32 minutes</b>
<b>Administering Medications</b>	<b>37 minutes</b>	<b>35 minutes</b>
<b>Non Medication transport (includes searching)</b>	<b>34 minutes</b>	<b>26 minutes</b>
<b>Total time spent in patient room</b>	<b>166 minutes</b>	<b>196 minutes</b>

## Lessons Learned

- Overall nursing time spent performing tasks was not different when comparing pre/post eMAR implementation
- Medication-related administration time remained the same, despite the requirement for bedside barcoding
- Less nursing time spent walking around the unit (no need to search for med books)
- Time spent in patients' rooms increased by 30 minutes per shift

## Next Steps

- Continue to implement eMAR/bedside barcoding throughout BIDMC