

# Pharmacy Planning and Evaluation of Computerized Prescriber Order Entry Implementation

St. Michael's

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Inspiring Science.

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## BACKGROUND & DESCRIPTION

- Implementation of computerized prescriber order entry (CPOE) and bar-coded electronic medication administration records (eMAR) to all non critical care adult inpatient care areas occurred as a staggered rollout over 2 years
- Pharmacists repeatedly affected by subsequent roll-outs on all units given their role in order validation.
- Pharmacy department developed and delivered a roll-out plan as each of the 13 patient care areas went live

## ACTIONS

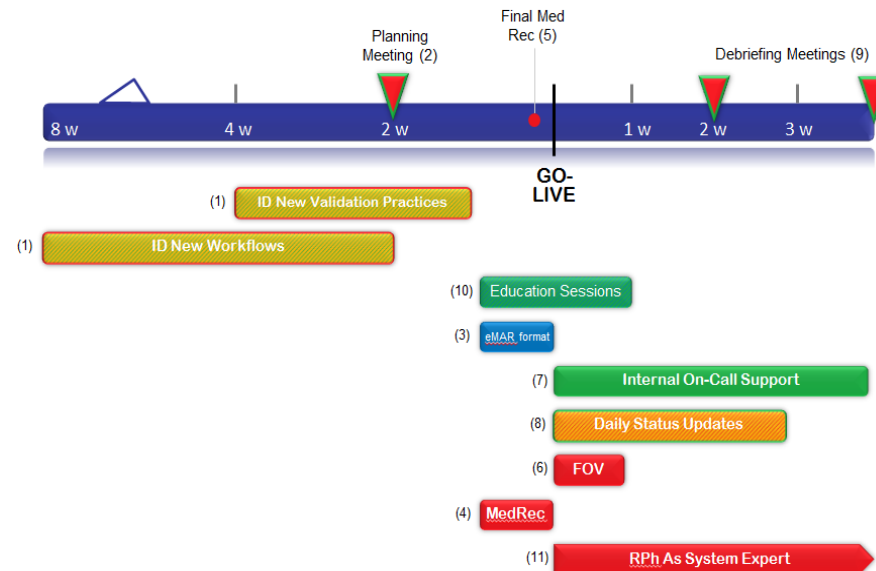
### Early Preparation Work

- Preparation and planning began 2 years before first unit launch
- Pharmacist co-lead development of medication content chiefly by working with each service to develop order set content
- Policy and procedures were updated (e.g. medication reassessment, verbal / telephone orders, range orders) or created (e.g. standard medication administration times)
- New multi-disciplinary group advised on patient safety and clinical practice related medication management issues pertaining to CPOE design & functionality
- At unit level, pharmacists collaborated project team to develop service-specific common medication orders, validate the translation of paper order set content and processes to electronic format

### Education & Support

- Prior to first unit launch, pharmacists received system training using combination of didactic teaching, order review in test systems and order validation for live patients (total 9 hours)
- Tip sheets for new and complicated medications / workflows
- Validation manual and self-study audio learning modules used for standardized new staff training
- "Rx-Line" email group for staff to ask questions, provide feedback or request enhancements/changes regarding medication build, workflows or validation

Figure 1: Timeline Of Activities for Single Unit Go-Live



- 1) Pharmacists provided direction on workflows and validation practices to informatics team through unit-specific engagement sessions
- 2) Unit pharmacist was engaged to anticipate shift in medication order review activities, address service-specific issues and identify required supports and scheduling needs during the launch
- 3) Staff pharmacists began processing all new orders in eMAR-compatible format (e.g. standard admin times, full clinical instructions)
- 4) Unit pharmacist began reconciliation of patient profiles
- 5) Final medication reconciliation review completed on morning of go-live
- 6) Unit pharmacist responsible for Full Order Validation (FOV) for first week
- 7) Pharmacy super-users available 24/7 to support front-line pharmacists during first two go-lives
- 8) Unit pharmacist participated in daily status meetings with project and practice leadership to address workflow and practice issues
- 9) Debriefing sessions held with unit pharmacist biweekly after each launch
- 10) For each unit, education sessions held for new service-specific orders and workflows

## EVALUATION

- Pharmacists provided feedback on how the implementation could have been improved. Responses included:
  - **Support:** pharmacists seen as "go to" person for any issue or problem with CPOE/eMAR, recommended to include training on alternative resources and for them to be readily available (11)
  - **Staff training:** more mandatory training for physicians, health disciplines and new staff new post-launch as well as providing training to agency/relief staff
  - **Knowledge:** pharmacists need training in areas that previously were not included in pharmacist order review (e.g. IV fluids)
  - **Things that went well:** adequate training was provided although at times it was a large amount of new information; "tip sheets" were a good reference for when specifics were forgotten; Increased staffing in inpatient pharmacy was important during "go-live periods"; staggered roll-out allowed learnings to be applied

## IMPLICATIONS

- Careful and intentional planning led to a seamless roll-out from the pharmacy department perspective
- Feedback incorporated into the roll-out plan when CPOE/eMAR subsequently launched in critical care units.

## ACKNOWLEDGEMENTS

Staff demonstrated a commitment to quality patient care and rose to the challenge of change with enthusiasm and excellence. Strong leadership from Janice Wells (Director of Pharmacy), and pharmacy informatics (Vaishali Sengar, Ramola Bhojwani, Jodie Leung and Jenny Lieu) enabled meaningful collaboration with successful outcomes.