Improving home based acute care in central Massachusetts

Meghan E. Reilly BA [1], Deidre Rolli BS, RN [2], Constantinos I. Michaelidis MD, MBA, MS [1,2], Candra Szymanski MS, RN [1,2], & Adarsha S. Bajracharya MD [1,2]

[1]UMass Chan Medical School, [2]UMass Memorial Medical Center

Hospital at Home
UMass Memorial Health
UMASS MEMORIAL MEDICAL CENTER

UMass Chan
MEDICAL SCHOOL

Introduction

- In response to the COVID-19 pandemic, the Centers for Medicare and Medicaid Services (CMS) took steps to enhance hospital capacity by allowing acute care to be delivered outside the hospital setting.
- Born out of these pandemic-driven challenges, UMass Memorial Health's **Hospital at Home** (HaH) program was launched in August 2021 to provide hospital-level, high quality care in the comfort and convenience of a patient's home.
- Hospital at Home is an inpatient med/surg unit serving eight townships in Worcester County, and has treated over 550 patients since its launch.
- Despite the successes in delivering high quality care and patient satisfaction, challenges remain in respect to day-to-day workflow. Therefore, it is important to identify operational inefficiencies in clinical workflow to ensure continued success and positive patient and care team experiences.
- The objectives were threefold: (1) observe front-line staff to understand current workflow, (2) identify challenges and opportunities for improving operational efficiency at HaH program, and (3) perform a root cause analysis on one of these barriers in an effort to better understand how to address it.

Methods

- Under the framework of the Lean Enterprise Institute, Gemba walks were performed with front-line staff. Gemba walks are a management practice for establishing the current state of an operation through observation and inquiry, before making actionable changes (Lean.org).
- For two weeks, four nurses, two care navigators (case managers), one clinical coordinator, and two providers were observed.
- Upon completion of the Gemba walks, detailed mapping of the workflow was constructed, and barriers to operational efficiency were identified.
- A root cause analysis was performed on one of these barriers.

Contact information
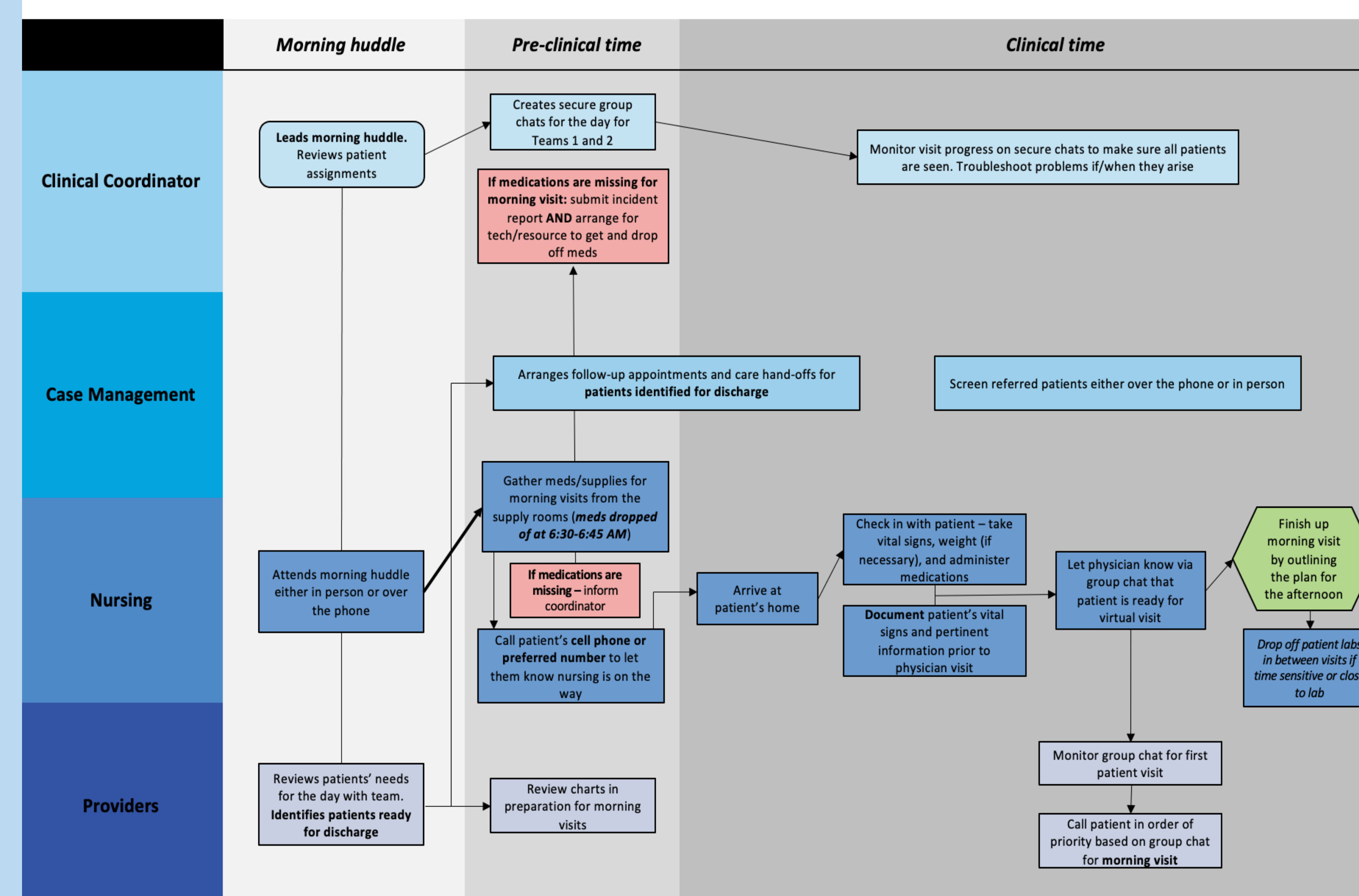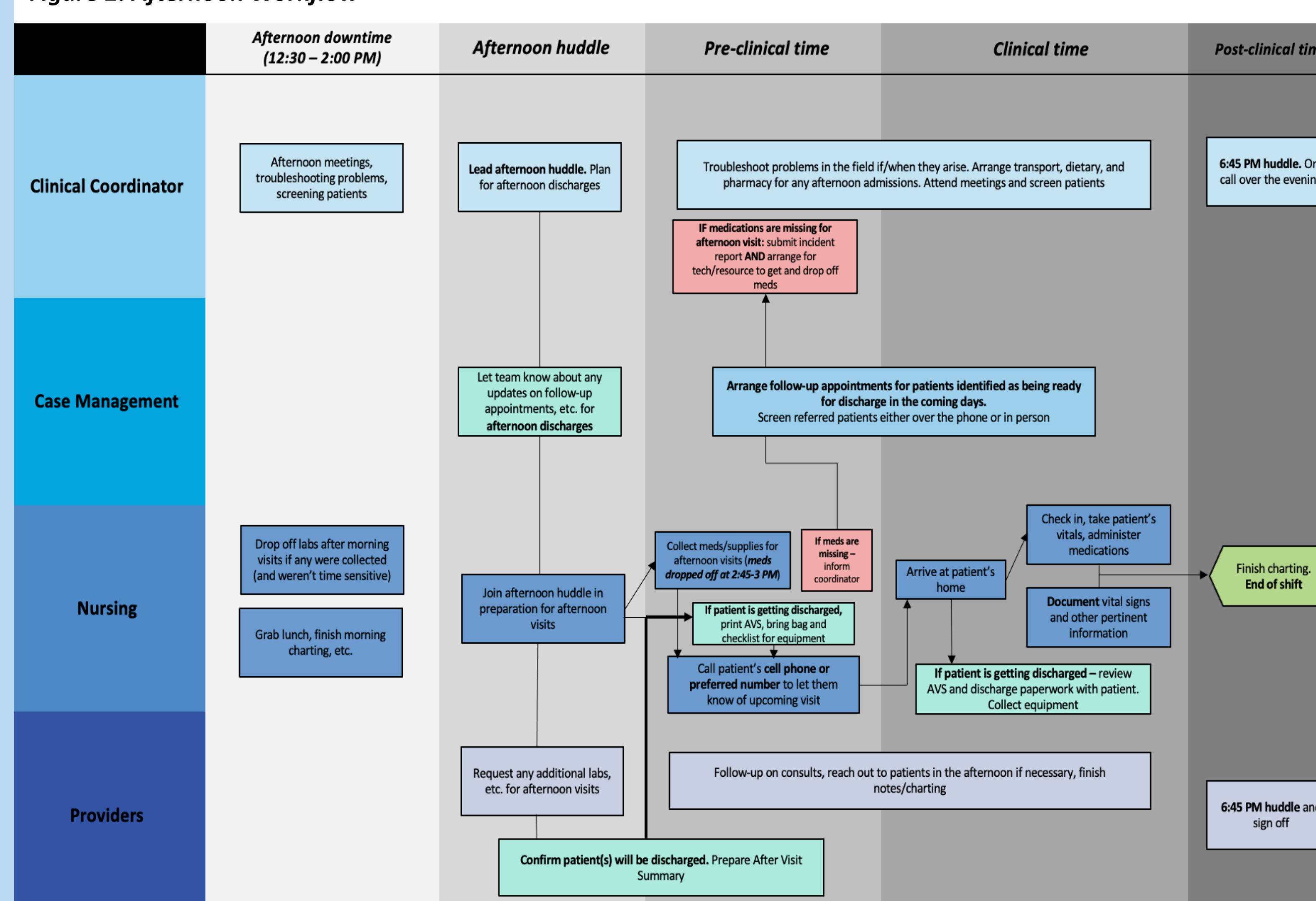✉ Meghan.Reilly@umassmed.edu

*Figure 1: Morning Workflow*

Figure 2: Afternoon Workflow

Results

- Figures 1 and 2 include sample workflows.
- Areas identified as barriers to efficient workflow included:

Barrier	Example
Medication delays	*Sporadic missing meds at morning and afternoon drop-off*
Patient-derived delays	*First patient of the morning not answering the door*
Technology-derived delays/hiccups	*Patient tablets resetting without warning*
Delays in onboarding new hires	*Newest hires were offered positions in March, but not onboarded until June*

- Of these barriers, **medication delays** were selected for a root cause analysis. Areas related to this problem included new admissions and medication ordering:
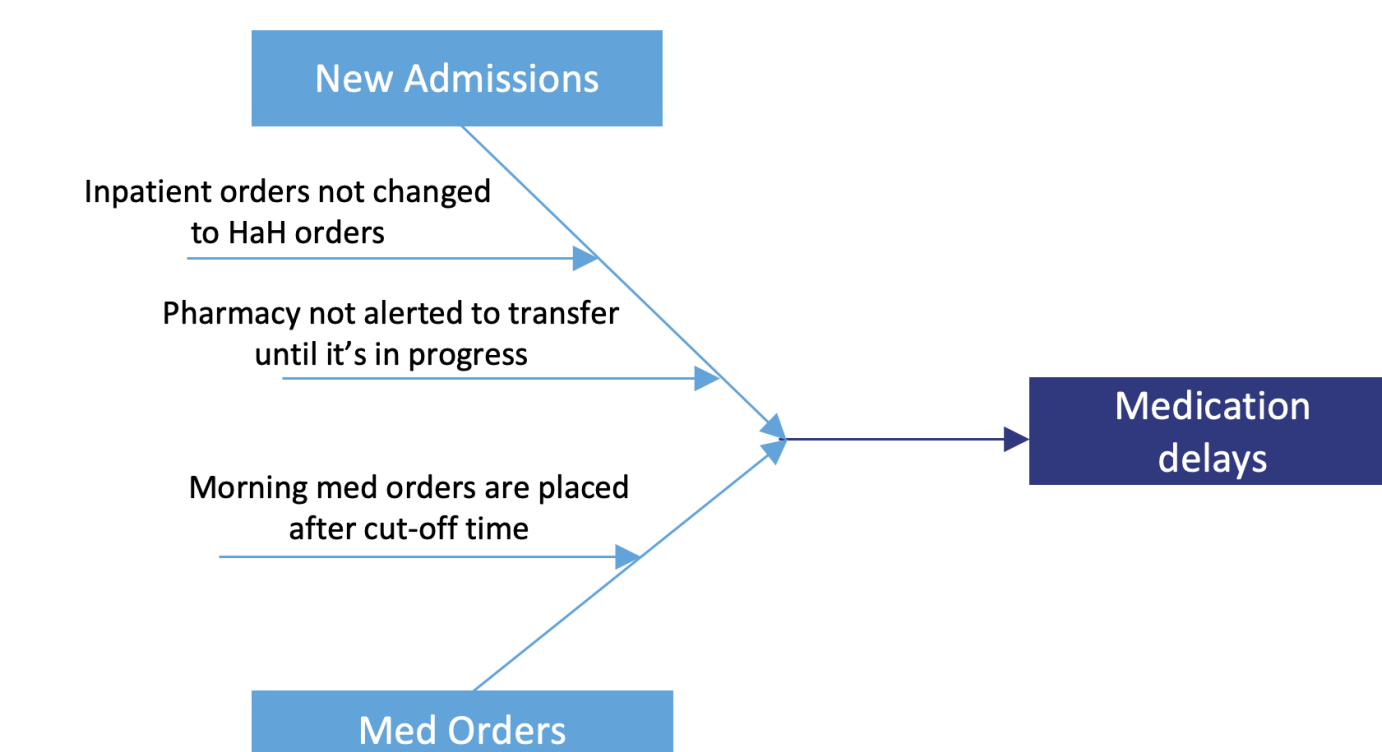
- The major causes of the delays included (1) inpatient orders not being converted to HaH orders upon patient transfer, (2) delays in alerting pharmacy to patient transfers, and (3) placing morning med orders after the cut-off time.

Conclusions

- While UMass Memorial Health's HaH program has seen many successes since its inception in August 2021, several opportunities for clinical operation improvement were identified.
- Some areas that were identified include medication delays, difficulties reaching the first patient of the morning, and technological hiccups with the patient surveillance tablet.
- Of these, performing a root cause analysis of medication delays would suggest that targeting provider education could decrease the medication delays at morning drop-off and at new admissions.
- Next steps include conducting a PDSA cycle that is informed by the root-cause analysis findings, and evaluate the impact of provider education on the reduction of missing medications.