

Patient Flow in a Pediatric Emergency Department

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July 31st, 2015

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1: Univ. of Michigan Department of Industrial and Operations Engineering

2: Univ. of Michigan Mott Children's Hospital

3: Skyline High School

- Background
- Motivation
- Results
- Implications
- Continuing work

- Center for Healthcare Engineering and Patient Safety
 - Multidisciplinary teams
 - Engineering
 - Nursing
 - Pre-med/Medical
 - Computer Science
 - Clinical faculty



- Nationally recognized for excellence in clinical services, research and education
- 348 beds
 - 28 ED beds
- Integrate clinical care, education, research and advocacy to advance the health of children, women, and families



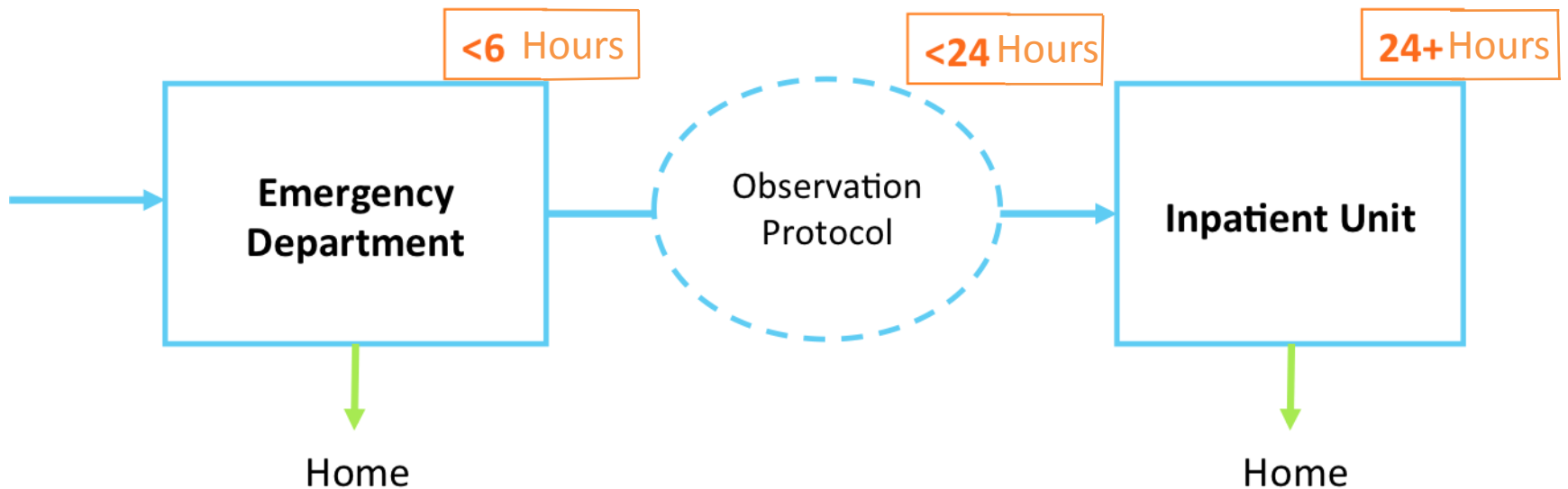
Emergency Department

- Emergency
- Unstable
- Complex
- Interactive

Inpatient Units

- Treatment
- Stable
- Complex
- Interactive

Motivation



Improve quality care delivery and help patients, families, and healthcare providers understand hospital processes

- **Observations:**
 - Over **100 hours** of observations in the ED/Inpatient Units
 - Observed day to day activities of attendings, residents, nurses
 - Observed patient hand-offs between the ED and the Inpatient Units
 - Spoke to social workers, care management teams, etc.

ED Flowchart

- Provide patients/families with knowledge of interactions and behind the scenes work during their hospital stay
- Help healthcare providers understand the impact that each provider has on the system
- Understand the reactions of ED processes and the effects on Inpatient Units

- Make flowchart app more user friendly
 - Implement flowchart in the hospital
- Continue observations to further enhance the flowchart
- Identify areas of opportunity to further our research in collaboration with C.S. Mott Children's Hospital

- Center for Healthcare Engineering and Patient Safety
- C.S. Mott Children's Hospital
- The Seth Bonder Foundation
- The U of M Center for Research on Learning and Teaching (CRLT)
- The TDC Foundation

Thank you!

QUESTIONS?

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