

Team Triage

Michelle Miller, RN, MSN, CNL
Emergency Services



Background

- IOM has declared emergency department (ED) overcrowding as a national crisis^{2,3}
- ED overcrowding has hospital wide implications on patient safety and satisfaction^{2,3,4,5,6}:
 - Increased time to provider (TTP), and left without being seen (LWBS) rates, and length of stay (LOS)
 - Delayed time to appropriate treatment
 - Decreased patient satisfaction
 - Patients who board in ED show poorer outcomes than admitted patients who do not board
- Overcrowding can be understood through the Input-Throughput-Output conceptual model above^{1,3}
 - Latest research focuses on maximizing resource utilization to ultimately improve throughput^{1,4}

UI Health Setting

- 495 licensed bed academic teaching hospital in the Illinois Medical District⁷ Primarily serving South and West Sides of Chicago
- Certified Comprehensive Stroke Center
- ED has 33 licensed bed spaced, evaluating an average 130 patients each day
- Average 11a-11p staffing: 15 RNs, two APNs, three Attending MD, four Resident MDs, five CNAs/EMTs

Objectives

Examine the influence of a Team Triage on throughput metrics: time to provider (TTP), left without being seen (LWBS), and length of stay (LOS)

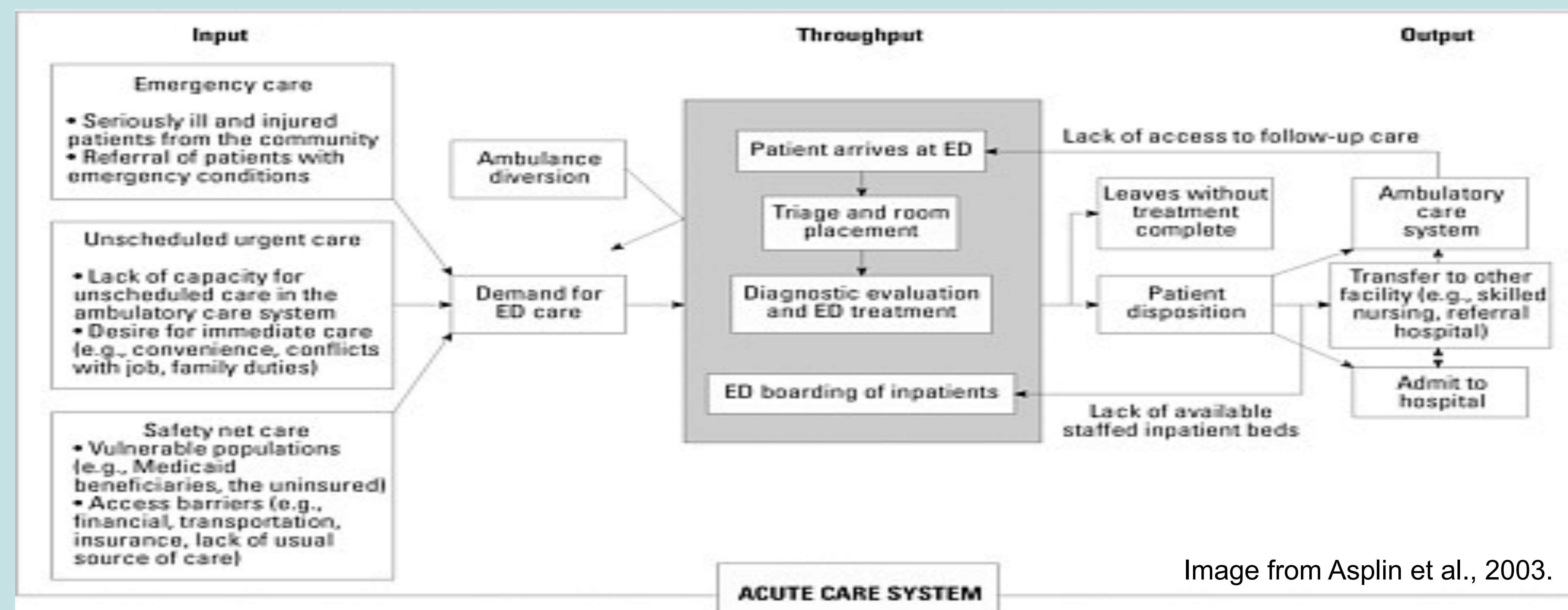


Image from Asplin et al., 2003.

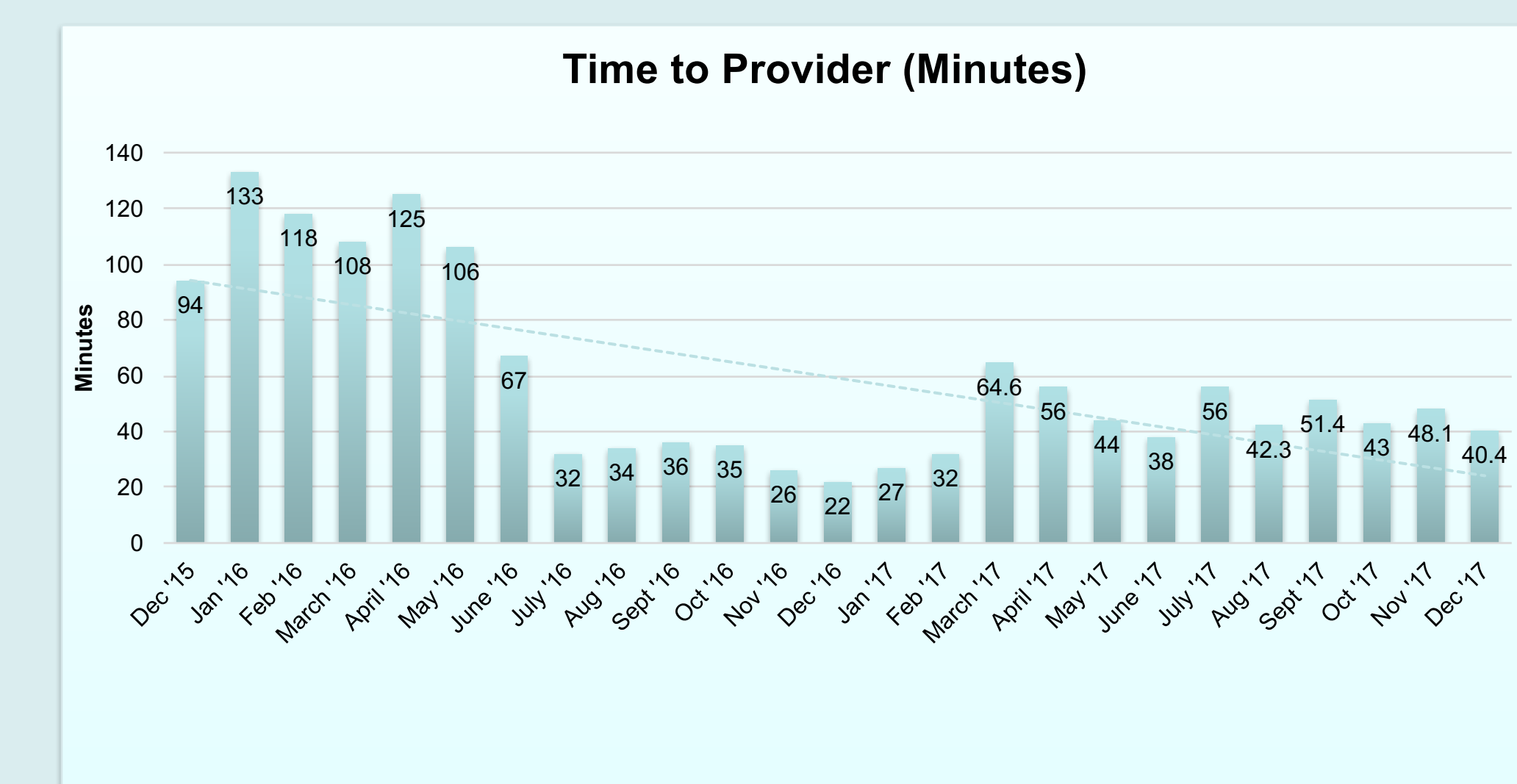
Methods

- Data collection
 - Literature search
 - Evaluate practice standards
- Implementation planning
 - Stakeholder assembly
 - Define staffing requirements, evaluation metrics, and budget
 - Process planning and space utilization
- PDSA Cycle for continued improvement of intervention

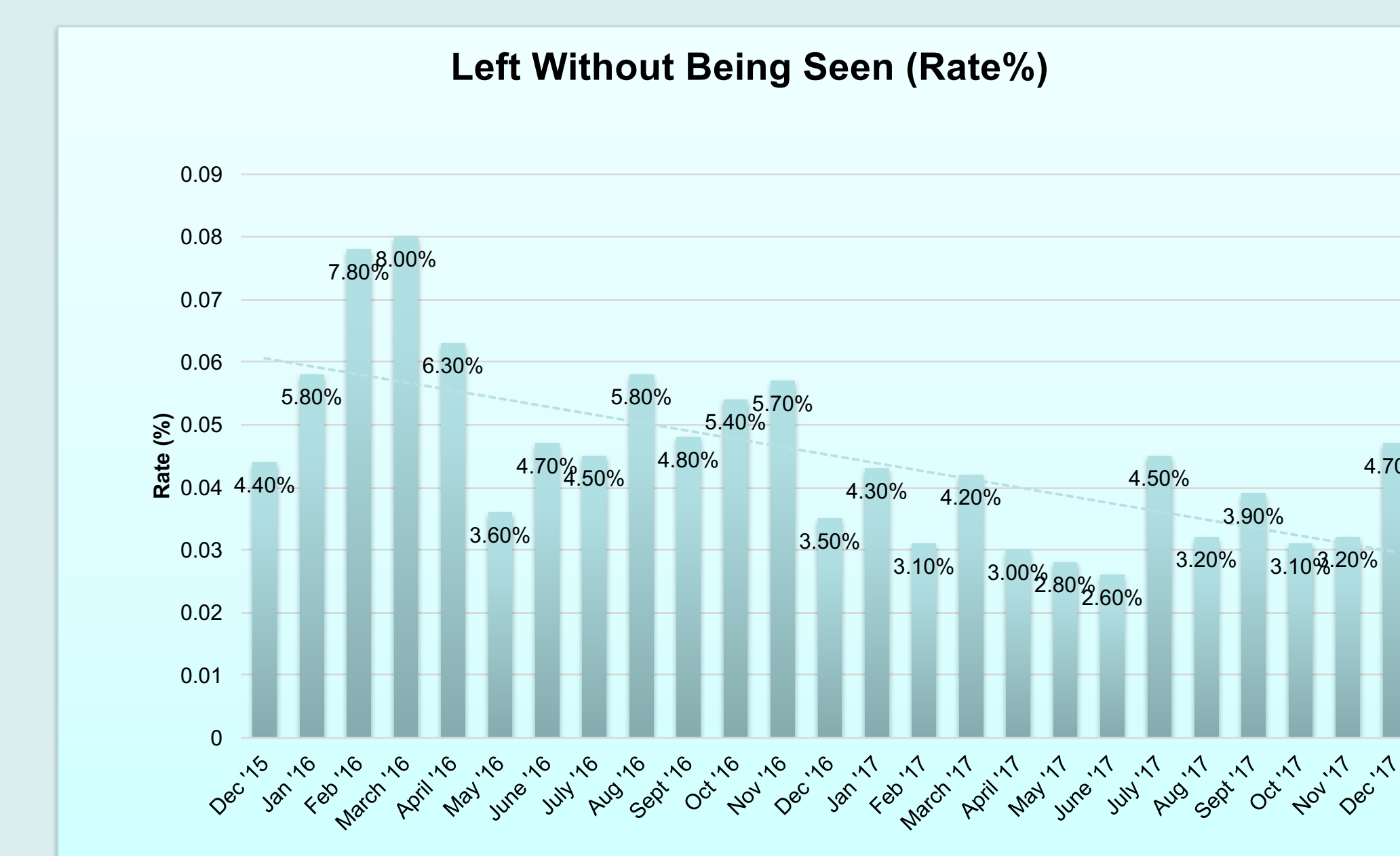
Implementation

- Team Triage (TT) introduces an APN's participation to the ED triage process
- TT was implemented in July 2016 and is staffed by experienced APNs Monday through Friday 11am-9pm
- The APN initiates a treatment plan and completes a medical screening evaluation based on the patient's chief complaint, medical history, vital signs and POCT results
- RN with a CNA or EMT facilitate the TT process by executing the treatment plan from triage when there is not immediate bedding
 - I.e. labs, imaging, pharm management
- TTP, LWBS, LOS are measured and reported monthly

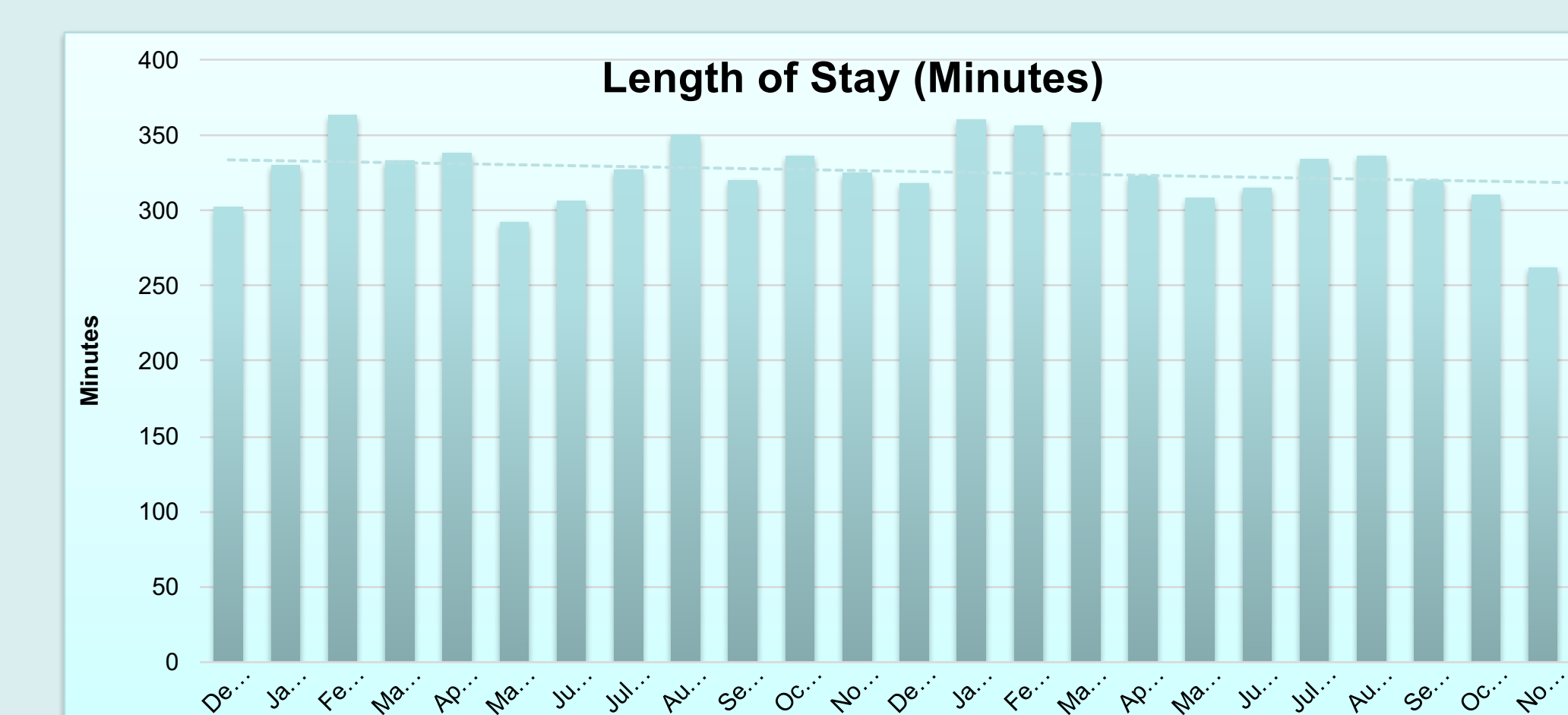
Results



- Time to Provider has improved
- Dec '15 - June '16 average TTP: 107 min
- Aug '16 - Feb '17 average TTP: 29 min
- July '16 - Dec '17 average TTP: 40.3 min



- Left Without Being Seen rates improved
- Dec '15 - June '16 average LWBS rate: 5.8%
- Aug '16 - Feb '17 average LWBS rate: 4.6%
- July '16 - Dec '17 average LWBS rate: 4.02%



- Length of Stay was unchanged.
- Dec '15 - June '16 average LOS: 323 min
- Aug '16 - Feb '17 average LOS: 337 min
- July '16 - Dec '17 Average LOS: 326 min

Discussion

Conclusion

- Based on metric data taken from December 2015 thru December 2017, Team Triage is a promising method to improving throughput metrics of TTP and LWBS at UI Health

Limitations

- Etiology of overcrowding is multifactorial: insufficient available inpatient beds or inpatient staffing, wait times for subspecialty consults, variations in patient volume
- ED Construction from April 2017-January 2018 may impact data as rooms were closed during different phases of construction
- Data metrics measured reflect all patients 24/7, not only patients who experienced Team Triage intervention

Continuation

- Next steps include continued data collection, and examine possible financial impact and patient satisfaction

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