Reducing ED to ACU Registration Errors

ICAHN Annual Conference 2025

Lincoln Memorial Hospital

Mid-America EMERGENCY PHYSICIANS

Dr. Jessica Alwerdt DMSc, MS, MSPA, PA-C, Ph.D. ABD, DFAAPA

APP Lead, Mid America Emergency Physicians

Adjunct Professor and Champaign Hubsite Director, SIU SOM

Lincoln, IL

Logan County

Population: 13,047

Annual ED visits: ~16k

Multiple specialties

Outreach Clinics

Problem

Admit type registration errors occurred in 9% of all ED patients admitted to ACU in April – October 2024

Leading to time-consuming rework by all departments

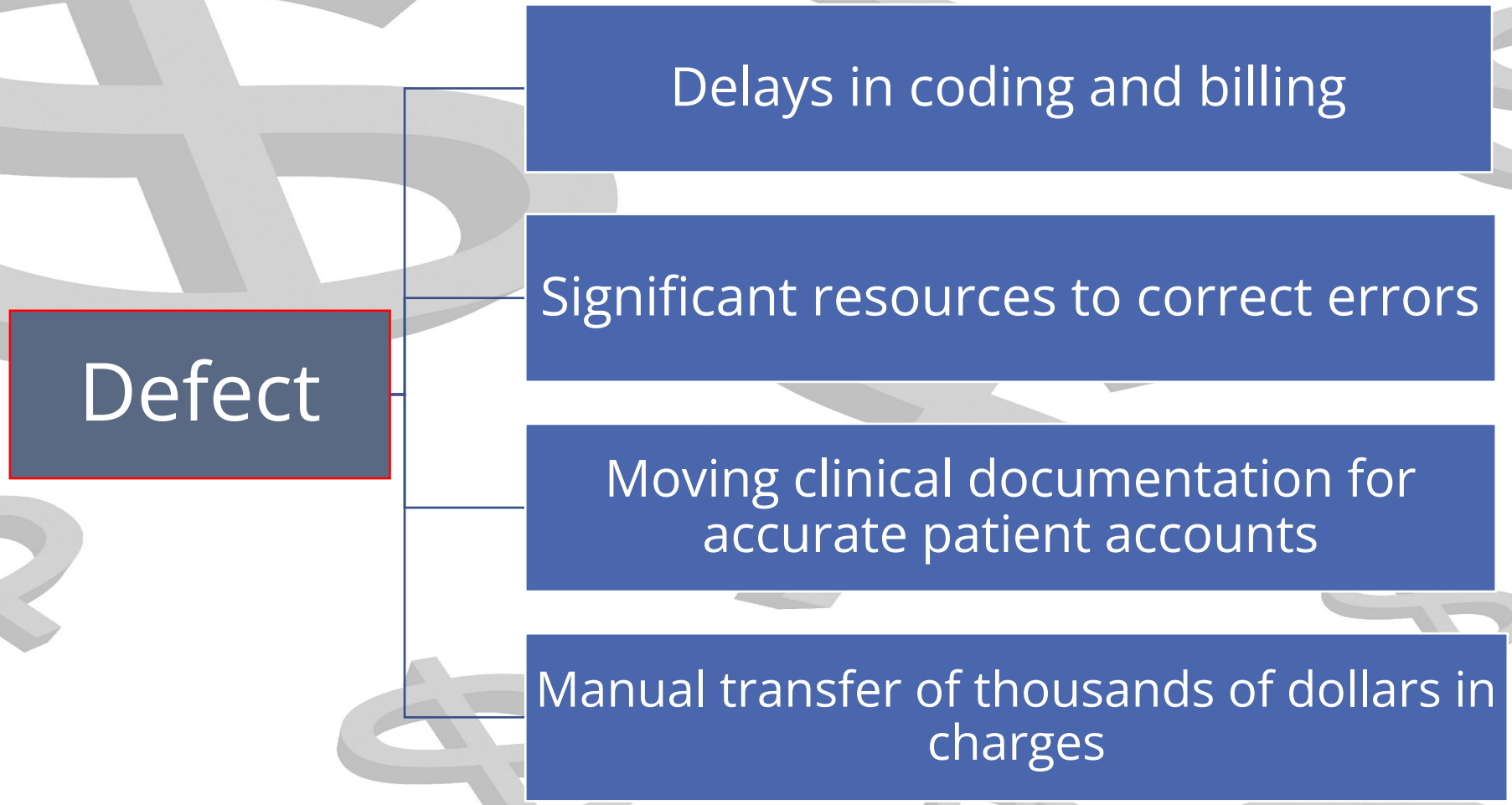
- Patient Access
- Coding Departments
- Clinical Department Supervisors

These type of errors have persisted despite various attempts to improve communication and prevent defects.

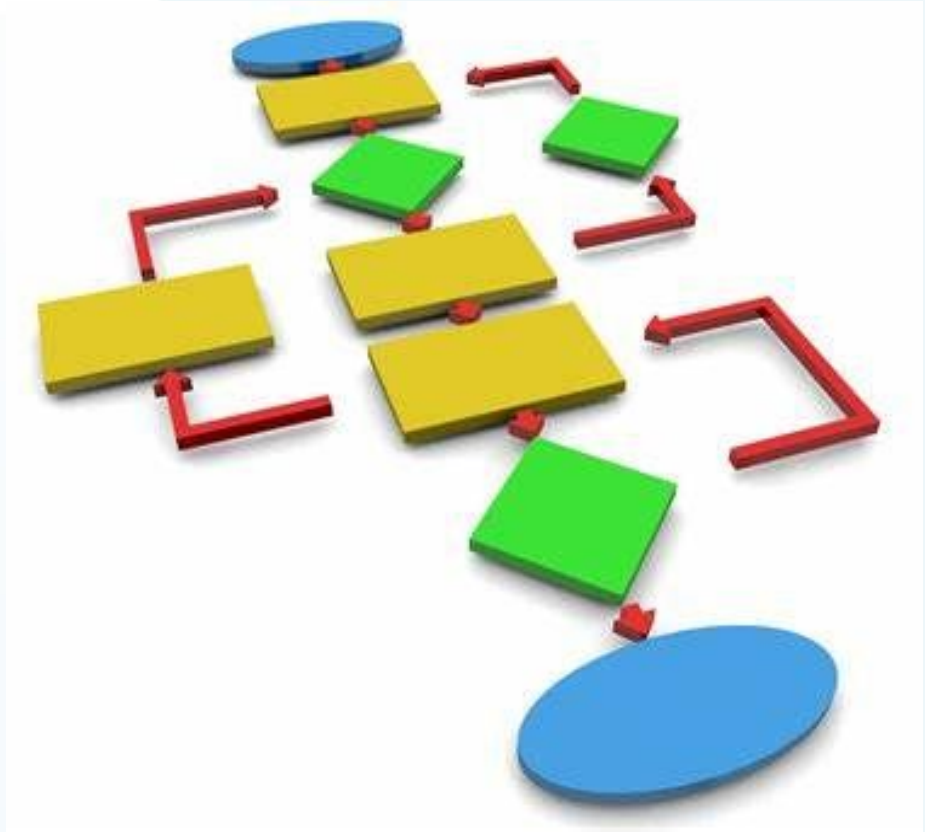
Complicating factors

- New IS platform
- Background fix now missing
- Small modifications with success
- No official tracking system for these errors
- Two separate platforms ED/ACU

Incorrect registration statuses lead to..

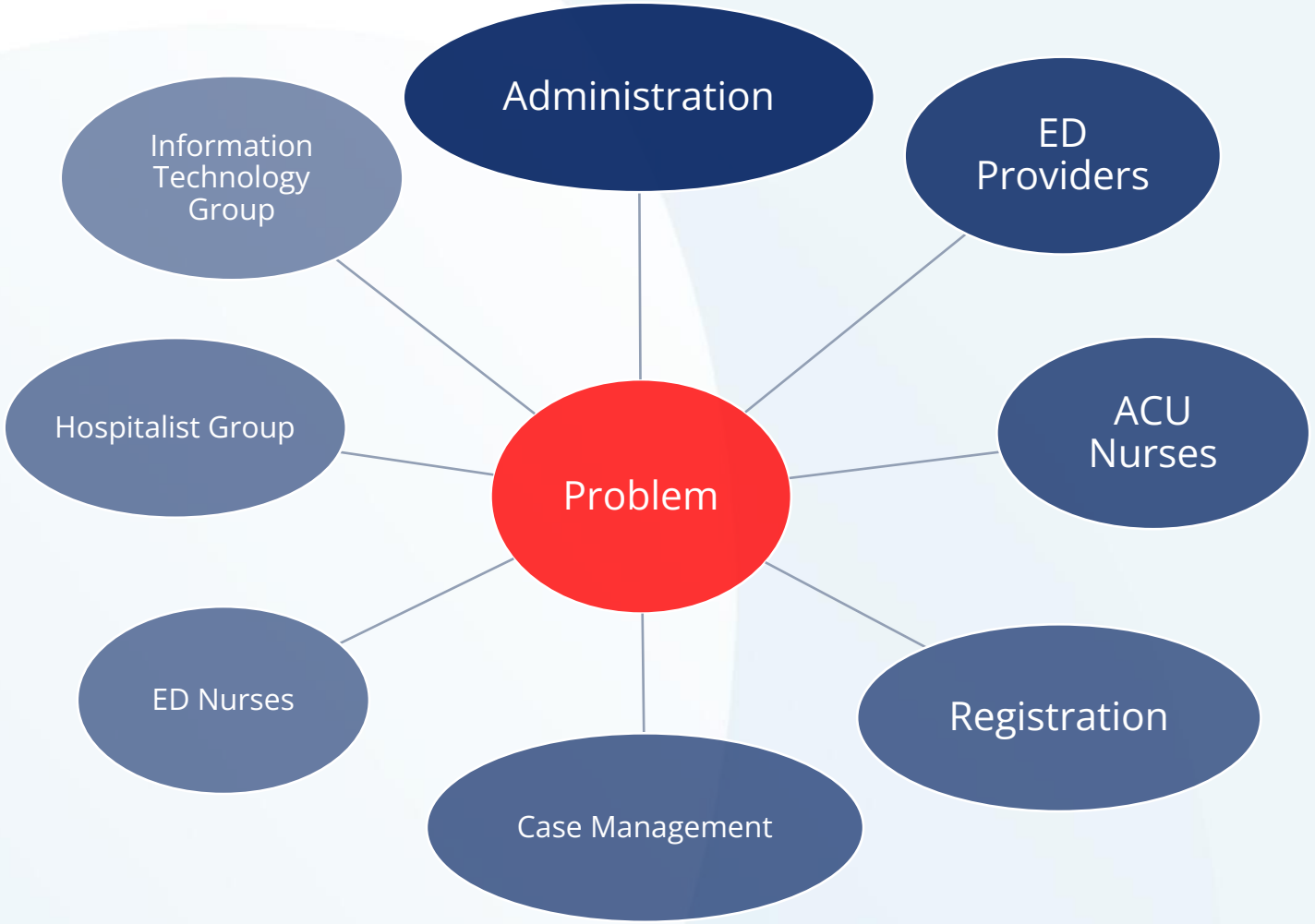


Develop a systematic admission process to help decrease ED to ACU admission errors through establishing a simplified admission procedure with integrative technology.

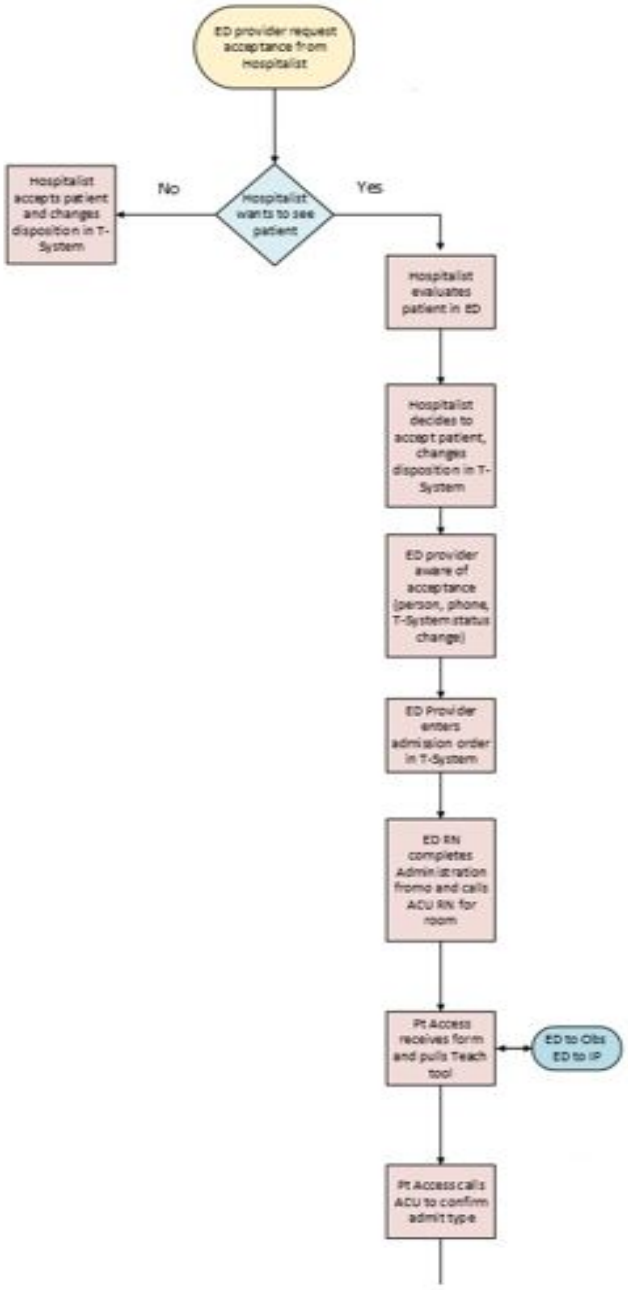


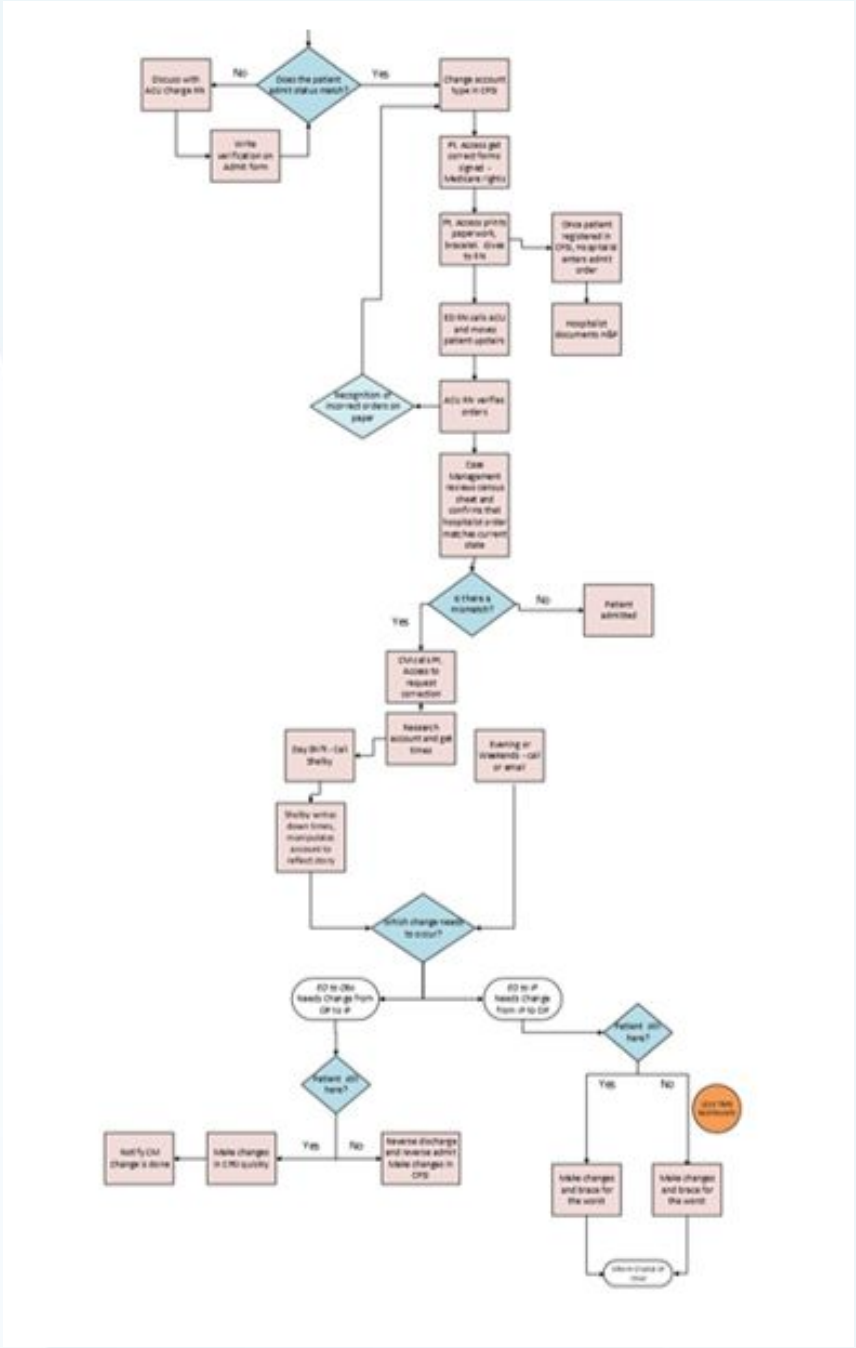
Planning for Evaluation

Multidisciplinary team was assembled

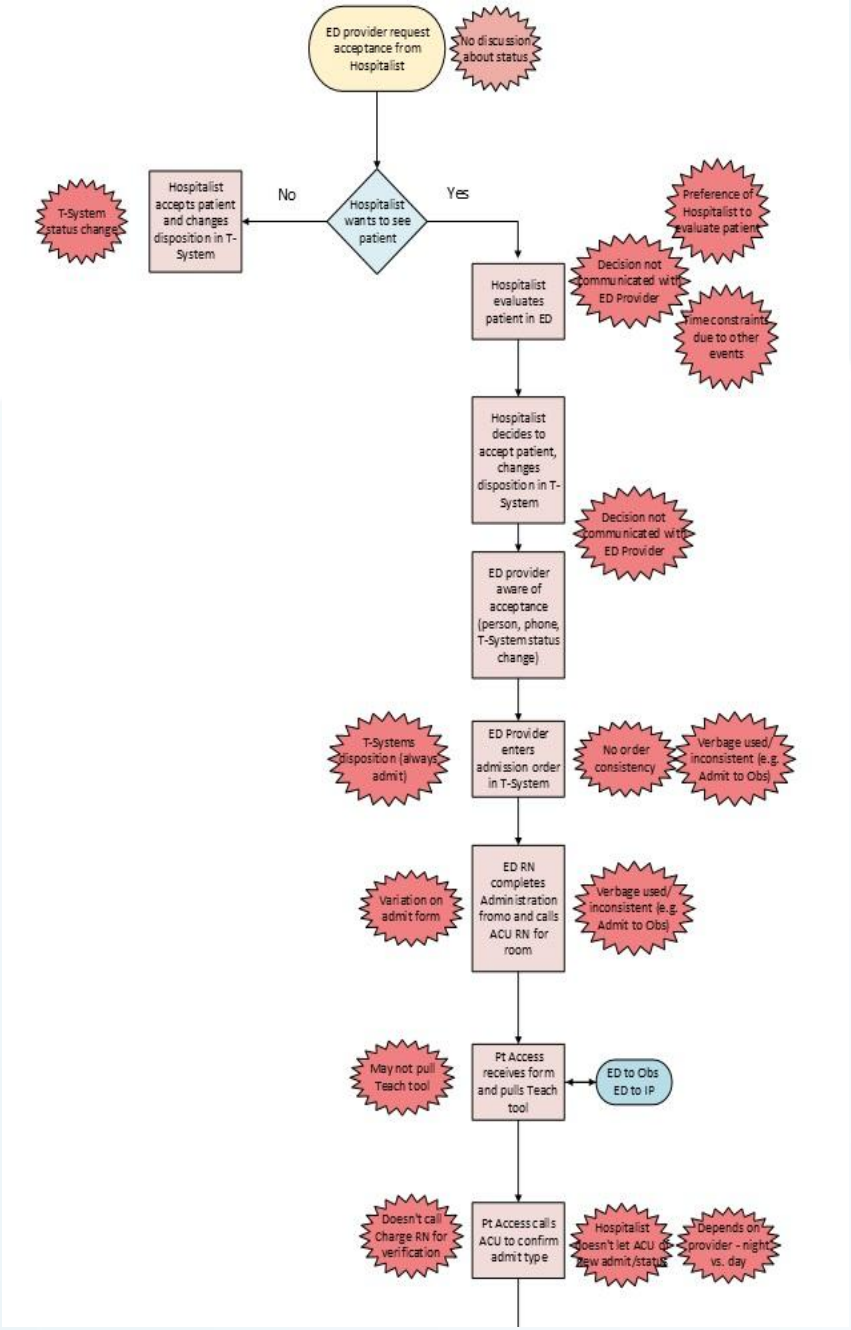


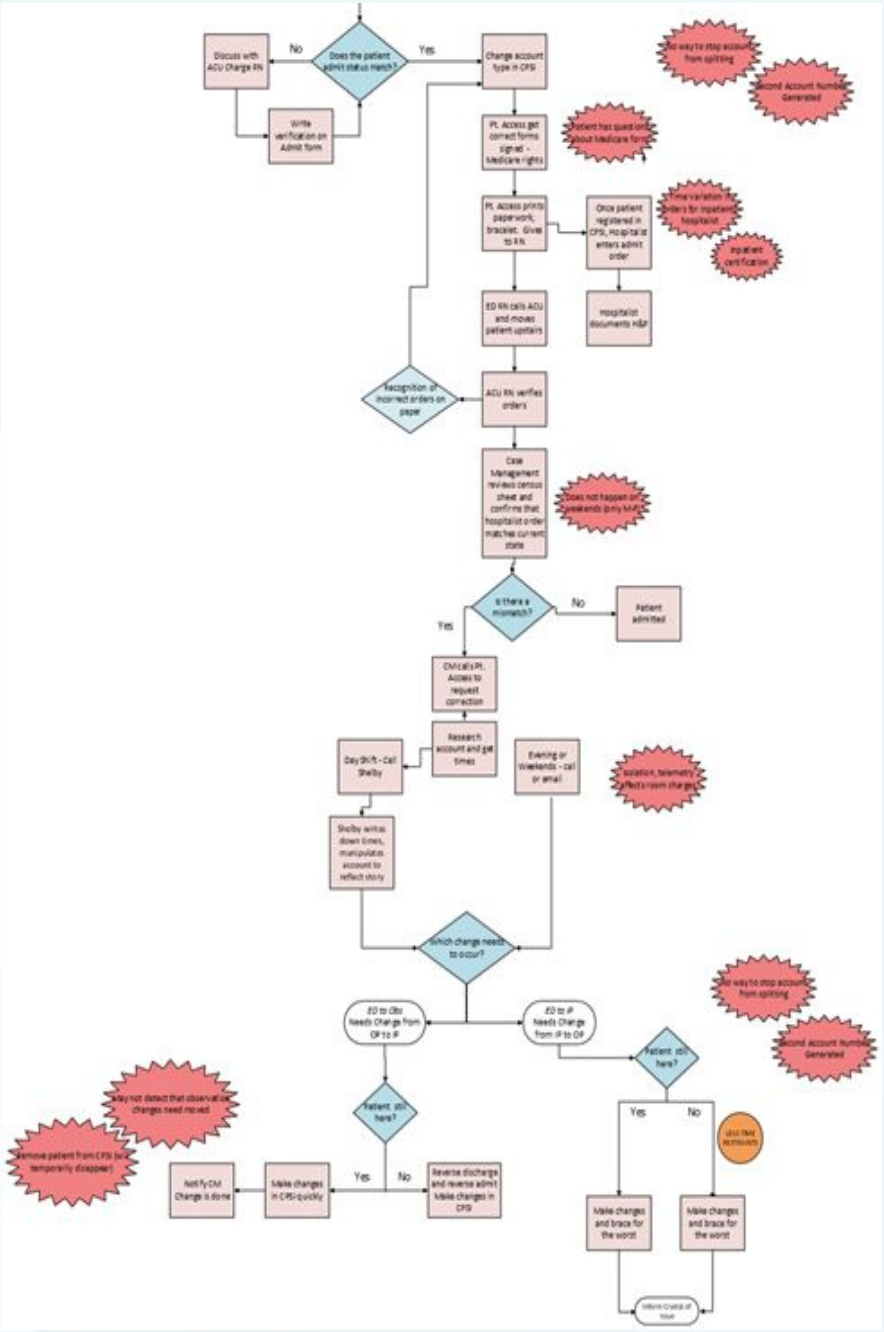
Admission Process





Points of Defects





PREVIOUS PROCESS

- ED Provider and Hospitalist have phone conversation
- ED Provider enters admit order T-systems
- Hospitalist enters admit order into CPSI
- ED nurses see ED Provider order and start admission
- Give paper copy to registration
- ED nurses discuss with ACU nurses, patient goes to ACU

[redacted]

ADMITTING/PLACEMENT

INFORMATION

Time ACU provider accepted patient (CPOE admission order) 0950

Time bed assignment was provided 0954

ROOM NUMBER ~~213~~ 228

ADMITTING PROVIDER [redacted]

DIAGNOSIS Exacerbation of COPD, Community Aquired Pneumonia

ACCOMMODATION INFORMATION (CIRCLE ALL THAT APPLIES)

ACUTE OUTPATIENT (SPA) ISOLATION TELEMETRY

OBSERVATION FALL RISK

CHECK WHEN COMPLETED

- COVID-19 TEST COMPLETED AND RESULTED

NURSE SIGNATURE [redacted]

changed 3 x before we were finished

20:27 [redacted] stated they didn't know
will call back

[redacted]

2030

[redacted]

Called
Patient

ADMITTING/PLACEMENT INFORMATION

Time ACU provider accepted patient (CPOE admission order) 1940

Time bed assignment was provided 1947

ROOM NUMBER 215

ADMITTING PROVIDER [redacted]

DIAGNOSIS Bilateral Covid pneumonia; UTI, sinusitis

19:50
No answer
19:56
Palpa

ACCOMMODATION INFORMATION (CIRCLE ALL THAT APPLIES)

(ACUTE) OUTPATIENT (SPA) (ISOLATION) TELEMETRY

OBSERVATION FALL RISK

CHECK WHEN COMPLETED

X COVID-19 TEST COMPLETED AND RESULTED – positive

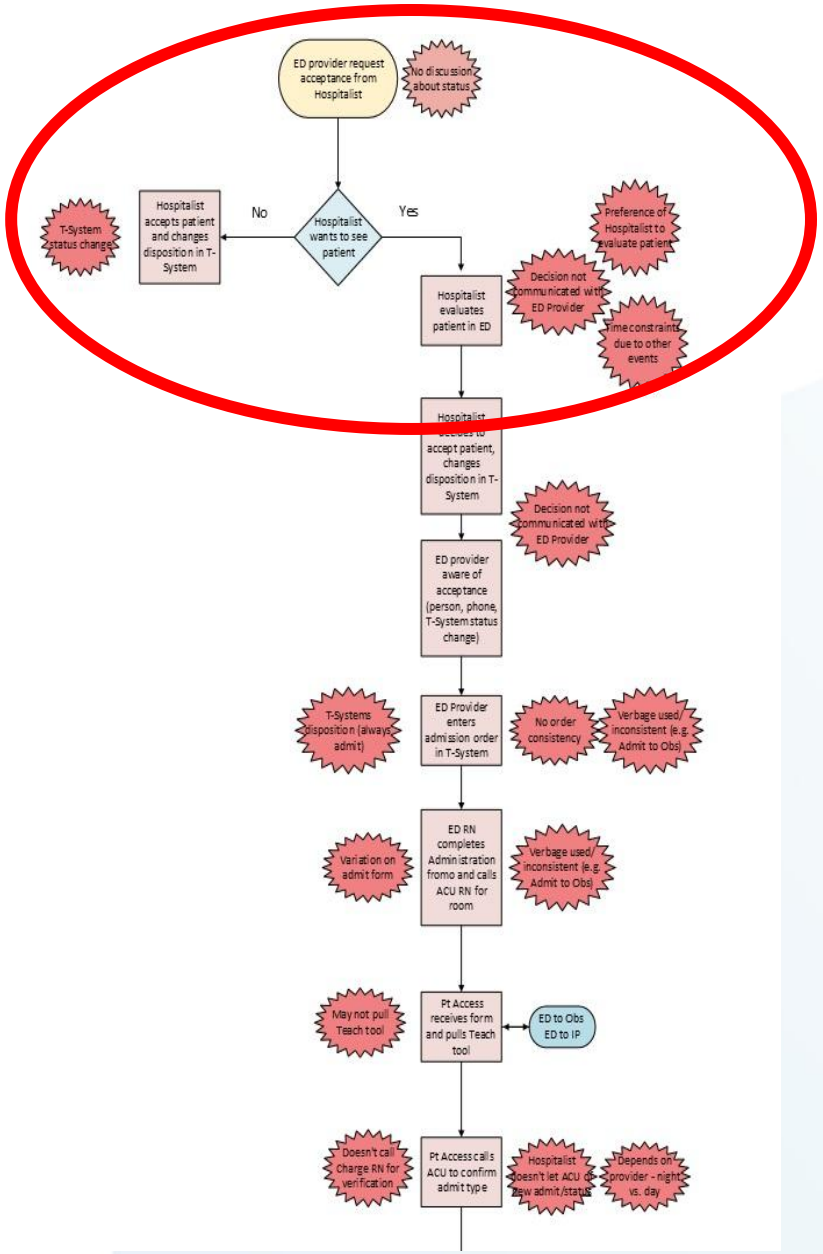
X ~~[redacted]~~
iso

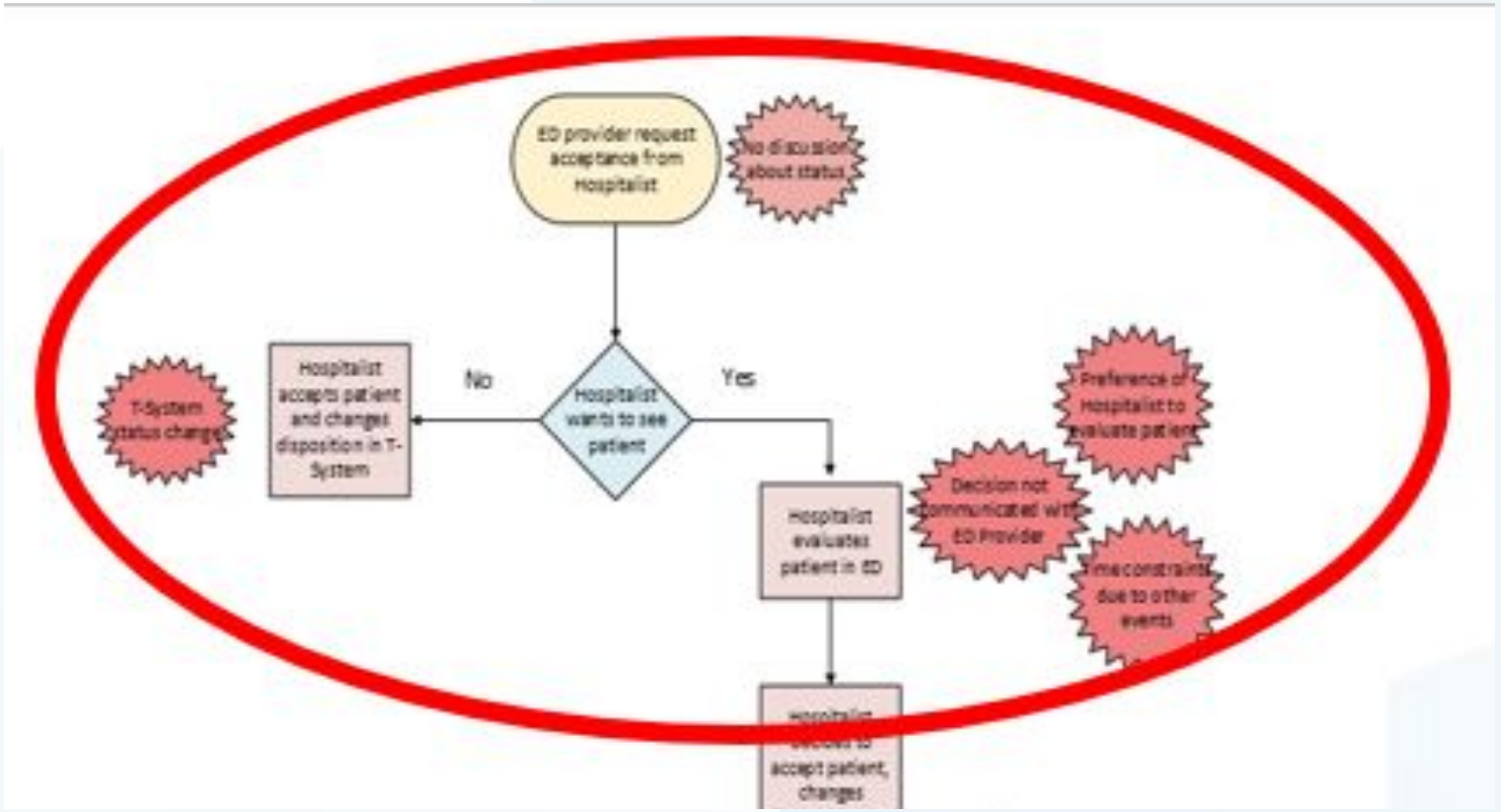
NURSE SIGNATURE [redacted]

X [redacted] ty per
its all admit & observation

20:22
called back

no tele
or fall





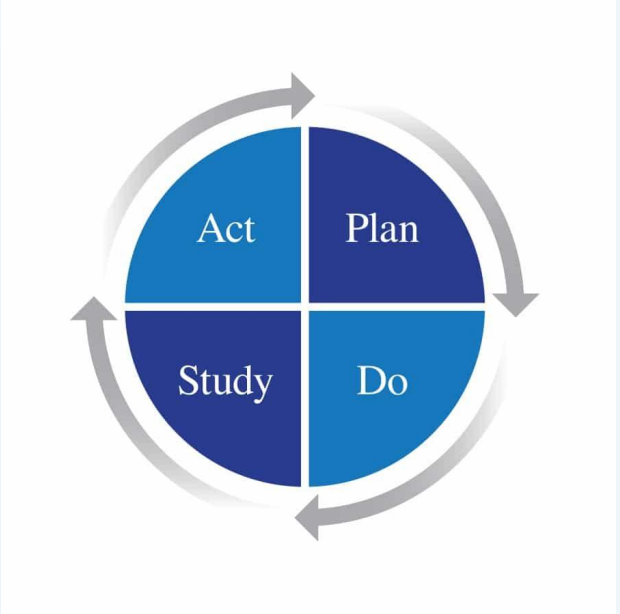
Primary focus for this project

Admission order

Model for Improvement

Decrease ED to ACU admit type registration errors *without increasing ED LOS of admitted patients*

- # of ED to ACU registrations requiring correction due to incorrect admit status will decrease
- # of ED/ACU admit order discrepancies will decrease
- Average/median ED LOS for admitted patients will decrease or remain stable



Deming Wheel, PDSA Cycle https://www.ihi.org/, https://deming.org/explore/pdsa/

Goals:

Integrate the ED and ACU with a streamlined process

Decrease stress on staff

Improve communication throughout the hospital

Decrease manual paper burden on staff

Improve billing processes for patients/staff

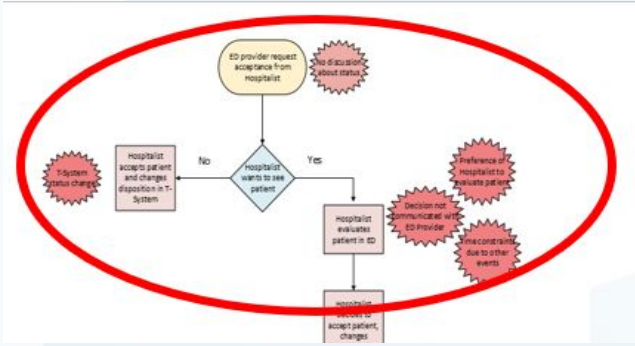
Lincoln Memorial Hospital

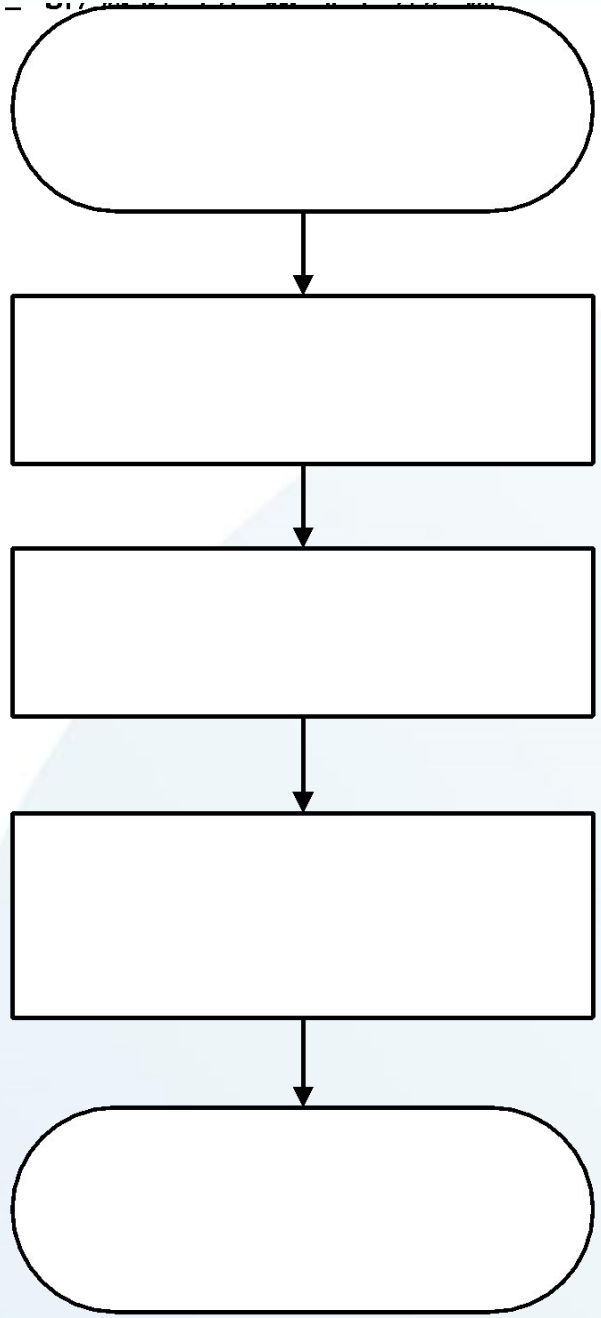
PREVIOUS PROCESS

- ED Provider and Hospitalist have phone conversation
- ED Provider enters admit order T-systems
- Hospitalist enters admit order into CPSI
- ED nurses see ED Provider order and start admission
- ED nurses discuss with ACU nurses, patient goes to ACU

NEW PROCESS

- ED Provider and Hospitalist have phone conversation
- Hospitalist sends Symplr/Halo message to all involved
- Updates of the admission process will be communicated via Symplr/Halo simultaneously





Patient name: Smith, Mary
DOB: 9/27/37
Admission type: IP
Diagnosis: CHF
Telemetry: Yes
Hospitalist: Dr. Smith

Orientation: A&O x3
Fall risk: No
Isolation: None
Overview: Sent
Hx of violence: No

204, bringing tele box down

Registered

CPSI Admission Order Options:
- Admit to Inpatient
- Place in Observation

The Pilot Process

(began at 07:00 on 1/27/25)

THE ADMISSION PROCESS IS DRIVEN BY THE SYMPLR MESSAGE YOU SEND TO THE LMH ADMIT GROUP

What Hospitalists Need to Know

ED Provider calls Hospitalist → Hospitalist accepts patient → **Hospitalist sends admit info in Symplr text to LMH Admit Group** → All staff involved will start the admission process → Hospitalist enters admission order in CPSI

ED Provider will update Disposition but **will not** enter an admission order in Tsystem

Use first and last name of Hospitalist

Patient name: Smith, Mary
DOB: 9/27/37
Admission type: IP
Diagnosis: CHF
Telemetry: Yes
Hospitalist: Parth Patel

Send once you have decided upon the admission type

204

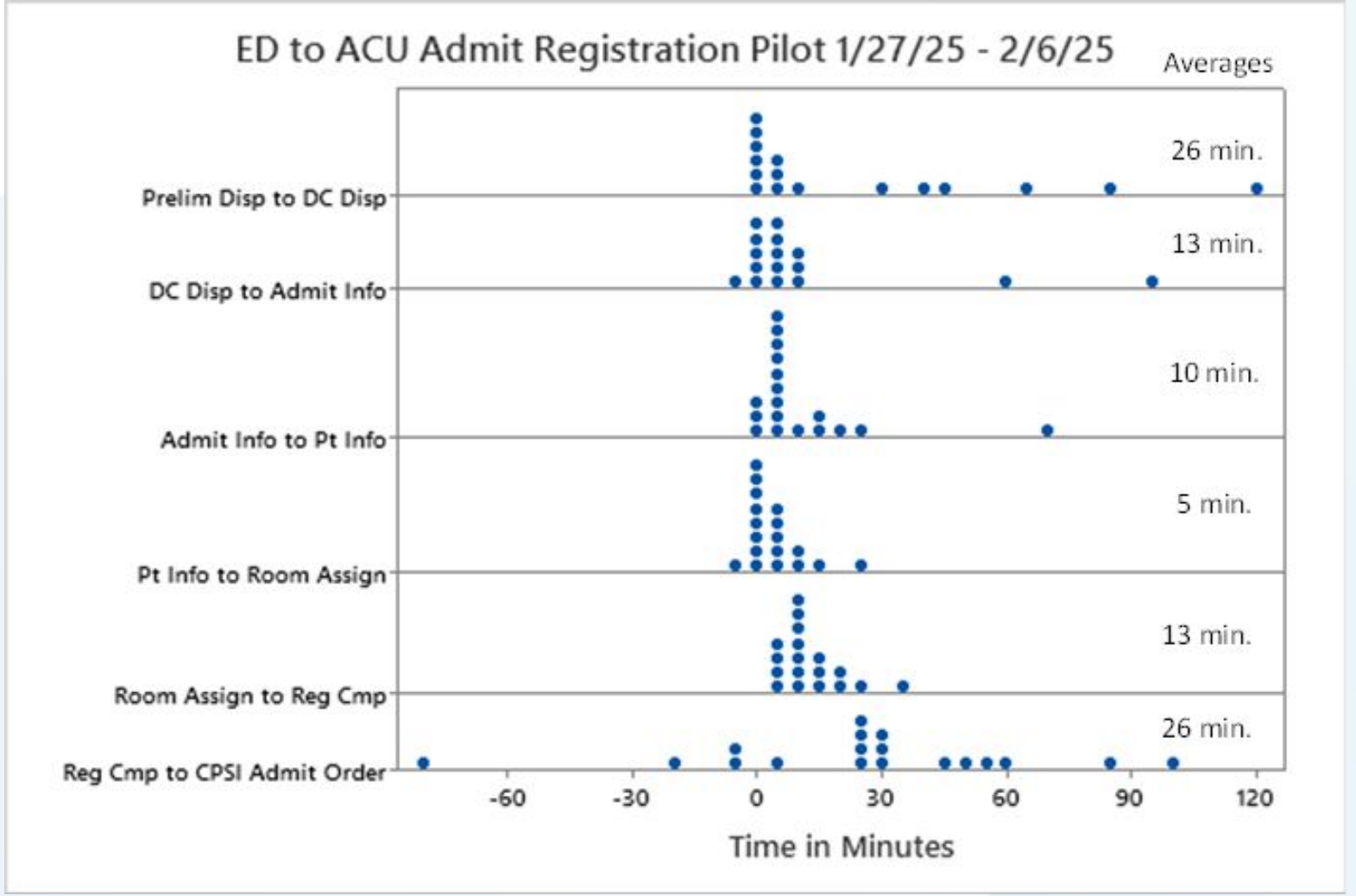
(Room assigned)

Registered

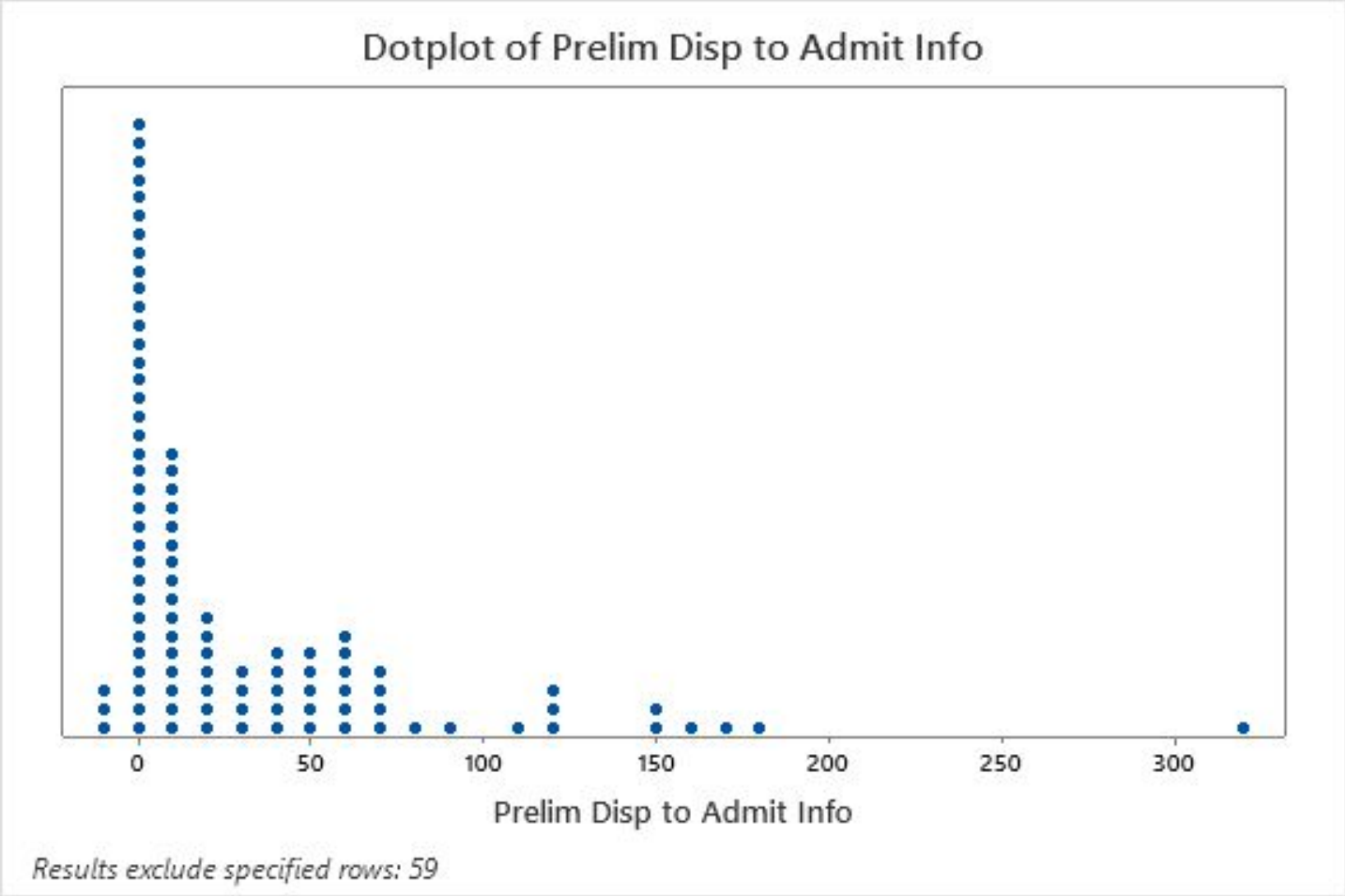
(Registration complete)

Admit as Inpatient or Place in Observation

Preliminary Pilot Results

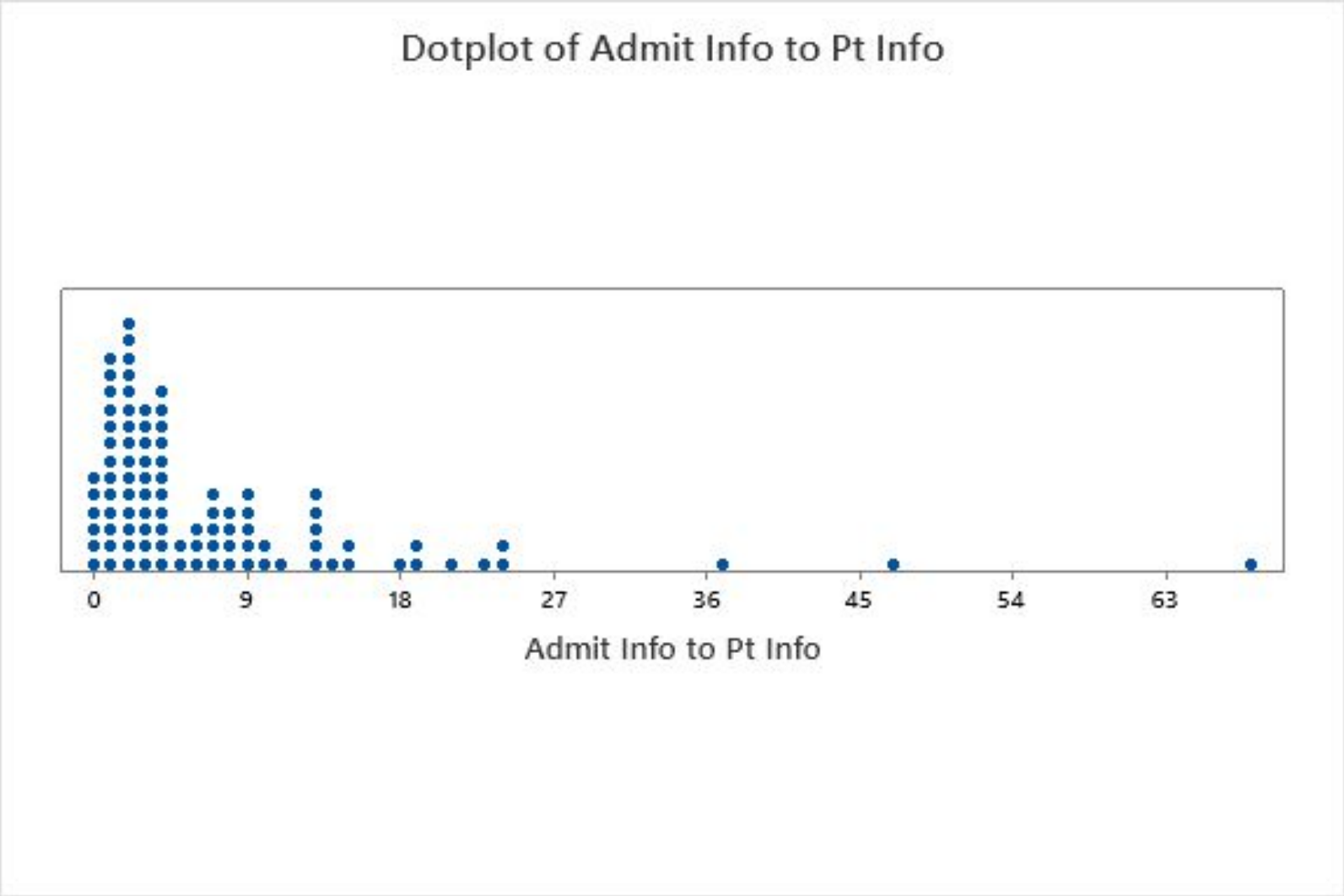


Dotplots of Time Intervals

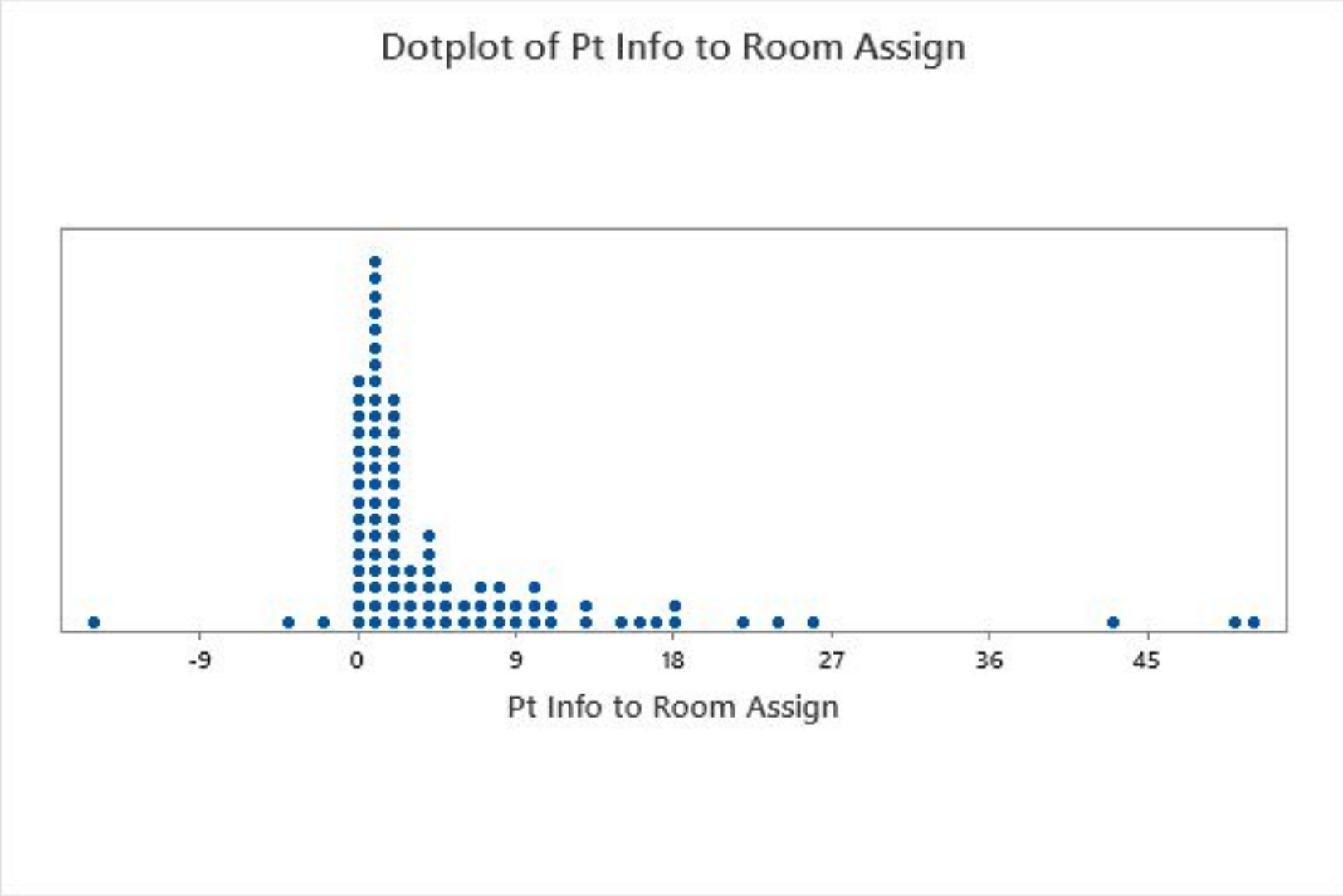


**Excludes outlier of 1090 minutes*

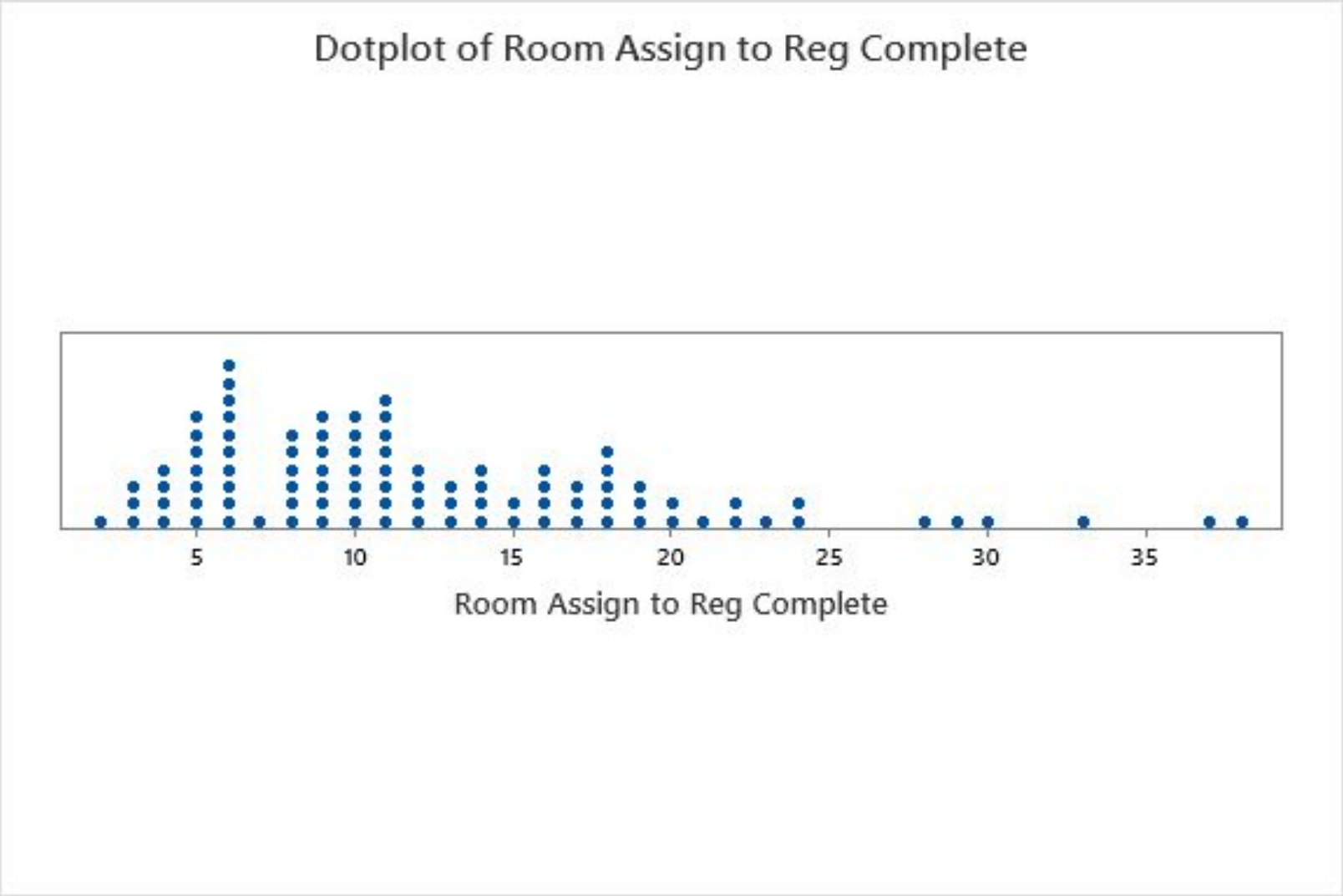
Dotplots of Time Intervals



Dotplots of Time Intervals



Dotplots of Time Intervals

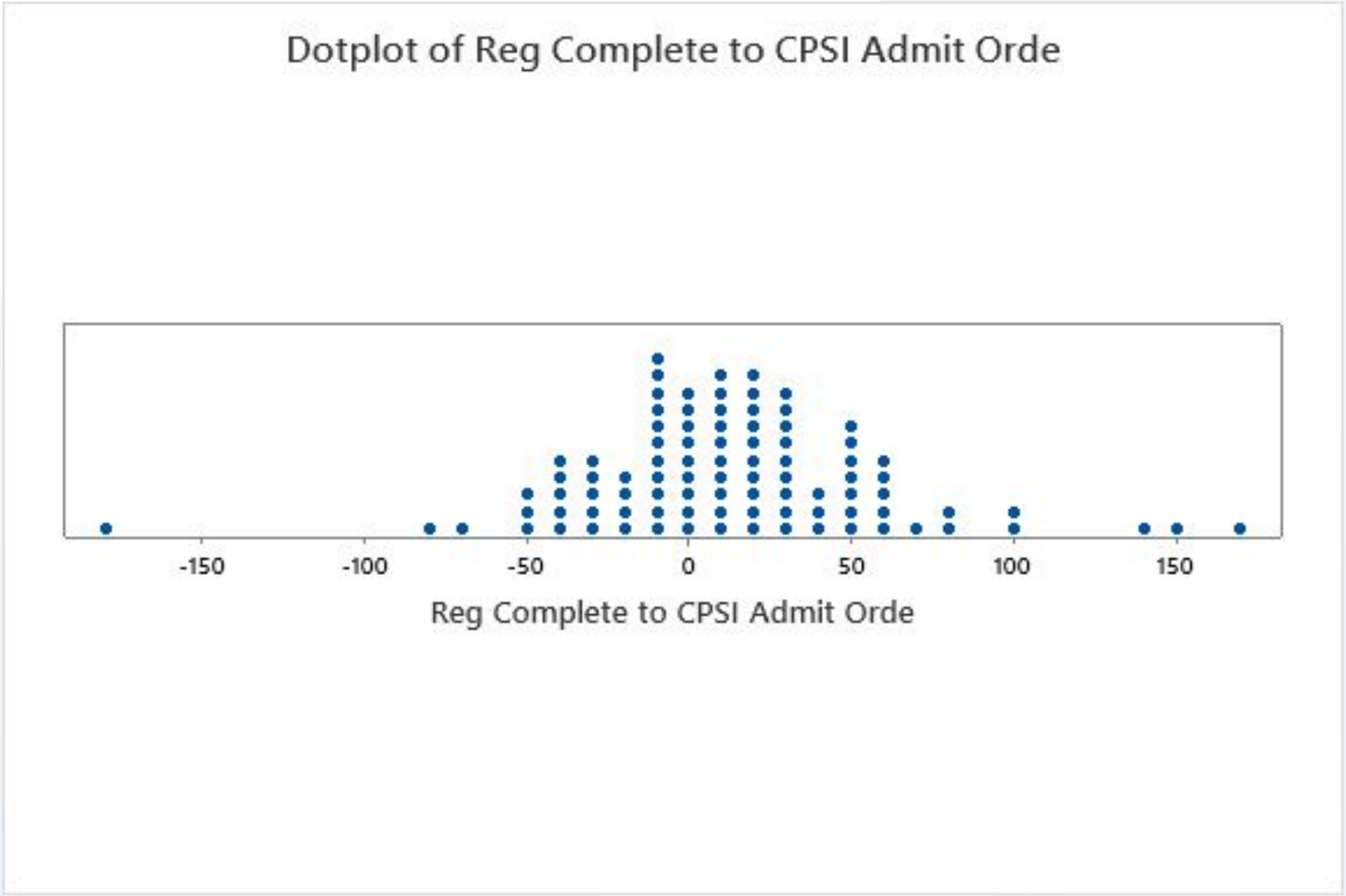


Time Interval Statistics

Statistics

Variable	Total Count	Mean	SE Mean	StDev	Minimum	Median	Maximum
Prelim Disp to Admit Info	97	44.5979	12.1036	119.207	-15	12	1090
Admit Info to Pt Info	97	7.33684	1.02986	10.0378	0	4	68
Pt Info to Room Assign	97	5.61053	1.00928	9.83729	-15	2	51
Room Assign to Reg Complete	97	12.5417	0.771322	7.55738	2	11	38

Dotplots of Time Intervals



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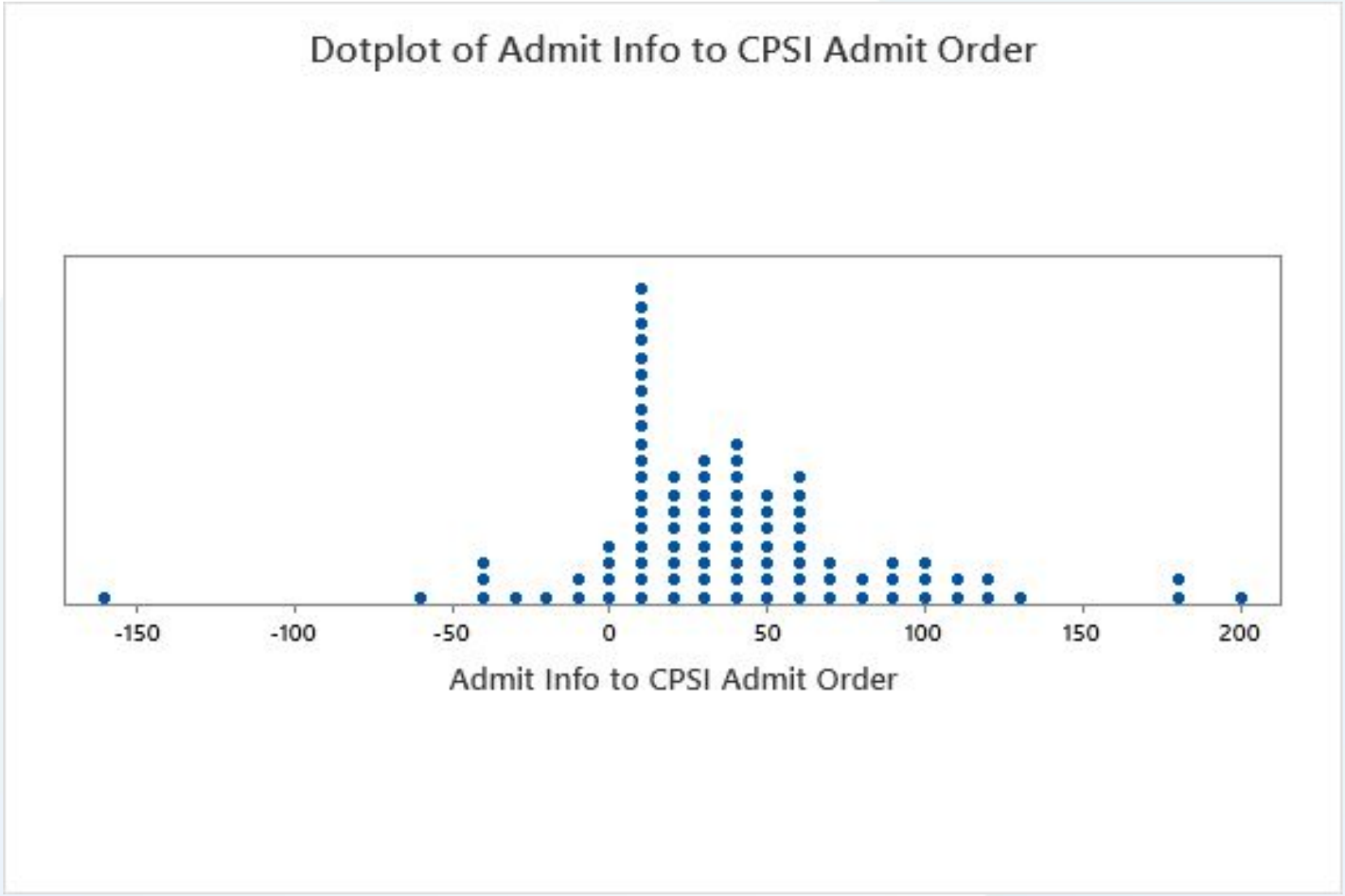
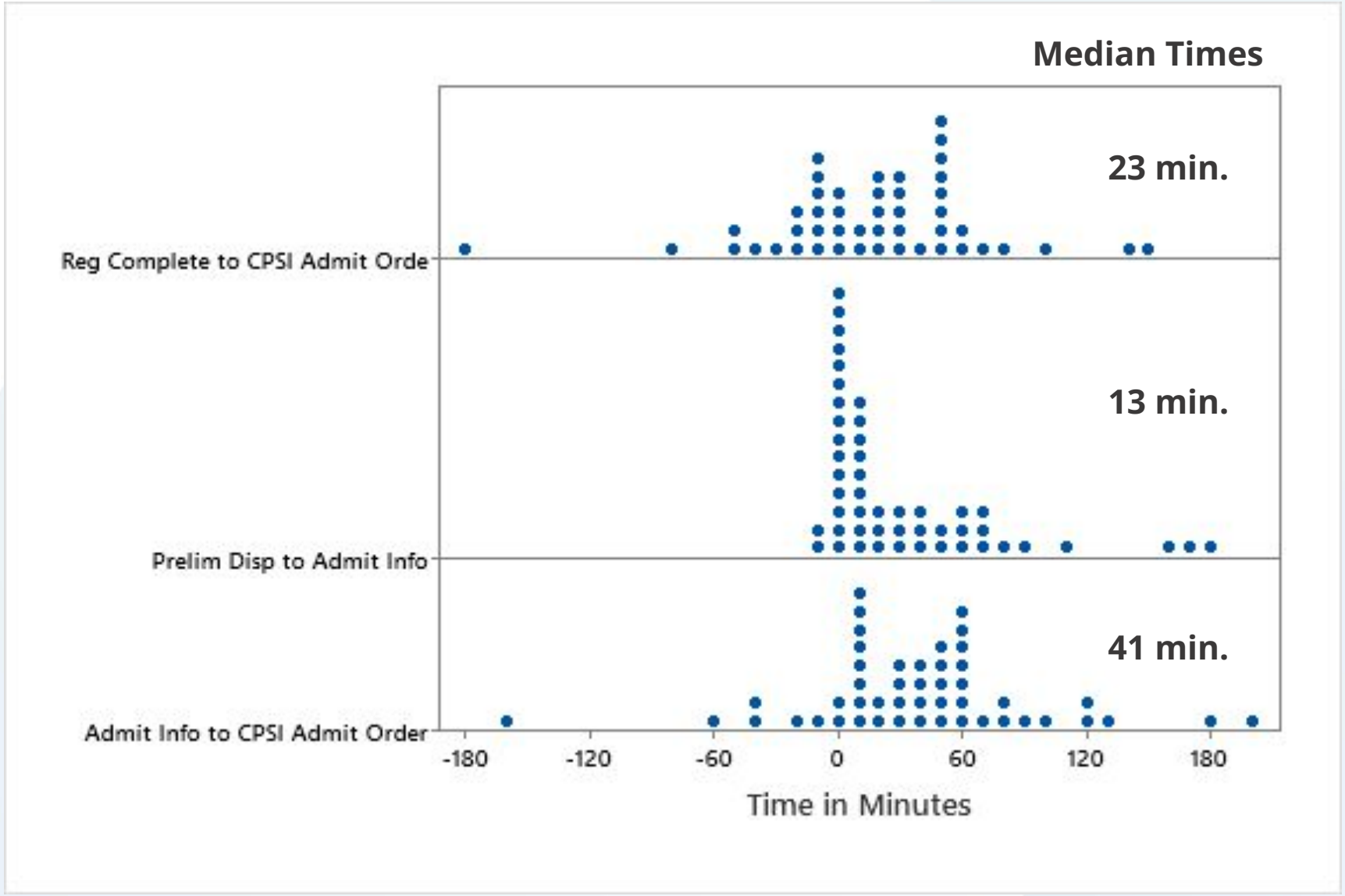


Dotplots of Time Intervals



ED to ACU Registration Pilot

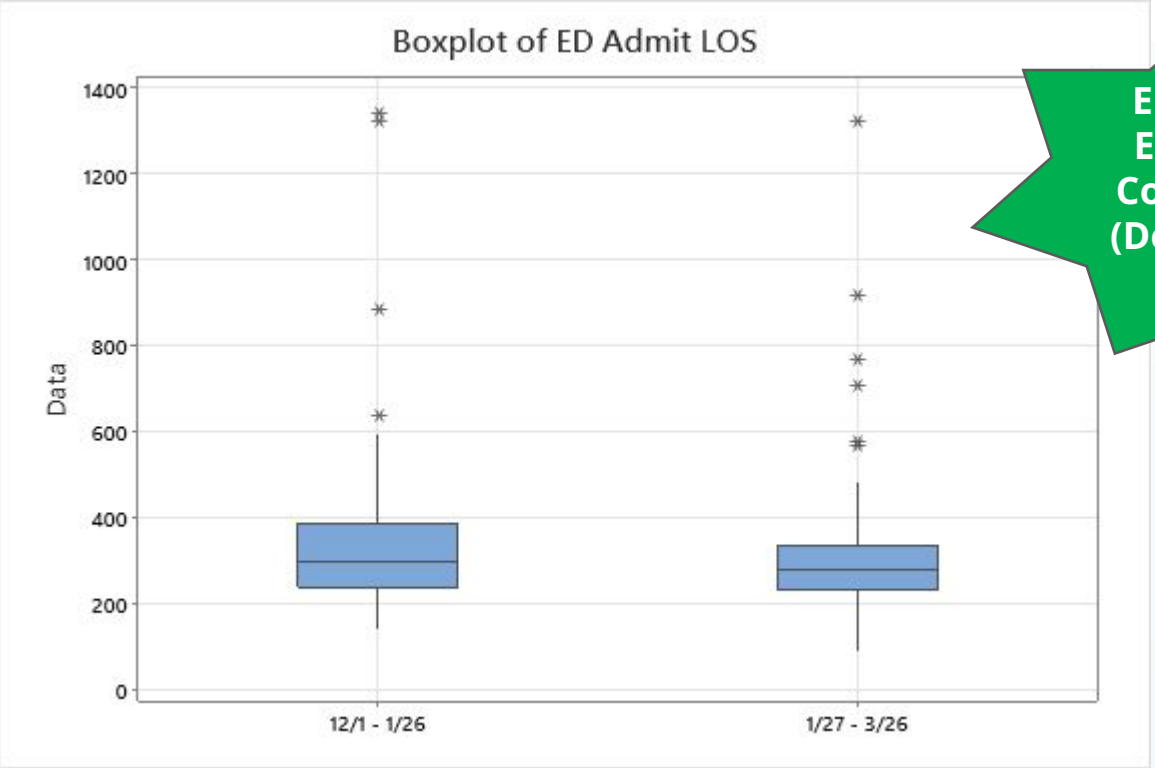
97 ED Admits 1/27/25 – 3/26/25

Metric	Result
ED/ACU Admit Type Registration Errors	1/97 1%
ED Provider Admit Orders (goal = 0)	2/97 2%
ED/ACU Admit Order Discrepancies	0/97 0%
Hospitalist Admit Info Message in Symplr	97/97 100%
ED Nurse Info Message in Symplr	95/97 98%
ACU Bed Assignment Message in Symplr	96/97 99%
Registration Complete Message in Symplr	94/97 97%

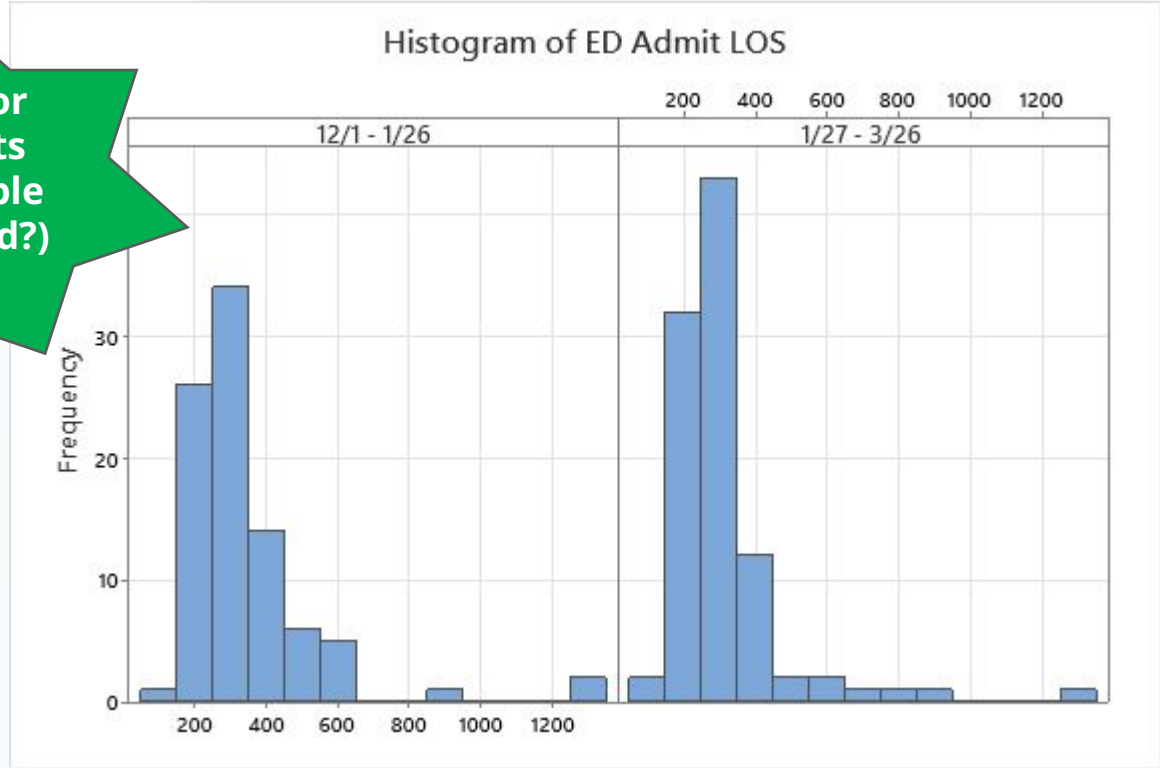
Only one registration defect (NP changed mind after seeing labs)

Excellent process compliance

ED Admit LOS Comparison



ED LOS for ED Admits Comparable (Decreased?)



Statistics

Variable	Total Count	Mean	SE Mean	StDev	Minimum	Q1	Median	Q3	Maximum
12/1 - 1/26	89	347.921	20.6828	195.121	142	239.5	301	387.5	1347
1/27 - 3/26	97	314.299	16.4139	161.658	91	232	281	338	1328

Test

Null hypothesis $H_0: \eta_1 - \eta_2 = 0$
Alternative hypothesis $H_1: \eta_1 - \eta_2 \neq 0$

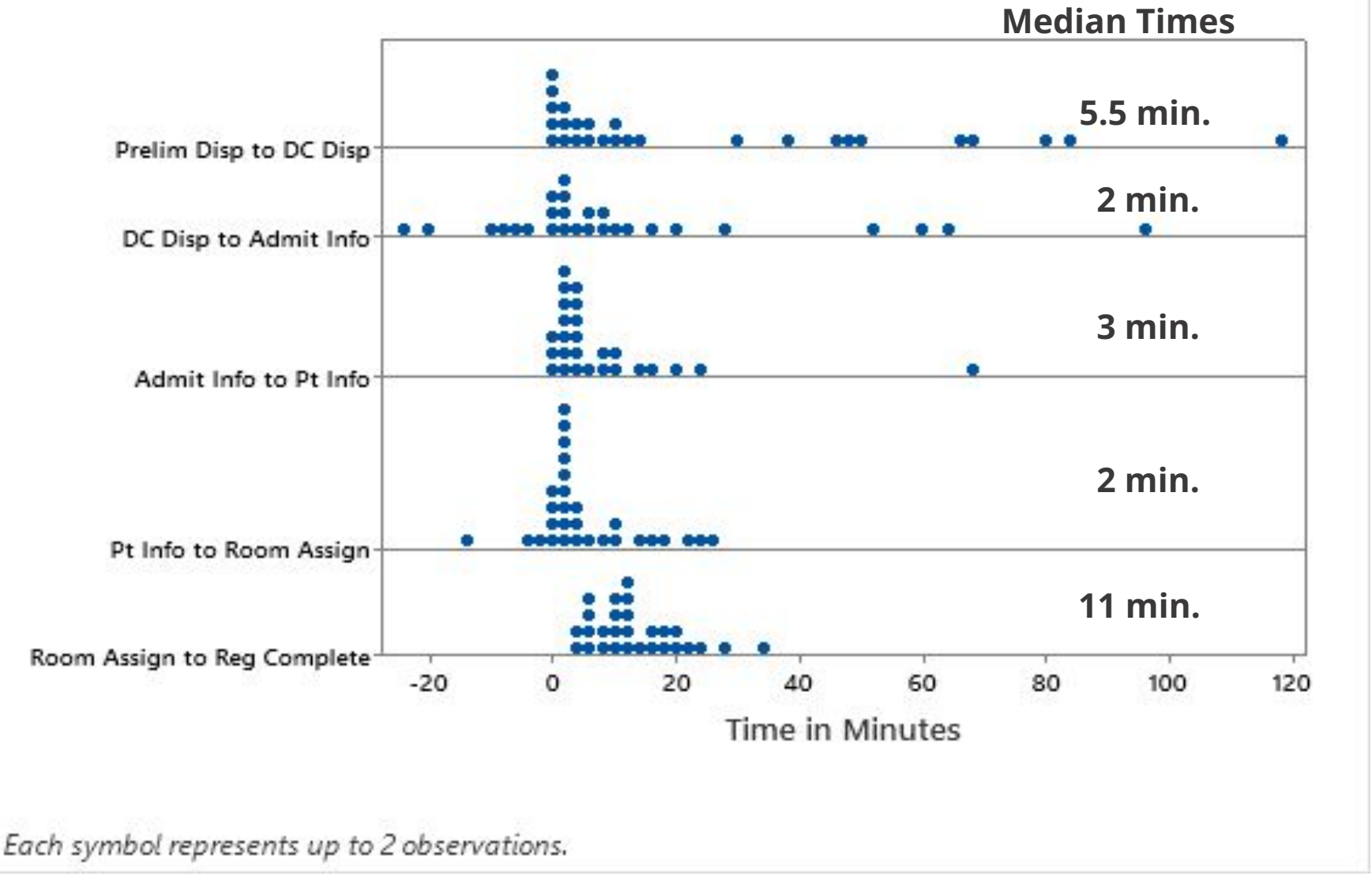
Method	W-Value	P-Value
Not adjusted for ties	8850.00	0.150
Adjusted for ties	8850.00	0.150

Test

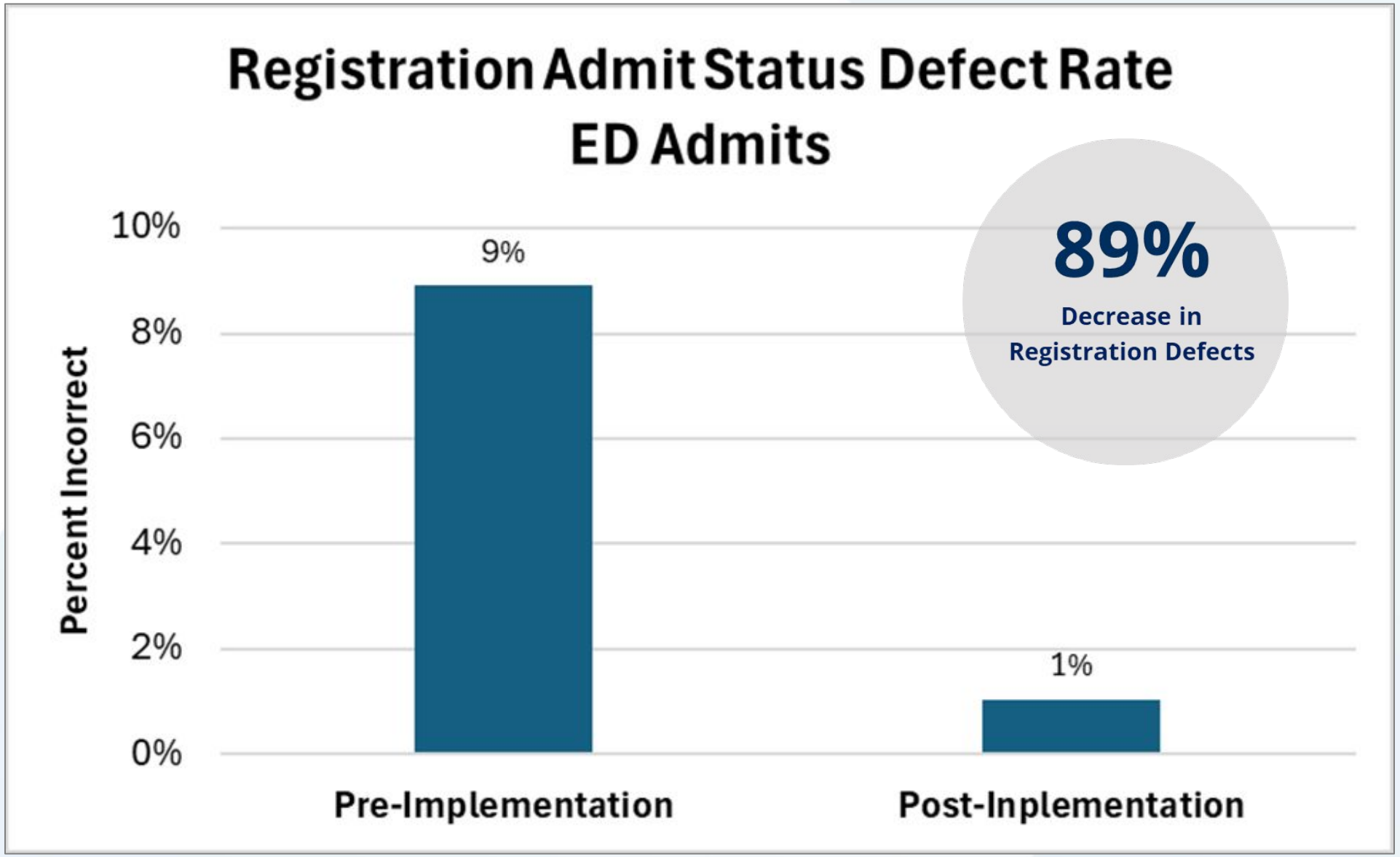
Null hypothesis $H_0: \eta_1 - \eta_2 = 0$
Alternative hypothesis $H_1: \eta_1 - \eta_2 > 0$

Method	W-Value	P-Value
Not adjusted for ties	8850.00	0.075
Adjusted for ties	8850.00	0.075

Interval Timepoints Comparison



Timely communication!


Registration Admit Status Defect Rate
ED Admits
Percent Incorrect
10%
8%
6%
4%
2%
0%
9%
1%
Pre-Implementation
Post-Inplementation
89%
Decrease in
Registration Defects

Issues and Resolution

Issue	Resolution
Nonessential communication	Send "coming up" message to ACU RN & Tech group
Communication re: telemetry boxes	Add "will bring tele box" to bed assignment message, when applicable
Multiple patients on same thread	E-mail targeted reminders to Providers
Standard template not used	Reminder to use
Non-hospitalist admission	Using Symplr template; if unwilling, ED Provider to enter order in Tsystem and ED RN to send Admit Info and ED Nursing Info messages
Admission order not entered in CPSI	Reminders already given to involved providers

Issues and Resolution

Discharge Disposition time in Tsystem after Admit Info sent	Ongoing communication challenge
Holding off on sending Admit Info until adequate staffing	Admit Info message should be sent
Bed assignment before ED RN info	Wait for ED RN info (isolation needed); call if info not sent within 10 min. of Hospitalist's Admit Info
CPSI admit order prior to registration complete or Admit Info sent	Reminder to follow sequence:
Admit info/order date crossed midnight	Issues should be rare if process is followed; Case Managers will handle

Successes

Decreased work complexity for all departments

Interdepartmental cooperation and willingness to change

No registration errors!

Simplification of process

Improved billing

No extra budget investment

Acknowledgements

- AP LEAP Program
- ICAHN
- Lincoln Memorial Hospital
  - Barbara Burneson
- Mid America Emergency Physicians

Lincoln Memorial Hospital

Reducing ED to ACU Registration Errors

FY 2025

Memorial Health

WHAT WAS THE OPPORTUNITY?

During April – October 2024, nearly one in ten patients admitted to ACU from LMH's ED were registered in the incorrect status (observation or inpatient), resulting in time-consuming rework for Patient Access, Coding and Billing Supervisors, and multiple Clinical Managers. Incorrect registration statuses delay coding and billing and require significant resources to correct. Correcting errors can involve manually transferring thousands of dollars in charges and/or moving clinical documentation to ensure that patient records are accurate and complete.

QUALITY DOMAIN

Efficient

Avoiding errors and unnecessary rework

WHAT DID WE DO?

Provided a "single source of truth" of admission information to all stakeholders simultaneously via the Symplr messaging platform

- Standardized entry of one admission order in CPSI by the Hospitalist
- Created a new method for communicating patient admission information via the secure texting platform, Symplr
- Set role-specific communication expectations

PROJECT TEAM

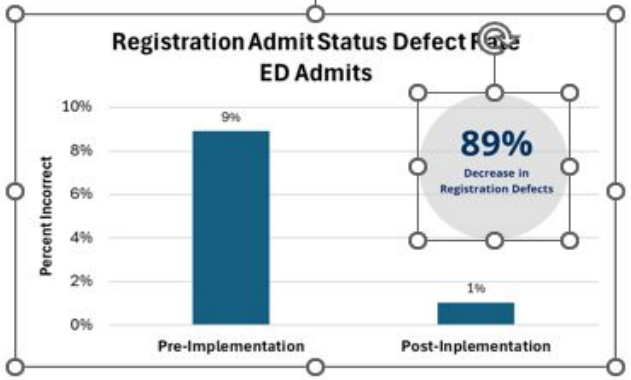
Dr. Kenneth Guillotte
Jessica Alwerdt
Shelby Brickey
Crystal Lippert
Lydia Allen
Barb Burneson
Chelsey Smock
Ashley Gleason

Not pictured:
Crystal Neal
Dr. Parth Patel
Jenny Rogers
Roxanne Stelle

Project Black Belt
Barb Burneson, RN, CPHQ, CPSS, CSSBB
burneson.barbara@mhsil.com | 217-605-5004

Project Co-Leader
Jessica Alwerdt DMSc, MS, MSPA, PA-C, DFAAPA
alwerdt.jessica@mhsil.com

WHAT WERE THE RESULTS?



Following a two-month pilot with nearly 100 ED to ACU admissions, the registration defect rate decreased from 9% to 1%, and the median ED length of stay decreased from 301 minutes to 281 minutes. All stakeholders reported improved communication efficiency and satisfaction with the accuracy and completeness of information.

Jessica co-facilitated this project as part of the AP LEAP (Advanced Practice Leadership, Excellence, and Advancement Program) through ICAHN (Illinois Critical Access Hospital Network).

Questions??