Main Line Health®
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Quick Triage & Results Pending: Efficient and Effective Tools to Improve Quality Metrics in an Emergency Department

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October 2, 2019

Introductions

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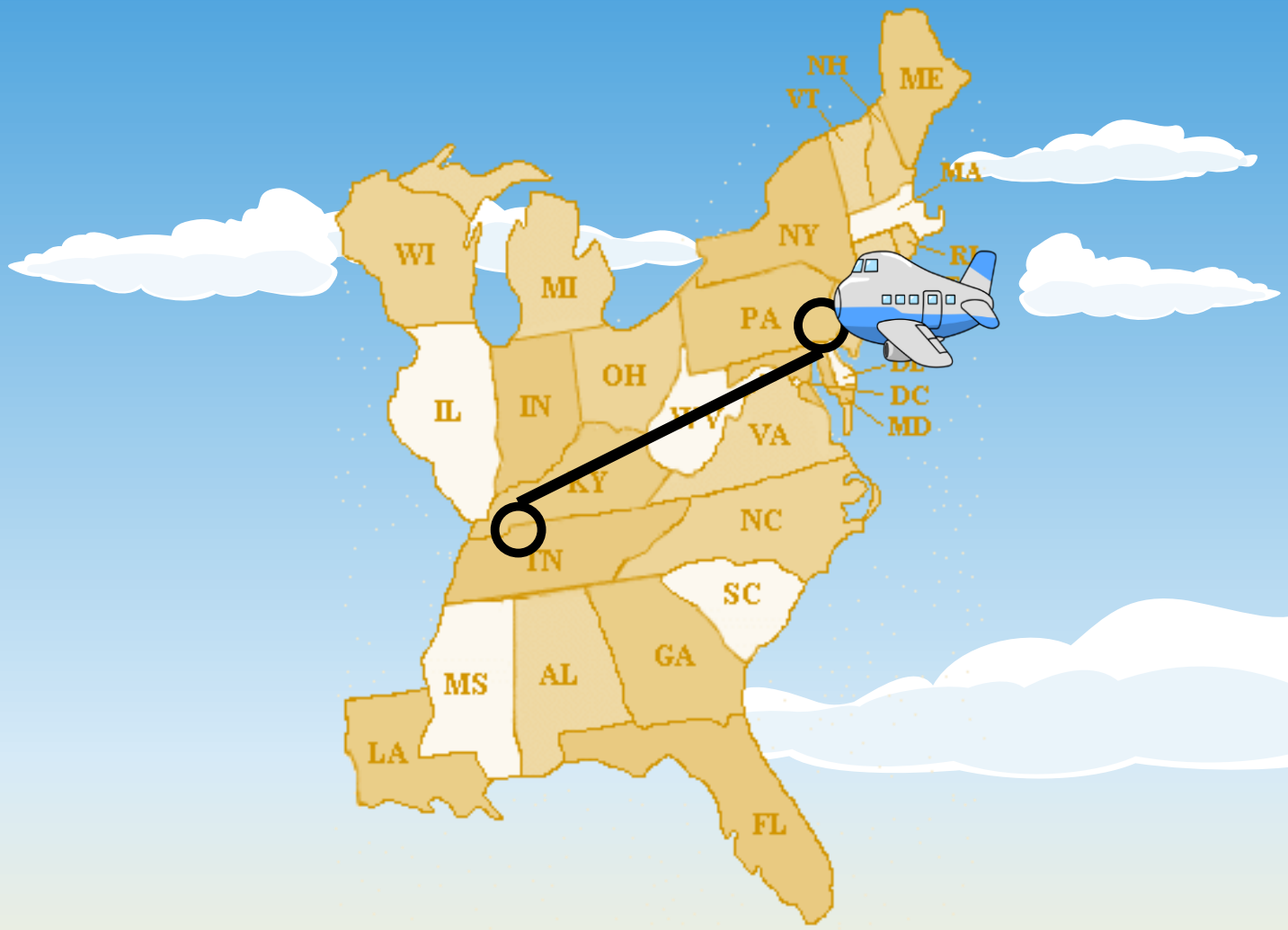
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Greetings from
the
MAIN LINE
The heart
of
suburban
Philly

Main Line Health, System Magnet® Designation March 2015

THIRD Designation
Lankenau Medical Center
Bryn Mawr Hospital
Paoli Hospital

INITIAL Designation
Riddle Hospital
Bryn Mawr Rehabilitation Hospital

Follow us on

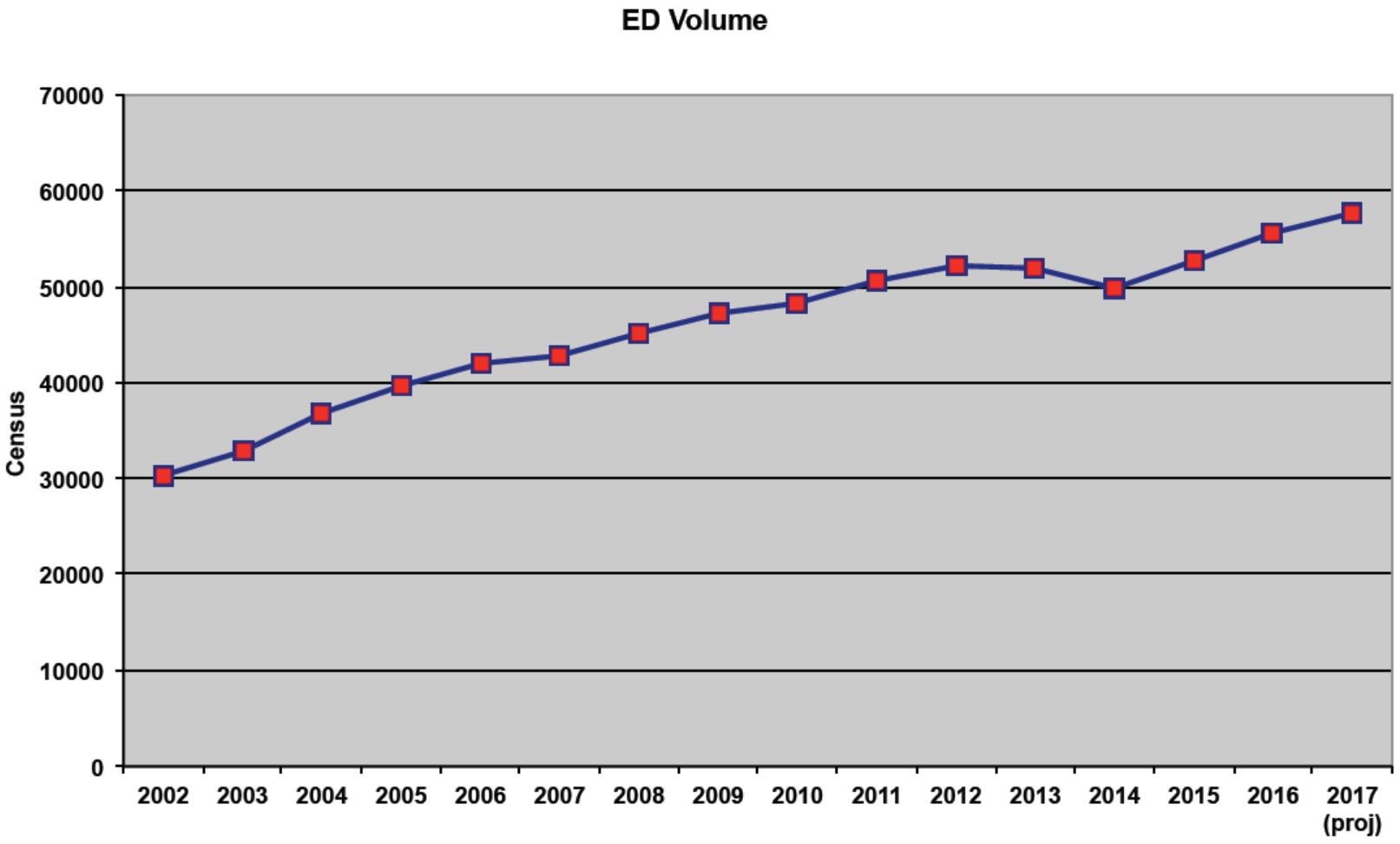
Former LMC Emergency Department Built in 2002

- 26 Formal Treatment Spaces
  - 18 Acute Rooms
  - 8 Fast Track Rooms
  - Multiple Hallway Stretchers
- Built to accommodate 35-40,000 visits/year

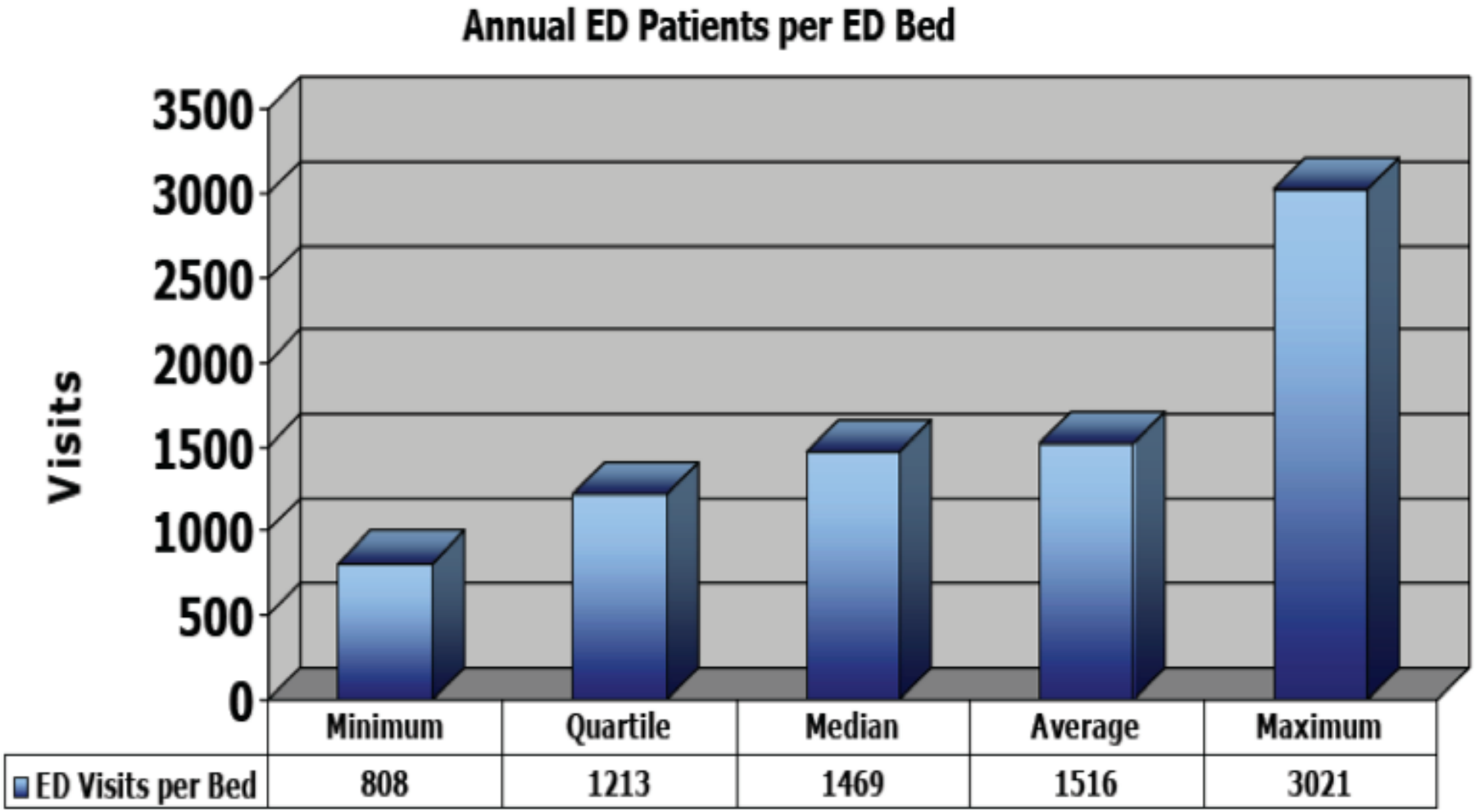
LMC Emergency Department

Calendar Year	Volume	% Change
2002	30375	6.40%
2003	32910	8.35%
2004	36849	11.97%
2005	39681	7.69%
2006	42052	5.98%
2007	42749	1.66%
2008	45309	5.99%
2009	47321	4.44%
2010	48306	2.08%
2011	50774	5.11%
2012	52196	2.80%
2013	51943	-0.48%
2014	49888	-3.96%
2015	52839	5.92%
2016	55642	5.30%
2017	57290	2.96%

LMC Emergency Department



Emergency Department Benchmark Alliance (EDBA)
Average National ED Visits per Bed per Year



LMC ED Volume Compared to Regional Hospitals

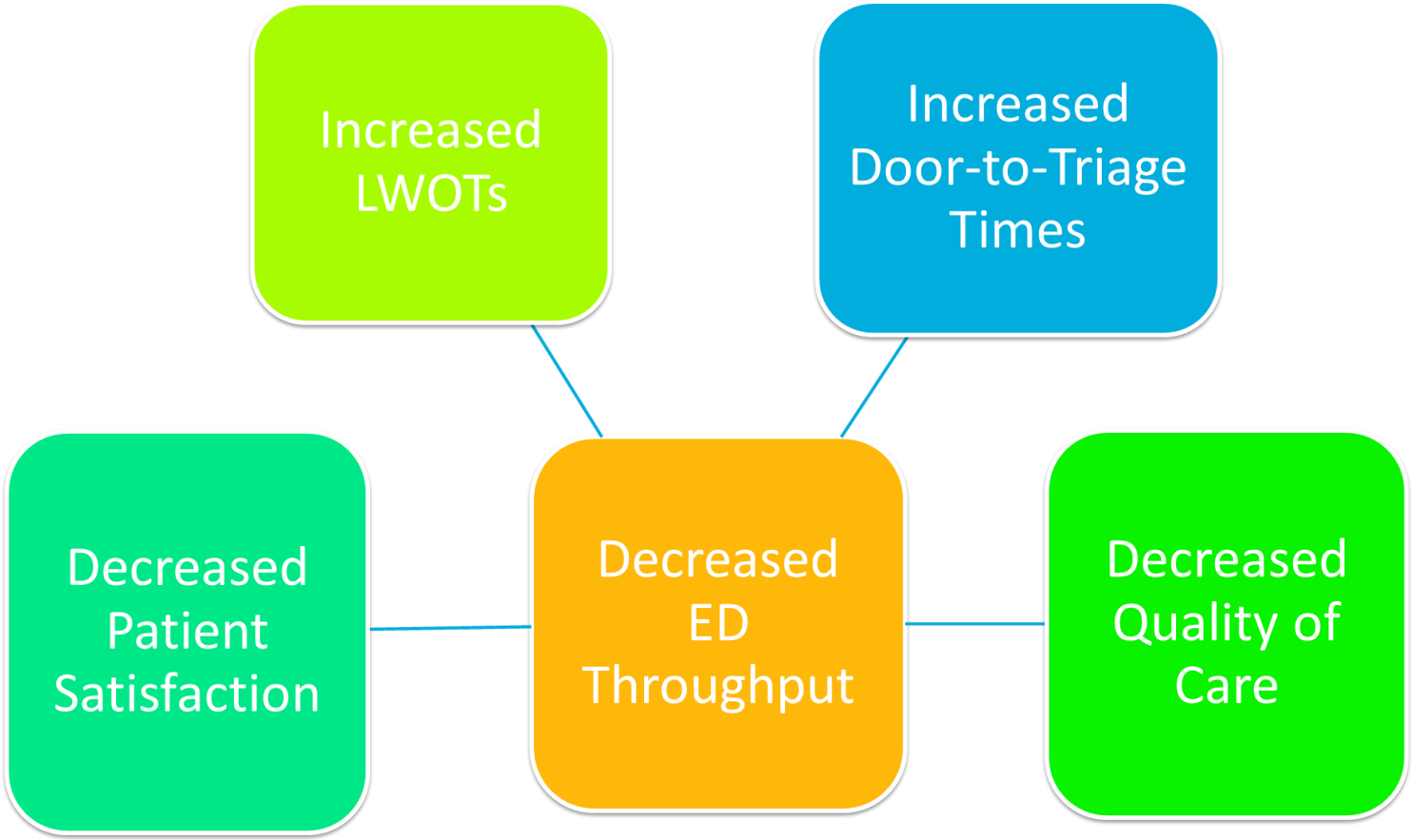
Location	Visits / Yr	Total ED SF	# of Treatment Spaces	SF/Treatment Space	Visits/Treatment Space
2015 Visits					
Lankenau Medical Center	51,596	15,800	26	608	1,984
Bryn Mawr Hospital	45,867	29,300	37	792	1,240
Paoli Hospital	39,977	33,853	31	1092	1,290
Riddle Hospital	32,422	20,180	24	841	1,351
Aria - Torresdale Hospital	55,000	38,575	45	857	1,222
Harrisburg Hospital	80,000	36,500	55	664	1,455
Geisinger - Wyoming Valley Medical Center	58,773	30,600	40	765	1,469
2016 Visits					
Lankenau Medical Center	54,400	15,800	26	608	2,092
Bryn Mawr Hospital	46,808	29,300	37	792	1,265
Paoli Hospital	40,303	33,853	31	1092	1,300
Riddle Hospital	33,083	20,180	24	841	1,378
Expanded LMC ED - 2025 Projection					
Lankenau Medical Center	73,000	48,000	59	847	1,237

LMC ED Achieves Level II Trauma Center Accreditation in 2016

TRAUMA

Trauma designation requires 2 ED beds to be held for trauma patients: visits per treatment space in 2017 adjusted to 2410 visits/bed/year

Impact of Overcrowding



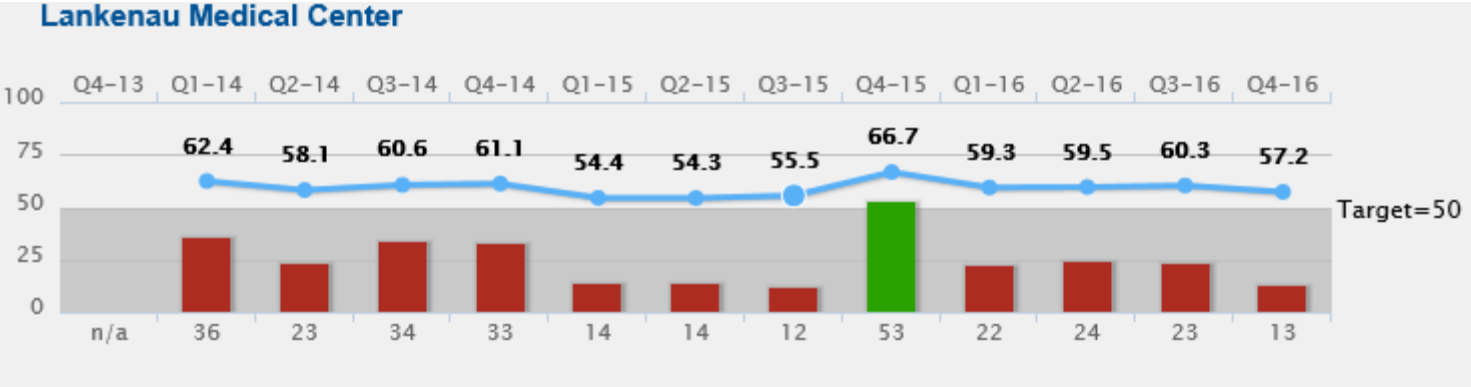
Impact of Volume on ED Metrics

Year	Left Without Treatment (LWOT)	Door to Triage
2018	0.9%	14
2017	0.8%	7
2016	2.0%	9
2015	2.9%	9
2014	2.5%	8
2013	1.9%	7
2012	1.8%	6

(National LWOT benchmark is 1%;
Health System Goal for Door to Triage is <10 minutes)

Impact of Volume on Patient Satisfaction

- In 11 out of 12 Quarters, the overall ED score did not surpass the 50th percentile



- Wait times and likelihood of recommending was below the Press Ganey mean for FY 2015 and 2016

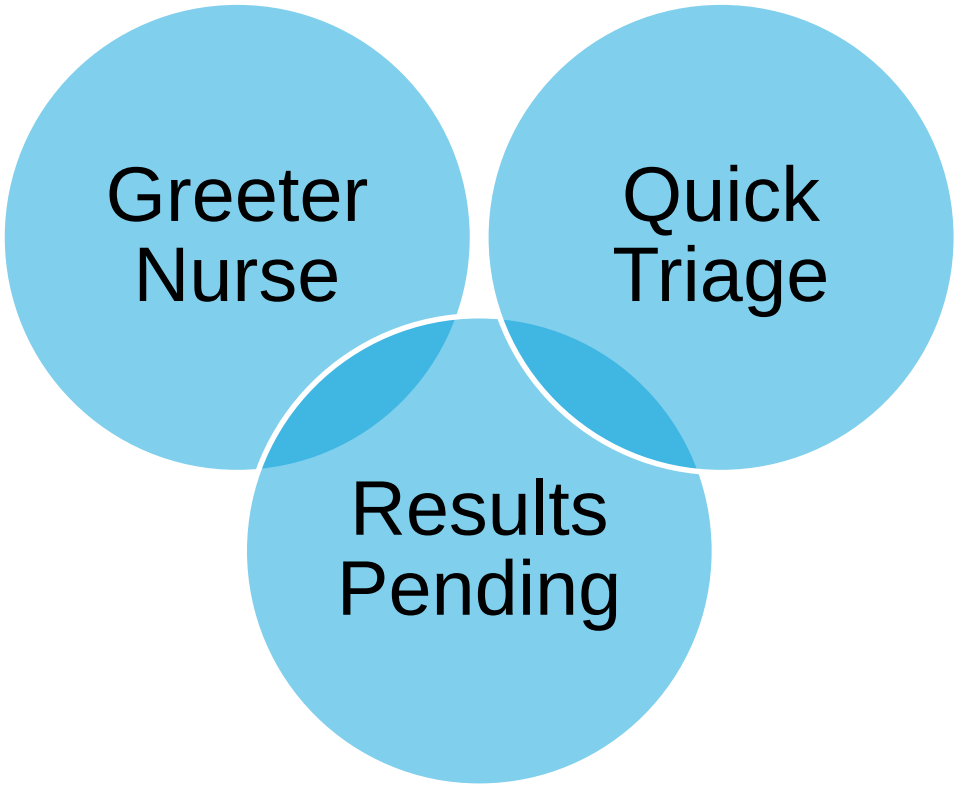
From the Patient's Perspective

- "While waiting for test results - I wasn't in a room I was on a bed next to nurses station & no privacy while I waited - everyone was buzzing around me & everyone staff & patients could see me."
- "You are at a desk & people are standing & walking around - no real privacy."
- "No privacy at all. Sitting on bed in hallway."
- "In treatment area, I was put on bed in the hallway. And had to walk around the corner and wait to go in a restroom to change."
- "Bad experience when staff in the waiting area ask me the specifics of my problem in front of everybody. Other people could hear me."

From the Patient's Perspective cont.

- "I certainly didn't like being on a bed in the hallway! It took about four hours before I was given a private room in the E R."
- "The wait experience (marginally comfortable space, marginally comfortable seating, blasting air conditioning, 6 hour wait) is your deal breaker."
- This was the worst experience I've ever had at Lankenau Hospital. Lankenau is growing! ER Department needs more beds!!! It needs to be expanded."

Potential Solutions from the Literature



Our Solutions in 2016

- Hallway stretchers
- Utilizing an inpatient unit for fast-track patients
- Patient evaluation and treatment in the triage area
- Operational efficiency initiatives to improve flow and reduce door to departure times for patients
  - Capacity alert system
  - Bridging orders
  - Bed request
  - “Welcome Admission” policy

Consulting Other Hospitals- Road Trip to St. Agnes

First Attempt at Quick Triage/Provider Rapid Eval

- In 2016, the fast track area for the ED (8 rooms) was converted to a quick triage area. The quick triage process included:
  - triage questions
  - vital signs
  - medication reconciliation
  - placing protocol orders
- Patients stayed in same area for labs and IV, simultaneous rapid evaluation by a provider and nurse and then were assigned a destination based on their ESI level (satellite fast track area, main ED, external waiting room)

Barriers to Success

- High patient turnover with many tasks to complete in a short timeframe (triage, medication reconciliation, IV, labs, assignment of an ESI level, medication administration) for 2 nurses assigned to 8 rooms
- Patient complaints about care being fragmented due to different nurses and providers caring for them in different areas
- External waiting room was a patient dissatisfier, which was reflected in decreasing Press Ganey scores and a concern for patient safety by staff due to poor visibility of patients by staff in this area

The Long Term Solution: A New Department

Alignment with Health System Strategic Initiatives

Deliver a Superior Experience for Patients, Physicians, Employees, Partners and Payors

- »Goal 2: Enhance culture of safety & quality
- »Goal 5: Meet the rise of health care consumerism
- »Goal 7: Drive volume by stemming inappropriate outmigration

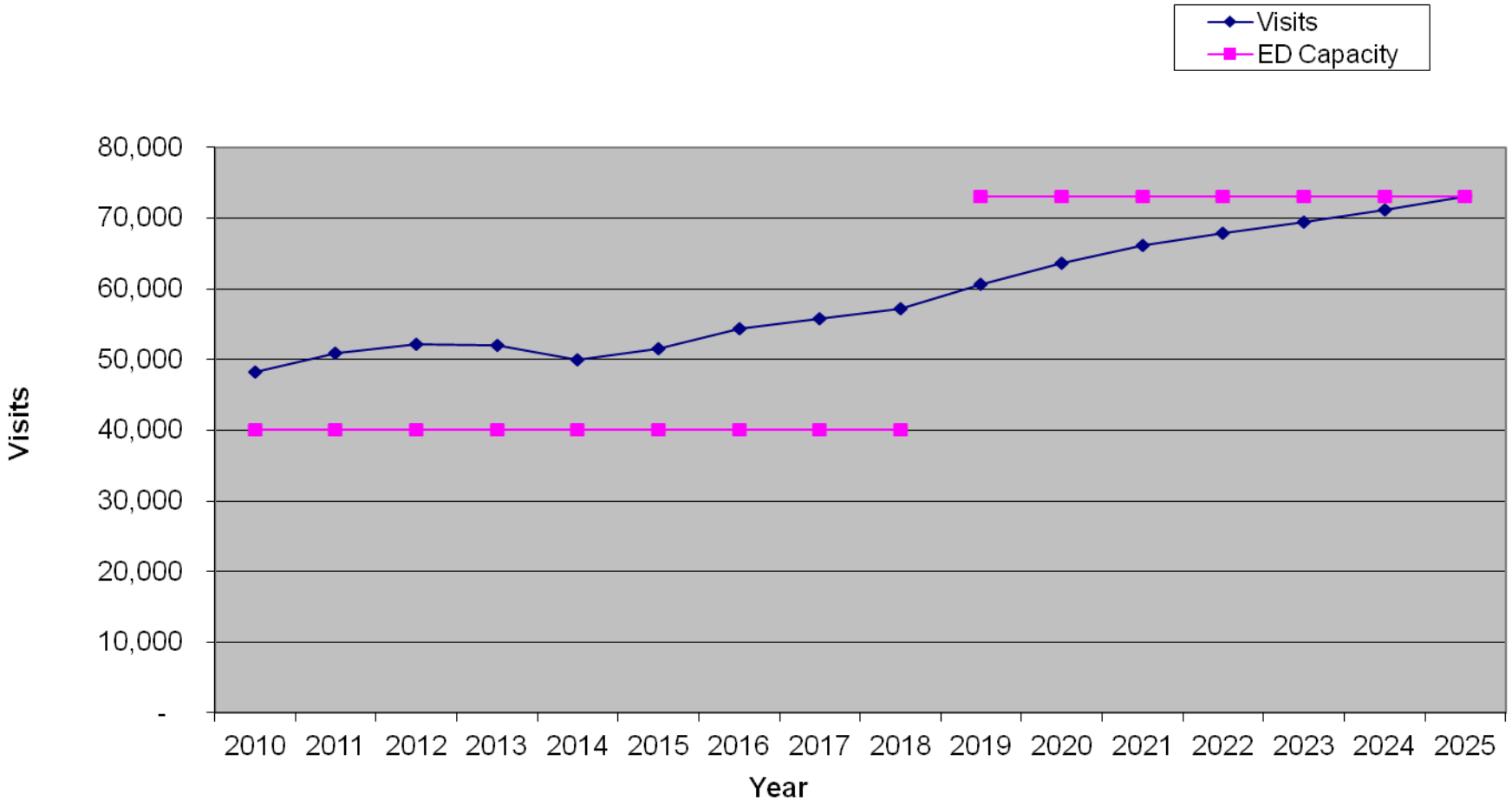
Improve the Health of the Communities We Serve

- »Goal 2: Enhance health status of communities we serve

Deliver Outstanding Value by Continually Improving Performance

- »Goal 3: Achieve top decile scores in safety, quality, patient satisfaction, clinical outcomes and efficiency metrics

Volume vs Capacity in an Expanded Department



	2016	2025 (Proposed)
Average Visits / Month	***4,533***	***6,083***
ED Volume	***54,400***	***73,000***
Treatment Spaces	***26***	***57***

ED Bays	Existing	Proposed
Fast Track	8	23
Trauma	2	3
Acute	16	31
Subtotal	**26**	**57**
Hallway Treatment Space	6	0
Total	**32**	**57**

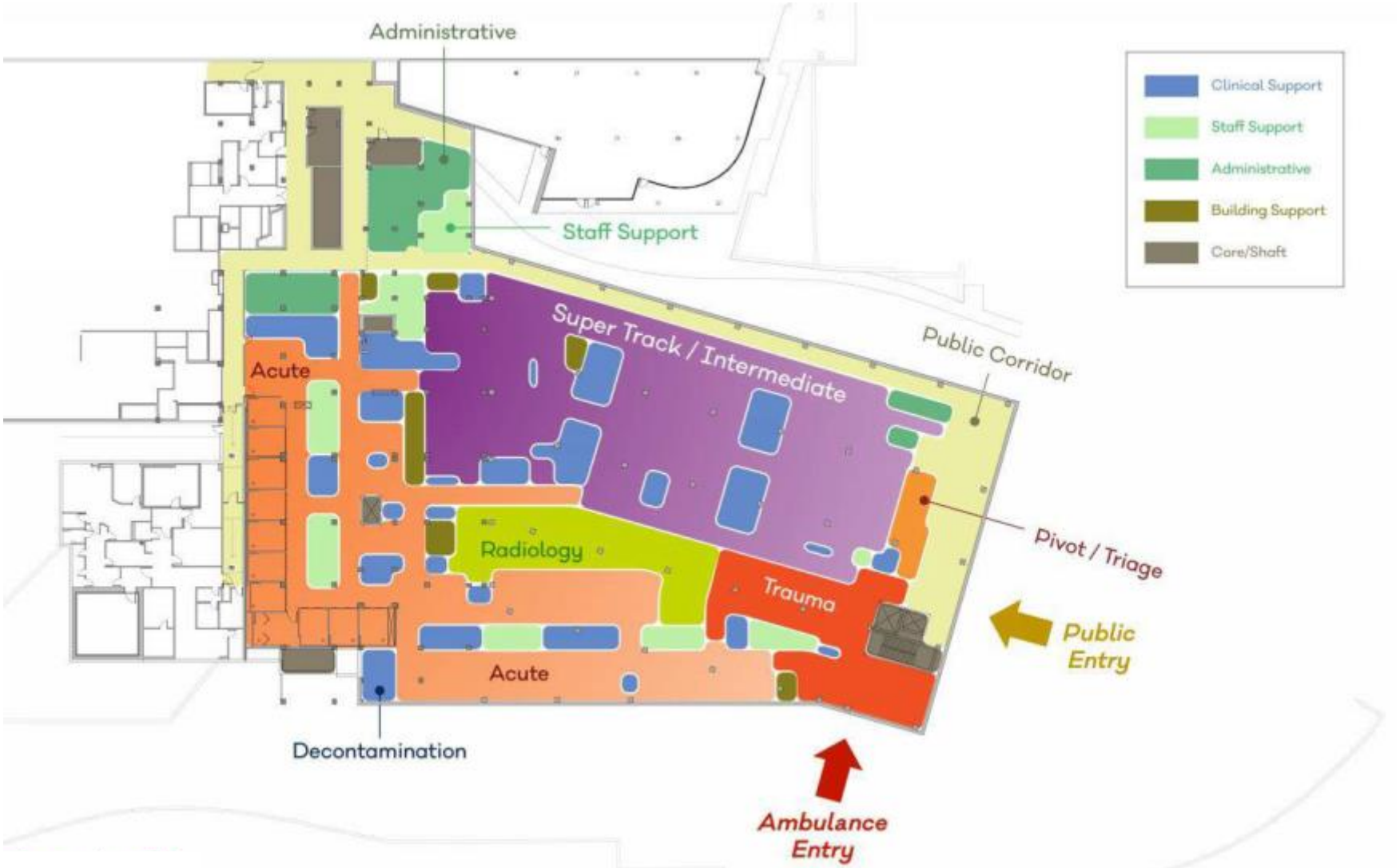
Note: Additional 9 Recliners provided in Results-Waiting area.

Planning and Design

- The architects, executive nursing director and medical director attended a conference on ED design and planning
- 5 all-day planning/design sessions were held at LMC and included all involved stakeholders

- Nursing
- Techs
- Unit Secretaries
- Physicians
- PAs
- Radiology
- Ultrasound
- EVS
- Registration
- Security
- Food & Nutrition
- Lab
- Pharmacy
- Materials Management
- EMS

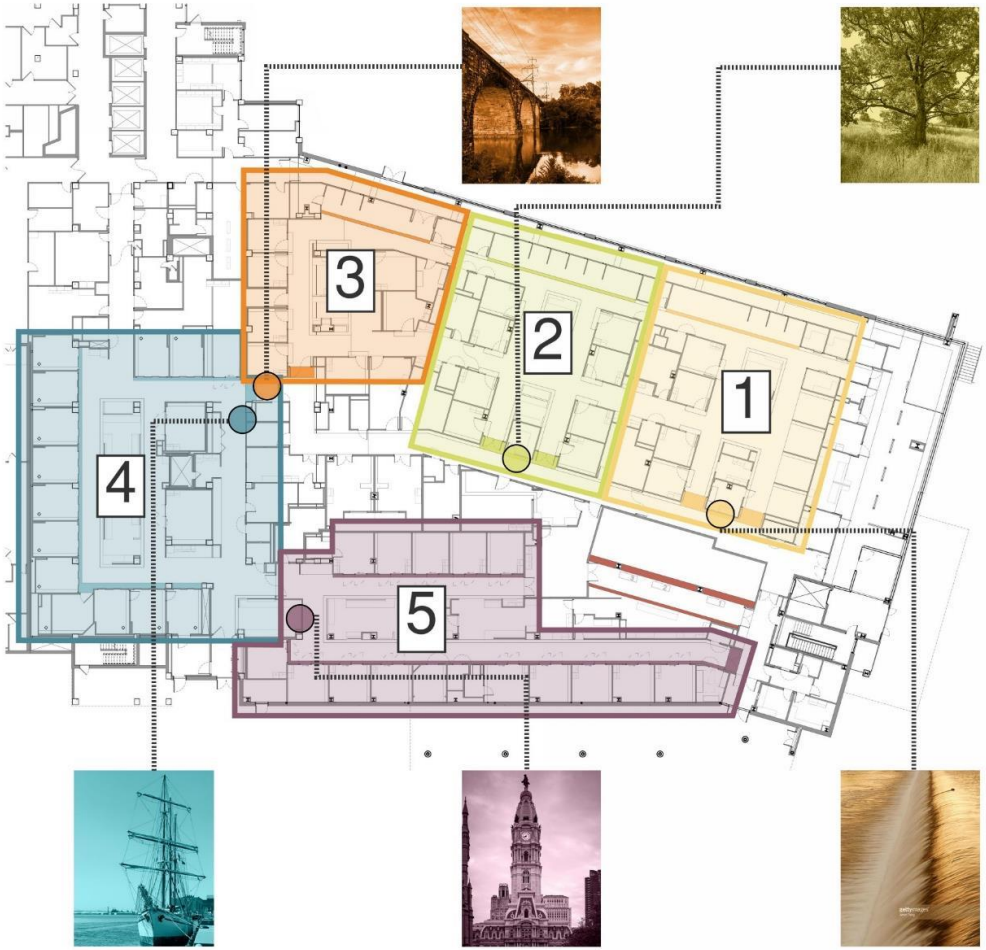
Proposed Layout Plan



Geriatric Friendly

- Utilizing evidence based practice we employed geriatric friendly tactics including:
  - Use of bright colors
  - Distinct Contrasts
  - Use of pictures and letters to enhance wayfinding
  - Lighting that can be bright and dim

Wayfinding



1 = FAST TRACK, YELLOW POD

2 = FAST TRACK, GREEN POD

3 = FAST TRACK, ORANGE POD

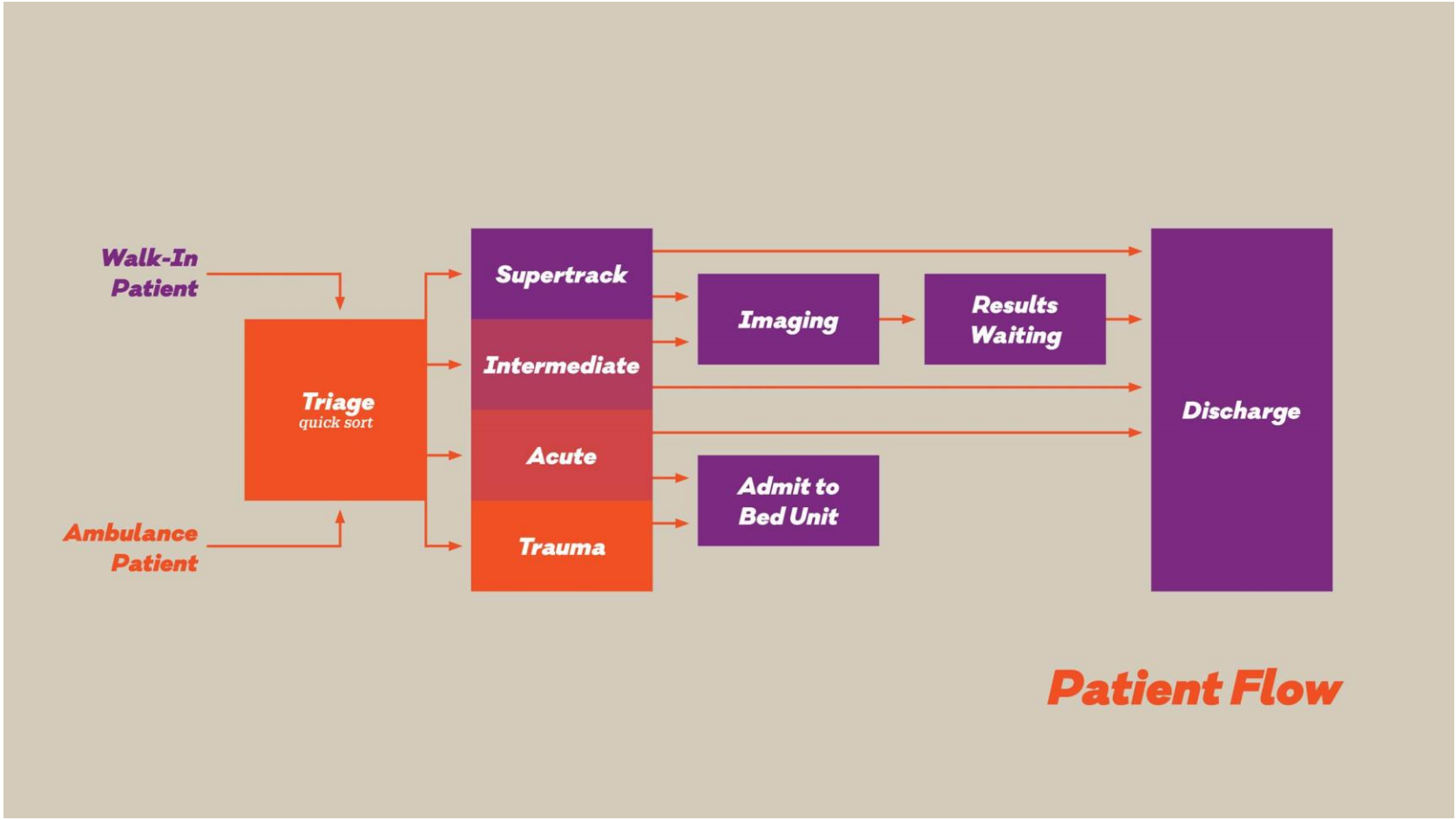
4 = ACUTE, BLUE POD

5 = ACUTE, PURPLE POD

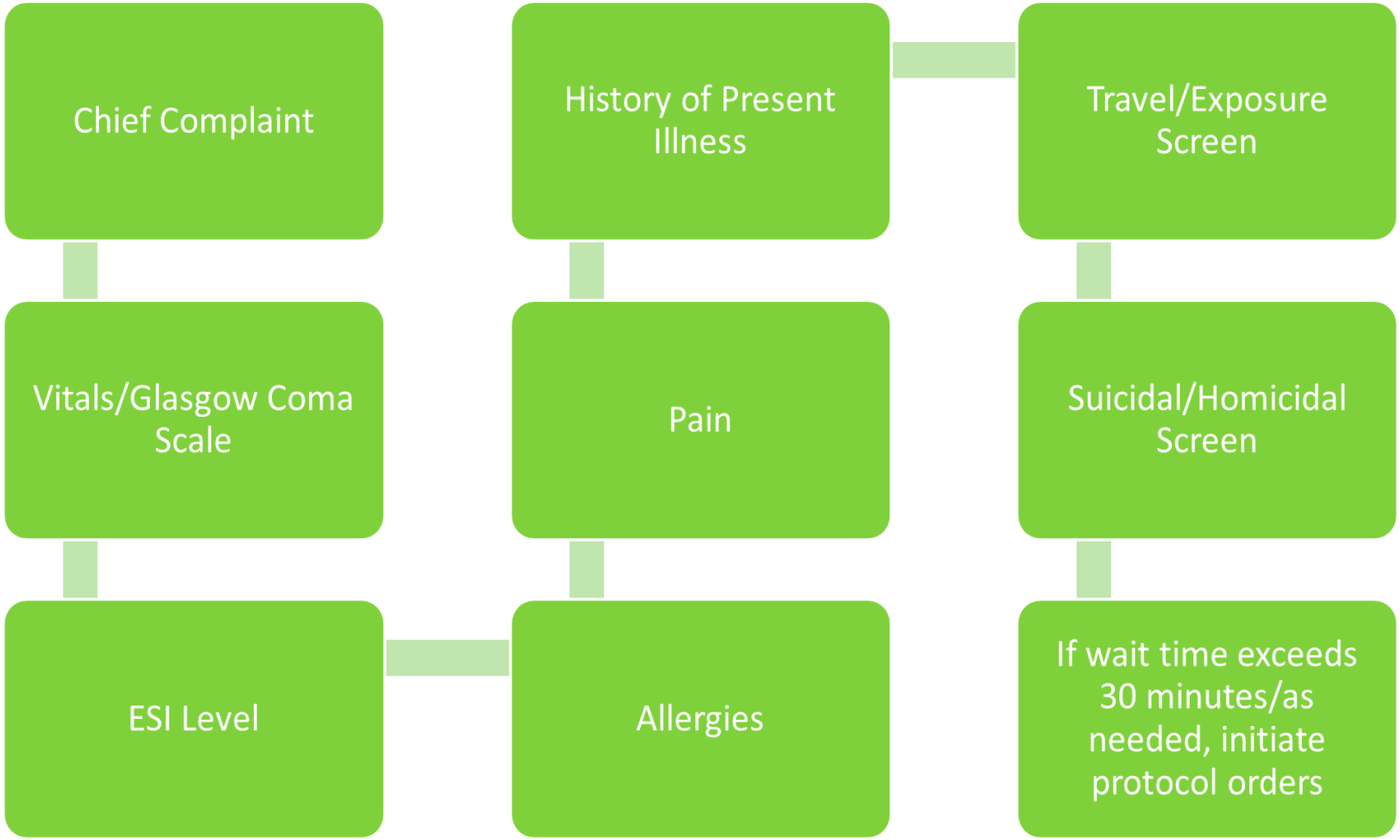
Table Top Planning Sessions

Road Trip to St. Agnes – a Second Time

Flow Design

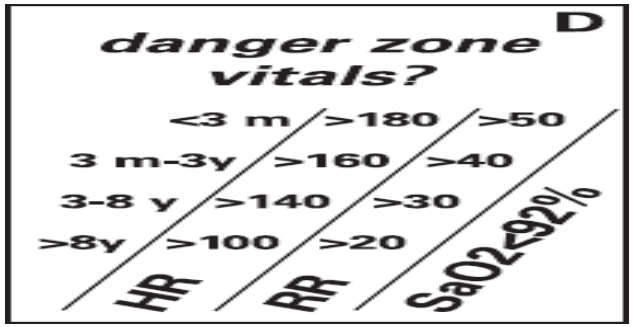

Walk-In Patient
Ambulance Patient
Triage
quick sort
Supertrack
Intermediate
Acute
Trauma
Imaging
Admit to Bed Unit
Results Waiting
Discharge
Patient Flow

Quick Triage



*Patients should not be left alone in the lobby if screening positive for travel/exposure or suicidal/homicidal thoughts

ED Tech Reminders



- If Vital Signs fall within the “danger zone” described above, please let the clinical coordinator know immediately
- Ensure an order is placed for every intervention and review patient identifiers every time for every patient
- Re-assess vital signs every 15 min for ESI 2 until determined stable, every 30-60 minutes for ESI 3 & every 2-4 hours for ESI 4
- Ensure physical chart items (EKG, etc) accompany patient to the patient room

Results Pending

Additional Improvements

- Utilization of inpatient unit as preadmission hold area
- Strategic placement of clinical coordinator
- Pod swarming
- Footpath to Helipad
- Interdisciplinary Hand-Off of Care
- EMS Tracking Board
- Active Shooter Detection System and Safe Rooms
- Specimen collection window
- Hill-Rom Nurse Locators
- Flow Coordinator position

Flow Coordinator

- Encourage the physicians to make dispositions for admissions, transfers, or discharges
- Monitor charts to track test results and place bed requests, communicate with the bed coordinator for proper patient placement, ensure that inpatient orders are being completed on boarding patients, audit stroke and sepsis charts in real time
- Assist with lengthy disposition times for ED practitioners (secondary to distraction from sicker patients coming into the department), patients waiting to be discharged because nurse is busy with other patients, patients waiting to go up to rooms or for report to be given, boarding patients, holding patients in the ED to determine level of care by inpatient teams

Our New Home- March 2019

For Our ED Family

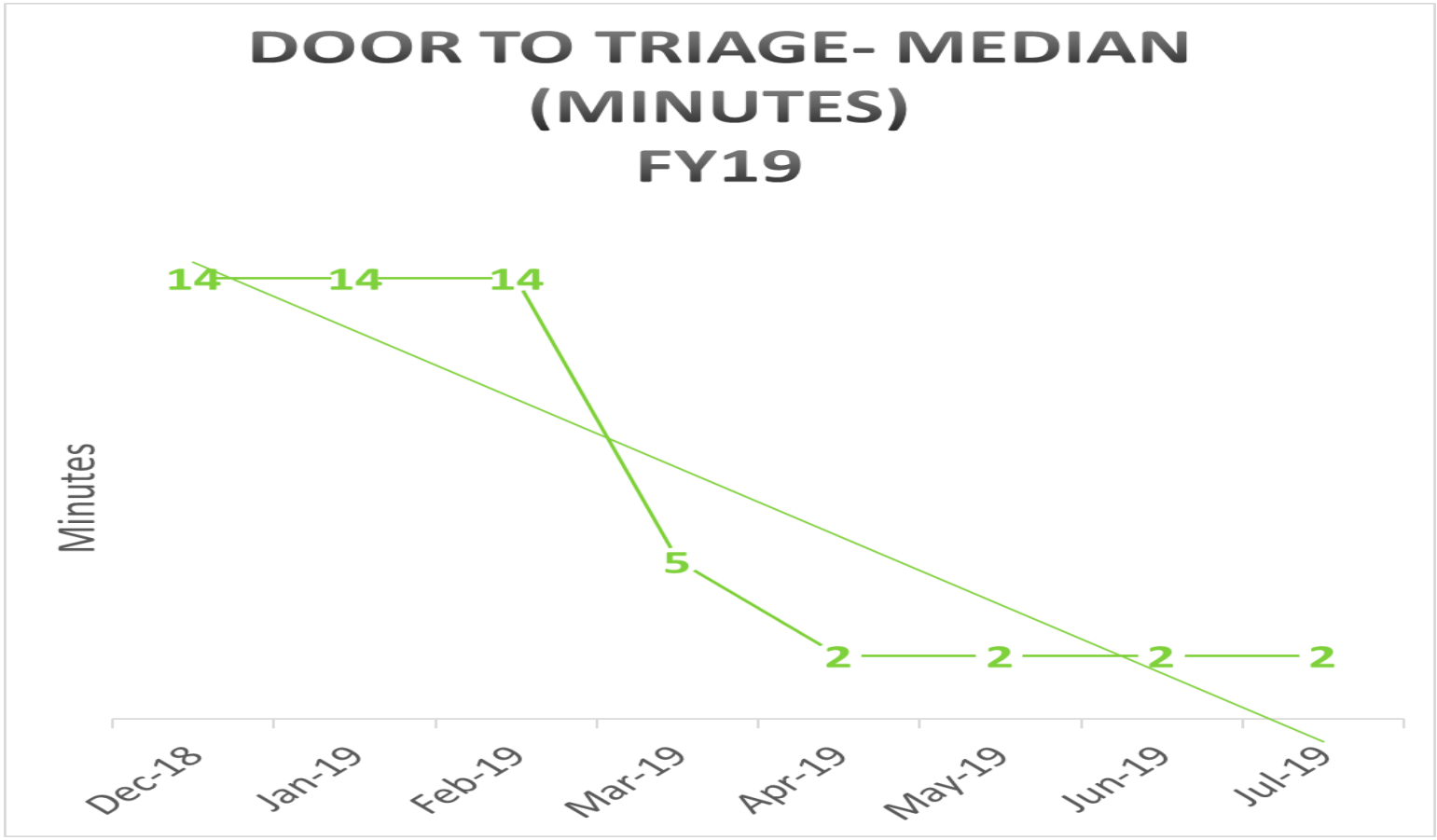
Quick Triage

Complete Nursing Assessment in Patient Room

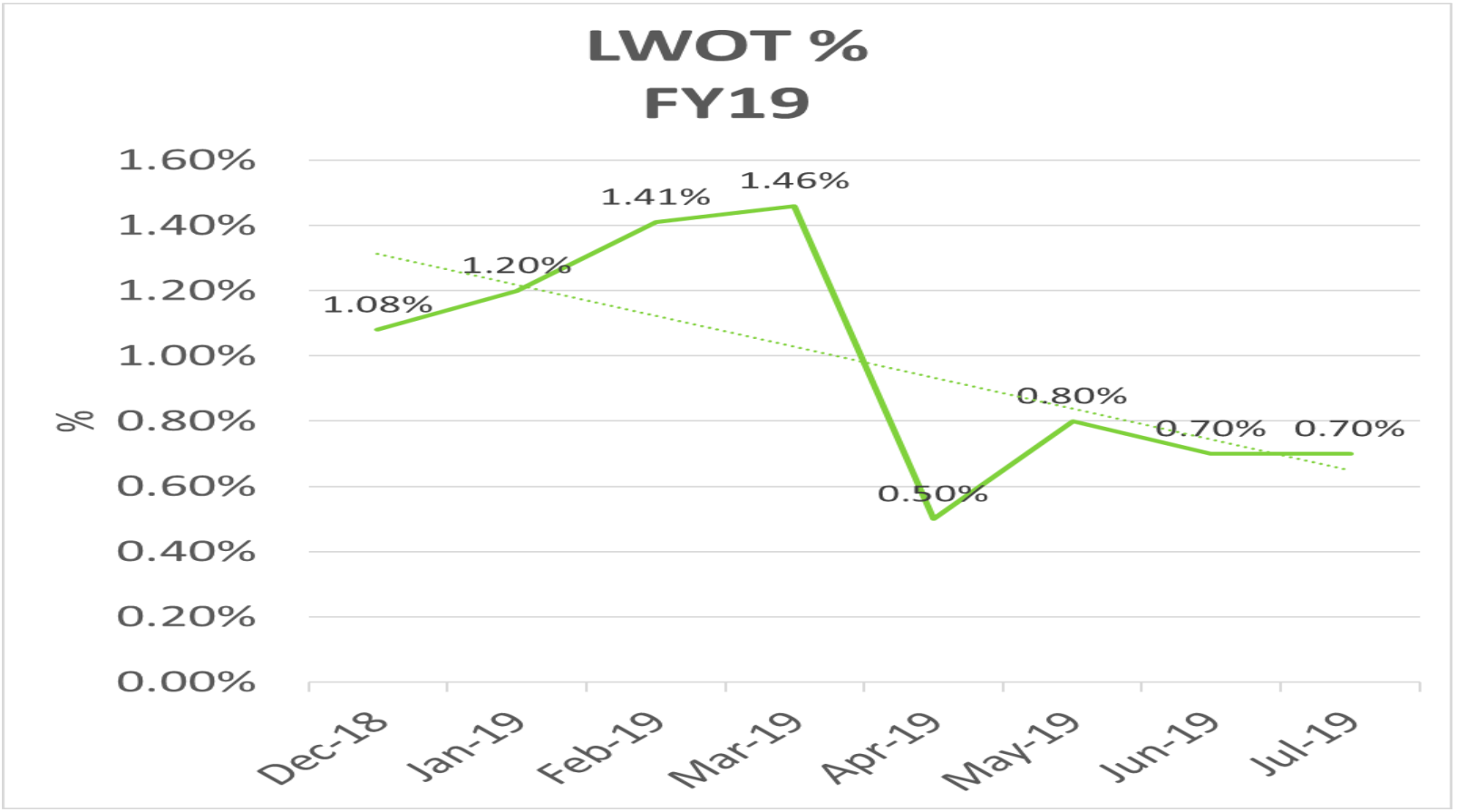
Results Pending

Specialty Trauma Care

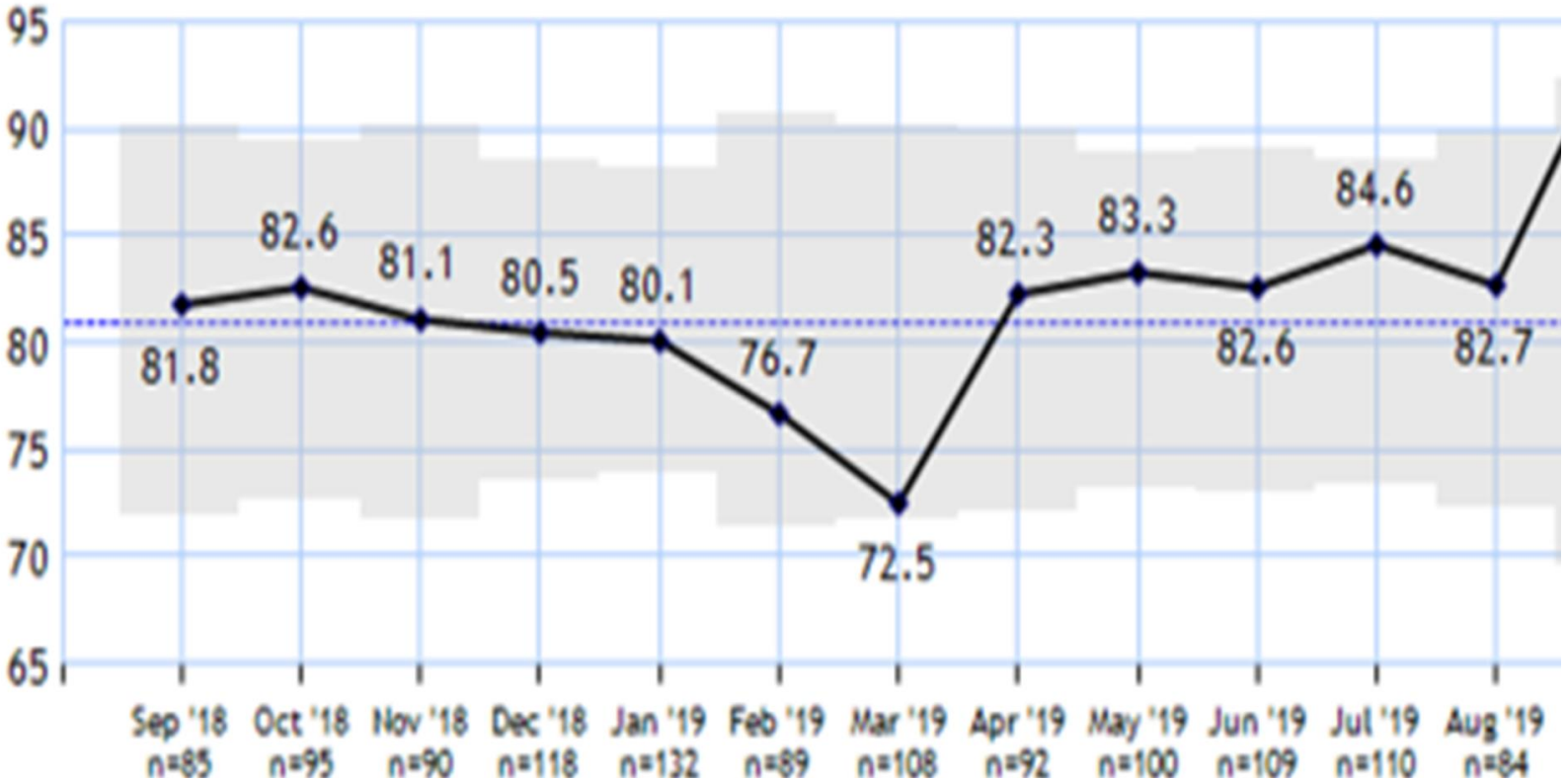
Impact on Door to Triage Times



Impact on LWOT Rates



Impact on Patient Satisfaction



PRESS GANEY®

Lessons Learned

- Reinforcement of the necessity to complete the remainder of the medical screenings and past medical history once the patient reaches a room or treatment space
- Increasing ED technician staffing to transport patients to their rooms and complete time-sensitive orders, such as an EKG or point of care glucose, is critical to success
- Need for clear and constant communication between the triage nurse, ED technicians, clinical coordinator and physicians
- Consistently using patient identifiers in these areas since patients are moving frequently
- Emphasize that staff are “on stage” in the results pending nursing station (no eating, cell phones, inappropriate discussions that would create a negative image for the patient/family)

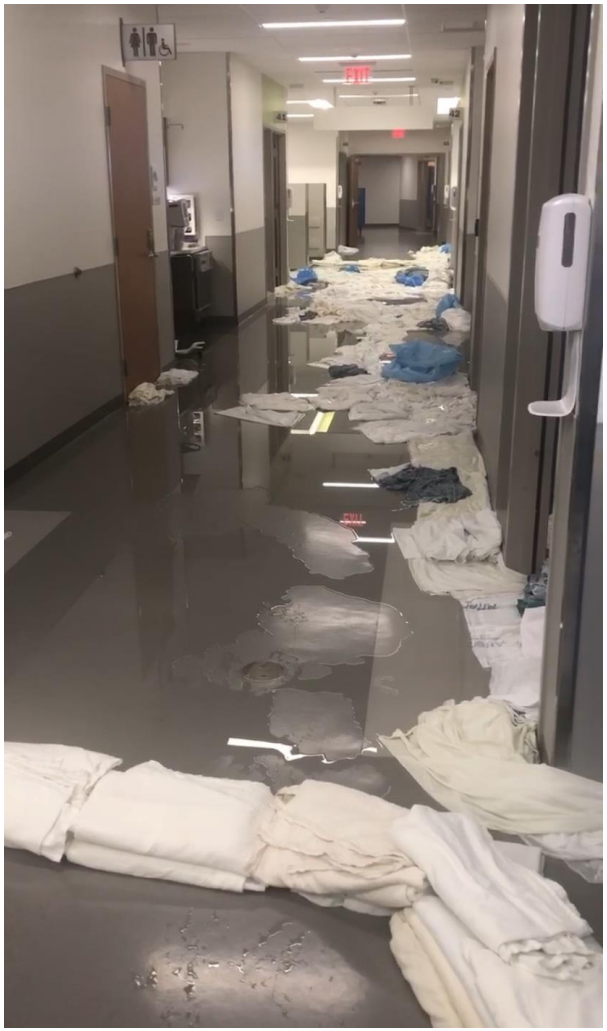
Lessons Learned continued

- Include allergies with triage questions
- Pair each triage nurse with a registrar at the check-in desk
- Utilize a portable pulse oximeter to assign ESI levels at the check-in desk and then an ED technician can obtain blood pressure and temperature in the intake or patient room
- Leader rounding is beneficial to patient satisfaction for results pending patients
- A private consult room should be used to share confidential information with patients
- Dedicate a treatment room for blood redraws, re-evaluations, bedside testing, etc. for results pending patients
- Scripting is essential to make patients and families aware of the benefits of the results pending area

Scripting for Results Pending

- To explain results pending up front- "While you are awaiting your results, we are going to move you to an area of the ED where you can rest, relax and watch TV if you choose. Your new nurse will be "name," and I will introduce you to him/her when we walk over together."
- When moving to results pending, say "this is our results pending area. You will sit in these chairs while your labs, imaging, and other test results are being completed and processed. Please do not hesitate to ask any of the staff members for anything you may need or express any concerns you may have. Once your results are back, the provider will take you to a private area to discuss your results and discharge plan."

Recent Challenge



Implications for Nursing Practice

Through the use of effective tools such as quick triage and results pending, emergency departments have the opportunity to maximize patient flow, improve standards of quality care, increase patient satisfaction, and decrease negative consequences of overcrowding such as patients leaving without receiving treatment and increased lengths of stay in the department.

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