Palliative Care Clinical Decision Support Tool

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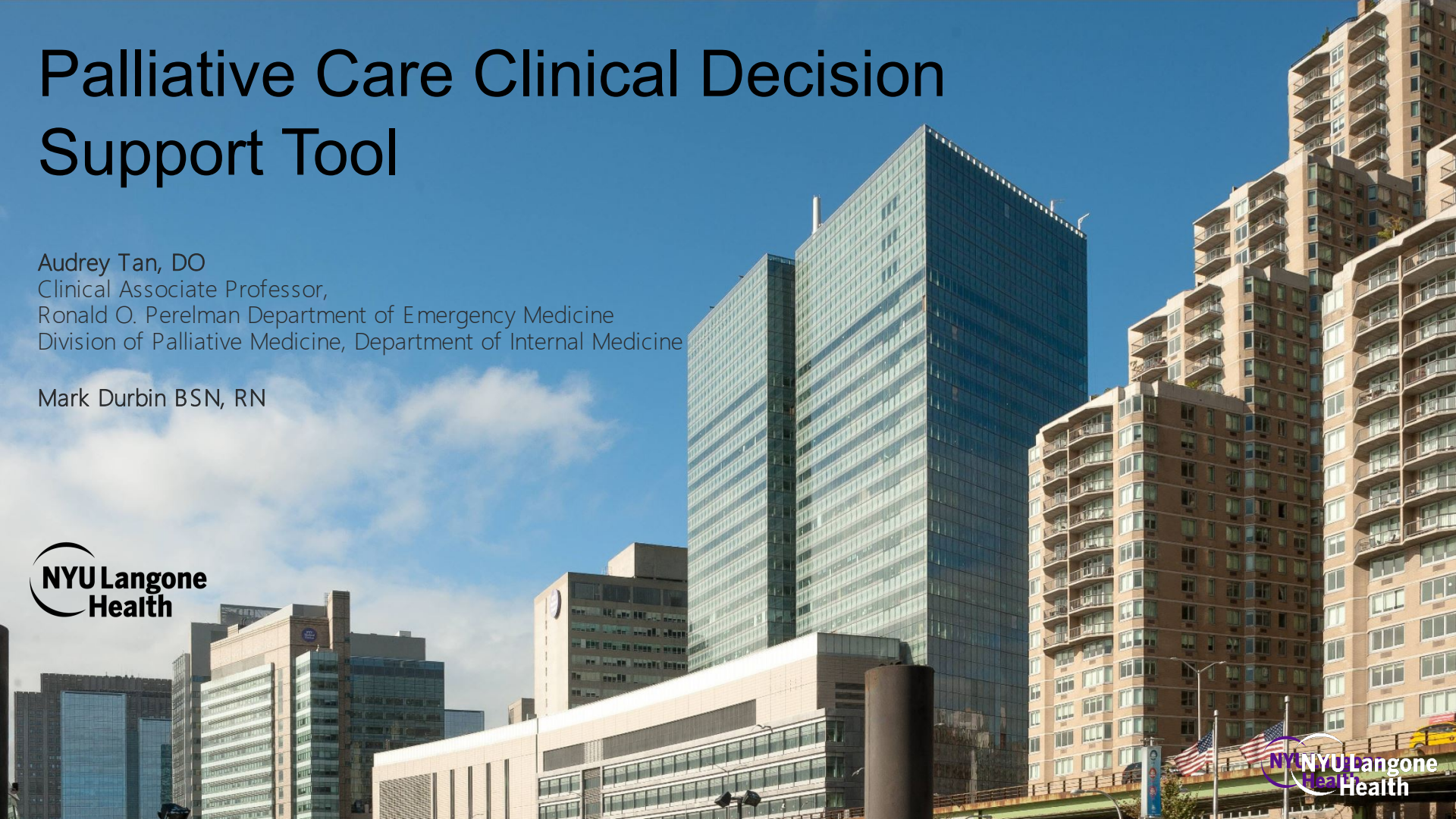

Disclosures

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  - Audrey Tan, DO
  - Mark Durbin, RN

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OUR EXPANDING FOOTPRINT

- NYU Langone locations
- Inpatient Locations

Tisch Hospital
Rusk Rehabilitation
Kimmel Pavilion
Hassenfeld Children's Hospital
NYU Langone Orthopedic Hospital
NYU Langone Hospital – Brooklyn
NYU Winthrop (affiliate)

230+ Locations in the New York Area

3,633+ Physicians with Privileges

PUTNAM
CONNECTICUT
NEW YORK
WESTCHESTER
THE BRONX
MANHATTAN
QUEENS
BROOKLYN
NASSAU
SUFFOLK
NEW JERSEY
STATEN ISLAND

as of March 2018

Why do we need palliative care in the ED?

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Background

Increasing number of ED visits by older adults with serious illness

Most prefer to receive care at home and to minimize life-sustaining procedures

Palliative care improves quality of life and decreases health care use

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Default Approach

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Benefits of palliative care in the ED

- Improve quality of life
- Decrease in ICU admissions
- Decrease in hospital LOS
- Decrease cost

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Primary Palliative Care for Emergency Medicine (PRIM-ER)

- Pragmatic, cluster-randomized stepped wedge design to test the effectiveness of primary palliative care education, training, and technical support in 35 EDs
- Measure the effect using Medicare claims data on:
  - ED disposition to an acute care setting
  - Healthcare utilization 6 months following the index ED visit
  - Survival following the index ED visit

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PRIM-ER Intervention Components

1. Evidence-based, multidisciplinary primary palliative care education (EPEC-EM, ELNEC);
2. Simulation-based workshops on communication in serious illness (EM Talk);
3. Clinical decision support; and
4. Provider audit and feedback.

SINCE 2000
ELNEC
END-OF-LIFE NURSING EDUCATION CONSORTIUM
Advancing Palliative Care

VITAL talk

EPEC®
Education in Palliative and End-of-life Care

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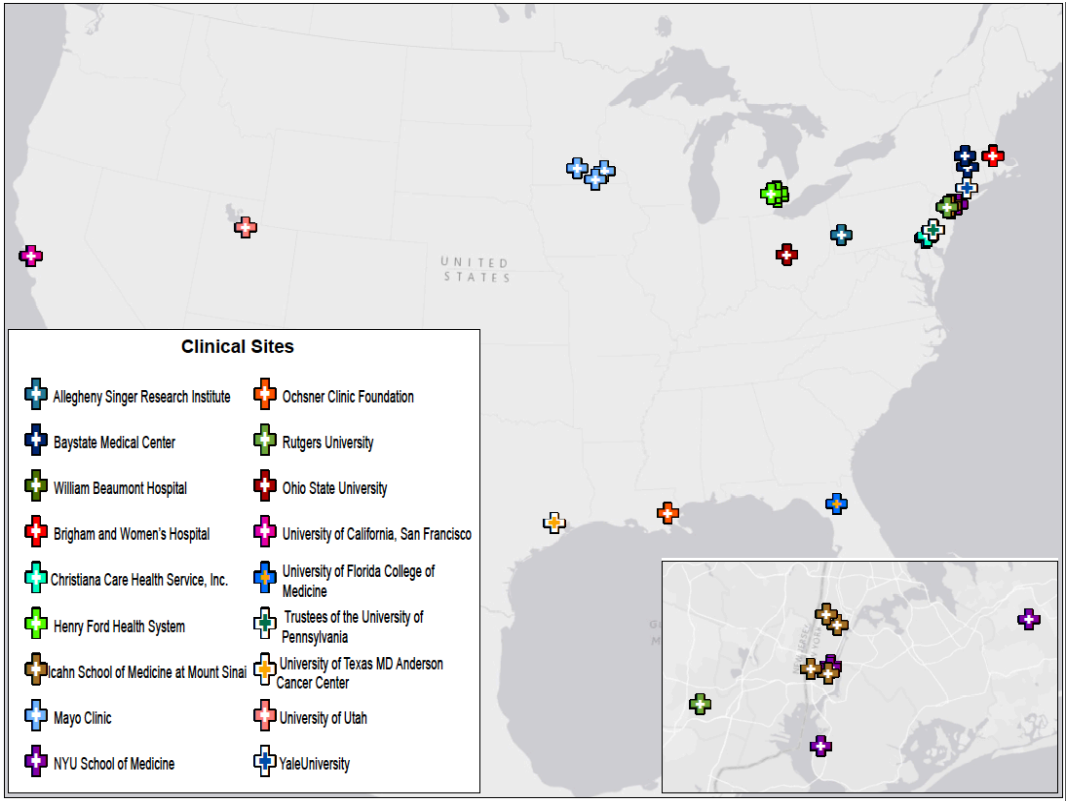
18 Health Systems



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Project Team & Design

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Correlation with current NYU initiatives

- **Value-Based Management Supportive Care Initiative**
  - Mission: improve quality of life for end-of-life patients and achieve better alignment of clinical practice with these patients and families' goals of care
- **Advance Care Planning Initiative**
  - Mission: improve infrastructure and resources dedicated to advance care planning
  - Utilization of MOLSTs (Medical Orders for Life-Sustaining Treatments)

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Workgroup members

- Emergency and palliative care physicians
- Clinical operations
- Informatics
- Nursing
- Care management
- Social work

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Creation of Algorithm

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How do we identify these patients in the ED?

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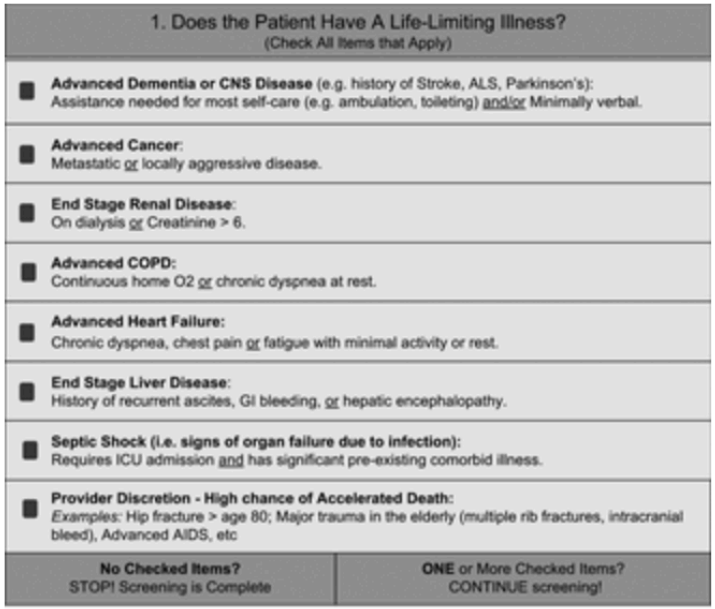
How did we previously identify these patients?



1. Does the Patient Have A Life-Limiting Illness?
(Check All Items that Apply)

- ☐ **Advanced Dementia or CNS Disease** (e.g. history of Stroke, ALS, Parkinson's): Assistance needed for most self-care (e.g. ambulation, toileting) and/or Minimally verbal.
- ☐ **Advanced Cancer**: Metastatic or locally aggressive disease.
- ☐ **End Stage Renal Disease**: On dialysis or Creatinine > 6.
- ☐ **Advanced COPD**: Continuous home O2 or chronic dyspnea at rest.
- ☐ **Advanced Heart Failure**: Chronic dyspnea, chest pain or fatigue with minimal activity or rest.
- ☐ **End Stage Liver Disease**: History of recurrent ascites, GI bleeding, or hepatic encephalopathy.
- ☐ **Septic Shock (i.e. signs of organ failure due to infection)**: Requires ICU admission and has significant pre-existing comorbid illness.
- ☐ **Provider Discretion - High chance of Accelerated Death**: *Examples:* Hip fracture > age 80; Major trauma in the elderly (multiple rib fractures, intracranial bleed), Advanced AIDS, etc

No Checked Items? STOP! Screening is Complete	**ONE** or More Checked Items? CONTINUE screening!

Bowman J, George N, Barrett N, Anderson K, Dove-Maguire K, Baird J. Acceptability and Reliability of a Novel Palliative Care Screening Tool Among Emergency Department Providers. *Acad Emerg Med.* 2016;23(6):694-702.

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Palliative care clinical decision support tool

Leverage clinical decision support alerts to:

Identify patients most likely to benefit from primary palliative care

Provide point-of-care clinical recommendations

Benefits:

Rapid

Sensitive

Improves adherence to guidelines

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A. Screening criteria

Historical data elements	Current encounter data elements
Mandatory surprise question: “Would you be surprised if this patient died within the previous 6 months?” (No)	Code narrator start
Previous palliative care consult	Active order for mechanical ventilation
Previous order for “Do Not Resuscitate”	Active order for non-invasive ventilation
Last hospital disposition to a long-term acute care facility or nursing facility	GFR < 15 ml/min/m^2
Previous scanned document of Consent to Withhold or Withdraw Life Sustaining Treatments	Albumin < 2 g/dL
Eastern Cooperative Oncology Group (ECOG) Score 3 or 4	Bicarbonate < 10 mEq/L
Previous discharge to hospice	pCO_2 < 70 mmHg
Previous MOLST documentation	

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B. Referral

PALLIATIVE CARE INPATIENT CONSULT SERVICE

SOCIAL WORK

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C. Design specifications

Interruptive vs non-interruptive alerts

- ED providers
- Social work and case management

Alert timing

- One hour after provider assignment

Alert audience

- ED providers, nurses, social workers, care managers

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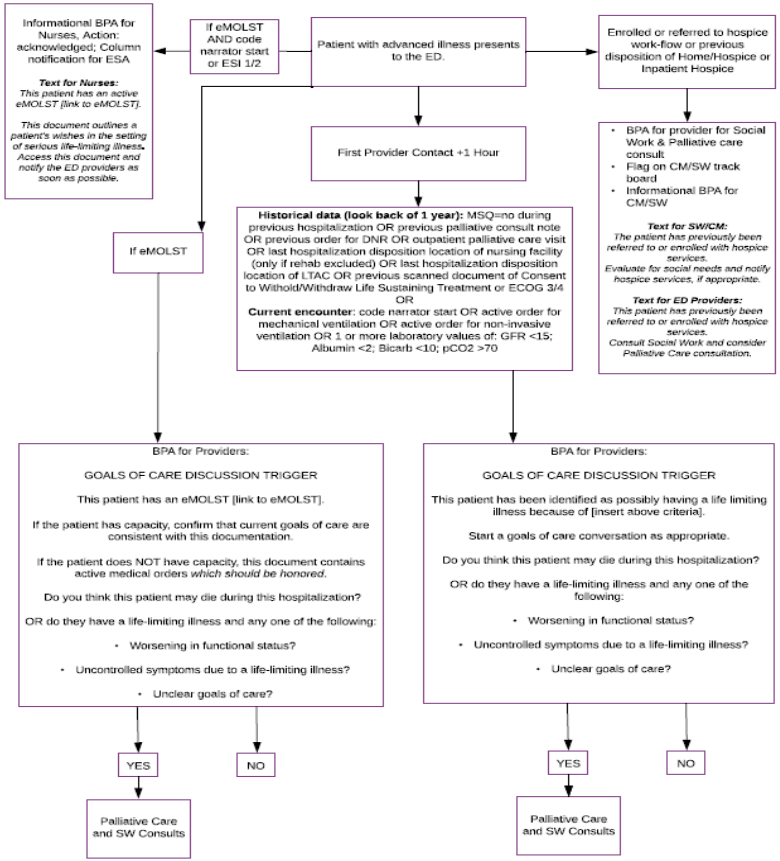
The Algorithm



The Algorithm: Hospice

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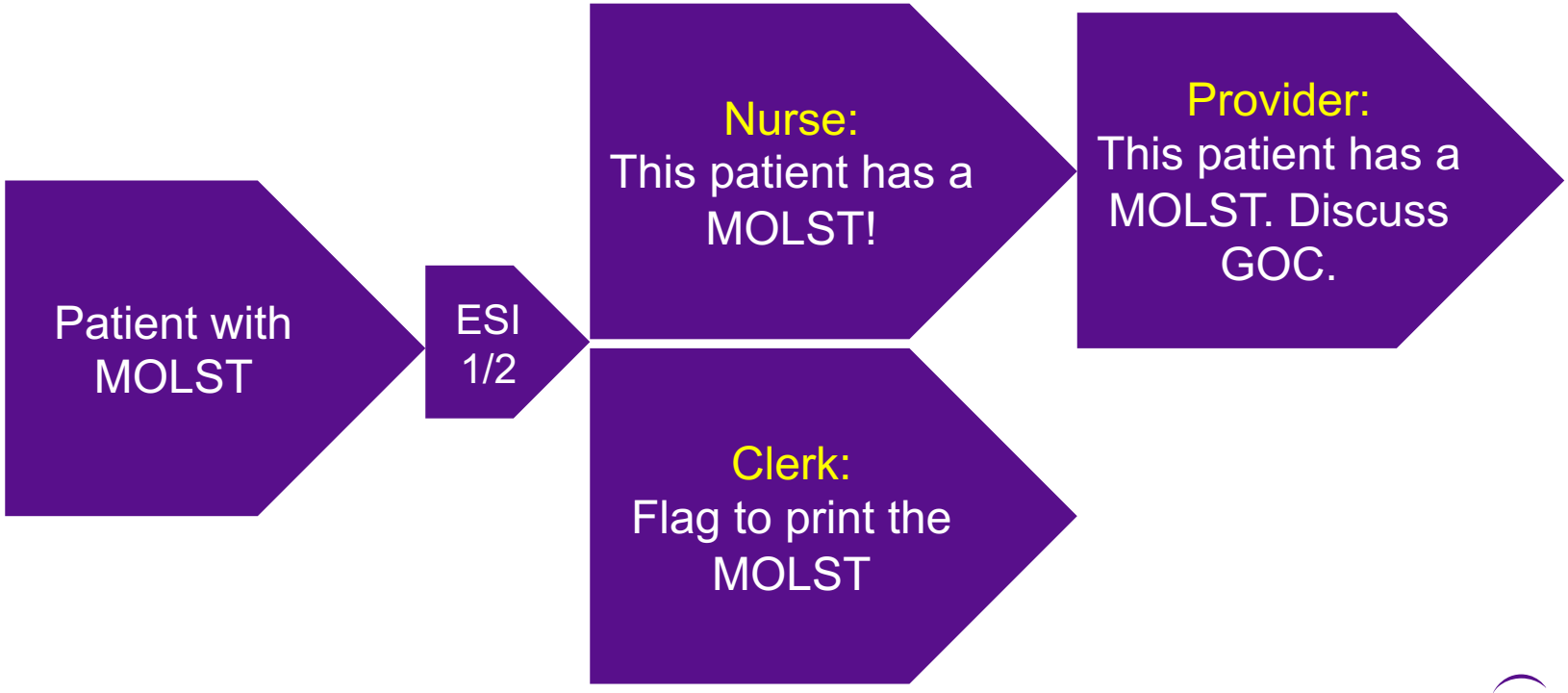
The Algorithm: (+) MOLST



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The Algorithm: No MOLST

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The Solution / The Build

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Translating the Algorithm into Electronic CDS

- Decision for Active Interruptive BPA's
- Positive eMOLST
  - BPA for RN
  - Column for Unit Clerks
  - BPA for Providers
- Positive Hospice (Enrolled or Referred)
  - BPA for Social Workers and Care Managers
  - Column for Social Workers and Care Managers
  - BPA for Providers
- Identified patients as possibly having life limiting illness based on numerous criteria
  - BPA for Providers

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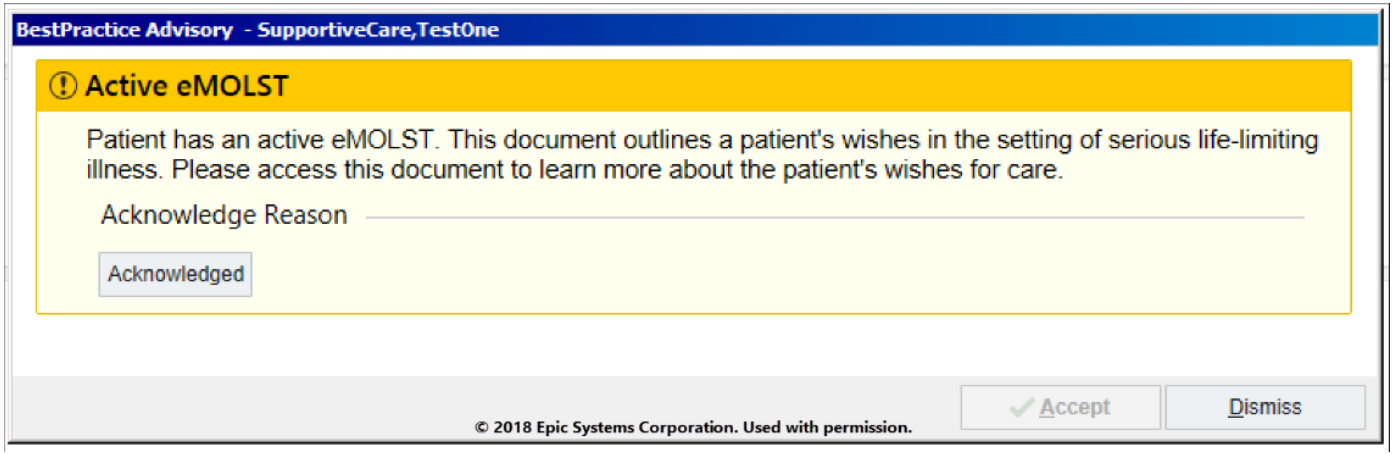
Clinical Decision Support @ NYU Langone Health

Identify seriously ill patients with advance care planning documents: BPA for RN's



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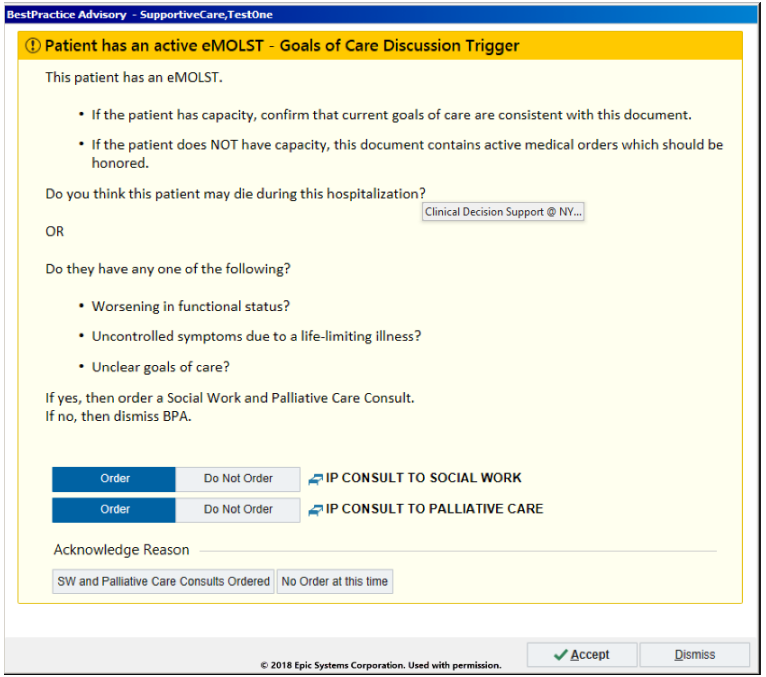
Clinical Decision Support @ NYU Langone Health

Identify seriously ill patients with advance care planning documents: BPA for Providers



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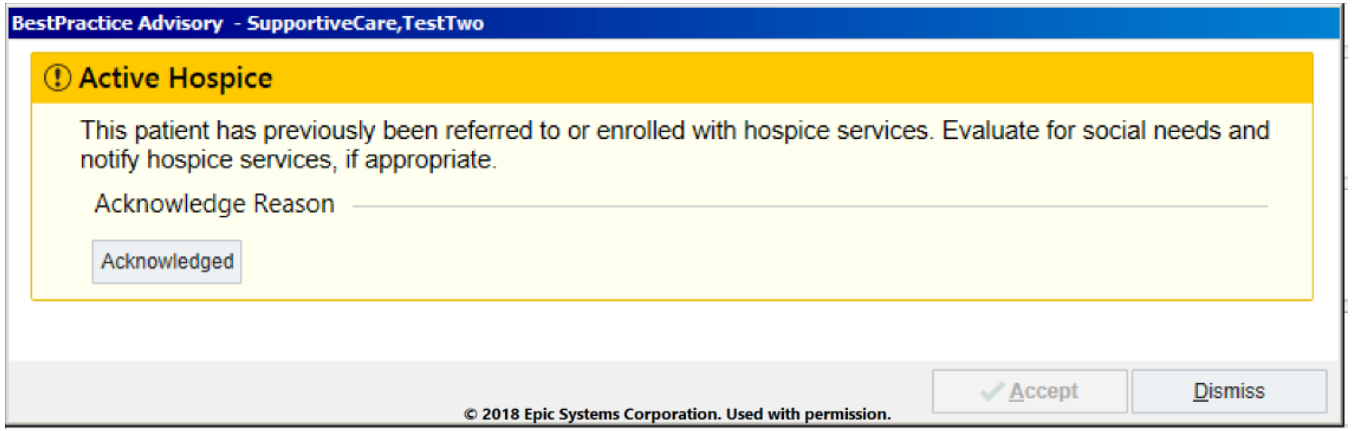
Clinical Decision Support @ NYU Langone Health:
BPA for Social Workers and Care Managers to identify hospice patients



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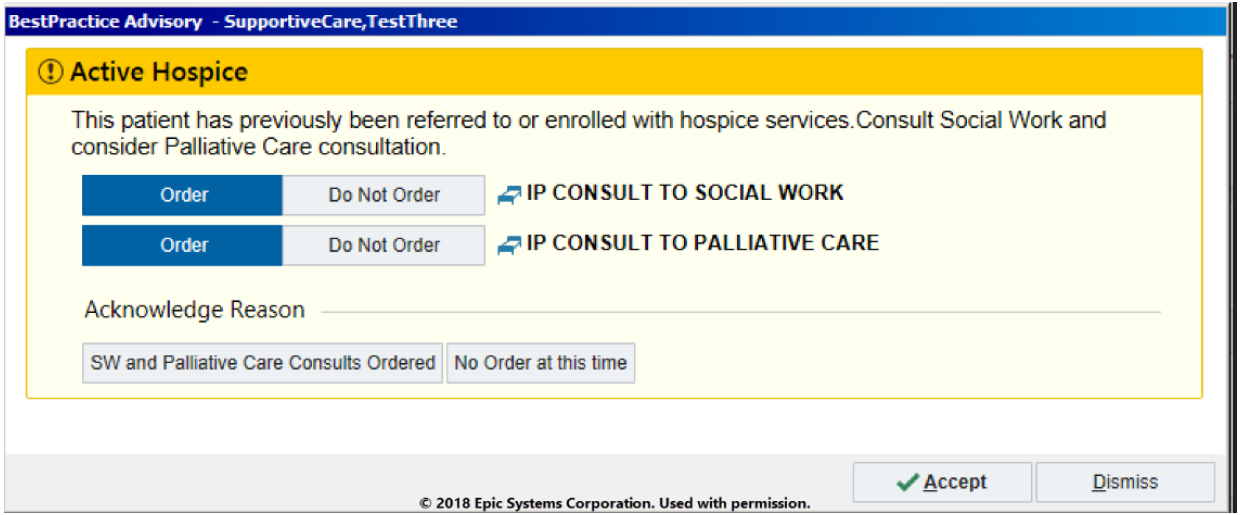
Clinical Decision Support @ NYU Langone Health:
BPA for Providers to identify hospice patients



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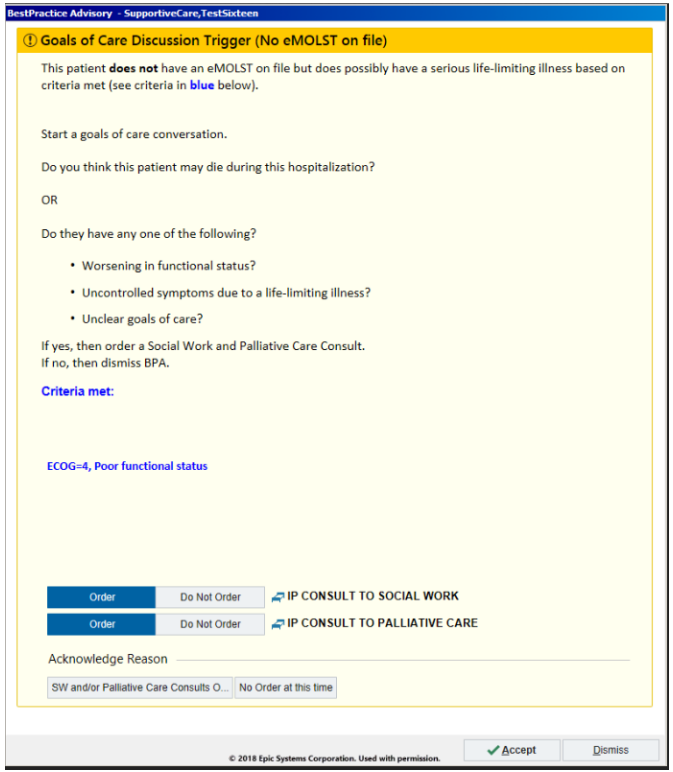
Clinical Decision Support @ NYU Langone Health:
Initiate goals of care conversation: BPA for Providers



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Education and Roll-out

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Usability Testing

- Test group of 10 ED staff including nurses, physicians, physician assistance and clinical operations leadership
- Tested multiple clinical scenarios
- Open forum for discussion/questions
- System Usability Scale (SUS) questionnaire
- Score of 92.5 (minimum threshold of 85 was considered “excellent”)

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System Usability Scale

Clinical Decision Support (CDS) System
Primary Palliative Care for Emergency Medicine (PRIM-ER)

Please check the box that reflects your immediate response to each statement. Don't think too long about each statement. Make sure you respond to every statement. If you don't know how to respond, simply check box "3."

	Strongly Disagree				Strongly Agree
1. I think that I would like to use this product frequently.	1	2	3	4	5
2. I found the product unnecessarily complex.	1	2	3	4	5
3. I thought the product was easy to use.	1	2	3	4	5
4. I think that I would need the support of a technical person to be able to use this product.	1	2	3	4	5
5. I found the various functions in the product were well integrated.	1	2	3	4	5
6. I thought there was too much inconsistency in this product.	1	2	3	4	5
7. I imagine that most people would learn to use this product very quickly.	1	2	3	4	5
8. I found the product very awkward to use.	1	2	3	4	5
9. I felt very confident using the product.	1	2	3	4	5
10. I needed to learn a lot of things before I could get going with this product.	1	2	3	4	5

Brooke J. SUS: A Retrospective. *Journal of Usability Studies.* 2013;8(2):12.

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Education

- Clinical rounds
- Email notifications
- Tip sheets
- Education at faculty meetings
- Champions from various disciplines including physicians, nursing, social work, care managers and unit clerks

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Dissemination of CDS

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Tailoring Clinical Decision Support to Each Site

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CRITERIA 1: Patient with Advanced Illness Presents to ED (no advance care planning documentation)							
One of the below positive from specified time interval to present							
MSQ=no during any previous hospitalization	☐Yes ☐No	Previous palliative care consult order in _____ months	☐Yes ☐No	Previous order for DNR	☐Yes ☐No	Outpatient Palliative Care visit in past _____ months	☐Yes ☐No
Last hospitalization disposition location of nursing facility in _____ months	☐Yes ☐No	ECOG 3 or 4	☐Yes ☐No	Last hospitalization disposition location of LTAC in _____ months	☐Yes ☐No	Previous scanned document of consent to withhold/withdraw life sustaining treatment	☐Yes ☐No
Previous dispo to outpatient or inpatient hospice in ____ months	☐Yes ☐No						

OR

CRITERIA 2: Patient with Advanced Illness Presents to ED (no advance care planning documentation)							
Current ED encounter							
Code narrator start	☐Yes ☐No	GFR<15	☐Yes ☐No	Albumin <2	☐Yes ☐No	Bicarb<10	☐Yes ☐No
PCO_2>70	☐Yes ☐No	Active order for mechanical ventilation	☐Yes ☐No	Active order for non-invasive ventilation	☐Yes ☐No		

OR

CRITERIA 3: Patient with advanced illness presents to the ED with advance care planning documentation					
eMOLST	☐Yes ☐No	MOLST	☐Yes ☐No	POLST	☐Yes ☐No
DNR/DNI	☐Yes ☐No	Five Wishes	☐Yes ☐No	ACP note under “CODE” tab in EPIC	☐Yes ☐No

OR

CRITERIA 4: Enrolled or referred to hospice work-flow or previous disposition of Home/Hospice or Inpatient Hospice	☐Yes / ☐No

REFERRAL TO SERVICES							
Social Work Consult	☐Yes ☐No	Palliative Care Consult	☐Yes ☐No	Hospice	☐Yes ☐No	Care Management	☐Yes ☐No
Chaplaincy	☐Yes ☐No	Clerks	☐Yes ☐No	Nursing	☐Yes ☐No		

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Dissemination

- Sharing the build – swim lanes
- Sharing of EPIC build
- Tech support

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Measuring Success

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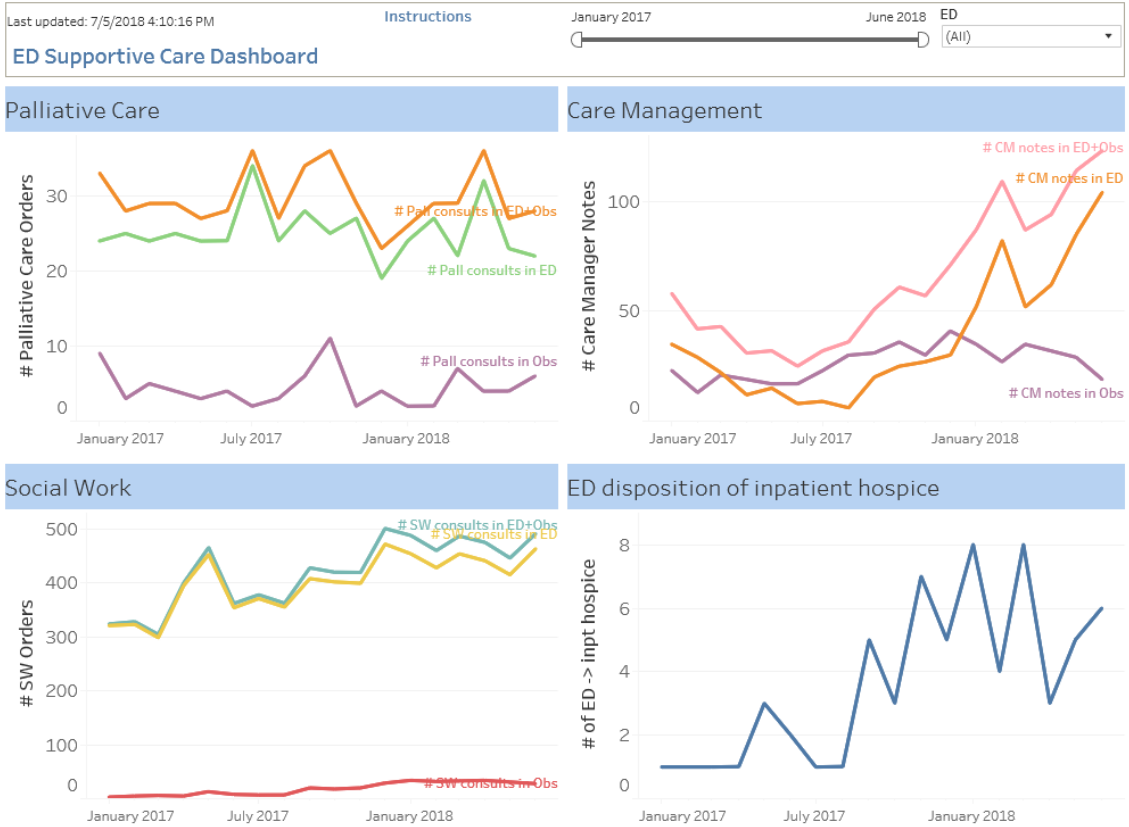
Audit and Feedback Dashboard



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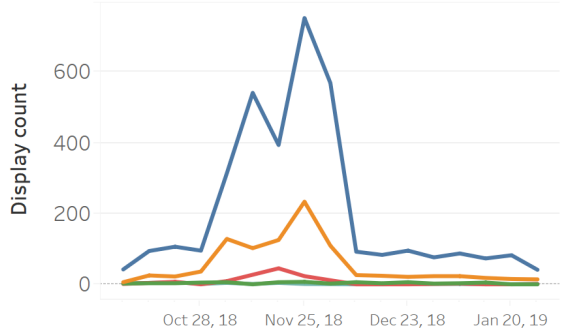
CDS Dashboard

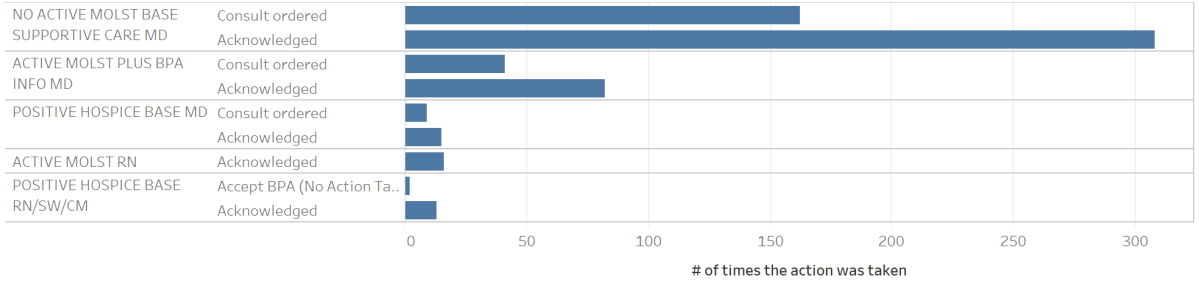
Last updated: 7/28/2019 12:09:30 PM

ED Supportive Care BPA Dashboard

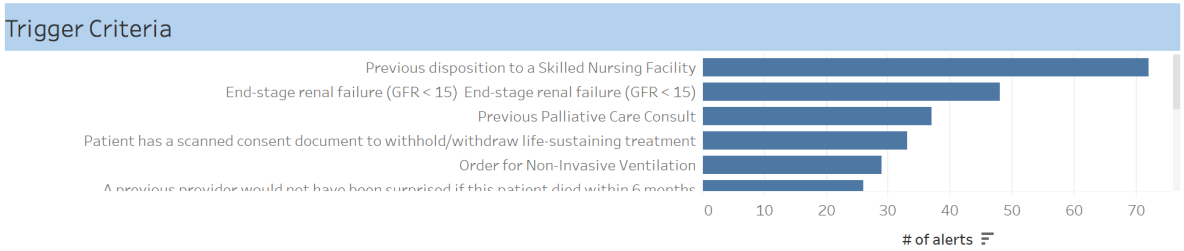
BPA display count by week



Actions



Trigger Criteria



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Modifications

- 11/7/2018
  - Alerts fire for all providers (attending, resident, PA) not just to the initial provider
- 12/9/2018
  - Discontinued alert firing for non-ED providers
  - Amended alert to fire only once for each ED provider
- 1/30/2019
  - Firing of No MOLST alert changed to T+60 min changed to T+90 min
  - Modification of criteria – removed nursing home disposition and GFR<15 ml/min/m^2
- 4/10/2019
  - No MOLST BPA held

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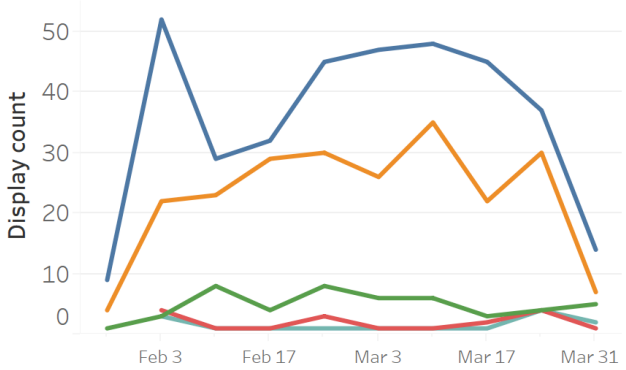
CDS Dashboard

BPA display count by week



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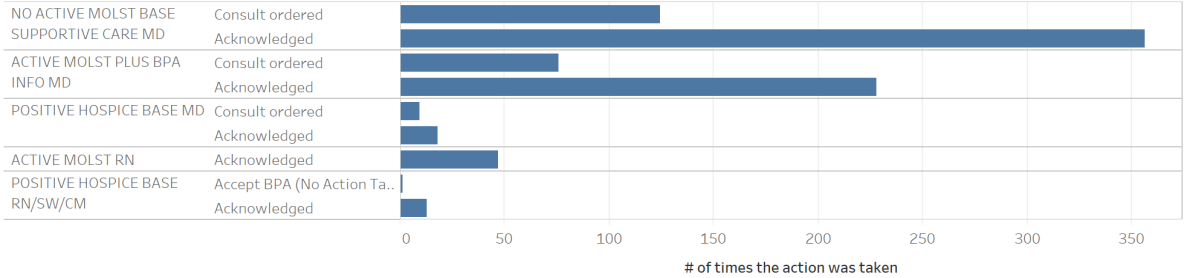

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CDS Dashboard

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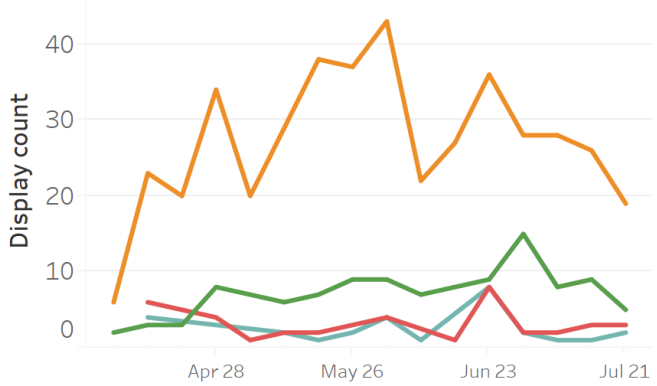

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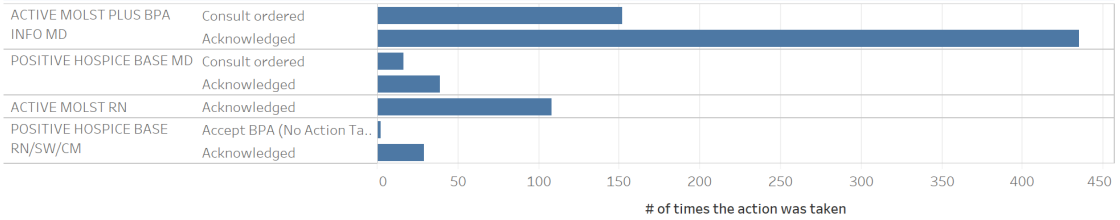

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Next steps

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Lessons Learned

- Be weary of alert fatigue
- Buy in is key
- Changing the culture of care in the ED

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Questions

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