ED OVERCROWDING

UNDERSTANDING NEDOCS AS A TEMPLATE FOR SURGE CAPACITY AND EMS/HOSPITAL COMMUNICATION

What is ED Overcrowding?

The experts at ACEP agreed on a definition:

Overcrowding "exists when the institutional available resources are insufficient to meet the basic service needs of emergency patients." (Supply/Demand)

Institute of Medicine has concluded that ED overcrowding constitutes a National Crisis.

WHY IS THIS IMPORTANT?

Patients admitted during high ED crowding have 5% greater risk of dying
December 6, 2012 | By Alicia Caramenico

High emergency department crowding is associated with increased inpatient mortality, as well as moderate rises in length of stay and costs, concludes a new study in the *Annals of Emergency Medicine*.

Patients admitted to the hospital during high ED crowding times had 5 percent greater risk of inpatient death than similar patients admitted to the same hospital when the ED was less crowded.

The researchers looked at almost 1 million ED visits resulting in admission to 187 hospitals and used daily ambulance diversion to measure ED crowding, according to a research announcement today.

They found that on days with a median of seven ambulance diversion hours, admitted patients had a 0.8 percent longer hospital length of stay and 1 percent higher costs.

Regulatory Indications:
Joint Commission Flow LD.04.03.11
Elements of Performance

- **EP 1:** A **process** that **supports the flow** of patients throughout the hospital.

- **EP 4: Criteria** to guide the initiation of **ambulance diversion.**

- **EP 5:** Measure and set goals for the components of the patient flow process. **Hospital leaders** need to use data and metrics and **manage the patient flow process throughout the entire organization.**

- **EP 6** Measure and set **goals for mitigating and managing** the boarding of ED patients.

- **EP 7** Require the staff or **individuals who manage the patient flow processes to**

    review the measurement results.

- **EP 8** Leaders must **take action to improve patient flow processes when goals are not**

    achieved.

ED Overcrowding

- Is <u>NOT</u> an ED only problem

- Needs to be addressed from an organizational perspective and be well defined within the organization

- Requires actions from all aspects of the organization

- Should be clearly communicated to our pre-hospital partners

- NEDOCS can help

What Is NEDOCS?

- National Emergency Department Overcrowding Scale

- A linear regression model that associates operational variables with the degree of crowding assessed.

- Developed as an early warning sign for ED overcrowding and serves as a way to quantify it.

- A 200 point scale divided into 5 ranges of severity for overcrowding

Not Busy 0-60	Busy but not overcrowded 61-100	Overcrowded 101-140	Severely Overcrowded 141-180	Disaster >180

Why Do We Need NEDOCS?

- Creates a common tool for demand-capacity management

- Involves the entire hospital in the response to overcrowding, not just the ED

- Allows our prehospital partners to evaluate the state of the community health system

- Serves as the framework for a comprehensive surge plan

Surge Plan

- Modeled after the NEDOCS color categories of overcrowding.

- Can become part of the Disaster Plan for the hospital-wide response.

- Directs the progressive activities each department will initiate at each level of overcrowding.

How Do We Get Started?

- All involved parties in the organization must agree on using NEDOCS

- Define conditions for each category

- Each department/group must identify progressive actions for each category

- Operationalize the plan with education

Definition	Action Green	Action Yellow	Action Orange	Action Red	Action Disaster
Two or More of the Following Conditions Exist	• Total inpatient beds available > 10 • Total ICU beds available >4 • No patients holding in PACU • NEDOCS score 0-60 (Busy)	• Total inpatient beds available 6-10 • Total ICU beds available 2-4 • 2 patients holding in PACU for bed assignments • NEDOCS Score 61-100 (Very Busy)	• Total inpatient beds available 1-5 • Total ICU beds available <2 • ICU holding > 2 transfers • 4 patients holding in PACU • Internal ED Overflow Plan in progress • NEDOCS Score 101-140 (Overcrowded)	• Total inpatient beds available (0) • Total ICU beds available (0) • PACU holding admits > 8 hours • OR Holding 1 or more patients in the OR suite for >15 minutes • Internal ED Overflow Plan in process • NEDOCS Score 141-180 (Dangerous/Severe)	Follow Ho Plan NEDOCS > 180
Owner	**Action Green**	**Action Yellow**	**Action Orange**	**Action Red**	**Action Disast**
PLC and House Managers (Scott-Combs)	Hospital throughput operations are normal. Regularly scheduled Daily Operations Meetings (DOM) occur. "311 Bed Status" is announced at DOM by House Manager or Director on Call (DOC) "311 Bed Status" is indicated on the daily census reports by House Manager	• PLC staff will call the charge nurses of the ICU to verify the known transfers out of the ICU • PLC staff will confirm with the ICU charge nurse the prioritization of the known transfers who are in a "ready to move" status • PLC staff will prioritize inpatients waiting for an ICU bed as "priority" unless directed differently by the ICU charge nurse or House Managers. • PLC staff will communicate any limitation on ICU or "specialty" bed availability with any on-call physician at the time of the acceptance	611 Bed Status" is announced at DOM by house Manager or DOC "611 Bed Status" is indicated on the daily census reports by House Manager. House Manager will direct the Hospital Operators to send 611 Raped Notify notifications (between the hours of 0500-2200) to key members of the organization alerting them that the hospital may go on divert status and the reason for the diversion (i.e. maximum bed capacity, staffing shortage, disaster phase)	Assign patients to dirty beds, allowing 2 patients to be sent up and hold in the hall while awaiting room. Discharge area opened to transfer all patients (no criteria) with discharge orders (patient hold beds in Cerner utilized to keep charts open for medication administration) Surgery post-op patients transferred to hold area until a bed in the tower is available Additional bed meetings may be added until bed status is downgraded	

Use of NEDOCS for the Community

- NEDOCS Score can be placed on EMResource

- EMResource serves as a communication tool for both prehospital and hospital personnel

- Example: DFW (NTTRAC)

https://emresource.intermedix.com/EMSystem   Intermedix Corporation [...]   Statewide Oklahoma - EMR...   ×   Welcome to CernerWorks!

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East Trauma Centers	Open Closed Advisory	NEDOCS	Comment
Baylor University Medical Center	Open	64 - Busy	psych divert
CHST Children's Medical Center - Dallas	Advisory	--	
Medical City - Plano	Open	113 - Overcrowded	
Methodist - Dallas Medical Center	Open	215 - Disaster	SANE 24/7 | PSYCH DIVERT, HOLDING I...
Parkland Memorial Hospital	Closed	309 - Disaster	Not accepting ED transfers except burn,Tr...
THR - Dallas	Open	49 - Normal	
THR - Plano	Open	20 - Normal	

East Region	Open Closed Advisory	NEDOCS	Comment
Baylor Scott & White Med Center - Irving	Open	53 - Busy	1 ICU beds available;3 Tele, 3 RT/GC bed...
Baylor Scott &White Med Cent - Carrolton	Open	48 - Normal	Interventional cardiology service 24/7
City Hospital at White Rock	Open	177 - Severe	Psych divert | **HOLDING PSYCH
Dallas Medical Center	Open	29 - Normal	No OB >20 weeks
Dallas Regional Medical Center	Open	0 - Normal	system
Medical City - Las Colinas	Open	150 - Severe	Holding all units in ED
Methodist - Richardson Medical Center	Open	--	OPEN
THR - Kaufman	Open	3 - Normal	No OB services
THR - Rockwall	Open	29 - Normal	
UTSW-William P. Clements Jr. University	Open	112 - Overcrowded	
VA - Dallas	Closed	244 - Disaster	Automatic - System will update to this stat...

South Region	Open Closed Advisory	NEDOCS	Comment
Baylor Scott & White MC - Centennial	Open	22 - Normal	
Baylor Scott & White MC – Lake Pointe	Open	0 - Normal	
BaylorScott&White Medical Center Waxahac	Open	49 - Normal	system
Ennis Regional Medical Center	Open	39 - Normal	
Hunt Regional Medical Center Greenville	Open	45 - Normal	CT DOWN 8AM TO 6PM TODAY 5/24/18 |...
Medical City McKinney (Columbia MC)	Open	14 - Normal	
Methodist - Charlton Medical Center	Open	46 - Normal	
Navarro Regional Hospital	Open	52 - Busy	
THR - Allen	Open	87 - Busy	

West Trauma Centers	Open Closed Advisory	NEDOCS	Comment
Baylor Scott & White Med Cen – Grapevine	Open	0 - Normal	
Cook Childrens Medical Center	Open	--	
JPS	Open	167 - Severe	
Medical City Denton	Open	92 - Busy	
THR - Fort Worth	Open	113 - Overcrowded	

West Region	Open Closed Advisory	NEDOCS	Comment
Baylor Scott & White All Saints MC Ft W	Open	173 - Severe	

EMResource   **Statewide Oklahoma**   H TQI OCM$ intermedix

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Update Status   ⓘ system notice ❓ help

🔒 24 ST JOHN-P I & II/HILLCREST & HILLCREST SOUTH-P II   🔒 24 OUMC

Show All Statuses

St. John Medical Center

Select the statuses to update (unchecked ones will not be changed):

☑ **NEDOCS:** NEDOCS Calculation

☐ Number of ED Patients   [35] Number of ED Beds
☐ Number of ED Admits   [   ] Number of Inpatient Beds (excluding PEDS and OB)
☐ Last Door-to-bed Time (hours, ex: 1.25)
☐ Number of Critical Care Patients (in ED)   [Calculate]
☐ Longest ED Admit (hours, ex: 1.25)

-- NEDOCS (Calculated)   NEDOCS Help Document

(All fields are required and take only positive numbers.)

[   ] Charge Nurse/Manager
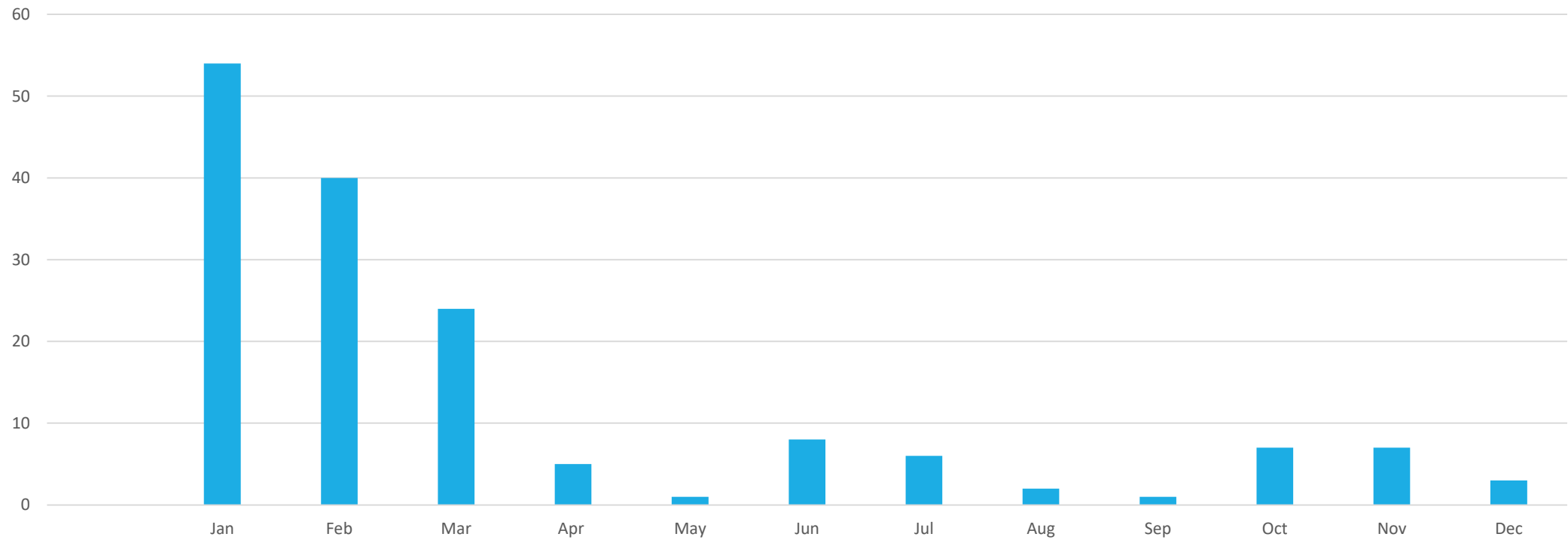[   ] Physician

Comment:

[   ]

Show All Statuses

[Save] [Cancel]

NEDOCS Benefits for St. John Medical Center

- Drive our hospital wide Surge Plan

- Communication tool for the Director/Administrator on call

- Assists in deciding what actions will be taken to correct overcrowding
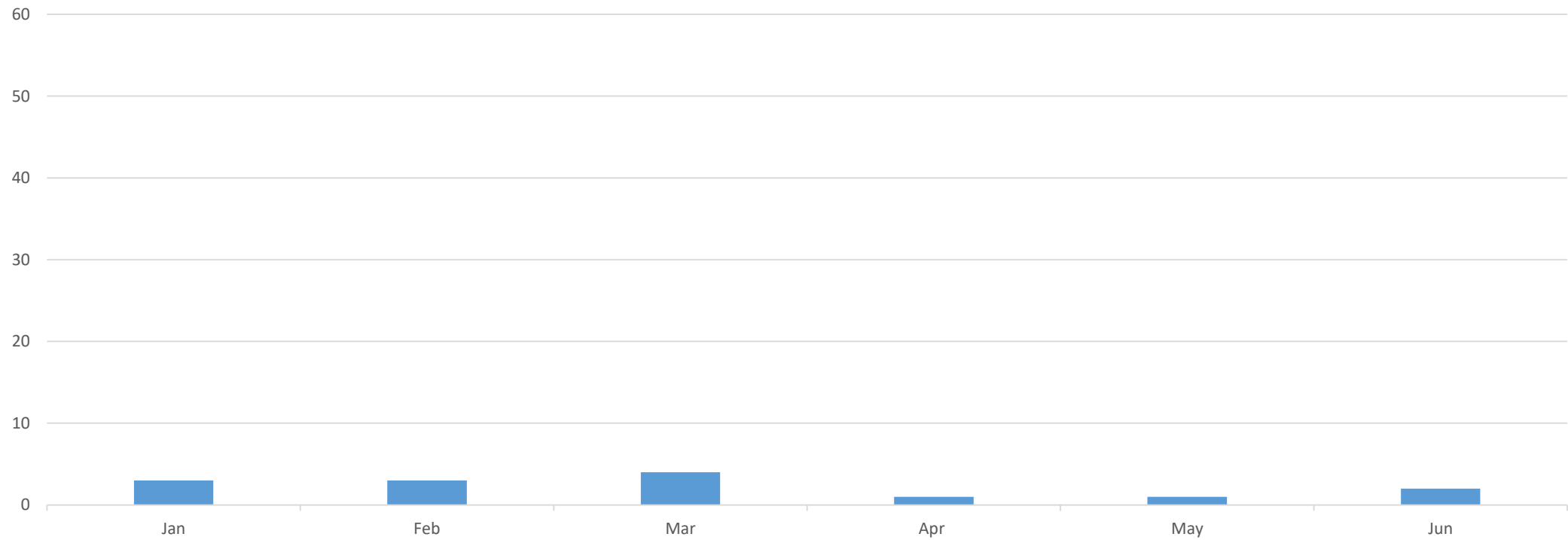
- So…Does it make a difference?

NEDOCS Makes a Difference

ED Divert Hours CY 2017

NEDOCS Makes a Difference

ED Divert Hours CY 2018

Where Do We Go From Here?

- Each hospital can design a Surge Plan using NEDOCS

- Reinstatement of the EMResource Steering Committee

- Discuss the use of a Statewide Plan

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