Emergency Department Response

to

Sepsis Alerts

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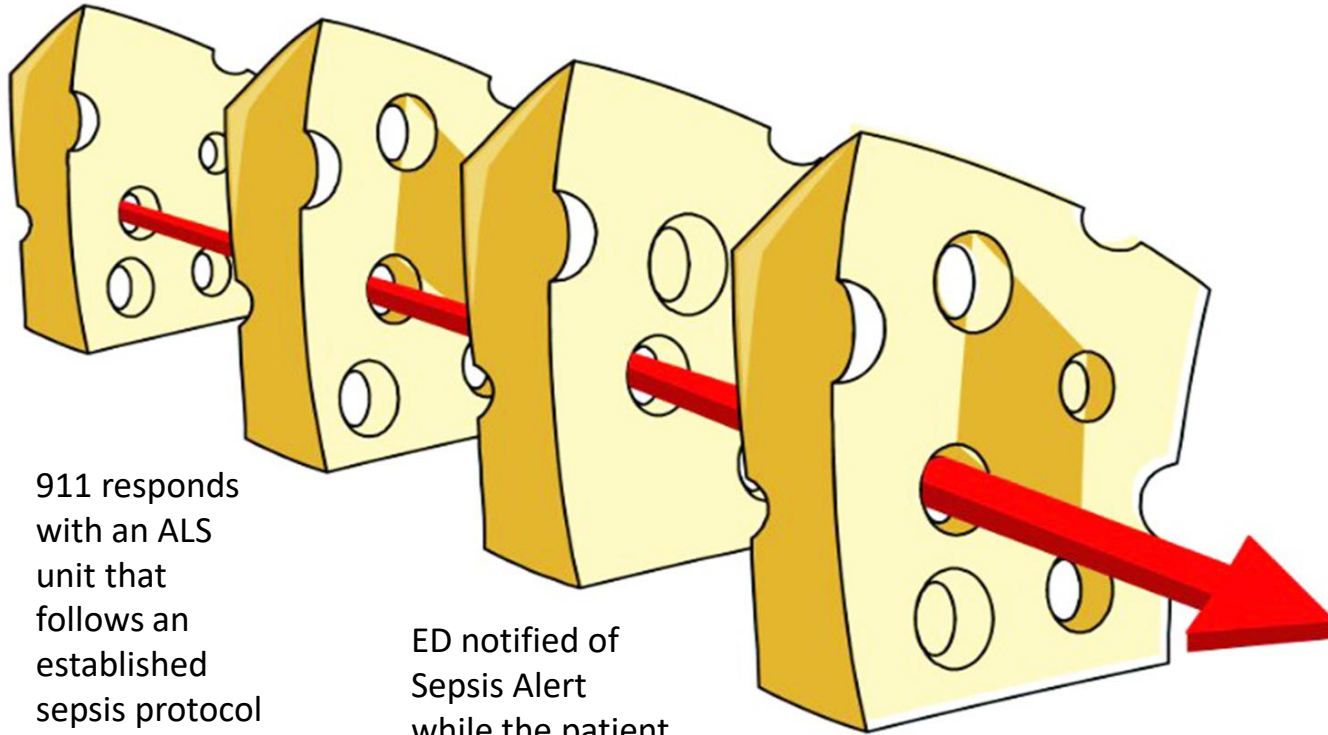
Florida Hospital Association

FHA Hospital Improvement Innovation Network (HIIN)

MISSION TO CARE

- How do Emergency Departments respond to sepsis alerts from Skilled Nursing Facilities?

  - It depends…………………………

Reversed Swiss Cheese Model

Established SNF sepsis screening process in place and a + screen triggers a 911 call

911 responds with an ALS unit that follows an established sepsis protocol

ED notified of Sepsis Alert while the patient is en route

The receiving ED has an established sepsis protocol

And the Survey Says……………

- Three-hour bundle (to be completed within 3 hours of patient's presentation):
  - Measure lactate level
  - Obtain blood cultures
  - Administer broad spectrum antibiotics (after blood cultures obtained)
  - Administer 30 milliliters per kilogram of crystalloid for hypotension or lactate greater than or equal to 4 millimoles per liter

- Six-hour bundle (to be completed within 6 hours):
  - Initiate vasopressors (for hypotension not responding to initial fluid resuscitation) to maintain a mean arterial pressure of at least 65 mmHg
  - In the event of persistent hypotension after initial fluid administration (mean arterial pressure of less than 65 mmHg) or if initial lactate was greater than 4 millimoles per liter, reassess volume status and tissue perfusion and document findings
  - Remeasure lactate if initial lactate was elevated

- Sepsis Response Teams
  - Most emergency departments handle sepsis alerts using a team made up exclusively of ED staff
    - Smaller hospitals may rely on the nursing supervisor to help respond to the initial alert and to then facilitate the transfer of the patient
    - Mayo Clinic Jacksonville Intensivists take over care and pull the patient to the ICU

- Designated Sepsis Coordinator
  - Improved documentation
  - Education for Patient/Family and Staff

- One-hour bundle (to be completed within 1 hour):
  - Measure lactate level. Remeasure is initial level is >2mmol/L
  - Obtain blood cultures prior to the administration of antibiotics
  - Administer broad-spectrum antibiotics
  - Begin rapid administration of 30ml/kg crystalloid for hypotension or lactate >4 mmol/L
  - Apply vasopressors if patient is hypotensive during or after fluid resuscitation to maintain MAP >65 mm Hg

Time zero or time of presentation is defined as the time of triage in the Emergency Department or, if presenting from another care venue, from the earliest chart annotation consistent with all elements of sepsis or septic shock.

http://www.survivingsepsis.org/Bundles/Pages/default.aspx

Sepsis Change Package

Drivers in This Change Package

EARLY RECOGNITION AND TREATMENT FOR SEPSIS AND SEPTIC SHOCK			
	RELIABLE EARLY DETECTION	IMPLEMENT A SEPSIS SCREENING TOOL	Change Idea
		ADOPT SEPSIS SCREENING ON ALL POTENTIALLY INFECTED PATIENTS	Change Idea
		SUPPORT PROMPT ESCALATION AND TIMELY INTERVENTION FOR AT-RISK PATIENTS	Change Idea
	IMPLEMENTATION OF 3-HOUR BUNDLE FOR PATIENTS WITH SEPSIS	MEASURE LACTATE	Change Idea
		OBTAIN BLOOD CULTURES PRIOR TO THE ADMINISTRATION OF ANTIBIOTICS	Change Idea
		ADMINISTER BROAD-SPECTRUM ANTIBIOTICS	Change Idea
		ADMINISTER 30ML/KG CRYSTALLOID FOR HYPOTENSION OR LACTATE LEVELS >4MMOL/L	Change Idea
		PROMOTE PROMPT IMAGING TO CONFIRM POTENTIAL SOURCES OF INFECTION	Change Idea
	IMPLEMENTATION OF 6-HOUR BUNDLE FOR PATIENTS WITH SEPTIC SHOCK	ADMINISTER VASOPRESSORS	Change Idea
		REASSESS VOLUME STATUS AND TISSUE PERFUSION TO ENSURE ADEQUATE RESUSCITATION	Change Idea
		REMEASURE LACTATE	Change Idea
	PROVISION OF OTHER SUPPORTIVE THERAPIES	IMPLEMENT THE OTHER SUPPORTIVE THERAPIES AS INDICATED BY INDIVIDUAL PATIENTS USING ALGORITHMS AND/OR PROTOCOLS	Change Idea

Mission to Care. Vision to Lead.

FLORIDA HOSPITAL ASSOCIATION

Sepsis Top Ten Checklist

2017 Sepsis Mortality Reduction Top Ten Checklist

1. Collect and analyze sepsis mortality data.

2. Gather a program planning team, including organizational leaders, physician champions, sepsis advisors and multidisciplinary members from the, ED, ICU and med/surg, to develop a strategy for implementing improvement ideas.

3. Adopt a sepsis screening tool or system in the ED and/or in one inpatient department.

4. Screen every adult patient during initial evaluation in the ED and/or once a shift in one identified inpatient department.

5. Develop an alert mechanism to provide for prompt escalation and action from care providers with defined roles and responsibilities.

6. Develop standard order set or protocol linking blood cultures and lactate lab draws (blood culture = lactate level) and ensure lactate results are available within 45 minutes. Consider a lactate of > 4mmol/L, a CRITICAL result to prompt notification.

7. Place broad-spectrum antibiotics in the ED medication delivery system to allow for antibiotic administration within 1 hour (collaborate with Pharmacy and Infectious Disease for appropriate selection).

8. Develop an order-set or protocol for 3-hour resuscitation bundle and the 6-hour septic shock bundle that uses an "opt-out" process instead of an "opt-in" for all bundle elements, with the explicit end goals of therapy and assessment of volume status.

9. Develop a process for rapid fluid infusion of isotonic solution 30ml/kg for patients with septic shock for timely resuscitation.

10. Utilize a "time zero" method that also displays visual cues for the health care team for timing of interventions for the sepsis.

> Suggested Bundles and Toolkits

- ASPIRE — Designing and Delivering Whole Person Transitional Care, retrieved at: http://www.ahrq.gov/professionals/systems/hospital/medicaidreadmitguide/index.html

- Re-engineered Discharge (RED), retrieved at: http://www.bu.edu/fammed/projectred/index.html

- The Care Transitions Program®, retrieved at: http://caretransitions.org/

- Care Transitions Measure, retrieved at: http://caretransitions.org/wp-content/uploads/2015/08/CTM3Specs0807.pdf

- Transitional Care Model, retrieved at http://www.nursing.upenn.edu/ncth/transitional-care-model/

- Better Outcomes by Optimizing Safe Transitions, retrieved at: http://www.hospitalmedicine.org/Web/Quality_Innovation/Implementation_Toolkits/Project_BOOST/Web/Quality___Innovation/Implementation_Toolkit/Boost/BOOST_Intervention/BOOST_Tools.aspx

- INTERACT — Interventions to Reduce Acute Care Transfers, retrieved at: http://www.pathway-interact.com/

- The Business Case for Person-Centered Care. http://www.thescanfoundation.org/business-case-person-centered-care

- The National Center for Complex Health and Social Needs, retrieved at https://www.complex.care/

- In-person events
  - Early Recognition and Treatment of Sepsis in the Emergency Department using TeamSTEPPS Methodology
  - Regional Readmission Forums

- Virtual Events
  - Ongoing Infection Prevention Training
  - Quality Hot Topics calls

Contact Us

We are here to help!

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