#### Welcome!

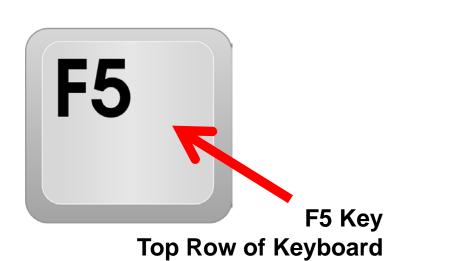
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# **Troubleshooting Audio**

Audio from computer speakers breaking up? Audio suddenly stop? Click <u>Refresh</u> icon – or – Click F5

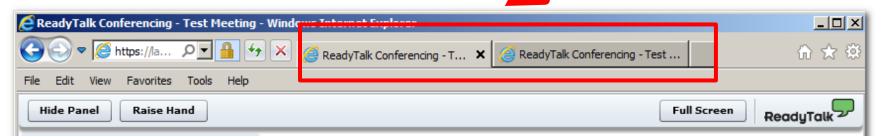




Refresh

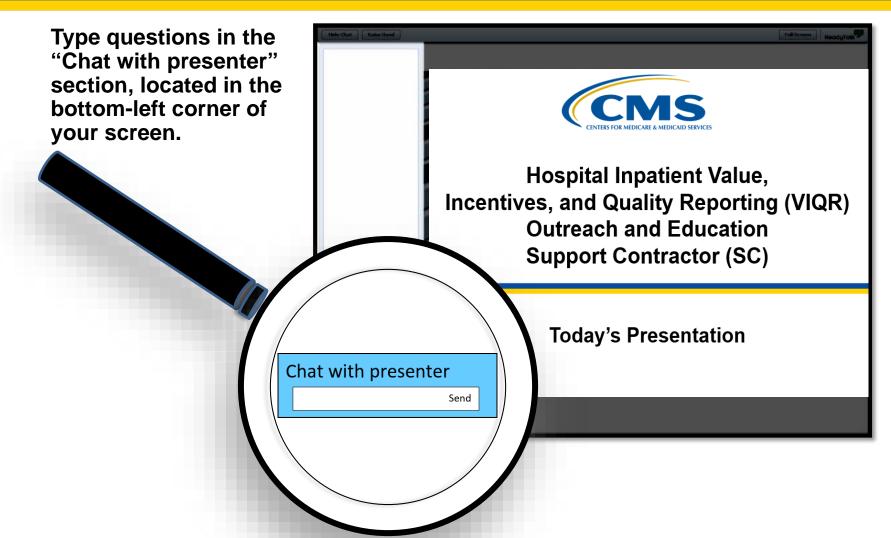
#### **Troubleshooting Echo**

- Hear a bad echo on the call?
- Echo is caused by multiple browsers/tabs open to a single event (multiple audio feeds).
- Close all but one browser/tab and the echo will clear.



Example of Two Browsers/Tabs Open in Same Event

# **Submitting Questions**





#### SEP-1 Early Management Bundle, Severe Sepsis/Septic Shock: Providence Tarzana Medical Center's Sepsis Journey and v5.4 Frequently Asked Questions

July 17, 2018

#### **Speakers**

#### **Our Sepsis Journey**

Jamie Eng, MD Associate Director Emergency Medicine Providence Tarzana Medical Center

Howard Davis, MD, MBA Chief Medical Officer Providence Tarzana Medical Center

#### Steve Perry, RN

Performance Improvement Review Nurse Providence Tarzana Medical Center

Andre Vovan, MD, MBA Regional Chief of Clinical Effectiveness Providence Tarzana Medical Center

#### SEP-1 Early Management Bundle, Severe Sepsis/ Septic Shock: v5.4 Measure FAQs

#### Noel Albritton, MSN, RN

Lead Solutions Specialist Hospital Inpatient and Outpatient Process and Structural Measure Development and Maintenance Support Contractor

#### Jennifer Witt, RN

Senior Health Informatics Solutions Coordinator Hospital Inpatient and Outpatient Process and Structural Measure Development and Maintenance Support Contractor

# **Objectives**

At the end of the presentation, participants will be able to:

- Better understand the sepsis journey of Providence Tarzana Medical Center.
- Better understand and interpret the guidance in version 5.4 of the specifications manual to ensure successful reporting for the SEP-1 measure.

#### **Acronyms and Abbreviations**

2X	two times	Н
A&O	alert and orientated	h
AB	antibiotic	Н
ABX	antibiotic	10
Afib	atrial fibrillation	
	anterior-posterior	IC
APN	advanced practice nurse	I
aPTT	activated partial	
	thromboplastin time	I
ARDS	Acute Respiratory Distress Syndrome	I
BMI	body mass index	IV
BP	Blood Pressure	k
BS	Bowel sounds	L
C	Celsius	L
CBC	complete blood count cubic centimeter	N
CC CDI	Clinical Documentation	N
CDI	Informatics	n
CDS	Clinical Documentation Specialist	N
СМ	Core Measure	N
CME		N
CMO	Continuing Medical Education Chief Medical Officer	
CMS		n
CMS	Centers for Medicare & Medicaid Services	n
Cx	culture	n
CY	calendar year	N
dL	deciliter	IV
ED	emergency department	N
EGDT	Early Goal Directed Therapy	P
EHR	electronic health record	P
ETOH	ethyl alcohol	
FAQ	frequently asked question	P
FiO2	fraction of inspired oxygen	P
g	gram	F
H&P	history and physical	p
H2O	water	F
HEENT	head, eyes, ears, nose, throat	

Hg	hemoglobin
hr	hour
HR	heart rate
ICD	International Statistical
ICD	Classification of Diseases
ICU	intensive care unit Institute for Healthcare
INR	Improvement international normalized ratio
IOP	Improving Organizational Performance
IV	intravenous
kg	kilogram
L	liter
LOC	level of consciousness
MAP	mean arterial pressure
MAR	medication administration record
mcg/L	micrograms/Liter
MD	medical doctor
MDM	Medical Decision Making
MEWS	Modified Early
	Warning System
mg/d	milligrams/day
mL	milliliter
mmol	millimole
MR	medical record
MRSA	Methicillin-resistant
	Staphylococcus aureus
NP	nurse practitioner
PA	physician assistant
PaCO2	partial pressure of carbon dioxide
	in arterial blood
PI	Performance Improvement
PICC	Peripherally inserted central catheter
PO	by mouth
pO2	partial pressure of oxygen
PSCSC	Providence Southern California
	Sepsis Collaborative

PSJSC	Providence St. Joseph Sepsis Collaborative
РОХ	pulse oximetry
PRN	as needed
PTMC	Providence Tarzana Medical Center
Q	quarter
Q2Hx3	every two hours times three
qSOFA	Quick Sepsis-related Organ
40017	Failure Assessment
R/O	rule out
RM	room
RN	registered nurse
ROM	risk of mortality
RR	respiratory rate
RRT	Rapid Response Team
RVR	rapid ventricular response
SBP	systolic blood pressure
SCPSC	Southern California Patient
	Safety Collaborative
ScVO2	central venous oxygen saturation
SEP	sepsis
SIRS	systemic inflammatory
	response syndrome
SOFA	Sepsis related Organ
	Failure Assessment
SOI	Severity of Illness
SpO2 STEMI	peripheral capillary oxygen saturation
	ST-elevation myocardial infarction
Temp uL	temperature microliter
umol	micromole/liter
UTI	urinary tract infection
UTX	ultrasound
v	version
v02	oxygen uptake
WTN	within normal limits
YTD	Year to Date

8

Jamie Eng, M.D. Associate Director Emergency Medicine, PTMC Steve Perry, RN Performance Improvement Review Nurse, PTMC

#### **Our Sepsis Journey**

9

# Providence Tarzana Medical Center

- 249-bed acute care hospital accredited by The Joint Commission
- 24/7 emergency department with ~45,000 annual visits
- STEMI receiving center
- Primary stroke center
- Pediatric medical center
- The Valley Heart and Vascular Institute
- Women and Children
   Services



#### Care Timeline 2005–2011

#### 2005

- EGDT
- Strong leadership by physicians
- Case review based on EGDT recommendations with referral to peer review

#### 2008

- Development of a multi-disciplinary team: Sepsis Study Group
- Formal integration into the IOP
- Adoption of 2008 IHI sepsis guidelines by study group as new standard of care
- Creation of Sepsis Coordinator position
- Development of Sepsis Rate-Based Report

#### 2009–2011

- Creation and implementation of ED and inpatient Sepsis Order Sets
- Sepsis integrated into annual nursing education update
- Participated in SCPSC
- Development of educational tool for sepsis continuum (physician/nurses)
- Participants in 2011 IHI Sepsis Detection and Initial Management Expedition

#### Care Timeline 2012

- Adoption of 2012 IHI guidelines as updated standard of care
- Updated Sepsis Order Set
- Development and implementation ED physician sepsis template for documentation
- Creation of Antibiotics by Source Order Set for sepsis patients based on antibiogram with pharmacy
- Stocked key antibiotics in ED pharmacy
- Included phlebotomy as part of RRT code
- Developed policy and procedure for dedicated RRT
- Expansion of Sepsis Study Group to include hospitalist group
- Providence System audit-high performer compliance with sepsis abstraction guidelines

### Care Timeline 2013–2015

- Participation in PSCSC
- ED and hospitalist sepsis presentations to general medical staff
- Educational reminders to ED and Department of Medicine regarding sepsis
- Close collaboration among CMO, hospitalists, and ED providers regarding target metrics
- Educational lecture regarding SEP-1 core measure to general medical staff
- Development of 3 and 6 hour severe sepsis and septic shock algorithm
- Refinement of RRT's role in early identification
- Key antibiotics to floors to expedite care (Pyxis)
- Collaboration with CDS to ensure accurate documentation in sepsis patients
- Hosted the Sepsis Simulator Mobile classroom
- Started collecting ROM and SOI data on all cases
- Participated in Premier analytics webinar regarding calculation of O/E mortality
- June 2015 CMS Webinar: Early Management Bundle, Severe Sepsis/Septic Shock

### **Care Timeline 2015–Today**

#### **SEP-1 Bundle**

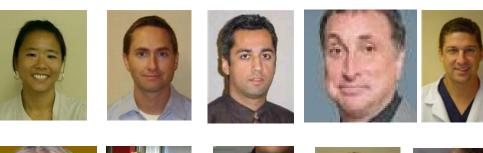
- Data collection beginning 2015 Q4 by PI department
- Second update of SEP-1 measure to general medical staff
- Weekly work group including nursing, lab, radiology and ED MD's regarding core measure compliance
- Addition of SEP-1 measures to nursing resource binder
- Education letter regarding SEP-1 guidelines and changes developed for medical staff
- Development of standardized ED documentation template

#### 2015–Today

- Refinement of ED Sepsis Order Set and Antibiotics by Source Order Set
- Development of CODE SEPSIS in the ED
- Development of sepsis checklist for ED nursing to ensure completion of bundle components
- Developed sepsis watch list
- Refinement of template to address CMS requirements for recognition time and septic shock reassessment
- Participation in PSJSC

# **Sepsis Study Group**

- CMO
- Hospitalists
- Laboratory
- Nursing Leadership
- Quality and PI
- Respiratory
- ED Leadership
- Coding and CDI
- Sepsis Coordinator













### **Sepsis Study Group**

- Multi-disciplinary
- Key stakeholders
- Regular monthly meetings under medical staff
- Review of system data and internal data
- Review of trends and processes
- Actionable items, reportable to the next meeting

# **Sepsis Coordinator**

- Position created to monitor and improve treatment and chart documentation
- Increasing role through the years
- Assists in providing nursing education
- Daily sepsis screening with inpatient charge nurses
- Does inter-rater reliability with abstractor
- Contemporaneous chart review
- Collaboration with key stakeholders to ensure timely treatment and management

#### Sepsis Rate Base Report ED Patients and Inpatients - 2017

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Sample size		16	12	15	16	12	14	12	12	13	16	15	17	170
ER RESUSCITATION BUNDLE	BMK													
Ν		16	12	15	16	12	14	12	12	13	16	15	17	170
1. % of patients met lactate standard.		94%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	99.0%
Ν		16	12	15	16	12	14	12	12	13	16	15	17	170
2. % Blood culture before ABX		94%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	99.0%
Ν		16	12	15	16	12	14	12	12	13	16	15	17	170
3. % ABX timeliness (ED = 180 min)		94%	100%	100%	100%	92%	100%	92%	100%	100%	100%	100%	100%	98.2%
N		15	12	15	15	12	14	12	12	13	16	15	17	168
4. % Correct Antibiotic Selection		100%	100%	100%	100%	100%	100%	92%	92%	100%	94%	100%	94%	97.6%
N		7	8	13	14	12	11	4	8	10	12	9	11	119
5. % repeat lactate done		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	91%	99.1%
N		4	2	4	5	3	3	4	6	2	9	5	5	52
6. % Fluids administered (30 ml/kg.)		75%	100%	75%	100%	100%	67%	100%	83%	50%	89%	80%	80%	84.6%
Ν		1	0	0	0	0	0	1	0	0	0	1	1	4
7. % Vasopressors administered.		100%	NM	NM	NM	NM	NM	100%	NM	NM	NM	100%	100%	100.0%
Ν		4	2	4	4	3	3	2	2	2	5	4	5	40
8. % Post fluid administration reassessment done.		75%	50%	75%	100%	100%	67%	100%	100%	100%	100%	100%	80%	87.5%

7/17/2018

# Sepsis Rate Base Report ED Patients and Inpatients - 2017

OUTCOME SUMMARY (ER CM)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Ν	16	12	15	16	12	14	12	12	13	16	15	17	170
1. % That Passed The Measure	69%	92%	93%	100%	92%	93%	83%	83%	92%	94%	93%	82%	88.8%
2. # Survived severe sepsis and/or septic shock.	15	11	14	16	12	13	11	11	12	15	15	17	162
3. Mortality rate.	6%	8%	7%	0%	0%	7%	9%	9%	8%	6%	0%	0%	5.8%
4. Quarterly mortality rate			7%			2%			8%			2%	
OUTCOME SUMMARY (ALL patients ER + inpat)													
1. Total # of Cases (CM)	17	14	15	16	15	15	14	15	15	18	17	18	189
2. # Patients that Survived (CM)	15	13	14	16	15	14	13	13	13	15	17	18	176
3. # Patients that Expired (CM)	2	1	1	0	0	1	2	2	2	3	0	0	14
4. Total Mortality Rate (all CM Patients)	11.7%	7.1%	6.9%	0.0%	0.0%	6.6%	13.3%	13.3%	13.3%	16.7%	0.0%	0.0%	7.3%
5. # Severe Sepsis Patients Expired (CM)	0	1	0	0	0	1	2	0	1	2	0	0	7
6. Severe Sepsis Mortality Rate (CM)	0%	8%	0%	0%	0%	8%	15%	0%	8%	17%	0%	0%	4.8%
7. # of Patients With Septic Shock (CM)	8	2	4	4	3	3	2	3	2	6	4	5	46
8. Septic Shock Mortality Rate (CM)	25.0%	0.0%	25.0%	0.0%	0.0%	0.0%	0.0%	66.6%	50.0%	16.7%	0.0%	0.0%	15.2%
9. Mortality rate for <u>all</u> coded with Severe sepsis or Septic shock. (Info-view)	21%	17%	14%	13%	7%	24%	16%	12%	21%	23%	16%	8%	15.9%

- Line 7 under outcome summary is a sub-set of line 1.
- Line 4 is the total mortality for patients included in the core measure.
- Line 9 is the mortality for all patients coded with Severe Sepsis and Septic Shock, not limited to the core measure sample.

#### Data Collection Tool for PI Abstraction 2009–3Q 2015

Tarz	ana		ata Collection Tool Pl Dashboard Elements)
		MR#	
		DATE OF ADMIT	Triage Time:
		DATE OF DISCHARGE	
		RESUSCITATION BUN	DLE (WITHIN 6 HOURS)
	15R	LACTATE LEVEL DONE, RESULTED AND REPORTED TO MD WITHIN 6 HOURS	YES NO NA Denominator: Number of patients who should have lactate level done. Number of patients with severe sepsis.
	15S	BLOOD CULTURES DRAWN BEFORE ABX ADMIN.	YES INO Denominator: Number of patients presenting with severe sepsis and / or septic shock.
	15T	TIME TO BROAD SPECTRUM ABX FROM TIME OF PRESENTATION	MINUTES Median time in minutes to be reported One hour for non-ED admits, 3 hours for ED admit.
	15U & 15V	FLUID RESUSCITATION: INITIAL MINIMUM OF 20 ml/ kg CRYSTALLOID OR COLLOID FOR HYPOTENSION AND OR LACTATE LEVEL > 4mmol/L (36 mg/ dl) AND OR VASOPRESSORS FOR HYPOTENSION AND OR LACTATE LEVEL > 4mmol (36 mg / dl) TO MAINTAIN MAP > 65. (SBP >/= 90)	YES NO N/A Denominator: Number of patients with hypotension (SBP < 90 or MAP <85 and /or lactate level > 4mmol/L, not responding to initial fluid resuscitation.
	15W	SEVERE SEPSIS, LACTATE >4mmol OR SHOCK PRESENT, IN WHICH CVP > 8mmHg ACHIEVED WITHIN 6 HRS.	YES NO N/A Denominator: Number of patients with severe sepsis and lactate level > 4 or septic shock. Exclusion: patients with non-severe sepsis or lactate level < 4mmol/L
	15X	SEVERE SEPSIS, LACTATE >4mmol OR SHOCK PRESENT, IN WHICH ScVO2 > 70%, or SvO2 > 65% ACHIEVED IN 6 HRS. FROM TIME OF PRESENTATION	YES         NO         N/A           Denominator: Patients with severe sepsis and lactate > 4mmol/L or septic shock. Exclusion: Non severe sepsis or lactate < 4 mmol/L.
		MANAGEMENT BUND	DLE (WITHIN 24 hours)
	15Y	SEPTIC SHOCK PRESENT. LOW DOSE STEROID ADMINISTERED PER ICU POLICY WITHIN 24 HRS. OF PRESENTATION.	YES     NO     N/A Denominator: Total number of patients with septic shock.
	15Z	SEVERE SEPSIS OR SHOCK PRESENT. DROTRECOGIN ALFA/activated) ADMINISTERED PER POLICY WITHIN 24 HRS. OF PRESENTATION	□ YES □ NO □ N/A Denominator: Total number of patients presenting with severe sepsis or septic shock who are given Xiggis per policy.
	15AA	SERUM GLUCOSE MAINTAINED GREATER THAN 70mg/dl AND WITH A MEDIAN VALUE < 150mg/dl OVER THE FIRST 24 HOURS FOLLOWING PRESENTATION.	YES NO N/A Denominator: total number of patients presenting with severe sepsis or septic shock.
	15BB	SEVERE SEPSIS OR SHOCK PRESENT. MECHANICALLY VENTILATED WITH IPP, 30 cm H2O OVER THE FIRST 24 HOURS FOLLOWING PRESENTATION.	YES     NO     N/A Denominator: Number of mechanically ventilated patients presenting with severe sepsis or septio shook.
	15CC	SURVIVED SEVERE SEPSIS AND OR SEPTIC SHOCK	YES NO Denominator: total number of patients with severe sepsis or septic shock.



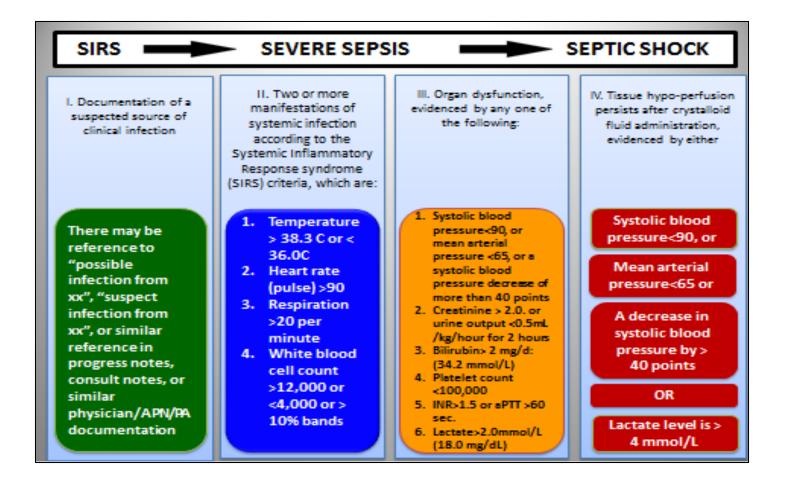
#### **Data Abstraction**

- Prior to the SEP-1 quality measure, all cases with ICD coding of severe sepsis and septic shock (typically 60–80 cases per month) were abstracted.
- Primary sepsis abstractor frequently submits queries to CMS through *QualityNet* for the purpose of clarification during case abstraction and for consultation when developing physician and staff documentation tools.
- For the purpose of <u>inter-rater reliability</u> our Sepsis Coordinator abstracted in parallel five of our 22 SEP-1 cases per month to compare results with sepsis primary abstractor.
- Primary abstractor identifies missed measures monthly and forwards initial write-up to peer review RN for verification before physician review.
- Primary abstractor completes rate-based report monthly, tracks and trends missed measures, and archives raw data.

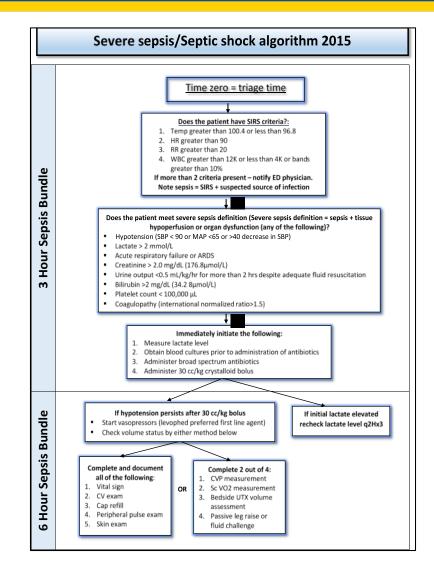
#### **Teaching Tool Based on 2008 Institute for Healthcare Improvement Guidelines**

S	EPSIS CONTINUUM
SIRS	Systemic Inflammatory Response Syndrome         Defined by the presence of two or more of the following:         1. Temperature > 38 degrees C or < 36 degrees C       2. Heart rate > 90 beats/ minute         3. Respiratory rate > 20 breaths / min or PaCO2 < 32 mm Hg       4. Leukocyte count > 12,000, <4,000 or > 10% bands
SEPSIS	SIRS plus a suspected or confirmed site of infection, Examples: Urinary tract infection, Pneumonia, Decubitus ulceration
SEVERE SEPSIS	Defined as: Sepsis with organ system dysfunction (examples below)         • Altered LOC (increased agitation, confusion, decreased Glasgow Coma Score)         • Renal failure/ insufficiency (Creatinine > 2.0 and/ or urine output <0.5 ml/kg/hour)         • Respiratory failure (room air pulse oximetry < 92%, pO2/ FiO2 <300, need for mechanical ventilation)         • Metabolic/ Hepatic/ Hematologic. (Lactate level >2.0, liver enzymes >2X upper limit of normal, Platelet count < 100k, INR> 1.5 w/o Warfarin)         Order:       Lactic acid , Blood Cx prior to ABX, Early fluid ( 20ml/ Kg) and antibiotic         Antibiotic administration: (ED <3 hours inpatient < 1 hour)
SEPTIC Shock	Septic Shock and/or Severe Sepsis w/ Lactate > 4.0 Defined As: Severe sepsis with SBP < 90 unresponsive to initial fluid resuscitation and/or lactate level > 4.0 Order: Lactic acid, Blood Cx prior to ABX, Early fluid (20ml/ Kg) and antibiotic Antibiotic administration: (ED <3 hours inpatient < 1 hour) Use printed septic shock order set for ED or inpatient

#### **Sepsis Continuum**



# Providence Tarzana Medical Center 2015 Algorithm



Acronyms 24

# Educational Letter to the Department of Medicine

Dear Member of the Department of Medicine:

The medical staff and hospital leadership of PTMC are committed to providing the safest and best care for our patients. As of October 2015 discharges of Severe Sepsis/Septic Shock Management are a Core Measure. On the reverse side of this document we have attached some slides that may be beneficial for your review;

- The first slide is from the Joint Commission/CMS that simplifies the requirements of the 3 hour and 6 hour bundle. You will also note that the measure is an "**all or nothing**" measure.
- The second slide describes the continuum of symptoms from SIRS to Septic Shock.
- And the third slide describes how the "start time" is determined.
- After review of multiple cases starting in October/2015 the following items/issues have been recognized and found to be problematic and have resulted in fallouts:
- You will note that on the third slide listed on the back the start time can be determined two ways: The start time is when either the third element of clinical criteria is documented within a 6 hour time frame or the MD documents a diagnosis of "severe sepsis or septic shock". During review we have noted the following:
  - 1. In the absence of clinical criteria being met in the chart, if the physician documents a diagnosis of severe sepsis/septic shock the start time is the time the physician opens the note that contains the diagnosis. (*Please note: if the physicians specifies a time of diagnosis within the document then that time is the start time).* If the physician documents severe sepsis/septic shock he/she must start treatment as described on the first slide on the reverse of page.
  - 2. If blood cultures were not drawn within 24 hours of diagnosis they must be repeated.
  - 3. If a lactate has not been done within 6 hours of diagnosis, you must order a lactate and repeat within 6 hours if greater than 2.0.
  - 4. If not on IV antibiotics the antibiotic must be ordered and administered within 180 minutes of diagnosis.
  - 5. Be aware if a patient experiences hypotension or lactate greater than or equal to 4.0 a fluid bolus of normal saline or lactated ringers in the amount of 30ml/kg is required.
- The most common patient to fail the management bundle is a patient that is diagnosed after admission on the medical/surgical/telemetry floor. So, when you are either contacted by the staff or make the diagnosis of severe sepsis/septic shock ask that the Rapid Response team (RRT) be called to manage administration of the bundle elements. If the patient is already in a critical care unit notify the nurse to initiate the sepsis bundle.

I hope this information is of value to you. If you want any additional information please contact. In addition there is on-going continued discussion on this topic at the both the Department of Medicine and the Medicine Peer and Chart Review Committee. Respectfully,

# **Sepsis Watch List**

The attached EPIC-generated list includes patients who might be on your floor and should be reviewed by the charge nurse for **possible** (at high risk for) severe sepsis or septic shock:

- Patients that appear on this list have been **flagged by EPIC with sepsis alerts** or have other indicators for sepsis including: **MEWS**, **SOFA**, **QSOFA**, **Procalcitonin**, **and/or elevated lactic acid**.
- Patients listed may not require sepsis orders but have been selected as "at risk" for possible sepsis.
- Timely recognition and treatment are essential and required by joint commission.
- Please ask MD and/or review your patient charts for any documentation by physicians of a diagnosis of severe sepsis or septic shock.
  - 1. If lactic acid is elevated (> 2) please ensure a repeat is drawn within 6 hours of first.
  - 2. Before starting antibiotics verify that cultures have been drawn within the past 24 hours.
  - 3. Fluid bolus may be required for new sepsis recognition at 30ml/kg.
- Please notify RRT with any case of suspected sepsis or newly recognized severe sepsis or septic shock diagnosis.
- RRT can assist with protocol orders.
- Inpatient sepsis constitutes the bulk of core measure fallouts. Please do your part to assist in the timely and proper treatment of septic patients.

Please direct questions or concerns by activating **Rapid Response XXX-XXX-XXXX**. Note:

#### Symbol of lightning = Possible sepsis Symbol of lightning and red dot = Possible severe sepsis 7/17/2018

# **ED and Inpatient Order Sets**

- ED Sepsis Order set and ED Antibiotics by Source set
- Created to address provider work flow and compliance
- Implemented by ED leadership
- ED providers educated regarding its use

#### Sepsis Order Set (1 of 2)

Order Sets
Sepsis Complete Manage My Version 🛪 🛠
▼ General
▼ Sepsis Management
Sepsis management P Details
Nursing Enhanced vital signs:
Sepsis notification parameters
▼ Studies
▼Lab
Comprehensive Metabolic Panel STAT
Magnesium STAT
Phosphorus STAT
CBC with Differential
Protime INR STAT
Lactic Acid STAT, EVERY 2 HOURS INTERVAL for 2 occurrences
Procalcitonin STAT
Blood Culture Panel
Culture, Respiratory, Lower, Smear STAT
▼Imaging
XR Chest AP Portable STAT

#### Sepsis Order Set (2 of 2)

Fluid Boluses
▼ Sepsis Fluid Bolus with Fluid Rounding
Fluid Bolus 100-116kg 3.5L
Sodium chloride 0.9% - BOLUS ONCE NOW 30 mL/kg, Intravenous, Administer over 1 Hours, ONCE
sodium chloride 0.9% - PRN BOLUS 500 mL, Intravenous, Administer over 15 Minutes, PRN, See Admininstration Instructions, Bolus based on parameters specified. HOLD bolus if patient meets criteria for bolus but CV greater than 3L / 12 hours or if SpO2 drops > 3%
Antibiotics
For Pneumonia: Anaerobic coverage is not indicated in the setting of micro-aspiration events. May consider utilization of agents with anaerobic spectrum in the setting of suspected lung abscess, post-obstructive pneumonia or large volume witnessed aspiration preceding pneumonia.
Pneumonia - Non-ICU
Pneumonia - ICU
UTI - Uncomplicated
UTI - Complicated
Intra-Abdominal Infection
Skin and Soft Tissue Infection
Meningitis
Febrile Neutropenia
Sepsis of Unknown Etiology
Vasoactive Medications
This patient does not appear to be in a critical care unit or the ED. The orders in this section will likely require a higher level of care.
▼ Vasopressors (preferred)
orepinephrine (LEVOPHED) infusion - 1st line     1-30 mcg/min, Intravenous, TITRATED, Taper vasoactive agents off in reverse order of initiation.
EPINEPHrine infusion - 2nd line 1-10 mcg/min, Intravenous, TITRATED, Taper vasoactive agents off in reverse order of initiation.
vasopressin - as ADJUNCT to norepinephrine 0.03 Units/min, CONTINUOUS, DO NOT TITRATE. Must be used WITH norepinephrine infusion. Stop when MAP goal achieved and norepinephrine is < 15 mcg/min. Taper vasoactiv

#### **Documentation Template**

- Created to ensure specific documentation elements by ED providers
- Initial draft reviewed and edited by education committee
- Implemented by ED leadership
- ED providers educated regarding its use
- Frequent revisions based on PI department review, CMS queries, and updated guidelines
- Contemporaneous provider feedback when template not used or components missing

#### **ER MD Sepsis Documentation Template**

Admit MDM:
Severe Sepsis criteria:         Infectious source:         End organ damage indicated by:         • Labs are pulled into template document:
Sepsis Management: Time of recognition of severe sepsis/septic shock:
Within 3 hours of recognition: Blood cultures x 2 before broad-spectrum antibiotics: <b>(YES/NO)</b> 30 ml/kg NS bolus Initial lactate: Repeat lactate:
Septic Shock Assessment:Any lactic acid $\geq 4.0$ (YES/NO)Persistent hypotension: (SBP < 90 or 40 mmHg drop, MAP < 65) despite 30 mL/kg IV fluid bolus (YES/NO)
<ul> <li>A focused sepsis perfusion/reperfusion reassessment examination was performed post 30ml/kg bolus @ 00:00:</li> <li>Temp</li> <li>BP</li> <li>HR</li> <li>RR</li> <li>Pox</li> </ul>

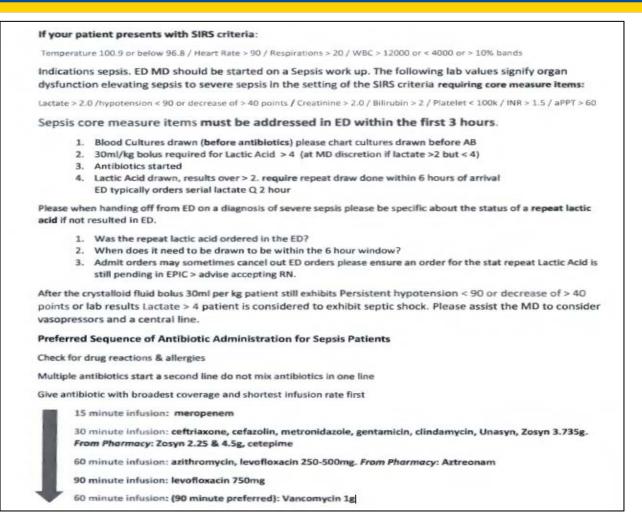
### **CODE SEPSIS**

- Created to ensure sepsis patients receive immediate diagnostics and treatment
- Overhead paged within ED if suspected or confirmed
- Temporary re-allocation of nursing resources to assist the primary nurse

# **ED Nursing Sepsis Checklist**

- Created to ensure SEP-1 bundle components met in ED prior to transfer
- Closes loop of communication between RN and MD

#### ER CODE SEPSIS Checklist (Part 1 of 2)



#### ER CODE SEPSIS Checklist (Part 2 of 2)

<ul> <li>Blood Cultures x 2</li> <li>Documentation of blood cultures drawn</li> <li>Drawn before administration of AB</li> </ul>	YESNO YESNO
Lactic Acid - any value > 2 requires repeat Report state the status of the repeat Lactic Acid inpatient RN YESNO	Time of draw Initial lactic acid: time: repeat lactic acid: time:
Fluid bolus 30ml/kg within 3 hours Reported status of fluid bolus to inpatient RNYESNO	patients charted weight:kg expected fluid bolus:ml time bolus start: time bolus ended:
<ul> <li>Antibiotics All must be given within 3 hours</li> <li>if multiple antibiotics administer per pharmacy recommendations (see reverse)</li> </ul>	time of administration #1: time of administration # 2: time of administration # 3:
Vasopressors within 6 hours	time of vasopressor administration central lineYESNO
MD reassessment volume reassessment by MD MD confirmation that patient is ready to transfer to floor	YESNO YESNO time transported

Acronyms

35

7/17/2018

### Rapid Response Team

- Incorporate MEWS 4 or higher into rapid response process
- Screen patient and communicate findings to admitting MD
- Initiate SEP-1 bundle if applicable
- Assist inpatient nursing in early identification and management of possible sepsis patients

#### **Peer Review**

- Protected
- Contemporaneous chart reviews
- Case reviewed by ED leadership with immediate feedback to provider in case of fallout
- All fallouts reviewed during ED Committee meeting every two months

#### Performance

- SEP-1 bundle compliance
   2017 YTD: 81.28%
- YTD mortality rate
  - o 2017: **16.18%** 
    - All patients except hospice
  - o 2011 YTD: **28.28%**

 Relative reduction in mortality over seven years: 42.78%

# Summary: What Did We Do? (1 of 2)

- Monthly multi-disciplinary meetings: pharmacy, coding, nursing, RRT, and laboratory
- Sepsis Coordinator
- Real-time chart review and feedback
- Peer-review process for Department of Medicine and ED
- Involved coders and CDI breakdown of processes
- Auditor review
- Sepsis simulator mobile classroom
- Auditor review
- Educational booklet
- Order Set development
- Developed rate-based report

# Summary: What Did We Do? (2 of 2)

- Data collection tools
- Documentation template
- Frequent queries to CMS for clarity with immediate implementation to practice and work-flow
- Creation of sepsis template for physician use
- Sepsis nursing checklist
- CODE SEPSIS in the ED
- Sepsis watch-list
- Sepsis continuum
- Presentation by physicians both internal and external (CME)
- Education to Department of Medicine, Medical Executive, and General Staff meetings

#### **Lessons Learned**

- Multidisciplinary team
- Physician-driven participation
- Strong nursing leadership
- Frequent standardization/templates/ compliance tools

### **Future Considerations**

- **PSJH Sepsis Collaborative**
- Sepsis unit with dedicated sepsis staff
- Consideration of SEP-3 definitions

Howard Davis, M.D., M.B.A, Chief Medical Officer Providence Tarzana Medical Center

Challenges

#### Challenges

- Independent Medical Staff
- Resources

Andre Vovan, M.D., M.B.A. Regional Chief of Clinical Effectiveness Providence St. Joseph Health, SoCal

**Future Considerations** 



### **Future Considerations**

- Decrease in mortality, cost, and variation in care
- "Fast Alone, Far Together"
- Sepsis mortality

### Challenges: Decrease Mortality, Cost and Variation in...







#### 50 Hospitals

- 8 Critical Access
- 7 > 500 bed
- 13 < 100 bed
- Rural, Urban, Suburban, Remote settings (e.g., Kodiak Island, Alaska)

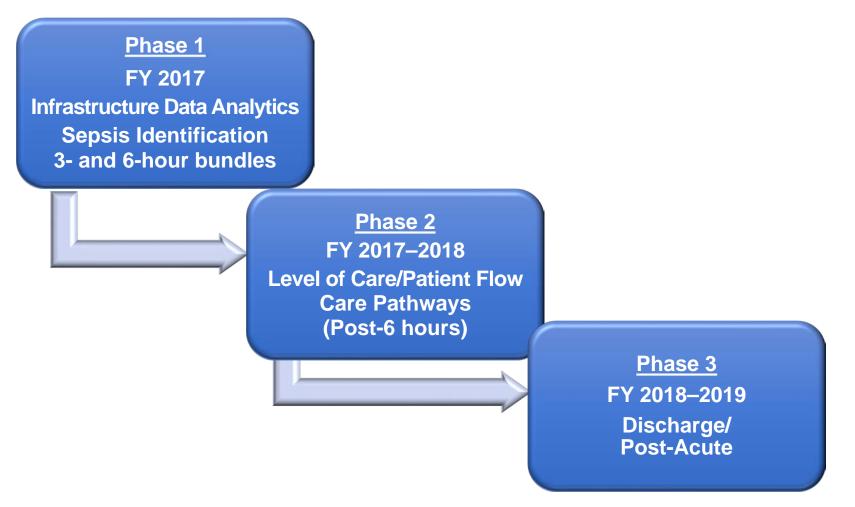
#### **Provider Mix**

- ED MDs
- Hospitalists
- Intensivists
- Nurses/APN/PAs
- Primary Care

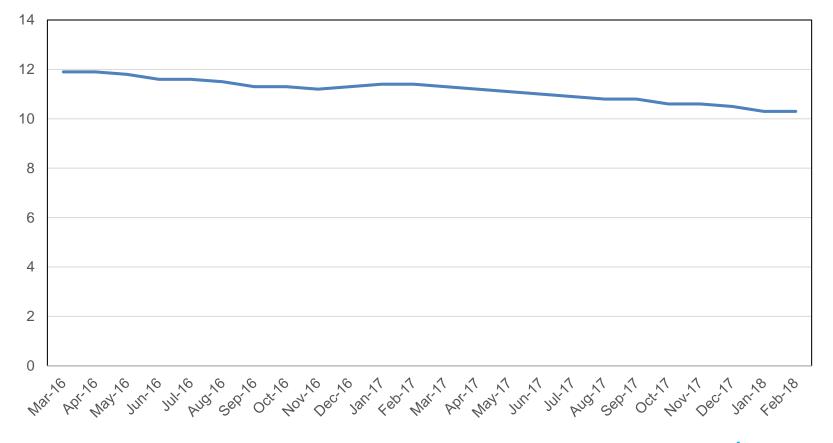
#### **Multiple EHRs**

- EPIC (3 instances)
- Meditech (3 regions)
- Allscripts

#### Sepsis Collaborative: A Phased Approach to "Fast Alone, Far Together"



#### Providence St. Joseph Health Sepsis Mortality Rate



#### **Thank You**

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Roberta.Wright@providence.org



#### SEP-1 Early Management Bundle, Severe Sepsis/Septic Shock: Providence Tarzana Medical Center's Sepsis Journey and v5.4 Frequently Asked Questions

#### **SEP-1 v5.4 Frequently Asked Questions**



# **SEP-1 Public Reporting**

- SEP-1 overall hospital performance public reporting begins with the July 2018 *Hospital Compare* release.
- The quarters publicly reported for this release are 1Q 2017 through 3Q 2017.
- With each release, the most recent quarter is added and older quarters removed so a full rolling year's worth of performance data are included, similar to other chart abstracted measures.
- The first full year of data will be in the October 2018 release when the full CY 2017 will be reported.

- Q: If the Severe Sepsis Presentation Date and Time is 7/1/18 at 0900 and the patient received an IV antibiotic 7/1/18 at 0930, what is the timeframe for abstracting the blood culture collection?
- A: Timeframe for abstracting Blood Culture Collection:

24 hours before the Severe Sepsis Presentation Time through 3 hours after the Severe Sepsis Presentation Time.

#### Example:

Blood Culture Collection Time: 7/1/18 at 0600 Severe Sepsis Presentation Date and Time is 7/1/18 at 0900 IV antibiotic at 7/1/18 at 0930

Timeframe for Blood Culture Collection: 6/30/18 at 0900 through 7/1/18 at 1200

Blood Culture Collection = value "1" (Yes) Blood Culture Collection Date = 7/1/18 Blood Culture Collection Time = 0600

- Q: If the patient received an IV antibiotic 7/1/18 at 2100 and the Severe Sepsis Presentation Date and Time is 7/2/18 at 0900, what is the timeframe for abstracting the blood culture collection?
- A: Timeframe for abstracting Blood Culture Collection: 24 hours **prior** to the administration of the **antibiotic** through 3 hours following Severe Sepsis Presentation Date and Time.

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#### Example:

Blood Culture Collection Time: 7/1/18 at 1800

IV antibiotic at 7/1/18 at 2100

Severe Sepsis Presentation Time is 7/2/18 at 0900

Timeframe for Blood Culture Collection:

6/30/18 at 2100 through 7/2/18 at 1200.

Blood Culture Collection = value "1" (Yes) Blood Culture Collection Date = 7/1/18 Blood Culture Collection Time = 1800

### Broad Spectrum or Other Antibiotic Administration Selection v5.4

- Q: If the physician documents "left leg wound with MRSA starting Vancomycin," is this documentation acceptable to select value "1" (Yes) if IV Vancomycin is started within 3 hours after the Severe Sepsis Presentation Date and Time?
- A: Value "2" (No) should be selected in this case.

# Broad Spectrum or Other Antibiotic Administration Selection v5.4

Physician/APN/PA documentation requirements if an IV antibiotic is not from Appendix C Table 5.0 (monotherapy) or Table 5.1 (combination therapy):

- Documentation referencing the <u>results of a culture</u> from within 5 days prior to the antibiotic start time.
- <u>Identify the date of the culture</u> results (must be within 5 days prior to the antibiotic start time).
- <u>Identify the suspected causative organism</u> from the culture result and its antibiotic susceptibility.

### Broad Spectrum or Other Antibiotic Administration Selection v5.4

#### Example:

Physician/APN/PA documentation: "Wound culture results from 7/12/18 show MRSA, with sensitivity to Vancomycin."

The patient has severe sepsis with criteria met on 7/15/18 at 15:00 and the only antibiotic started is IV Vancomycin on 7/15/18 at 15:30.

Value "1" (Yes) should be selected.

- Q: If there is a single order for NS 30 mL/kg over 2 hours and during the 30 mL/kg infusion an IV antibiotic diluted in NS is administered at 150 mL per hour, do we have to include the NS used to dilute the IV antibiotic toward the target ordered volume?
- A: Yes, the crystalloid fluids (NS) used to dilute the IV antibiotic should be used toward the target ordered volume of crystalloid fluids.

- Q: If two or more crystalloid fluid infusions are running at the same time, how do we calculate the completion time of the target ordered volume?
- A: Combine the mL per minute of the infusions running simultaneously to calculate when the target ordered volume was completely infused.

#### Example:

Physician Order: NS 2000 mL at 1000 mL/hr Physician Order: Vancomycin 1000 mg/250 mL NS over 60 minutes

#### MAR:

- 1. 0800 Started NS 1000 mL at 1000 mL/hr
- 2. 0900 Started Vancomycin 1000 mg/250 mL NS over 60 minutes
- 3. 0900 Started NS 1000 mL at 1000 mL/hr

#### Target Ordered Volume - 2100 mL

#### **Example Continued:**

0800 to 0900 - 1000 mL infused

1100 mL still needed for target ordered volume

0900 to 1000 - Infusions #2 and #3 ran simultaneously

Infusion #2 infusing at 16.67 mL per minute

Infusion #3 infusing at 4.2 mL per minute

16.67 + 4.2 mL per minute = 20.87 mL per minute combined

1100 mL  $\div$  20.87 mL per minute = 53 minutes

2100 mL completed at 0953

- Q: When calculating the target ordered volume, can we use the minimum volume (within 10% lower than the 30mL/kg) as the target volume to determine when the fluids were completely administered?
- A: Only crystalloid fluid volumes ordered that are within 10% lower than the 30 mL/kg total volume are acceptable. In addition, only crystalloid fluid orders can be used to determine the target ordered volume. Administering or abstracting less than the ordered amount is not acceptable.

# Directive for Comfort Care, Severe Sepsis & Septic Shock v5.4

- Q: What if a palliative care consult is ordered within the timeframe but the palliative care team does not see the patient until after the timeframe, can value "1" (Yes) be selected?
- A: Yes, the physician/APN/PA order for palliative care consult documented within the specified timeframe would suffice for selecting value "1" (Yes).

# **Initial Hypotension v5.4**

- Q: If within the 6 hours before through 6 hours after the Severe Sepsis Presentation Time we have multiple blood pressure readings, but only two BP readings are hypotensive and they are not consecutive, is this considered Initial Hypotension?
- A: Value "1" (Yes) should be selected when two hypotensive blood pressures are documented within the timeframe of 6 hours before through 6 hours after the Severe Sepsis Presentation Time. The hypotensive blood pressures do not need to be consecutive.

# **Initial Hypotension v5.4**

- Q: If the Severe Sepsis Presentation Time was 1100, hypotensive blood pressures documented at 1000 and 1330, and the target ordered volume of crystalloid fluids completed at 1130, what value should be selected for Initial Hypotension?
- A: With the target ordered volume of crystalloid fluids completing prior to the second hypotensive blood pressure, value "2" (No) should be selected for Initial Hypotension.

# **Initial Hypotension v5.4**

- Q: If there are two hypotensive BP's within the specified timeframe but no IV fluids were ordered, do you still abstract Initial Hypotension?
- A: Yes, Initial Hypotension should be abstracted. If no crystalloid fluids were ordered, value "3" (No) should be selected upon reaching the Crystalloid Fluid Administration data element.

# **Initial Hypotension Time v5.4**

Q: If the following blood pressure readings were documented within the timeframe for Initial Hypotension, which time would determine initial hypotension? **Severe Sepsis Presentation Time 1800 Blood Pressures** 1300 - 88/541400 - 92/581500 - 91/591600 - 86/521900 - 83/482000 - 87/53

A: Initial Hypotension Time = 1600

### **Persistent Hypotension v5.4**

- Q: Why is value "3" (No) selected for Persistent Hypotension when multiple blood pressures are documented within the hour and the last two blood pressure readings are a normal BP followed by a hypotensive BP?
- A: Value "3" (No) is selected because another blood pressure is needed to determine if hypotension persists or if the blood pressure is normalizing.

### **Persistent Hypotension v5.4**

#### Example:

Persistent Hypotension assessed 1415 to 1515

Blood Pressures:

- 1420 95/60
- 1435 92/51
- 1450 87/50

Select Value "3" (No)

### Repeat Volume Status and Tissue Perfusion Assessment Performed v5.4

Q: Is the following documentation acceptable for physician/APN/PA documentation of attesting to performing the Repeat Volume Status data element?

Form: History & Physical Section: Exam Findings Neurologic – A&O x3 HEENT - Negative Heart – WNL, HR 96 Lungs – Clear bilaterally Abdomen – Positive BS x4 Skin – WNL

A: No, the documentation of the findings of an exam will not suffice for physician/APN/PA documentation attesting to their performance of an exam. Documentation of the findings of an exam can be used to suffice individual components of the Repeat Volume Status and Tissue Perfusion Assessment Performed data element (e.g. skin, capillary refill, cardiopulmonary assessment).

## Repeat Volume Status and Tissue Perfusion Assessment Performed v5.4

- Q: The first option indicates physician/APN/PA documentation attesting to performing or completing a sepsis focused exam is acceptable. Is the focused exam still required for meeting the requirements of the repeat volume status and tissue perfusion assessment?
- A: No. The focused exam requirement from previous versions has been integrated into this new data element. This data element provides three options considered acceptable.

The first option includes different terms or phrases considered synonymous with documentation of completing a physical exam of the patient. Therefore, if "Sepsis focused exam" is included on a clinician form or a physician/APN/PA documents they completed a focused exam, it is acceptable to meet the intent of the data element.

- Q: If prior to or within 24 hours after the Severe Sepsis
   Presentation Time the physician noted
   "thrombocytopenia related to chronic hepatitis C," could we exclude <u>all</u> platelet values for organ dysfunction?
- A: <u>All</u> low platelet values would be excluded due to the physician documentation that includes the general reference to low platelet count (thrombocytopenia) and the documentation of the chronic condition.

- Q: If prior to or within 24 hours after the Severe Sepsis Presentation Time the physician noted "platelets 75 related to chronic hepatitis C," could we exclude <u>all</u> platelet values for organ dysfunction?
- A: Only the platelet count of 75 would not be excluded due to the physician documentation that includes this specific platelet count and the documentation of the chronic condition.

- Q: If the PA documents "elevated lactate due to seizure," should the elevated lactate be used or not used for evidence of organ dysfunction?
- A: The sign of organ dysfunction documented as due to an acute condition **should be used**.

To exclude the sign of organ dysfunction, further physician/APN/PA documentation stating the acute condition is due to a non-infectious source is required.

#### Example:

"seizures related to ETOH withdrawal"

- Q: Within the H&P, Xarelto is listed under the Home Medications section. Should the elevated INR be used for a sign of organ dysfunction?
- A: With an anticoagulant from Table 5.3 documented in the Home Medications section or documented as given on the hospital MAR, the elevated INR **should not be used**.

- Q: Which physician documentation is acceptable to disregard tachycardia when A-fib is documented?
  - 1. "A-fib with RVR"
  - 2. "A-fib with tachycardia"
  - 3. "Chronic A-fib, now presenting with RVR"
  - 4. "History of A-fib," "A-fib with tachycardia"
- A: For the physician documentation within the specified timeframe:
  - 1. <u>Use elevated heart rates</u> since A-fib is not documented as a chronic condition.
  - 2. <u>Use elevated heart rates</u> since A-fib is not documented as a chronic condition.
  - 3. <u>Do not use the heart rates</u> since A-fib is documented as a chronic condition.
  - 4. <u>Do not use the heart rates</u> since A-fib is documented as a chronic condition.

- Q: What allowable value should be abstracted for Severe Sepsis Present with the following physician documentation?
  7/15/18 0800: "Severe Sepsis likely due to influenza"
  7/16/18 1800: "Patient now with Septic Shock"
- A: Select value "1" (Yes) for Severe Sepsis Present based on the documentation of Septic Shock on 7/16/18 at 1800.

- Q: How should Severe Sepsis Present be abstracted with the following documentation?
  - 7/5/18 0800: Severe Sepsis clinical criteria met (a, b, c)
  - 7/5/18 1200 PA Note: "patient not septic"
  - 7/5/18 1300 MD Note: "transferring to ICU due to Septic Shock"
- A: Select value "2" (No) for Severe Sepsis Present based on the documentation "patient not septic" on 7/5/18 at 1200.

# Severe Sepsis & Septic Shock Presentation Date & Time v5.4

Q: In the following scenario, which date and time should be abstracted for the Severe Sepsis Presentation Date and Time? 7/1/18 1930 - Arrival to ED 7/1/18 2300 - ED physician Note: "Severe Sepsis present on admission" 7/1/18 2315 - Order for Admission to ICU 7/1/18 2320 - Status changed to inpatient 7/2/18 0330 - RN Note: Patient arrived to ICU Rm. 4 A: Abstract 7/2/18 at 0330 for the Severe Sepsis Presentation Date and Time.

SEP-1 Early Management Bundle, Severe Sepsis/Septic Shock: Providence Tarzana Medical Center's Sepsis Journey and v5.4 Frequently Asked Questions

#### Questions

# **Continuing Education Approval**

This program has been pre-approved for 1.5 continuing education (CE) unit for the following professional boards:

#### National

• Board of Registered Nursing (Provider #16578)

#### • Florida

- Board of Clinical Social Work, Marriage & Family Therapy and Mental Health Counseling
- o Board of Nursing Home Administrators
- o Board of Dietetics and Nutrition Practice Council
- o Board of Pharmacy

**Note:** To verify CE approval for any other state, license or certification, please check with your licensing or certification board.

## **CE Credit Process**

- Complete the ReadyTalk<sup>®</sup> survey that will pop up after the webinar, or wait for the survey that will be sent to all registrants within the next 48 hours.
- After completion of the survey, click "Done" at the bottom of the screen.
- Another page will open that asks you to register in the HSAG Learning Management Center.
  - $\circ$  This is a separate registration from ReadyTalk<sup>®</sup>.
  - Please use your **personal** email so you can receive your certificate.
  - Healthcare facilities have firewalls up that block our certificates.

## **CE Certificate Problems**

- If you do not immediately receive a response to the email that you signed up with in the Learning Management Center, you have a firewall up that is blocking the link that was sent.
- Please go back to the **New User** link and register your personal email account.

o Personal emails do not have firewalls.

#### **CE Credit Process: Survey**

Please provide any additional comments	
~	
10. What is your overall level of satisfaction with this present	lation?
◯ Very satisfied	
Somewhat satisfied	
O Neutral	
Somewhat dissatisfied	
◯ Very dissatisfied	
If you answered "very dissatisfied", please explain	
^	
~	
11. What topics would be of interest to you for future present	tations?
$\bigcirc$	
12. If you have questions or concerns, please feel free to leav	ve your name and phone number or email address and we will contact you.
$\sim$	
	Done

#### **CE Credit Process: Certificate**

Thank you for completing our survey!

Please click on one of the links below to obtain your certificate for your state licensure.

You must be registered with the learning management site.

New User Link:

https://lmc.hshapps.com/register/default.aspx?ID=da0a12bc-db39-408f-b429-d6f6b9ccb1ae

Existing User Link:

https://lmc.hshapps.com/test/adduser.aspx?ID=da0a12bc-db39-408f-b429-d6f6b9ccb1ae

Note: If you click the 'Done' button below, you will not have the opportunity to receive your certificate without participating in a longer survey.

Done

#### **CE Credit Process: New User**

Learning Center Registration: OQR: 2015 Specifications Manual Update - 1-21-2015         First Name:	HSAG HEALTH SERVICES AUVICINY GROUP	Learning Management Center
Email:		015 Specifications Manual Update - 1-21-
	Email: Phone:	

## **CE Credit Process: Existing User**

HSAG HEALTH SERVICES ADVISORY EROUP		this is a secure site please provide credentials to continue	
	Secure Login  User Name: Password: Log In		

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