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SEP-1 Early Management Bundle, Severe Sepsis/Septic Shock: v5.6 Measure Updates and FAQs

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Agenda

The purpose of this event is to clarify the most frequently asked questions, changes, and rationale behind the updates to the SEP-1 measure and guidance in version 5.6 of the specifications manual.
Objective

At the end of the presentation, participants will be able to understand and interpret the updated guidance in version 5.6 of the specifications manual to ensure successful reporting for the SEP-1 measure.
# Acronyms and Abbreviations

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<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
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<tr>
<td>ABD</td>
<td>abdomen</td>
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<td>A-fib</td>
<td>atrial fibrillation</td>
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<td>APN</td>
<td>advanced practice nurse</td>
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<td>aPTT</td>
<td>Activated partial thromboplastin time</td>
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<td>BMI</td>
<td>body mass index</td>
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<td>BP</td>
<td>Blood pressure</td>
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<td>CA</td>
<td>cancer</td>
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<td>c. diff</td>
<td><em>Clostridium difficile</em></td>
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<td>CT</td>
<td>Computerized tomography</td>
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<td>ED</td>
<td>emergency department</td>
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<td>ETOH</td>
<td>ethyl alcohol</td>
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<td>FAQ</td>
<td>frequently asked question</td>
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<td>H&amp;P</td>
<td>history and physical</td>
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<td>HR</td>
<td>heart rate</td>
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<td>Hx</td>
<td>history</td>
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<td>IBW</td>
<td>ideal body weight</td>
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<td>INR</td>
<td>International Normalized Ratio</td>
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<td>IA</td>
<td>ideal body weight</td>
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<td>IV</td>
<td>intravenous</td>
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<td>kg</td>
<td>kilogram</td>
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<td>MAR</td>
<td>medication administration record</td>
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<td>mL</td>
<td>milliliter</td>
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<td>MD</td>
<td>medical doctor</td>
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<td>mm/Hg</td>
<td>millimeters of mercury</td>
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<td>NP</td>
<td>nurse practitioner</td>
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<td>OR</td>
<td>operating room</td>
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<td>PA</td>
<td>physician assistant</td>
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<td>PACU</td>
<td>post anesthesia care unit</td>
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<td>PO</td>
<td>by mouth</td>
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<td>RVR</td>
<td>rapid ventricular response</td>
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<td>SBP</td>
<td>systolic blood pressure</td>
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<td>SC</td>
<td>Support contract</td>
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<td>SEP</td>
<td>sepsis</td>
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<td>SIRS</td>
<td>systemic inflammatory response syndrome</td>
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<td>VIQR</td>
<td>Value, Incentives, and Quality Reporting</td>
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<td>WBC</td>
<td>white blood count</td>
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SEP-1 Early Management Bundle, Severe Sepsis/Septic Shock: v5.6 Measure Updates and Frequently Asked Questions (FAQs)
• A more general documentation of refusal of care or documentation of patient non-compliance with care (e.g., pulling out IV) that would result in the following not being administered within the specified time frame is acceptable.
  o Blood draws
  o IV or IO fluid administration
  o IV or IO antibiotic
APN Note within the specified timeframe:
“Patient uncooperative, yelling and screaming at nurses, security called.”

Q. Is this documentation acceptable to select Value “1” (Yes) for the Administrative Contraindication to Care, Severe Sepsis data element?

A. Yes, this APN documentation of the patient’s refusal would suffice selecting Value “1” (Yes).
Updated guidance for cases where antibiotic monotherapy or combination therapy consistent with tables 5.0 or 5.1 was not ordered, but oral vancomycin, rectal vancomycin, or IV Flagyl was administered, and there is documentation that C. difficile is suspected or likely is now acceptable.

- There is physician/APN/PA documentation within 24 hours prior to the antibiotic start time identifying the presence of C. difficile. **Documentation that C. difficile is suspected or likely is acceptable.**
MD notes at 1500: probable C. diff Colitis. MAR notes – PO Vancomycin 1730 given within time frame. Which Allowable Value would be selected?

A. Value “1” (Yes)
B. Value “2” (No)
Poll the Audience: Broad Spectrum or Other Antibiotic Administration Selection

MD notes at 1500: probable C. diff Colitis. MAR notes – PO Vancomycin 1730 given within time frame. Which Allowable Value would be selected?

A. Value “1” (Yes)

B. Value “2” (No)
Only the earliest physician/APN/PA documentation of an inclusion term documented in the following contexts suffices:

- Comfort measures only recommendation
- Order for consultation or evaluation by a hospice care service
- Patient or patient representative request for comfort measures only
- Plan for comfort measures only
- Referral to hospice care service
PA documentation within time frame: “Discussed comfort care vs. palliative care with patient and family. Palliative Consult ordered.”

Q. Should Value “1” (Yes) or Value “2” (No) be selected?

A. Value “1” (Yes) would be selected due to the inclusion of “Palliative Consult ordered.”
Crystalloid Fluid Administration v5.6 Guidance

• The specified time frame for abstraction of crystalloid fluids is within 6 hours prior through 3 hours after either of the following trigger events. If both are present the specified time frame is determined by the earliest trigger.
  o Initial Hypotension Date and Time
  o Septic Shock Presentation Date and Time
The target ordered volume must be ordered and initiated within the specified time frame if Initial Hypotension or Septic Shock is present. Additionally, in order to choose Value “1,” the target ordered volume must be documented as completely infused. The target ordered volume is NOT required to be completely infused within the specified time frame. If the target ordered volume is not completely infused, choose Value “2.”
Crystalloid Fluid Administration v5.6 Guidance

• To determine if the target ordered volume was completely infused, one of the following must be documented along with the infusion start time. If one of the following is not documented, do not use the fluids toward the target ordered volume:
  - An infusion rate
  - Infusion duration or time over which to infuse
  - Infusion end or completion time
Poll the Audience:
Crystalloid Fluid Administration

*Initial Hypotension Time* is 1030. When must the target ordered volume be completely infused?

A. Completed by 1330
B. Completed by 1630
C. Completed by 2230
D. None of the above
Initial Hypotension Time is 1030. When must the target ordered volume be completely infused?

A. Completed by 1330
B. Completed by 1630
C. Completed by 2230
D. None of the above
Crystalloid Fluid Administration v5.6 Guidance

• Crystalloid fluid volumes ordered that are equivalent to 30 mL/kg or within 10% less than 30 mL/kg are considered the target ordered volume.

Example:
- Patient weighs 70 kg
  - 30 mL/kg x 70 kg = 2100 mL (10% less = 1890 mL)
- Physician order: NS IV 2000 mL over 2 hours

2000 mL should be infused because it is the volume ordered, which is within 10 percent of 30 mL/kg.
Poll the Audience: Crystalloid Fluid Administration

Physician Order: NS IV 2500 mL over 2 hours for an 80 kg patient (30 mL/kg x 80 kg = 2400 mL). What fluid volume must be infused?

A. 2500 mL
B. 2400 mL
C. 2250 mL
D. 2160 mL
Poll the Audience: Crystalloid Fluid Administration

Physician Order: NS IV 2500 mL over 2 hours for an 80 kg patient (30 mL/kg x 80 kg = 2400 mL). What fluid volume must be infused?

A. 2500 mL
B. 2400 mL
C. 2250 mL
D. 2160 mL
Initial Hypotension v5.6 Guidance

• Hypotensive BPs obtained within the operating room (OR), interventional radiology, during active delivery, or procedural/conscious sedation should not be used.
Poll the Audience: Initial Hypotension

If the only hypotensive readings occurred while the patient was in the PACU, should the hypotensive readings be used to establish *Initial Hypotension*?

A. Yes
B. No
Poll the Audience: Initial Hypotension

If the only hypotensive readings occurred while the patient was in the PACU, should the hypotensive readings be used to establish *Initial Hypotension*?

A. Yes
B. No
Initial Hypotension v5.6 Guidance

• Documentation of a term that represents or is defined by an SBP <90 mmHg or MAP <65 mmHg is acceptable in place of an abnormal value when documented as normal for the patient, due to a chronic condition, due to a medication, or due to an acute condition that has a non-infectious source/process.

Example:
Hypotension (Systolic blood pressure <90 mmHg).
Q. If the MD documented “sepsis, hypotension, blood cultures ordered,” can the documentation of “hypotension” be used as one of the hypotensive readings to meet Initial Hypotension?

A. No, the term “hypotension” would not be used as one of the blood pressure readings for establishing Initial Hypotension.
Initial Hypotension v5.6 Guidance

- Initial hypotension is hypotension that is present prior to the target ordered volume of crystalloid fluids being completely infused.

**Example:**

*Severe Sepsis Presentation Time* at 1200  
*Initial Hypotension* – 80/50 at 1200, 86/58 at 1330  
Target Ordered Volume completed at 1300

*Initial Hypotension* = Value “2” (No) because the second hypotensive value is after the fluid was completely infused.
Q. If no crystalloid fluids were ordered or started, would value “2” (No) be selected for Initial Hypotension?

A. If two hypotensive readings were documented within the specified time frame for Initial Hypotension, Value “1” (Yes) would be selected for Initial Hypotension.
Persistent Hypotension v5.6 Guidance

• If one or more blood pressures were documented within the time frame and persistent hypotension is unable to be determined but a vasopressor was administered, select Value “1.”
Assess for *Persistent Hypotension* from 1400 to 1500.

1410 - BP 97/63
1430 – BP 92/59
1445 – BP 85/51

MAR: Vasopressin IV start time: 1450

Q. Which value would be selected for *Persistent Hypotension* in the above scenario?

A. Value “1” (Yes) would be selected for *Persistent Hypotension* due to the administration of the vasopressor.
Assess for *Persistent Hypotension* from 1400 to 1500.

1410 – BP 97/63
1430 – BP 92/59
1445 – BP 85/51

Q. Which value would be selected for *Persistent Hypotension* in the above scenario?

A. Value “3” (No) would be selected for *Persistent Hypotension* due to the hour ending with a single hypotensive blood pressure reading.
Example:
Target Ordered Volume is 2100 mL
1. NS 1000 mL bolus – Start time 0800, End time 0900
2. Antibiotic in NS 250 mL over 1 hr – Start time 0815, End time 0915
3. NS 1000 mL over 1 hr – Start time 0830

Step 1: Determine Independent Infusion Rates.
1. 1000 mL / 60 minutes = 16.67 mL per minute
2. 250 mL / 60 minutes = 4.17 mL per minute
3. 1000 mL / 60 minutes = 16.67 mL per minute
Step 2: Determine volume infused from multiple overlapping infusions.

Infusion 1:
From 0800 to 0815 = 15 minutes x 16.67 mL per minute = 250.05 mL

Infusions 1 and 2:
From 0815 to 0830 = 15 minutes x (16.67 + 4.17 mL per minute) = 312.6 mL

Infusions 1, 2, and 3:
From 0830 to 0900 = 30 minutes x (16.67 + 4.17 + 16.67 mL per minute) = 1125.3 mL

Infusions 2 and 3:
From 0900 to 0915 = 15 minutes x (4.17 + 16.67 mL per minute) = 312.6 mL
Step 3: Determine total infused volume and volume remaining.
By 0915, 250.05 mL + 312.6 mL + 1125.3 mL + 312.6 mL = 2000.55 mL were infused.
2100 mL – 2000.55 mL = 99.45 mL remaining

Step 4: Determine completion time.
Infusion 3: 99.45 mL / 16.67 mL per minute = 6 minutes
0915 + 6 minutes = 0921 completion time of the 2100 mL target ordered volume

Assess for *Persistent Hypotension* from 0921 to 1021.
Persistent Hypotension v5.6
Example #2

Example:
Patient weight 155 kg
Physician Order: “NS 30 mL/kg based on IBW at 1000 mL/hr”
Physician Order comments “BMI 46.2, IBW 77 kg”
Target Ordered Volume is 2310 mL based on IBW of 77 kg
1. NS 500 mL bolus – Start time 1400, End time 1430
2. NS 1000 mL over 2 hours - Start time 1400, End time 1600
3. NS 1000 mL over 6 hours – Start time 1430
4. NS 500 mL bolus – Start time 1530, End time 1600
Step 1: Determine Independent Infusion Rates.

1. 500 mL / 30 minutes = 16.67 mL per minute
2. 1000 mL / 120 minutes = 8.33 mL per minute
3. 1000 mL / 360 minutes = 2.78 mL per minute
4. 500 mL / 30 minutes = 16.67 mL per minute
Step 2: Determine volume infused from multiple overlapping infusions.

Infusion 1 and 2:
From 1400 to 1430 = 30 minutes x (16.67 + 8.33 mL per minute) = 750 mL

Infusions 2 and 3:
From 1430 to 1530 = 60 minutes x (8.33 + 2.78 mL per minute) = 666.6 mL

Infusions 2, 3, and 4:
From 1530 to 1600 = 30 minutes x (8.33 + 2.78 + 8.33 mL per minute) = 583.2 mL
Step 3: Determine total infused volume and volume remaining.
By 1600, 750 mL + 666.6 mL + 583.2 mL = 1999.8 mL were infused.
2310 mL – 1999.8 mL = 310.2 mL remaining

Step 4: Determine completion time.
Infusion 3: 310.2 mL / 2.78 mL per minute = 112 minutes

1600 + 112 minutes =
1752 completion time of the 2310 mL target ordered volume

Assess for Persistent Hypotension from 1752 to 1852.
Repeat Volume Status and Tissue Perfusion Assessment Performed v5.6 Guidance

- Physician/APN/PA documentation indicating or attesting to performing or completing a physical examination, perfusion (re-perfusion) assessment, sepsis (severe sepsis or septic shock) focused exam, or systems review.

**Examples** of Physician/APN/PA documentation that is acceptable:

- “I did the Sepsis reassessment”
- Flowsheet question: “Sepsis focused exam performed?” and selection of “Yes”
- “Review of systems completed”
- “I have reassessed tissue perfusion after bolus given.”
- “Sepsis re-evaluation was performed”
- “I have reassessed the patient’s hemodynamic status”
MD notes, “Review of systems negative except as noted in H&P.” Is this physician/APN/PA documentation acceptable?

A. Yes
B. No
MD notes, “Review of systems negative except as noted in H&P.” Is this physician/APN/PA documentation acceptable?

A. Yes
B. No
• INR >1.5 or aPTT >60 sec
  o If the suggested data source shows the patient was given an anticoagulant medication in Appendix C Table 5.3, an elevated INR or aPTT level should not be used as organ dysfunction. Physician/APN/PA documentation is not required. **If only the following is given, the elevated INR or aPTT level should be used.**
  - Heparin flushes
Severe Sepsis Present v5.6 Guidance

• Documentation of a term that represents or is defined by a SIRS criteria or sign of organ dysfunction is acceptable in place of an abnormal value when documented as normal for the patient, due to a chronic condition, due to a medication, or due to an acute condition that has a non-infectious source/process.

Examples include but are not limited to:

- Tachypnea (Respiration >20 per minutes)
- Tachycardia, RVR (Heart rate >90)
- Leukopenia (White blood cell count <4,000)
- Leukocytosis (White blood cell count >12,000)
- Thrombocytopenia (Platelet count <100,000)
- Hypotension (Systolic blood pressure <90 mmHg)
Poll the Audience: Severe Sepsis Present

PA notes’’ Hx of A-fib with tachycardia.’’ Which heart rates would be used as SIRS criteria?

A. HR 127
B. HR 149
C. HR 99
D. None
Poll the Audience: Severe Sepsis Present

PA notes” Hx of A-fib with tachycardia.” Which heart rates would be used as SIRS criteria?

A. HR 127
B. HR 149
C. HR 99
D. None
Severe Sepsis Present v5.6 Guidance

• SIRS criteria or a sign of organ dysfunction obtained within the operating room (OR), interventional radiology, during active delivery, or procedural/conscious sedation should not be used.
Poll the Audience: Severe Sepsis Present

Patient hypotensive during cardioversion under conscious sedation, should the hypotensive BP be used as evidence of organ dysfunction?

A. Yes
B. No
Poll the Audience: Severe Sepsis Present

Patient hypotensive during cardioversion under conscious sedation, should the hypotensive BP be used as evidence of organ dysfunction?

A. Yes
B. No
Severe Sepsis Present v5.6 Guidance

- Disregard any documentation of SIRS criteria, organ dysfunction, an infection, Severe Sepsis, or Septic Shock in a discharge note, discharge summary, or documented after the time of discharge.
Severe Sepsis Present v5.6 FAQ #1

Coding query on 7/10/2019 states, “Severe sepsis present on admission?”
Physician selected “Yes” to coding query on 7/10/2019.

Q. Should severe sepsis be considered present on admission?

A. No, the documentation of severe sepsis after discharge would not be used.
Severe Sepsis Present v5.6 Guidance

To determine the laboratory test value time for severe sepsis criteria, use the following sources in priority order.

- **Primary source:**
  1. Laboratory test value result time from lab

- **Supporting sources in priority order if primary source not available:**
  1. Time within a narrative note that is directly associated with the laboratory test value
  2. Time the laboratory test value is documented in a non-narrative location (e.g., sepsis flowsheet)
  3. Laboratory test sample draw or collected time
  4. Physician/APN/PA or nursing narrative note open time
If the following INR result times are documented, which should be used for the time of the elevated INR?

A. Sepsis Flowsheet – INR 1.9 1915
B. PA notes – INR 1.9 1820
C. Lab Results – INR 1.9 1830
D. INR drawn 1730
Poll the Audience: Severe Sepsis Present

If the following INR result times are documented, which should be used for the time of the elevated INR?

A. Sepsis Flowsheet – INR 1.9 1915
B. PA notes – INR 1.9 1820
C. Lab Results – INR 1.9 1830
D. INR drawn 1730
Severe Sepsis Present v5.6 Guidance

• For the following, physician/APN/PA documentation prior to or within 24 hours after *Severe Sepsis Presentation Time* is required.
  
  o If the SIRS criteria or a sign of organ dysfunction is due to the following, it **should not be used**. Inferences should not be made. The abnormal value or reference to the abnormal value must be in the same documentation.
    
    ▪ Normal for that patient
    ▪ Is due to a chronic condition
    ▪ Is due to a medication
MD documented: “Chronic Kidney disease”
The creatinine is 3.25.

Q. Should the elevated creatinine be used as a sign of organ dysfunction?

A. Yes, the creatinine of 3.25 would be used because the elevated creatinine is not documented as due to the chronic condition.
Severe Sepsis Present v5.6 FAQ #3

APN H&P: Lung CA
- CT of ABD ordered
- Blood cultures due to fever
- Pancytopenia

Q. Should the low platelet count and WBC’s be used to meet severe sepsis clinical criteria?

A. No, since the term “pancytopenia” is documented with the chronic condition and defines the abnormal platelet count and WBC, neither would be used to establish severe sepsis.
Poll the Audience: Severe Sepsis Present

PA note: “Patient with ABD pain, hx of Cirrhosis, ETOH abuse. Currently bilirubin is 6.0, recheck in AM.” Would the elevated bilirubin be used?

A. Yes
B. No
Poll the Audience: Severe Sepsis Present

PA note: “Patient with ABD pain, hx of Cirrhosis, ETOH abuse. Currently bilirubin is 6.0, recheck in AM.” Would the elevated bilirubin be used?

A. Yes
B. No
Septic Shock Present v5.6 Guidance

• In order to establish the presence of Septic Shock by clinical criteria, one of following two criteria (a or b) must be met:
  a. Severe Sepsis Present
     AND
     Persistent Hypotension evidenced by:
     • In the hour after the conclusion of the target ordered volume of Crystalloid Fluid Administration, two consecutive documented hypotensive blood pressure readings.
Q. If the *Initial Lactate Level Result* is less than or equal to 2 and there is no physician/APN/PA documentation of septic shock, can septic shock still be met by severe sepsis with *Persistent Hypotension*?

A. Yes, if *Persistent Hypotension* is present in the hour following the completion of the target ordered volume of crystalloid fluids, Value “1” (Yes) may be selected for *Septic Shock Present*. 
Septic Shock Present v5.6 FAQ #1

Continued

Severe Sepsis Present = Value “1” (Yes)

Severe Sepsis Presentation Time = 1800

Initial Lactate Level Result = Value “1” (<=2.0 mmol/L)

Initial Hypotension = Value “2” (No)

Septic Shock Present = ?
Q. How can *Persistent Hypotension* (new onset hypotension) be determined upon reaching the *Septic Shock Present* data element?

A1. Look for two consecutive hypotension blood pressure readings in the six hours following the *Severe Sepsis Presentation Time*.

- If there are not two consecutive hypotensive blood pressure readings within the six hours, Value "2" (No) would be selected for *Septic Shock Present* because the *Septic Shock Presentation Time* could not be greater than six hours after *Severe Sepsis Presentation Time*.
- If there is only one or no hypotensive blood pressure readings, then Value "2" (No) would be selected for *Septic Shock Present* because *Persistent Hypotension* requires two consecutive readings.
A2. If two consecutive hypotensive blood pressure readings are present in the six hours after the Severe Sepsis Presentation Time.

- Determine when the target volume of crystalloid fluids completed.
- Determine whether the two hypotensive blood pressure accurately represent Persistent Hypotension.
Questions
Continuing Education (CE) Approval

This program has been approved for CE credit for the following boards:

• **National credit**
  - Board of Registered Nursing (Provider #16578)

• **Florida-only credit**
  - Board of Clinical Social Work, Marriage & Family Therapy and Mental Health Counseling
  - Board of Registered Nursing
  - Board of Nursing Home Administrators
  - Board of Dietetics and Nutrition Practice Council
  - Board of Pharmacy

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