Sepsis Wave II
How MIPS, CPIA, CEDR metrics relate to E-QUAL
Presenter

Arjun Venkatesh, MD
Disclaimer

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Drive to Transform Clinical Practice

Target percentage of payments in ‘FFS linked to quality’ and ‘alternative payment models’ by 2016 and 2018

- Alternative payment models (Categories 3-4)
- FFS linked to quality (Categories 2-4)
- All Medicare FFS (Categories 1-4)

Historical Performance:
- 2011: 0% Alternative, ~20% FFS linked, >80% All Medicare
- 2014: ~20% Alternative, 85% FFS linked, >80% All Medicare

Goals:
- 2016: 30% Alternative, 85% FFS linked, 90% All Medicare
- 2018: 50% Alternative, 90% FFS linked, 90% All Medicare
Current CMS programs

- PQRS
- Medicare EHR Incentive Program
- Value-Based Payment Modifier

MIPS

- Improvement Activities
  - 25%
- Advancing Care Information
  - 15%
- Quality
  - 60%
- Resource Use: 0%
MIPS Credit 2017

• Emergency clinicians only to be measured on Quality and CPIA
**FEE**  
**Fee Schedule Updates**  
- 2015 and earlier: 0.5  
- 2016: 0.5  
- 2017: 0.5  
- 2018: 0.5  
- 2019: 0  
- 2020: 0  
- 2021: 0  
- 2022: 0  
- 2023: 0  
- 2024: 0  
- 2025: 0  
- 2026 and later: 0.75  
- 0.25

**MIPS**  
- Quality: 4%  
- Resource Use: 5%  
- Clinical Practice Improvement Activities: 7%  
- Meaningful Use of Certified EHR Technology: 9%  
- PQRS, Value Modifier, EHR Incentives  
- MIPS Payment Adjustment (+/-)

**Certain APMs**  
- Qualifying APM Participant Medicare Payment Threshold Excluded from MIPS  
- 5% Incentive Payment  
- Excluded from MIPS

*Qualifying APM conversion factor  
**Non-qualifying APM conversion factor
<table>
<thead>
<tr>
<th></th>
<th>CEDR</th>
<th>EQUAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIPS</td>
<td>Quality (85%)</td>
<td>CPIA</td>
</tr>
<tr>
<td>Goal</td>
<td>Score</td>
<td>Participation</td>
</tr>
<tr>
<td>Core Function</td>
<td>Quality Reporting</td>
<td>Educational alignment</td>
</tr>
<tr>
<td>Elements</td>
<td>1-6</td>
<td>3-6</td>
</tr>
<tr>
<td>Cost</td>
<td>Modest</td>
<td>Free</td>
</tr>
<tr>
<td>Effort</td>
<td>***</td>
<td>**</td>
</tr>
</tbody>
</table>
Pick Your Pace in MIPS

If you choose the MIPS path of the Quality Payment Program, you have three options.

Don’t Participate

Submit Something

Submit a Partial Year

Submit a Full Year

Not participating in the Quality Payment Program:
If you don’t send in any 2017 data, then you receive a negative 4% payment adjustment.

Test:
If you submit a minimum amount of 2017 data to Medicare (for example, one quality measure or one improvement activity for any point in 2017), you can avoid a downward payment adjustment.

Partial:
If you submit 90 days of 2017 data to Medicare, you may earn a neutral or small positive payment adjustment.

Full:
If you submit a full year of 2017 data to Medicare, you may earn a moderate positive payment adjustment.
Support more than 150,000 clinicians in their practice transformation work

Improve health outcomes for millions of Medicare, Medicaid and CHIP beneficiaries and other patients

Reduce unnecessary hospitalizations for 5 million patients

Generate $1 to $4 billion in savings to the federal government and commercial payers

Sustain efficient care delivery by reducing unnecessary testing and procedures

Build the evidence base on practice transformation so that effective solutions can be scaled
TCPi | Transforming Clinical Practice Initiative

+ 

EMERGENCY MEDICINE

= 

E·QUAL | EMERGENCY QUALITY NETWORK
“engage emergency clinicians and leverage emergency departments to improve clinical outcomes, coordination of care and to reduce costs”

• **Improving outcomes for patients with sepsis**
  • Reducing avoidable imaging in low risk patients by implementation of ACEP’s Choosing Wisely recommendations
  • Improving the value of ED evaluation for low risk chest pain by reducing avoidable testing and admissions
In the United States, sepsis kills more than prostate cancer, breast cancer, and AIDS combined.
Delays Matter

Detecting sepsis early increases chances for survival

<table>
<thead>
<tr>
<th>time of hypotension before therapy</th>
<th>survival rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;0.5 hrs</td>
<td>4 in 5 / 80%</td>
</tr>
<tr>
<td>&gt;3 hrs</td>
<td>3 in 5 / 60%</td>
</tr>
<tr>
<td>&gt;6 hrs</td>
<td>2 in 5 / 40%</td>
</tr>
<tr>
<td>&gt;24 hrs</td>
<td>1 in 5 / 20%</td>
</tr>
</tbody>
</table>

Source: Radiometer, adapted from Kumar et al.
• Leading cause of death in US hospitals
  • Rivers – 47% in hospital mortality
  • 3 Recent Trials (PROCESS, ARISE, PROMISE) – 20%
  • The difference – *early recognition and resuscitation*

• Wide variation in sepsis care process and outcomes between hospitals

• National attention spurred CMS Sepsis-1 metric
• QI efforts Improve outcomes
  • Absolute mortality reduction of ~5%
  • Reduce liability through standardization
  • Improve revenue

• Implementation of QI projects to improve sepsis care can save lives through:
  • Earlier detection
  • Reduced time to fluids
  • Reduced time to antibiotics
Sepsis Wave II

• Over 300 EDs across the nation have joined!

• 10 month learning period (January – October)

• Build upon Wave I offerings
Sepsis Wave II: Activities

**Recruitment & Enrollment**
- Enrollment Pledge
- Quality Readiness Assessment Survey

**Learning Period (6-9 months)**
- Monthly Webinars, Office Hours
- Tool kit
- Publicize guidelines
- Disseminate CME
- Submit benchmarking data

**Wrap Up**
- Data Reports
- Summary Report
- Lessons Learned
- eCME, MOC, MIPS credit
E-QUAL: Sepsis Toolkit

• DART tool
  • Mobile app with diagnostic/treatment protocols
• Updates on most recent sepsis literature
• Information on SEP-1
• Webinar/Podcast series
  • Initiation & implementation of Sepsis initiatives
  • Latest developments in Sepsis diagnostics and treatment
• Quality Improvement guides from leading national experts
Does your ED currently engage in quality improvement activities focused on:

- Protocol driven care support tool (EHR trigger, dedicated nurse checklist, etc): 84%
- Electronic health record screening tool or alert system: 75%
- Nurse order sets for sepsis: 72%
- Code Sepsis or ED sepsis team (dedicated team of providers and response for patients with sepsis): 35%
- ICU co-management for septic shock patients: 22%
- Dedicated critical care rooms or unit in ED for septic shock patients: 16%
- Other: 11%
Activity Tracker

Use the E·QUAL portal to track and complete activities for the Wave II Sepsis Initiative. Activities are aligned with E·QUAL webinars and educational offerings but can be completed at any time.

Activity 1  Kick-Off
Submit your E·QUAL Sepsis Initiative Participation Agreement, assemble your list of local clinicians and leaders, and kick-off your E·QUAL sepsis quality improvement project with a short presentation.

Activity 2  Benchmarking
Submit benchmarking data to assess current performance (October through December 2015) on sepsis bundle metrics.

Activity 3  Engage Leadership and Review Best Practices
Identify interest in best practices to improve emergency sepsis care and gain early sponsorship and support from hospital and ED leadership to ensure the success of your Sepsis CI work. Report on your sepsis quality improvement plan.

Activity 4  Download and Review Data
Get your Benchmarking results from Activity 2. Download your personalized, confidential benchmarking report and review results with both ED and hospital leaders as well as front-line clinicians to develop common goals.

Activity 5  Commit to Data-Driven Best Practices
Tell us about your efforts to disseminate your Benchmarking reports locally and how you will use sepsis quality metrics to focus quality improvement efforts on data-driven targets. Commit to implement best practices that meet local quality gaps.

Upcoming Events

MIPS, Clinical Practice Improvement Activities and Sepsis Quality Metrics
- January 18th
  Dr. Arjun Venkatesh

New recommendations from the Surviving Sepsis Campaign and what they mean for the ED
- February 15th
  Drs. Mitch Levy and Don Yealy

Harnessing the EHR to improve early identification of septic patients and how to engage nurses in sepsis identification and early
- March 22nd
  Dr. Alan Jones and ENA

CMS SEP-1 measure—Early Insights and Experience
- April 19th
  Dr. Todd Sesinger and CMS

Fluid and Pressors Management including challenging cases and exceptions and an overview of MIPS, Clinical Practice Improvement Activities and Sepsis Quality Metrics
- May 24th
  Drs. Arjun Venkatesh, Laurence Dubensky and Tiffany Osborn

Reassessment
- June 21st
  Dr. Matt Dawson and ENA
Activity 6  Front-line engagement  Coming Soon
Practice change requires the engagement and enthusiasm of front-line clinicians. Help us understand which E-QUAL products your clinicians have found most useful and how you integrated evidence-based sepsis care tools in your ED.

Activity 7  Develop a QPP Plan  Coming Soon
Requirements of the new CMS Quality Payment Program (QPP) can be met through participation in E-QUAL and by your sepsis quality improvement efforts. Your quality improvement activities in 2017 can determine up to 4% of your payments in 2018. Develop your 2017 QPP plan before June 1, 2016 to ensure you meet all deadlines.

Activity 8  Assess performance  Coming Soon
Take stock of your sepsis quality improvement initiative by assessing clinician engagement and performance. Report on best practices developed and utilized to earn Clinical Practice Improvement Activity credit.

Activity 9  Tell your Success Story  Coming Soon
Tell us your sepsis quality improvement success story (in 100 words) that will be disseminated across the E-QUAL Network.

Activity 10  Benchmarking II  Coming Soon
Sepsis quality improvement requires the use of iterative Plan-Do-Study-Act Cycles. Submit recent data (July to September 2016) for benchmarking local sepsis care performance.

Activity 11  Post Wave II Quality Readiness Assessment  Coming Soon
Transforming clinical practice in the ED requires sustained focus and re-assessment. Submit your post-Wave II Quality Readiness Assessment to benchmark quality improvement activities and identify future opportunities for practice improvement.

Resources
- E-QUAL Sepsis Initiative Toolkit
- Greater New York Hospital Association Stop Sepsis Collaborative
- Surviving Sepsis Campaign
- CDC Sepsis Resources
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CEDR

Choose one of the following Data Submission Options

- Clinical Emergency Data Registry (CEDR)
  Clinical Emergency Data Registry (CEDR): If you are already enrolled in CEDR and have completed data mapping for CEDR Sepsis Metrics, then you can simply opt to have CEDR data pushed to E-QUAL.

- Let me submit my chart

Continue

Thank you for participating in CEDR

We will use this to request your result from the registry.

Return to Activity Tacker
# Septic Shock Chart Review

<table>
<thead>
<tr>
<th>Record Number</th>
<th>Exclusion Reasons</th>
<th>Measure Population</th>
<th>Comfort Care</th>
<th>Pressure Lactate Performed</th>
<th>Lactate Value</th>
<th>Blood Cultures</th>
<th>Broad Spectrum Antibiotics</th>
<th>30CC/KG IV Fluids</th>
<th>Reversal Vasopressors</th>
<th>Repeat Lactate Value (Optional)</th>
<th>Lactate Clearance (Optional)</th>
<th>Died (In-Hospital)</th>
<th>Delete Row</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre - 004</td>
<td>Reason 1</td>
<td>Severe Sepsis</td>
<td>Yes</td>
<td>Yes</td>
<td>32.0</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Pre - 005</td>
<td>Reason 1</td>
<td>Severe Sepsis</td>
<td>Yes</td>
<td>Yes</td>
<td>32.0</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
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<td>Reason 1</td>
<td>Severe Sepsis</td>
<td>Yes</td>
<td>Yes</td>
<td>32.0</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>
Quick Septic Chart Review

- Completed “pre” and “post” E-QUAL
- Abstract key data elements on 20 patients with septic shock
  - Pre: October and December 2016.
  - Post: July-Sep 2017
  - Identify patients based on ED diagnostic coding, and then manually review each chart for the completion of key sepsis care processes.

- Identify patient based on ED billing diagnosis
  - Septic Shock or Infection+hypotension
  - Same as CEDR definition

- May be supported by billing company or third party if your site has centralized sepsis data
### CMS SEP-1 Preliminary Data

#### Septic Shock Chart Review

**SEP-1 Severe Sepsis**

- **Denominator**: 22 (after exclusions, also SEP-1 H)
- **Numerator**: 4 (bundle met, SEP-1 L)

**Failure point (SEP-1 component not met and SEP-1 skip logic indicates)**

<table>
<thead>
<tr>
<th>Failure Point</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial lactate (SEP-1 I)</td>
<td>4</td>
</tr>
<tr>
<td>Blood Culture before broad spectrum Antibiotics (SEP-1 K)</td>
<td>1</td>
</tr>
<tr>
<td>Broad Spectrum Antibiotics (SEP-1 J)</td>
<td>3</td>
</tr>
<tr>
<td>Repeat Lactate (SEP-1 L)</td>
<td>3</td>
</tr>
</tbody>
</table>

**Septic Shock**

- **Denominator**: 10
- **Numerator**: 2

**Failure point (SEP-1 component not met and SEP-1 skip logic indicates)**

<table>
<thead>
<tr>
<th>Failure Point</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 cc/kg IV fluids (SEP-1 N)</td>
<td>3</td>
</tr>
<tr>
<td>Vasopressors indicated (SEP-1 C)</td>
<td>6</td>
</tr>
<tr>
<td>Others?</td>
<td></td>
</tr>
</tbody>
</table>
CMS SEP-1 Preliminary Data

- For EDs receiving regular CMS quality reports on septic shock patients from hospital quality staff.

- For ED’s seeking benchmarking on publicly reported metrics

- Submit the same data provided to you by the hospital now:
  - Monthly or Quarterly → mirror hospital process
  - Usually includes ED and non-ED patients

- Report key data elements each period
  - Total Denominator
  - Total Numerator
  - # cases that failed at each component (antibiotics, IVF, etc)
What is the frequency of the quality of sepsis process care in your ED today?

<table>
<thead>
<tr>
<th></th>
<th>0-25%</th>
<th>26-50%</th>
<th>51-75%</th>
<th>76-100%</th>
<th>Unsure</th>
</tr>
</thead>
<tbody>
<tr>
<td>% patients with septic shock getting lactate checked</td>
<td>3%</td>
<td>0%</td>
<td>12%</td>
<td>74%</td>
<td>12%</td>
</tr>
<tr>
<td>% patients with septic shock receiving broad spectrum antibiotics in less than one hour</td>
<td>3%</td>
<td>9%</td>
<td>21%</td>
<td>48%</td>
<td>19%</td>
</tr>
<tr>
<td>% patients with septic shock receiving 20cc/kg of IV fluids within one hour</td>
<td>3%</td>
<td>7%</td>
<td>30%</td>
<td>40%</td>
<td>19%</td>
</tr>
<tr>
<td>% patients with septic shock and elevated serum lactate with repeat lactate performed</td>
<td>7%</td>
<td>13%</td>
<td>21%</td>
<td>49%</td>
<td>9%</td>
</tr>
</tbody>
</table>
• Rapid dissemination of best practices

• Locally designed solutions are optimal

• Benchmarking and data drive change

• Leadership is essential

• Alignment reduces burden and improves quality

What's your ED’s plan?
E-QUAL and MOC Part IV Credit

- E-QUAL will be listed on the ABEM drop down list of opportunities
  - ED Director will need to be listed attesting that the individual participated in E-QUAL
  - E-QUAL hopes to develop “automatic” credit soon

E-QUAL and CME Credit

- All E-QUAL webinars/podcasts will be associated with eCME credit
- To obtain credit visit the E-QUAL homepage
Welcome to ACEP’s New Clinical Emergency Data Registry

As part of its ongoing commitment to providing the highest quality of emergency care, ACEP has developed the CEDR registry. This is the first Emergency Medicine specialty-wide registry at a national level, designed to measure and report healthcare quality and outcomes. It will also provide data to identify practice patterns, trends and outcomes in emergency care. CEDR is an evolving registry, which will support emergency physicians’ efforts to improve quality and practice in all types of EDs even as practice and payment policies change over the coming years. ACEP has applied to CMS for CEDR to become a “qualified clinical data registry” or QCDR, so to help emergency physicians and clinicians meet both the Centers for Medicare and Medicaid Services’ Physician Quality Reporting System (PQRS) reporting and potentially regional and national certification requirements.

Why Should You Participate?

Instead of being mired in an alphabet soup of reporting requirements, CEDR allows for a single data capture to fulfill the requirements of multiple programs, making your quality measure reporting more efficient. The healthcare environment is transitioning from volume-based to value-based payment for care. The CEDR registry will ensure that emergency physicians, rather than other parties, are identifying what practices work best and for whom.
CEDR Goals

CEDR seeks to accept patient data from practicing emergency clinicians in a registry seeking to:

1. Provide a unified method for ACEP members to collect and submit Physician Quality Reporting System (PQRS), MOC, OCC, Ongoing Professional Practice Evaluation (OPPE) data to meet quality improvement and regulatory requirements.

2. Promote the highest quality of emergency care for patients.

3. Demonstrate the value of emergency care.

4. Facilitate appropriate emergency care research.
CEDR: Qualified Clinical Data Registries (QCDRs)

- Data aggregator platform
  - Utilize data from all sources (billing, EHR) for all patients
- Allows ACEP to develop clinically meaningful and feasible quality measures
- QCDR allows for
  - Benchmarking reports in real-time
  - CMS payment incentives
  - TJC OPPE/FPPE Compliance
  - MOC Part IV activities (in conjunction with ABEM)
Flavors of Data Registries

Clinical Data Registries
- Manually Abstracted Data
- Research Focus
- Hospital reporting
- Minimal payment incentive

PQRS Registries
- Claims-data
- Billing supported
- EP reporting
- PQRS focus

Qualified Clinical Data Registries
- EHR data
- Quality focused
- EP and Group and Hospital reporting
- MIPS focus
Why use a QCDR (CEDR)?

- More measure options
  - PQRS & Non-PQRS Measures
  - ACEP developed measures in CEDR
  - Electronic clinical quality measures
- All payer (not just Medicare beneficiaries)
- Pick measures before reporting
- Also meet TJC OPPE and ABEM MOC Part IV
Example Dashboard

Web Demo practice
CEDR e01: Emergency Department Utilization of CT for Minor Blunt Head Trauma for Patients Aged 18 Years and Older

<table>
<thead>
<tr>
<th>PERFORMANCE TRENDS</th>
<th>LOCATIONS</th>
<th>PROVIDERS</th>
<th>ALL</th>
</tr>
</thead>
</table>

**Performance Trends**

<table>
<thead>
<tr>
<th>QUARTER</th>
<th>ALL</th>
<th>(+)</th>
<th>(-)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014Q2</td>
<td>3347</td>
<td>2622</td>
<td>525</td>
<td>84.31 %</td>
</tr>
<tr>
<td>2014Q1</td>
<td>3195</td>
<td>2770</td>
<td>425</td>
<td>86.70 %</td>
</tr>
<tr>
<td>2013Q4</td>
<td>3177</td>
<td>2810</td>
<td>367</td>
<td>88.45 %</td>
</tr>
<tr>
<td>2013Q3</td>
<td>2645</td>
<td>2357</td>
<td>288</td>
<td>89.11 %</td>
</tr>
</tbody>
</table>
History of sepsis quality measures

- **2008**
  - NQF 500
  - IHI/Surviving Sepsis
  - 1 composite based on EGDT
  - Designed for Quality Improvement
  - Chart Abstracted

- **2010**
  - STOP Sepsis.
  - >10 metrics
  - Process and outcome (mortality)
  - New York Hospital QI Collaborative

- **2015**
  - CMS SEP-1
  - 1 composite
  - 2 populations: severe sepsis and septic shock
  - Public Reporting begins in 2017

- **2016**
  - ACEP CEDR
  - 6 septic shock measures: achievement
  - 1 Outcome measure
  - EHR specified
CEDR Sepsis Measure Development

**Measure Conceptualization**
- Membership Survey
- Technical Expert Panel
- Environmental scan and Literature Review

**Measure Development**
- Technical Expert Panel
- ACEP Sepsis Taskforce
- Public Comment

**Measure Reporting**
- CEDR Validation
- Voluntary PQRS reporting
- E-QUAL reporting
How Do We Measure Quality?

Donabedian Framework of Quality Measurement

- **Structure**
  - PCI Capability

- **Process**
  - Door to Balloon Time

- **Outcome**
  - 30 day AMI Mortality
## 2016 CEDR Sepsis Measures

<table>
<thead>
<tr>
<th>CEDR#</th>
<th>Measure Title</th>
<th>NQS Domain</th>
</tr>
</thead>
<tbody>
<tr>
<td>#28</td>
<td>Septic shock: lactate level measurement</td>
<td>Effective Care</td>
</tr>
<tr>
<td>#30</td>
<td>Septic shock: Antibiotics ordered</td>
<td>Effective Care</td>
</tr>
<tr>
<td>#31</td>
<td>Septic shock: Fluid resuscitation</td>
<td>Effective Care</td>
</tr>
<tr>
<td>#32</td>
<td>Septic shock: Repeat lactate level</td>
<td>Effective Care</td>
</tr>
<tr>
<td>#33</td>
<td><strong>Septic shock: Lactate clearance rate ≥10%</strong></td>
<td>Effective Care</td>
</tr>
<tr>
<td>QI</td>
<td>Septic Shock: Blood Cultures Ordered</td>
<td>Effective Care</td>
</tr>
</tbody>
</table>
CEDR Sepsis Measure Denominator

• Denominator:  
  **Septic Shock**  
  • Based on ED diagnosis
    • Septic Shock
    • Sepsis AND hypotension
    • Infection AND hypotension

• Exclusions
  • Transferred into ED
  • AMA/LWBS/Died
  • Acute trauma
  • AMI
  • Cardiac arrest
  • CMO
  • Seizure
  • Acute pulmonary hemorrhage
  • Acute GI hemorrhage
  • Acute Ischemic Stroke
  • Toxicologic Emergencies
  • Severe burns
## Septic shock: lactate level measurement

<table>
<thead>
<tr>
<th>Numerator</th>
<th>ED visits for patients who had a serum lactate ordered during the ED visit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><em>Lactate</em>: point of care or central lab</td>
</tr>
<tr>
<td>Denominator</td>
<td>All ED visits for patients age 18 years older with septic shock</td>
</tr>
</tbody>
</table>
## Septic shock: Antibiotics ordered

<table>
<thead>
<tr>
<th>Numerator</th>
<th>ED visits for patients who had an order for antibiotics during the ED visit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><em>Antibiotics: IV broad spectrum</em></td>
</tr>
<tr>
<td>Denominator</td>
<td>All ED visits for patients age 18 years older with septic shock</td>
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</table>
Septic shock: Blood Cultures ordered

<table>
<thead>
<tr>
<th>Numerator</th>
<th>ED visits for patients who had a blood culture order during the ED visit</th>
</tr>
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<tbody>
<tr>
<td>Denominator</td>
<td>All ED visits for patients age 18 years older with septic shock</td>
</tr>
</tbody>
</table>

Note: QI Measure that cannot be used for PQRS reporting
# Septic shock: Fluid resuscitation

| **Numerator** | ED visits for patients who had an order for ≥ 1 Liter of crystalloid during the ED visit  
|              | • Crystalloid: NS or LR or “Lytes”  |
| **Denominator** | All ED visits for patients age 18 years older with septic shock  |
| **Additional Exclusions** | • Severe heart failure (ED<30%)  
|                        | • Left Ventricular Assist Device  
|                        | • Acute Pulmonary Edema |
Septic shock: Repeat lactate level

<table>
<thead>
<tr>
<th>Numerator</th>
<th>ED visits for patients with a second serum lactate measurement ordered following the elevated serum lactate result during the ED visit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denominator</td>
<td>All ED visits for patients age 18 years older with septic shock and an elevated serum lactate result (&gt;2 mmol/L)</td>
</tr>
<tr>
<td>Additional Exclusions</td>
<td>• &lt;2 hours in ED following Lactate #1</td>
</tr>
</tbody>
</table>
### Septic shock: Lactate clearance ≥10%

<table>
<thead>
<tr>
<th><strong>Numerator</strong></th>
<th>ED visits for patients with a serum lactate clearance rate of ≥ 10% during the ED visit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Denominator</strong></td>
<td>All ED visits for patients age 18 years older with septic shock and an elevated serum lactate result (&gt;2 mmol/L) and a second serum lactate measurement performed in the ED</td>
</tr>
</tbody>
</table>
| **Additional Exclusions** | • <2 hours in ED following Lactate #1  
• ED administration of epinephrine  
• Drug interaction w/ lactate clearance (i.e NRTI)  
• Acute liver disease  
• End stage liver disease |
CEDR Sepsis Measure Myths

• Myth #1: Sepsis difficult to detect and define
  • Denominator: Septic Shock only

• Myth #2: Our group doesn’t have oversight over nurses
  • All process measures are based on “order”
  • TEP support for this initial approach

• Myth #3: these measures remove my clinical judgement
  • Numerous clinical exclusions developed by EPs for each measure
CEDR Sepsis Measure Myths

• Myth #4: Too burdensome to collect
  • Initial denominator is based on ED diagnosis
  • CEDR offers data pull option
  • eCQMs don’t require manual review after initial set-up

• Myth #5: Many factors result in lactates changing
  • CMS requires one outcome measure for PQRS reporting
  • Exclusions remove many alternative etiologies

• Myth #6: Blood culture ordering is not evidence based
  • We Agree! Blood Cx measure is for QI only, not reporting
  • Provides data to show hospitals
  • Enables future study of regarding utility of blood cultures
Reporting Sepsis Makes Sense

• Clinically meaningful and high-visibility to providers

• Specified as electronic quality measures

• Ability to report 5 measures for Quality Category

• Access to concurrent QI support via E-QUAL Network and many other hospital and local efforts

• Strong CEDR sepsis measure performance likely to result in strong CMS SEP-1 measure performance
For More Information

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