Beating the Clock to Stop Sepsis in One Hour

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Transformation sensei

• Melissa Lin is a Transformation sensei at Virginia Mason Institute.

• Melissa’s national experience in health care strategy consulting has given her breadth and depth across a number of domains, with a particular focus on strategic planning, board governance and strategic partnerships.

• Melissa has also led lean training and coaching for small and large hospital groups, implemented organization-wide strategies and spoken at numerous regional and national health care conferences on the impact of a continuous improvement culture.

• Melissa is certified in the Virginia Mason Production System® and in TapRoot Root-Cause Analysis.
Engaging With Us Today

• Ask questions using the GoToWebinar chat or question tool. We will do our best to address as many questions as possible during the Q & A session or via the chat feature.

• Today’s session will be recorded and posted on our website at VirginiaMasonInstitute.org. All questions and answers will also be posted following the presentation.

• Check your inbox for the recording and question/answer document following this session.
Virginia Mason
OUR STRATEGIC PLAN

Patient
VISION
To be the Quality Leader and transform health care.
MISSION
To improve the health and well-being of the patients we serve.
VALUES
Teamwork | Integrity | Excellence | Service

Strategies
People
We attract and develop the best team
Quality
We relentlessly pursue the highest quality outcomes of care
Service
We create an extraordinary patient experience
Innovation
We foster a culture of learning and innovation

Virginia Mason Foundational Elements
Strong Economics | Responsible Governance | Integrated Information Systems | Education | Research | Virginia Mason Foundation

Virginia Mason Production System
Urgency and Sepsis

• There are more than 18 million cases of sepsis worldwide each year, and it kills more than 258,000 Americans annually.¹,²

• Sepsis is the primary cause of death from infection.² Patients diagnosed with sepsis are estimated to have a mortality rate of 28 to 50 percent.³

• Patients with initially less severe sepsis make up the majority of sepsis deaths. In one study, septic shock was not present in 68 percent of patients who died from sepsis.⁴ Improving standardized care for patients with less severe sepsis could drive future reductions in hospital mortality.


Sepsis was the major cause of mortality in our institution with 2276 deaths from 2008-2014.

Sepsis was responsible for 47% of the total mortality cases over this 7 year time period.
Sepsis Survivors Experience

• Longer lengths of stay with high utilization of precious healthcare resources

• Higher rates of readmission

• Experience long term injury and effects of the disease which could be life altering
Early Sepsis Recognition and Treatment

**Sepsis**
SIRS + Possible Infection

**Severe Sepsis**
Sepsis + Injury
- Lactic Acid
- Creatinine
- Delirium

**Septic Shock**
Hypotension

**SIRS**
Any 2:
- TEMP > 38.0 < 36.0
- HR > 90
- RR > 20
- WBC > 12, < 4
- > 10% bands

**Diagnosis**
- IV fluids
- Lactate test
- Blood cultures
- Antibiotics

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Researchers have found that each hour of delay in administering antibiotics results in an average decrease in survival of 7.6 percent.\(^1\)

Additionally early sepsis was targeted because two-thirds of those who die do not have sepsis on arrival.\(^2\)


\(^2\) Liu et al. Hospital Deaths in Patients With Sepsis From 2 Independent Cohort. JAMA July 2014
Sepsis Power Hour

RN Work
- Identify Sepsis
- Check Lactate
- Draw Blood Cultures
- Start Bolus

MD Work
- Confirm Sepsis
- Start Antibiotics
- Complete Bolus

Pharmacy Work
- Prioritize Antibiotics
- Dose and Prepare
- Deliver

< 30 minutes
< 60 minutes
SNIP: Sepsis Nurse Initiated Protocol

Time Required

Without SNIP

Waiting

RN

With SNIP

Waiting

RN

Provider

Target Time

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2 Key Elements of Success

Empower your care team to take immediate action.

Rapidly bring services directly to the patient.
“Dr. Calderon,

Thank you for using the order set and ordering antibiotics STAT! The patient received antibiotics in 31 minutes, well under our 60 minute target.

Thanks again,

Alice”
“I think the best thing about Sepsis Power Hour is that it brings care to the patient without the patient having to wait; it really leverages the whole multidisciplinary team exactly where their skills and strengths are and the ultimate beneficiary is the patient.”

— Alice Ferguson, RN
Results at Virginia Mason Medical Center

**Lead Time Reduction**

The average lead time of sepsis bundle completion decreased by 54% between 2014 and 2017.

140 min.  →  64 min.

**Sepsis Mortality Rates**

(2011 versus 2016)

Since 2011, patient mortality due to sepsis decreased by 45%.
Sepsis Power Hour Bundle

1-hour bundle
To Learn More About our Sepsis Solution

The Sepsis Power Hour solution
https://www.virginiamasoninstitute.org/sepsis-power-hour/

Learn about additional trainings and services
www.VirginiaMasonInstitute.org

Email us
Info@VirginiaMasonInstitute.org
Question and Answer Session

Ask your questions via the chat feature or the question tool.
A lean journey is a learning journey™