UCLA Health Sepsis Program

UCLA’s Sepsis Program comprises a comprehensive infrastructure aligned with “High Reliability” organizational principles. The program uses an interdisciplinary approach to improve overall patient outcomes through sustainable actions. The program uses current education and outreach, care connect improvements, clinical champions, and data analysis to improve overall care of the septic shock patient.

### UCLA HEALTH High Reliability Organization & Sepsis Program

**Areas of Innovations and Future Opportunities: Sepsis Continuum of Care**

**2018 GOALS**

1. Standardize UCLA definition for Sepsis that integrates definitions for Sepsis 2.0, 3.0 and includes SOFA and qSOFA using ICD-10.
2. Develop unit based and service line specific dashboards (Include Time of Presentation).
3. Implement evidence based and highly reliable innovations in Care Connect to support clinical decision making.
4. Ensure appropriate resources to support the sepsis program, i.e. Full time sepsis coordinator
5. Improve compliance with CMS (SEP-1) core measure. Track & develop learning system from fallouts
6. Define emergency response for sepsis, and integrate the surveillance team initiatives i.e. code sepsis
7. Research and complete a gap analysis on the Joint Commission certified sepsis center accreditation.

**Long Term Goals**

- Research Program Integration
- Joint Commission Sepsis Certified Center
- Integration of Clinical Documentation Teams into Sepsis Improvement
- Complete infusion of sepsis language in clinical practice

**Suspect Sepsis. Save Lives.**

### UCLA Health Key Findings

- Of all patient deaths at UCLA, Septic patients account for 25-34%, and Septic Shock patients have an average mortality rate of 40%
- Septic patients generate >1000 excess bed days per year
- On average 20% of septic patients readmit
- Septic patients stay 20% longer than other patients
- Bundle Compliance (CMS SEP-1) RRMC 25%  SMMC 48%
- 27% of clinical surveillance encounters are related to Sepsis and 30% of initial deterioration
- Greater than 75% of Septic patients present in the Emergency Department at SM and 64% at RR
- 2/5 patients who are diagnosed with severe sepsis or septic shock will die before leaving the hospital

**UCLA Health Best Practices**

- A comprehensive sepsis infrastructure
- Santa Monica ED Bundle Compliance improved ~25% from 2015-2017
- Repeat Lactate compliance increased from 71% at SM and 87% at RR in Jan ’17 to 100% in March ’17
- 90% of nurses screen their patients upon admission to the unit

### Barriers

- Alignment with Care Connect/ISS
- Dedicated resources for data analytics
- Systematic organizational support
- Consensus about treatment of septic shock/severe sepsis treatment among Physician groups
Sepsis Program Infrastructure

- Mortality Sepsis
- Coordinator: Summer Maxwell
- ValU Support: Sabrina Adelaine
- Business Owner: Kim Ternavan
- Physician Champion: Russ Kerbel

Executive Committee
- Adelaine Lee Galuska
- Kerry Gold
- Nursing
- Lynne Harrison
- Pediatrics: Sabrina Greco-RN
- Outreach: Carson Del Greco/Lisa Harrison
- Physician: Meng Wei
- Physician: Lynne Harrison
- Physician: Sabrina Nichols
- Physician: Mary Lawanson
- Physician: Yuhan Kao
- Physician: Kim Ternavan
- Physician: Russ Kerbel
- Physician Champion:
- Information Technology: Carson Del Greco/Lisa Harrison
- Information Technology: Meng Wei
- Data: Lee Galuska
- Data: Lynne Harrison
- Data: Trudy Rhodes
- Data: Meng Wei
- Data: Lisa Harrison
- Data: Meng Wei
- Education & Outreach
- Adelaine Lee Galuska
- Physician: Sabrina Adelaine
- Physician: Lynne Harrison
- Physician: Sabrina Greco-RN
- Physician: Sabrina Nichols
- Physician: Mary Lawanson
- Physician: Yuhan Kao
- Physician: Kim Ternavan
- Physician: Russ Kerbel
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- Physician Champion: Russ Kerbel
- Information Technology: Carson Del Greco/Lisa Harrison
- Information Technology: Meng Wei
- Data Development: Meng Wei
- Data: Lisa Harrison
- Data: Meng Wei
- Abstractor Specialists: Trudy Rhodes
- Pediatrics: Sabrina Greco-RN
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Sepsis Bundle Timeline

**SEVERE SEPSIS & SEPTIC SHOCK: EARLY MANAGEMENT BUNDLE**

**COMPLETE WITHIN 1 HOUR (max)** following initial time of presentation (TOP)
- **Initial Lactate Level** (per nursing protocol, no co-sign required)
- **Blood Cultures** X 2 sets (per nursing protocol, no co-sign required)
- **Anesthesia for Intubation/Endotracheal Intubation** (if most recent lactate level per nursing protocol, no co-sign required)

**COMPLETE WITHIN 6 HOURS (max)** following initial time of presentation (TOP)
- **Administer IV broad spectrum antibiotic** on or after approved combination of antibiotics
- **Administer IV fluid bolus of 30mL/kg** (per nursing protocol, no co-sign required)
- **Bedside cardiovascular ultrasound** (contact MD/NP/PA for orders)
- **Anesthesia for Intubation/Endotracheal Intubation** (if most recent lactate level per nursing protocol, no co-sign required)

**Hydrocortisone 500mg IV push** (contact MD/NP/PA for order)

**Repeat volume & tissue perfusion assessment** any combination of the following:
- Cardiopulmonary exam, AND
- Central venous pressure (CVP) measurement, AND
- Central venous oxygen saturation (sCVO2) measurement, AND
- Determination of perfusion, AND
- Capillary refill evaluation, AND
- Peripheral pulse evaluation, AND
- Skin exam, OR
- **Any two of the following**
- Central venous pressure (CVP) measurement, OR
- Central venous oxygen saturation (sCVO2) measurement, OR
- Renal cardiovascular abnormal, OR
- Positive leg rise or fluid challengeWithin 1 hour of presentation (TOP)