BARDA DRIVe Solving Sepsis Program

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Why is DRIVE taking on Sepsis?

**MORBIDITY**

1.7 Million

Each year in U.S.

Source: CDC.gov

**MORTALITY**

~270,000 Americans die each year

>80,000 are discharged to hospice

**MANAGEMENT**

1:3 patients who die in hospital have sepsis

**ECONOMIC BURDEN**

Responsible for nearly $24 Billion Annually (6.2% of hospital costs)
Sepsis is a secondary confounder that arises from primary insults and threatens our ability to protect our Nation.

BARDA’s Mission

Develop medical countermeasures against CBRN, influenza and emerging infectious disease threats, to minimize public health impact.

Targeting pathogen or insult is critical, but not always sufficient.

Life-threatening organ dysfunction caused by a dysregulated host response to infection.
All Roads Can Lead to Sepsis
Accelerate the development of transformative technologies and approaches to protect Americans from 21st century health security threats, including reducing the: 

- Incidence
- Morbidity
- Mortality
- Cost

associated with sepsis by investing in key strategic areas.
Program Vision

Public Awareness
- Virtual partnerships
- Patient and clinician decision support toolkits

Prediction
- Continuous Monitoring Devices/integrated feedback
- Data enclave access

Prevention
- Machine learning algorithms
- Host-Based biomarker identification
- POC/wearable device
- AI clinical prediction/management

Diagnosis

Prognosis

Mitigation
- Redirect host response, restore homeostasis
- Individualized plans

Recovery
- Prevent hospital readmission

The Importance of Data

Establish Sepsis Data Enclave
- Develop sepsis repository/distributed network
- Standardized, curated data
- Interrogate data with algorithms
- Exploit electronic health records

Leverage Data to Enhance Care
- Develop decision support toolkits
  - Diagnostic
  - Prognostic: sepsis trajectory
  - RT feedback on SOC
  - Individualized treatment based on patient profile
- Discover Host-Based Biomarkers
- Determine factors that lead to survival based on care protocol
- Stratify patient populations

Measure Improved Outcomes
- Develop sepsis metrics (incidence, morbidity, mortality, readmission) for baseline modeling
- Assess impact of prevention and mitigation approaches by monitoring changes over time

Incidence, morbidity, mortality vs. Time

How can you help solve Sepsis?

Partner with us to Solve Sepsis
Submit to the Broad Agency Announcement (EZ-BAA)
Area of Interest #2

Sepsis Interests

- Innovative solutions
- Proof of concept or pilot programs to demonstrate potential for future investment
- Sepsis relevant
- Means to improve access and collaboration across disparate data systems

- Not interested in targeted pathogen approaches
  - All roads can lead to sepsis
  - Pathogen-specific therapeutic or diagnostic approaches, not of interest at this time

We are looking for catalytic not incremental approaches to Solving Sepsis!
SOLVING SEPSIS TOGETHER

Novel Public Private Partnerships with USG, HealthCare and Industry is critical to our success!
How to Engage

• Start a conversation!
  ▪ Dr. Kim Sciarretta, Acting Program Manager- Solving Sepsis
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  ▪ Dr. Tim Buchman, Advisor to Solving Sepsis, Tim.Buchman@hhs.gov
  ▪ Dr. Steve Simpson, Advisor to Solving Sepsis, Steven.Simpson@hhs.gov

• Present your technology
  ▪ [https://www.medicalcountermeasures.gov/home.aspx](https://www.medicalcountermeasures.gov/home.aspx) - Portal to BARDA: Register to request a TechWatch meeting

• Check out the DRIVe website for more information:
  ▪ DRIVe.hhs.gov