
DEPARTMENT OF HEALTH & HUMAN SERVICES · USA
ASPR

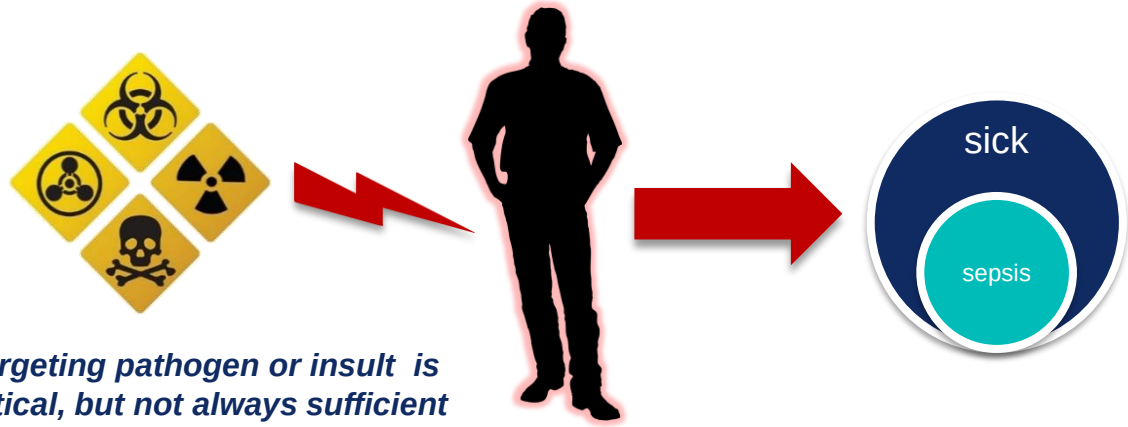

SOLVING
SePSIS

Solving Sepsis

BARDA mission is to develop MCMs against CBRN, flu and emerging infectious disease threats, to minimize public health impact

DRIVe WILL SAVE LIVES BY SOLVING SEPSIS

Sepsis is a secondary confounder that arises from primary insults – threatens our ability to protect our Nation



Targeting pathogen or insult is critical, but not always sufficient

The General Problem

Enormous healthcare impact to the US public and growing each year…

MORBIDITY	MORTALITY	MANAGEMENT	GROWING COST
1.5 Million people each year in U.S.	**>250,000** people die each year **>80,000** are discharged to hospice	**1:3** patients who die in hospital have sepsis CDC Centers for Disease Control and Prevention	responsible for nearly **$24 Billion** Annually (6.2% of hospital costs)

Sepsis is a life-threatening organ dysfunction caused by a dysregulated host response to infection (Sepsis-3)

Challenges in Current Practices

Infection	Diagnosis	Intensive Care	Inability to restore homeostasis
Lack of patient education/awareness	Lack of accurate biomarkers	Standard of care practices inadequate	
Sepsis not considered by physician	Misdiagnosis	Lack of understanding of immune dysregulation	
Delayed pathogen detection & treatment (incorrect antibiotic, AMR, etc.)	Delayed access to healthcare	Patient comorbidities	
		Patient population heterogeneity (age, background, pathogen)	

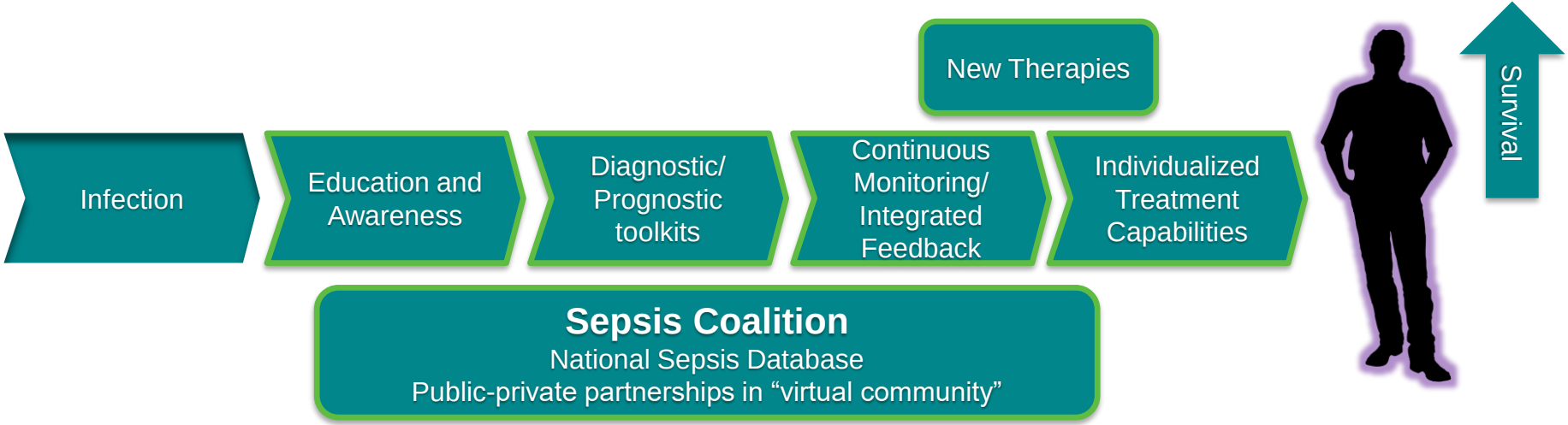
Mortality rises 7% for every 1hr appropriate antibiotics are delayed

Death from sepsis may occur rapidly despite medical care

DRIVe Solving Sepsis Program Vision

Goal: Reduce the incidence, morbidity and mortality due to sepsis annually by investing in **target areas** throughout the patient treatment plan

- Develop decision support toolkits to empower the individual and the clinician
- Develop technologies that can restore and maintain homeostasis of the patient



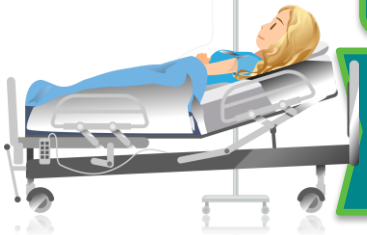
Solving Sepsis

PREVENT RE-ADMISSION

PATIENT → **CLINIC VISIT** → **ICU CLINICAL MANAGEMENT**

Education and Awareness*

Diagnostic// Prognostic toolkits



New Therapies

Diagnostic// Prognostic toolkits

Continuous Monitoring/ Integrated Feedback

Individualized Treatment capabilities

National sepsis database

Integrated Feedback

Machine Learning/AI

*Virtual Community

***Not expected to be funded via traditional BAA mechanism**

DRIVe

INVESTMENT TARGET AREAS

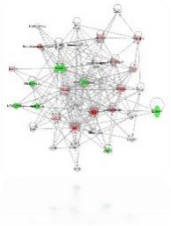
Enabling Technologies

Database: No central Sepsis repository exists

Continuous Monitoring: Need to monitor dynamic changes

Point-of-Care Prognostic/Diagnostic: Host vs. pathogen based

Biomarker discovery



Host-pathogen pathway analysis

Individualized treatment approaches to restore homeostasis