

What Physicians Need in CDS

Dr. Bela Patel

Let me tell you a story.....

Advancing Clinical Decision Support A Clinician's Perspective

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Sepsis Wolf

- 10th most common cause of death in US
- Leading cause of death in ICU
- 18 billion dollars/year
- Sepsis is the body's response to infection
 - Severe sepsis: multiple organ dysfunction
 - Septic shock: hypotension
 - Septicemia: bloodstream infection
- Estimated 800,000 cases of severe sepsis per year in the US
- Rate increasing by 1.5% per year estimated additional 1 million cases by 2020
- Mortality 30-40%





Sepsis/Wolf Recognition

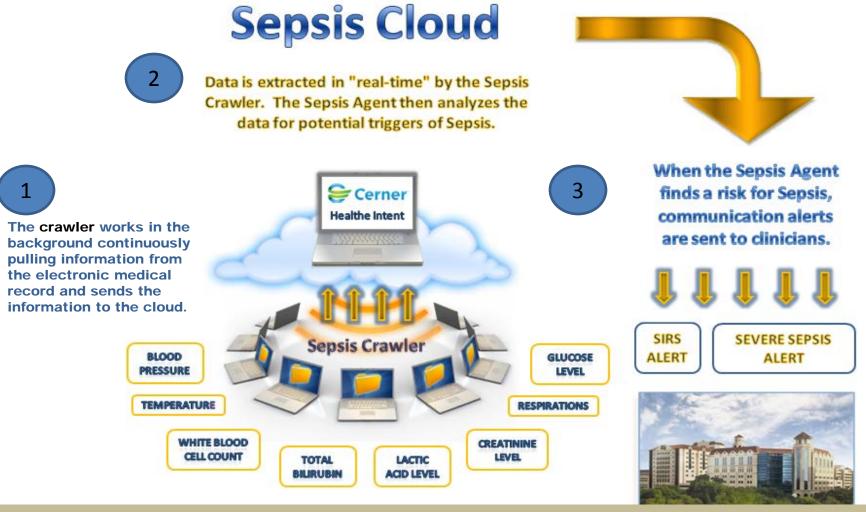
- What big eyes you have
- What big ears you have
- What sharp teeth you have
- What long nails you have

- WBC count
- Fever
- Tachycardia
- Respiratory rate elevation

Evaluation for Severe Sepsis Screening Tool

	the patient's history sugges	tive of a n	ew intection?		
	Pneumonia, empyema		Bone/joint infection		Implantable device
	Urinary tract infection		Wound infection		infection
	Acute abdominal infection Meningitis		Bloodstream catheter infection		Other
	Skin/soft tissue infection		Endocarditis		
Δ.	re any two of following signs	& sympto	ms of infection both present	and new	YesI
			ms of infection both present ed for inpatients but may not		to the patient? Note
la		en obtain	ed for inpatients but may not Tachypnea > 20 bpm	be availa	to the patient? Note
la	Hyperthermia > 38.3 °C (101.0 °F)	en obtain	ed for inpatients but may not	be availa	to the patient? Note whole for outpatients. Leukopenia (WBC coun 4000 µL-1)
la	Hyperthermia > 38.3 °C (101.0 °F) Hypothermia < 36 °C	en obtain	ed for inpatients but may not Tachypnea > 20 bpm Acutely altered mental status	be availa	to the patient? <u>Note</u> ble for outpatients. Leukopenia (WBC coun 4000 µL-1) Hyperglyoemia (plasma
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Cloud Technology



Think of the crawler as a physician on constant rounds, continuously analyzing clinical parameters (The Cloud) and adding them up to determine if SIRS/Sepsis is possibly present (The Alerts).

You tell me a story......



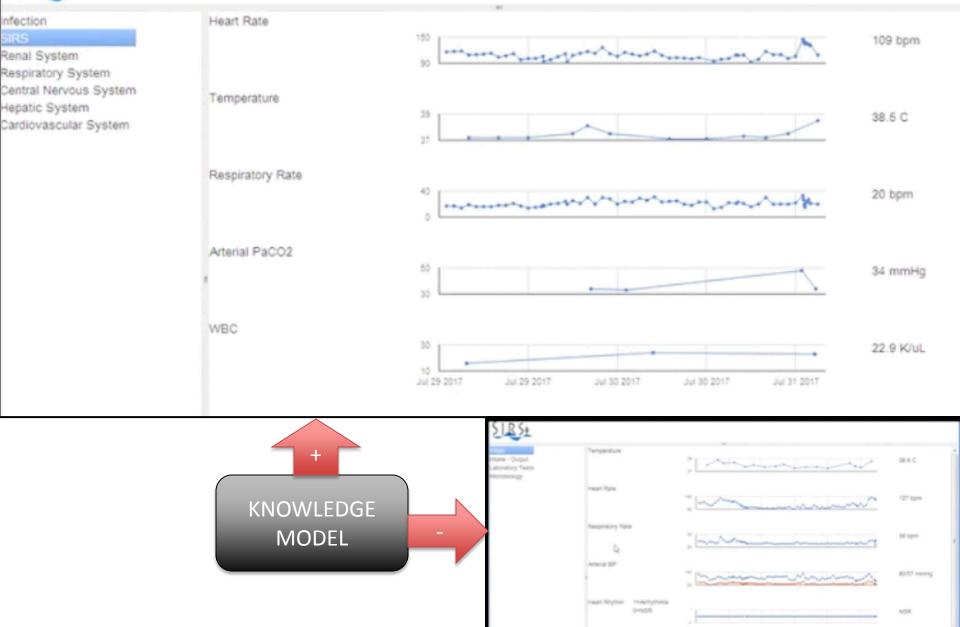




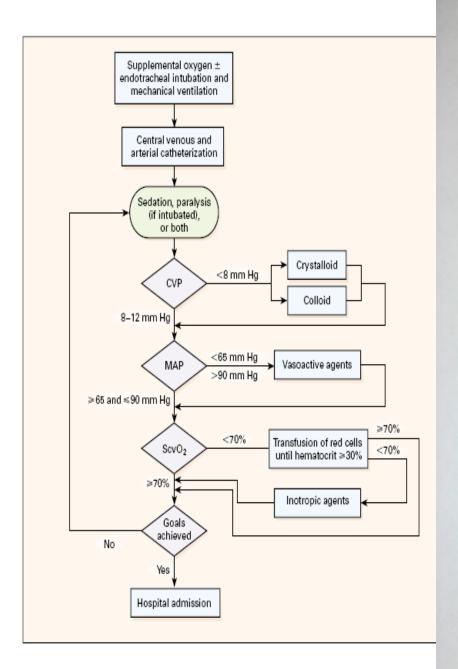


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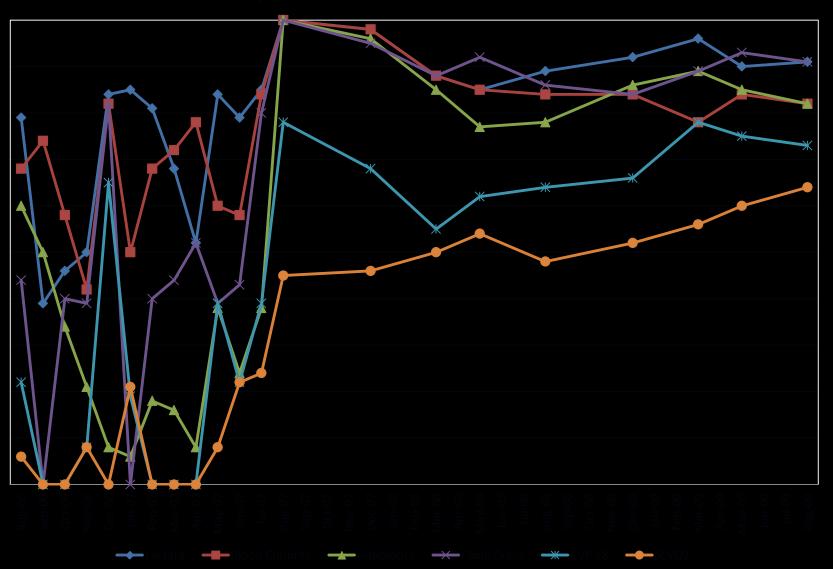








Compliance with Bundle Elements



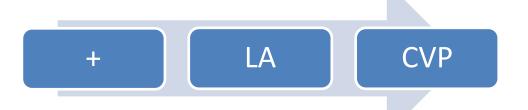


Command Central Clinical Decision Support

- Time to Detection
- Time to Initiation
 - Antibiotics
 - Fluids
 - Vasopressors



- Lactic Acid normalization
- Urine output targets
- Organ dysfunction resolution
- Time to de-escalation



Clinical Decision Support Future State

- Preventions Systems
- Early Detection Systems
- Early Intervention Systems
- Organ response Systems
- De-escalation Systems

Save Grandma



