Billings Clinic

Early Sepsis Identification at the Point of Triage

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ICU Clinician

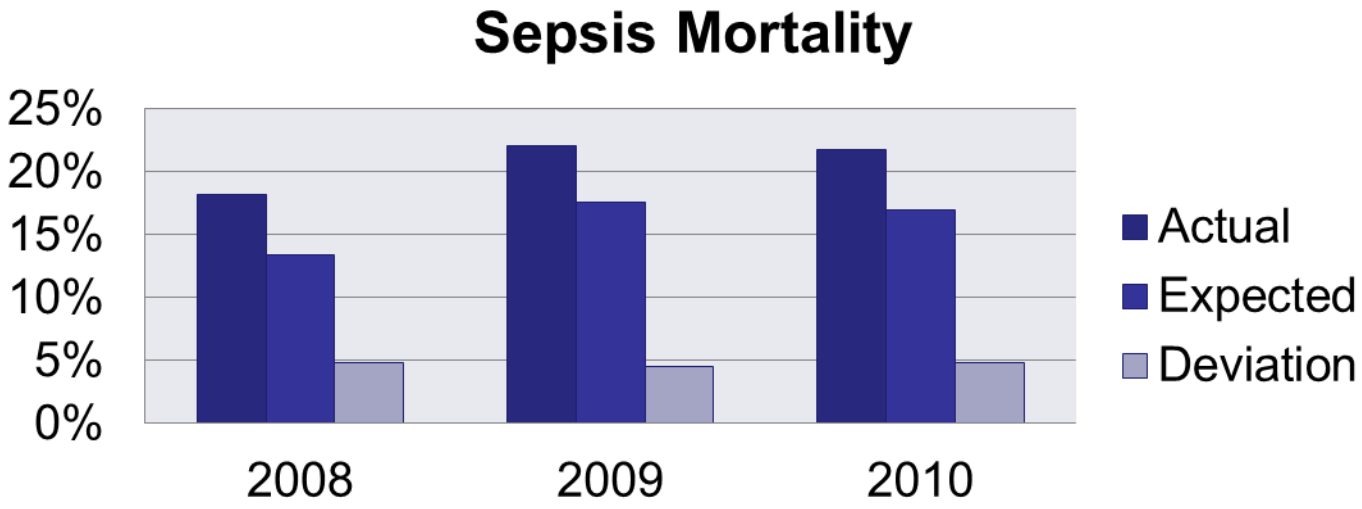
Billings Clinic

- Community-owned health care organization
- 272 bed hospital
- Magnet Designation

Purpose

- Sepsis is the 10th leading cause of death in the United States
- Patient's admitted with septic shock have 46% mortality rate
- Mortality increases with delay in treatment

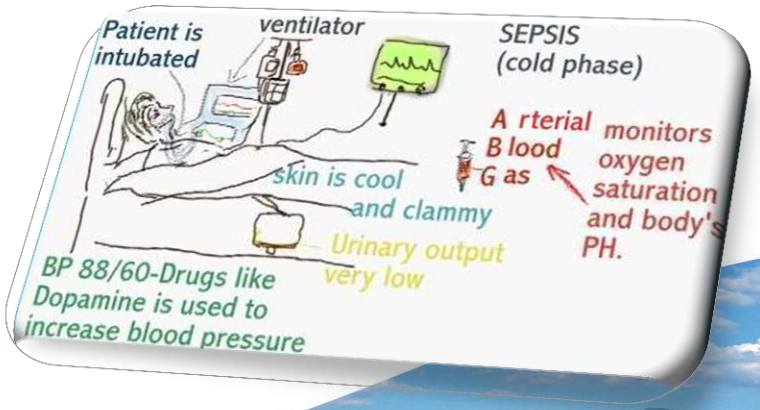
What our data showed



- Our actual mortality exceeded our expected mortality
- Something had to be done!

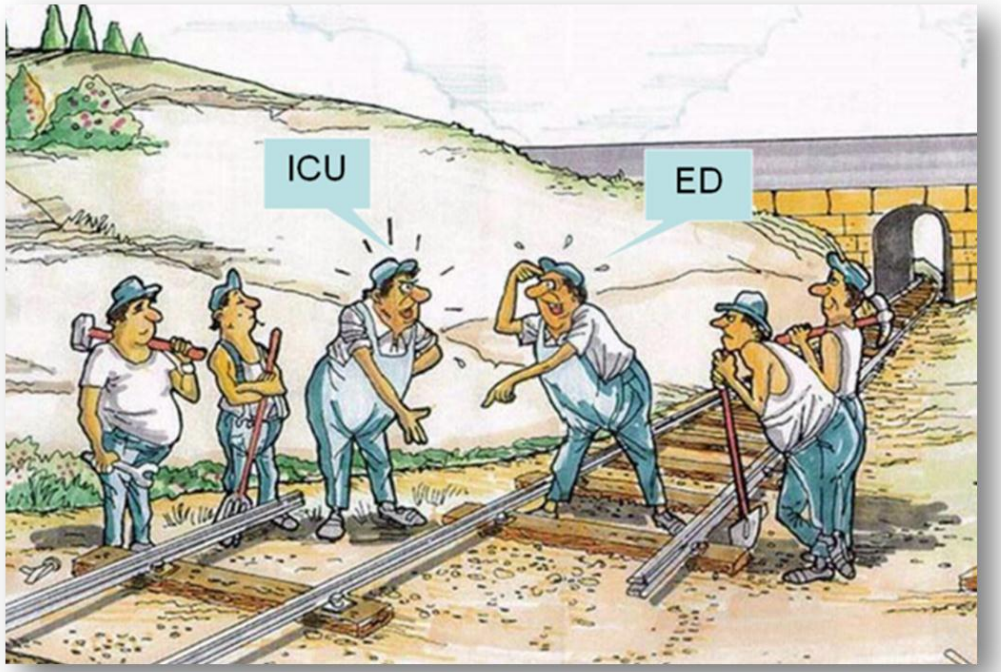
Goal

- Improve mortality
  - Early identification
  - Patient placement for treatment
    - Up to 3 patients per month were transferred to ICU within hours of admission to the hospital with Sepsis



Multidisciplinary Team

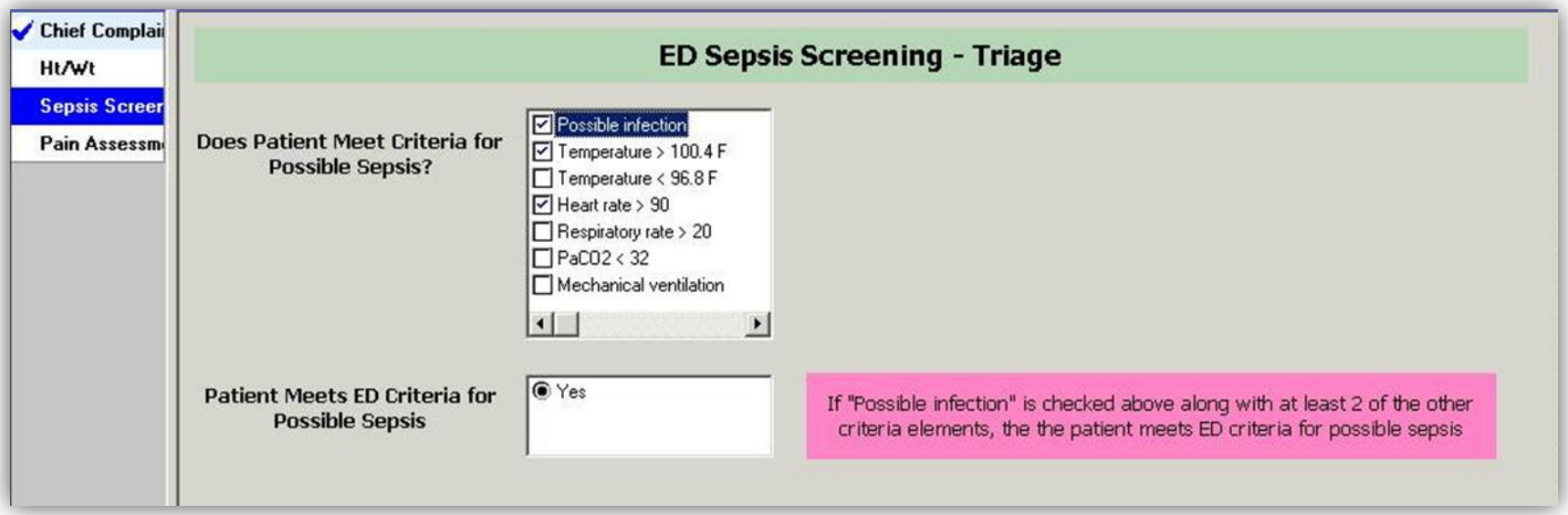
- ICU
- ED
- Pharmacy
- Med-Surg
- Informatics

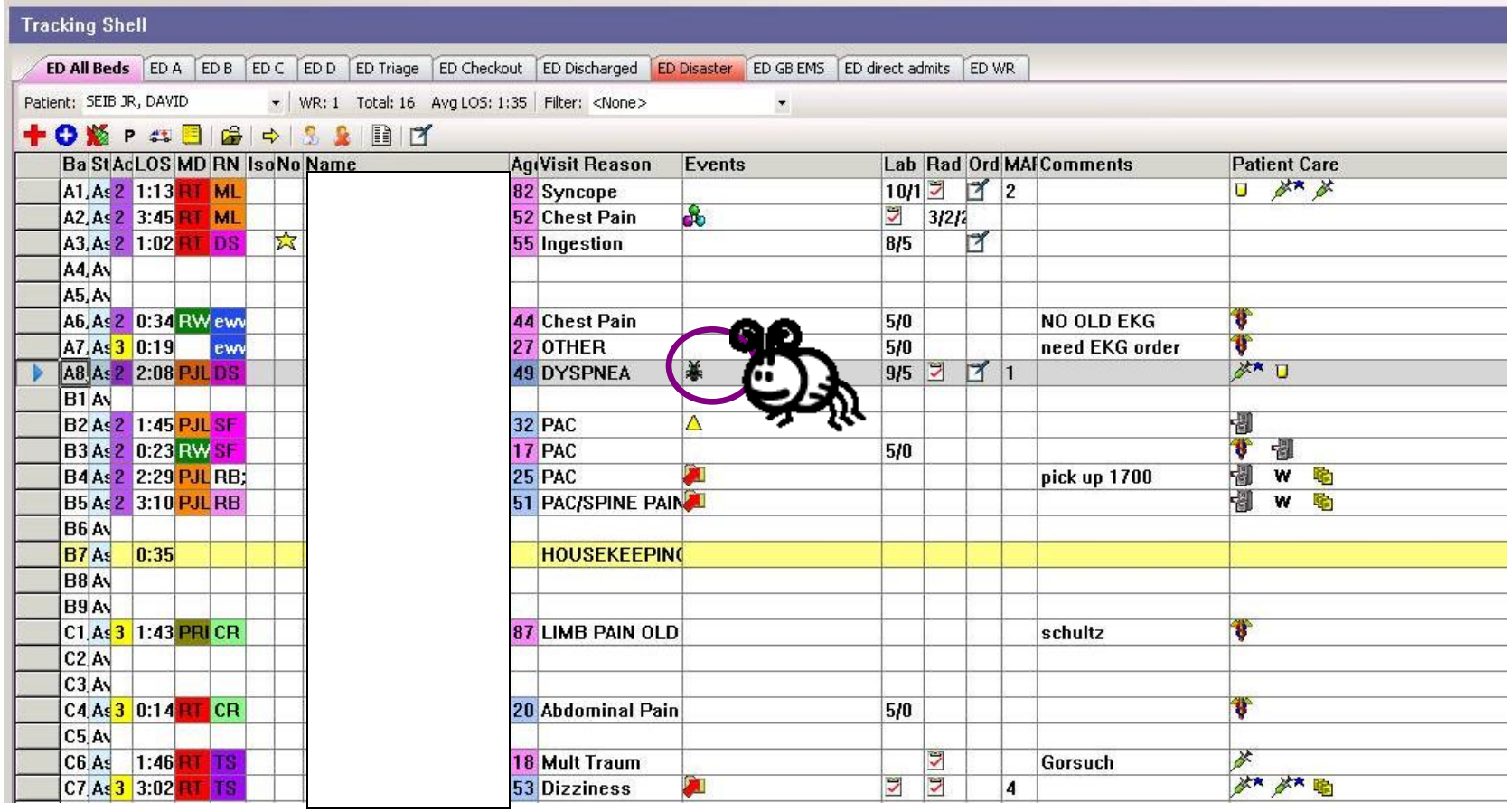


Process

- ED triage
- Computerized cue
- Standard order sets
- Guidelines for patient placement
- Nursing and medical staff education

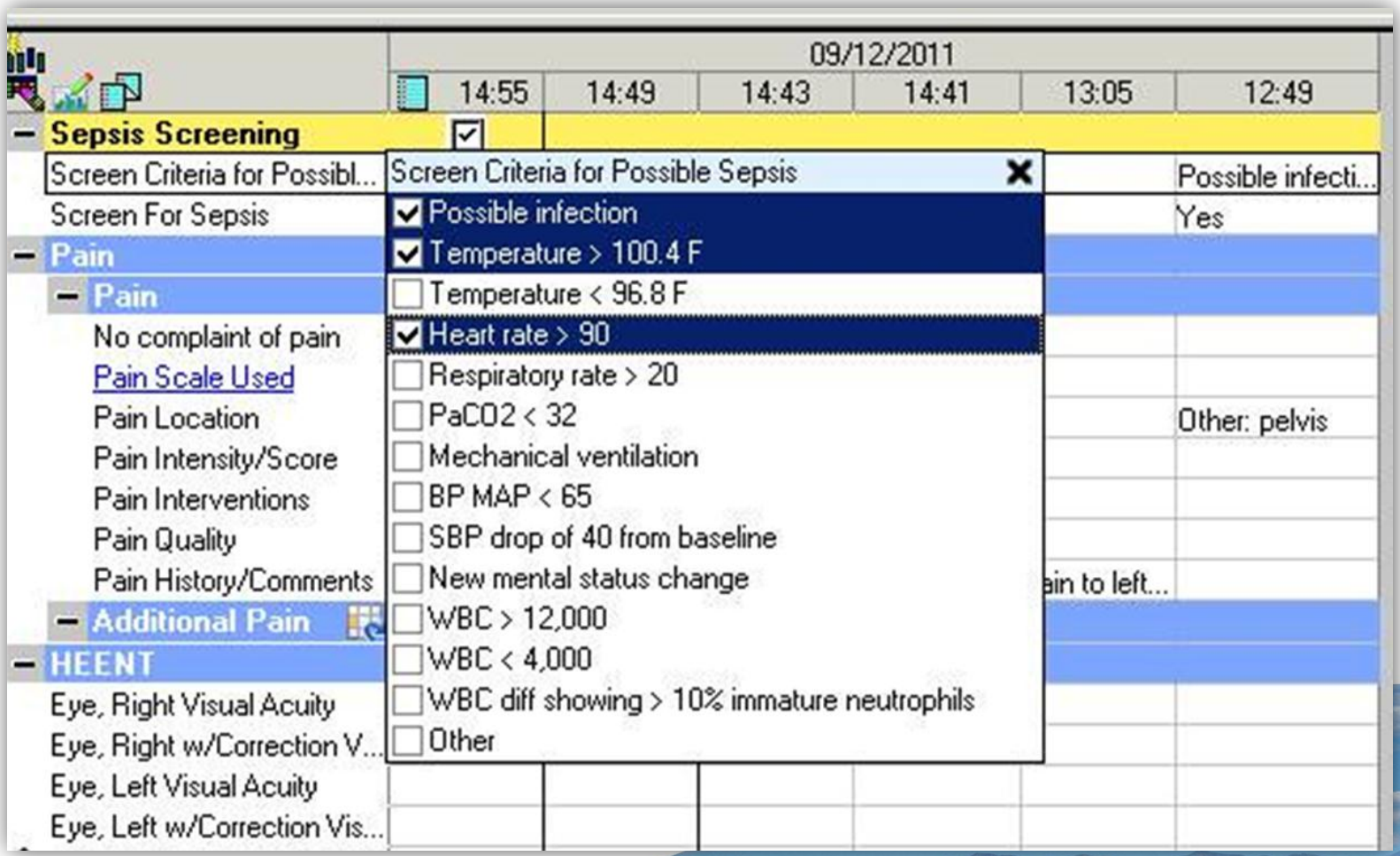
ED initial triage and screening





ED Identifier

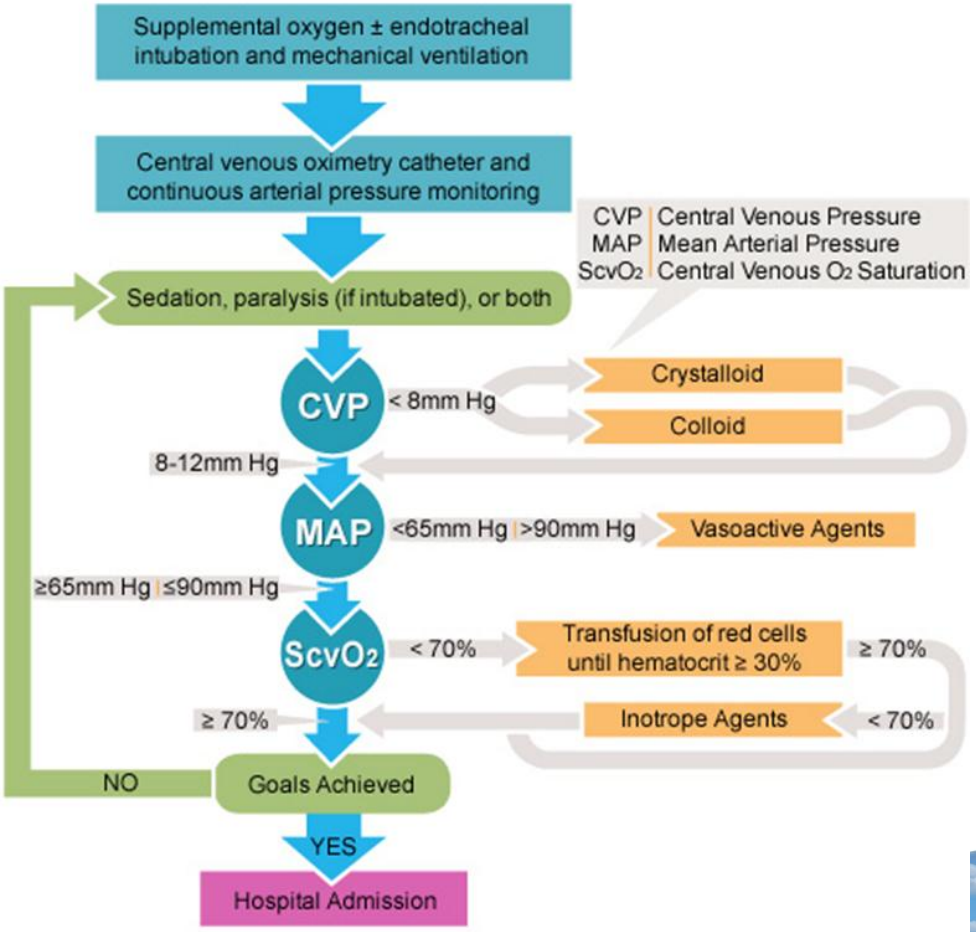
ED 2nd Screening



Admit to ICU

- Suspected Sepsis
- Lactate >3
- Greater than 2 organ failure

Early Treatment



Med-Surg Education

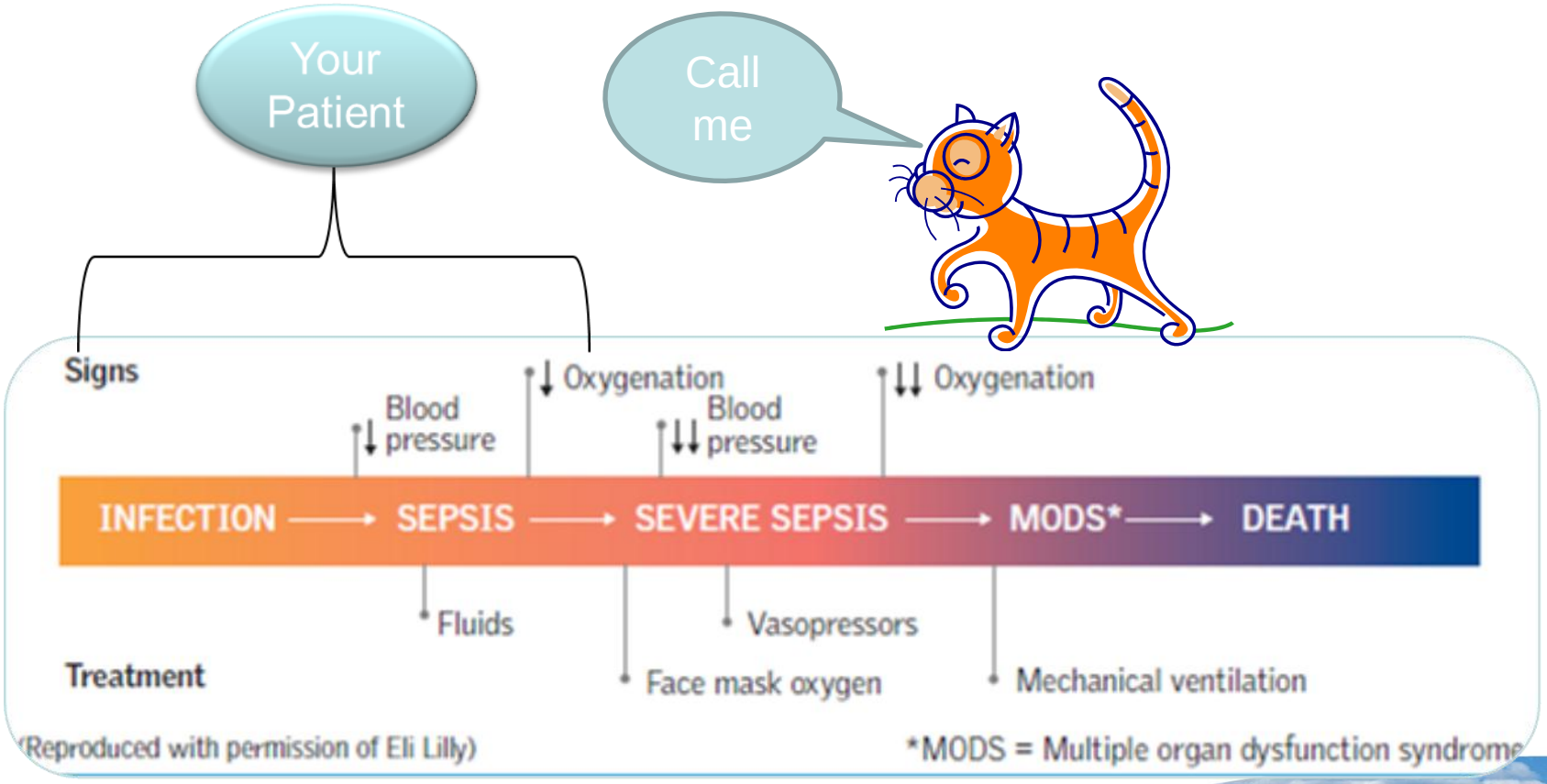
Early Identification

- Vital Signs
  - Blood Pressure
    - Drop of 40 from baseline
  - MAP
    - Less than 65
  - HR, Pulse
    - Greater than 90
  - RR
    - Increased greater than 20
  - Temperature
    - Greater than 100.4 F
    - Less than 96.8 F
- Change in 2 or more systems
  - LOC, mentation
  - Increased RR, work of breathing
  - Urine output
- Labs
  - WBC—identify signs of infection
    - Greater than 12,000
    - Less than 4,000
  - Lactate—indicates perfusion
  - Cultures—identify source of infection

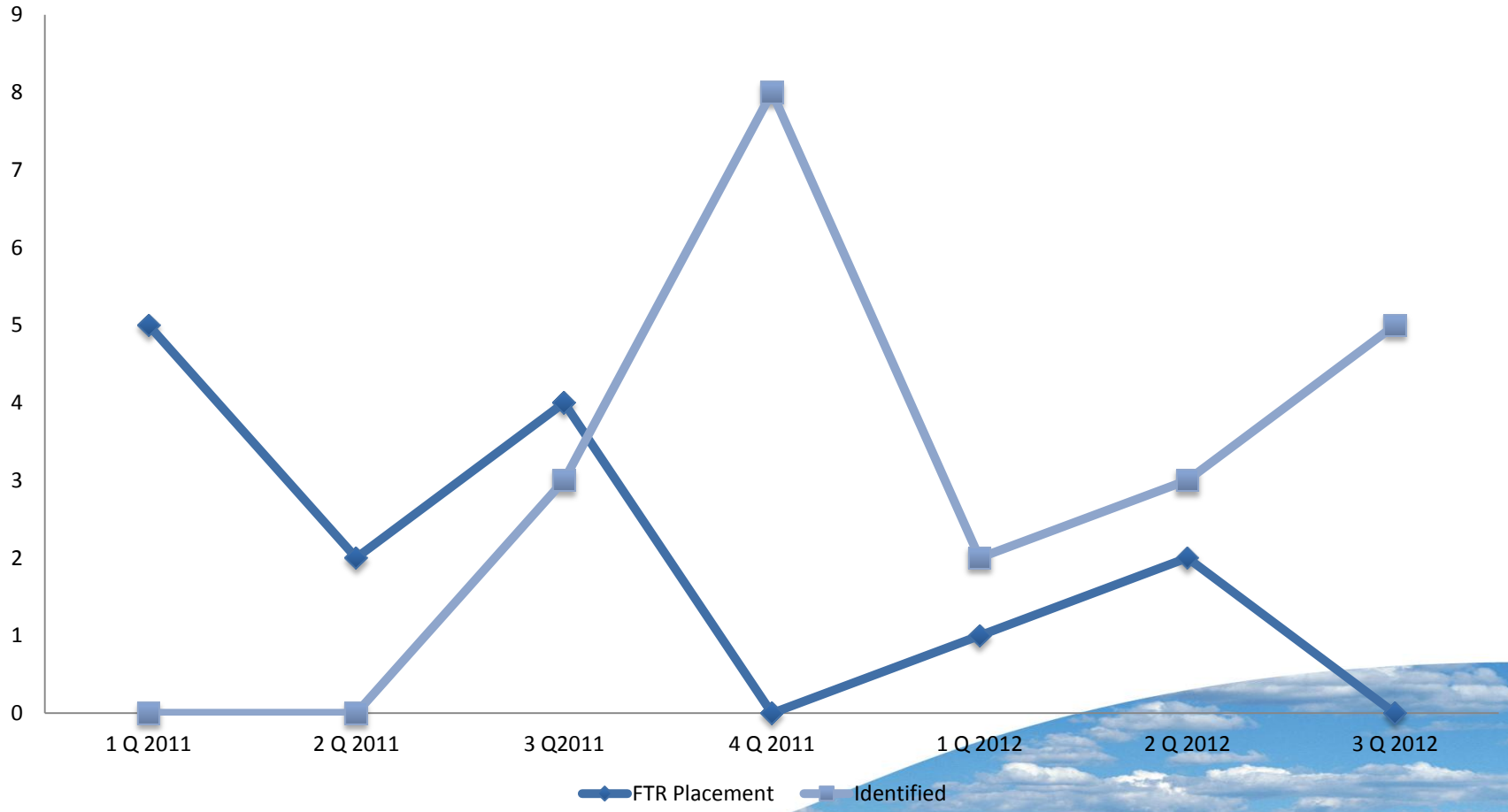
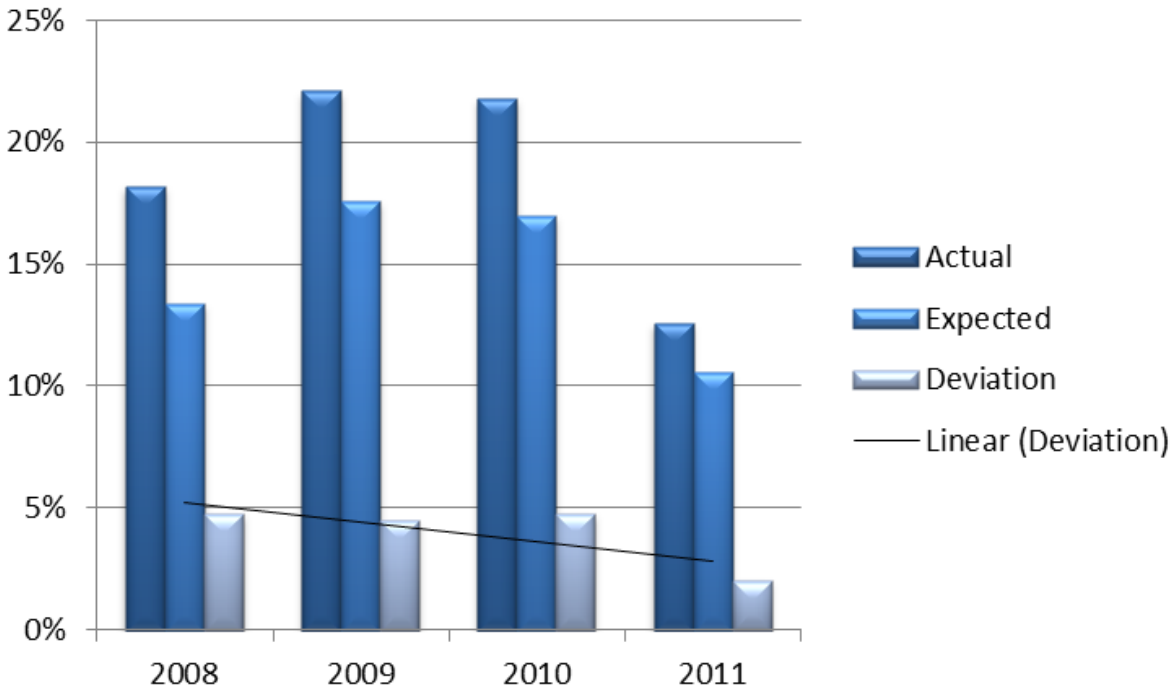
April 2012, Sherry Herbert and Pam Zimecker

- Mandatory Classes
- Sepsis Case Studies
- Failure to recognize individual case reviews

Med-Surg Involvement



Patient Placement and Case Identification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