Improving ED Sepsis Identification and Time to Treatment Initiation

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BACKGROUND

- In 2015, the Centers for Medicare & Medicaid Services implemented the Severe Sepsis and Septic Shock Early Management Bundle, a new measure to assess quality of care for septic patients.

- In the FY 2019, there were **56 failures** of the Sepsis CMS Core (**SEP-1**) Measure in our hospital

- A quarter of these failures resulted from **missing the 3-hour window for appropriate antibiotic administration**, indicating room for improvement in identifying these patients sooner so care can be initiated promptly

PROJECT AIM

Global Aim: To improve quality of care and time to treatment initiation for septic patients presenting to VMC's Emergency Department

Specific Aim: To decrease the number of sepsis bundle failures by 25% by the end of FY 2021

PROJECT DESIGN/STRATEGY

- Nursing focused interventions

Triage Screening tool: based on SIRS criteria, intended to both raise awareness & identify common patient attributes

Sepsis Gimkit Game: education tool

Sepsis Narrator: nursing based documentation tool that prompts time-based interventions

- Provider focused interventions

ED Sepsis Order Set: prompts appropriate fluids, antibiotics, labs

CHANGES MADE (PDSA CYCLES)

- **PDSA #1: Triage Screening Tool**

  – Within a week of the roll-out, very few tools had been completed. Feedback indicated that adding a manual step to existing workflow was unnecessarily complicated, so the tool was discontinued

- **PDSA #2: Sepsis Narrator**

  –Nursing documentation tool that prompts time-based interventions based on patient presentation and vital signs. Following implementation, staff felt it was double documentation and wanted to explore other job aids including: paper check lists, reminder signs

- **PDSA #3: Sepsis Gimkit Game**

  –An online interactive educational tool, the game consists of 50 questions about sepsis management. This was distributed to ED nursing staff as part of their required education.

- **PDSA #4: Sepsis Order Set (current cycle)**

  - When patients are identified as septic or at risk for sepsis, the order set can be used to prompt appropriate interventions. It includes suggested labs, fluid, and antibiotic suggestions based on suspected source
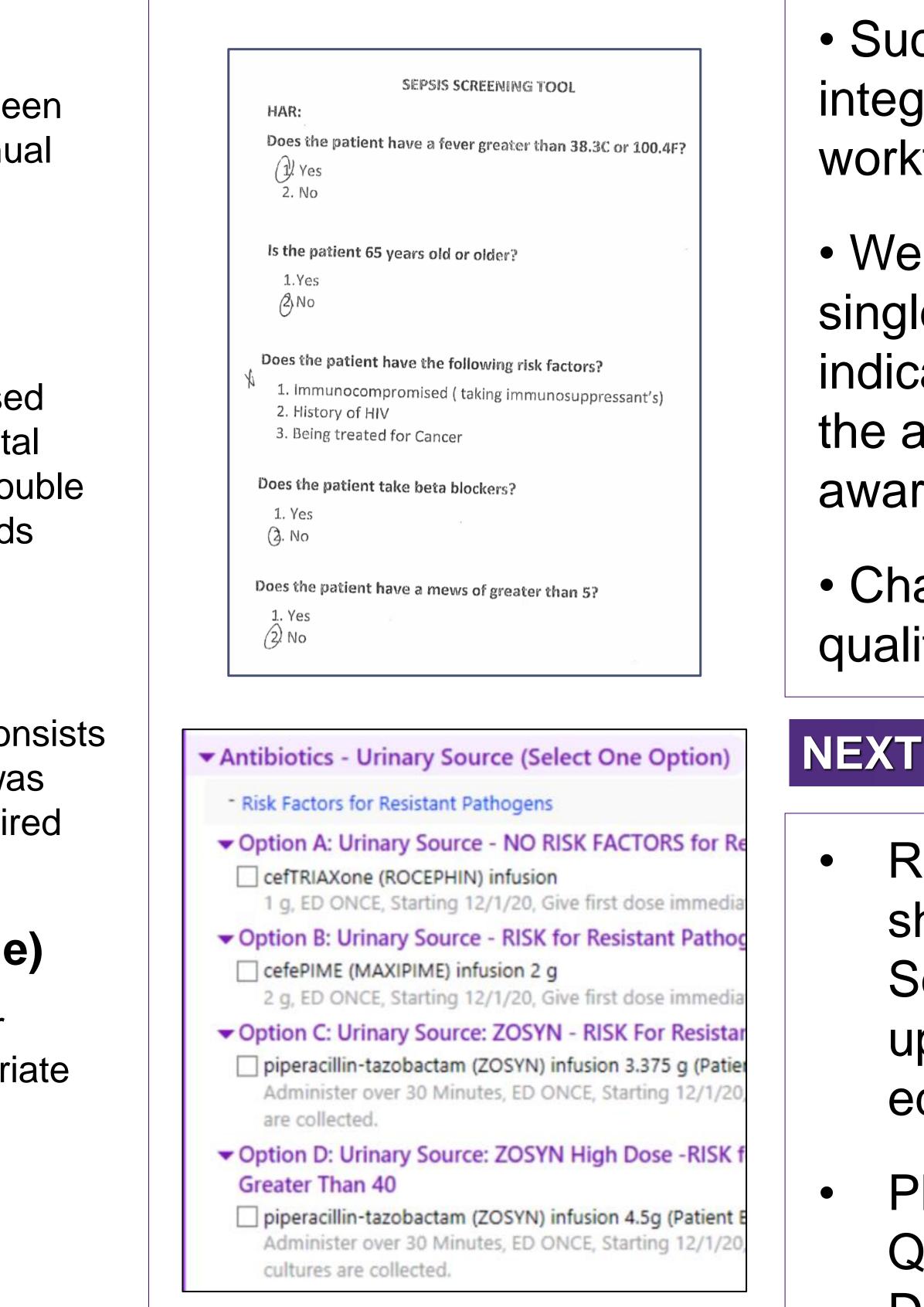

RESULTS/OUTCOMES

	SEP-1 Rate
FY 2019	44%
FY 2020	46%

Represents a **5%** reduction in the failure rate

While we have not yet met our goal of 25% reduction, we are moving in the appropriate direction. This month, our success rate has been 100% thus far, an encouraging start for FY 2021

LESSONS LEARNED

- Successful interventions are integrated into preexisting workflow, not separate from it

- We have had success without a single "home-run" intervention, indicating that a combination of the approaches (or simply raising awareness) has been key

- Challenges of COVID-19 and quality improvement initiatives

NEXT STEPS

- Recently developed a "tips sheet" for the Sepsis Order Set that will be included in upcoming ED resident education

- Planned partnership with Quality and IT to validate new DI index to increase identification.

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