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# **REDUCING TIME TO ANTIBIOTICS IN THE EMERGENCY DEPARTMENT USING A COMBINATION ANTIBIOTIC BAG IN SEPSIS THERAPY**

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# Background/Methods

## Time-based Therapy Goals for Sepsis and Septic Shock

- Three-hour bundle → Surviving Sepsis Campaign 2016 One Hour Bundle

### Combination Antibiotic Bag (CAB):

- 1000 mg vancomycin, 2000 mg cefepime in 1 L 0.9% NaCl
- Pilot period showed improved antibiotic delivery time
- Evaluation of large-scale use desired

### Methods: Retrospective cohort study

- **Pre-CAB “Control” cohort: 10/1/17 – 5/31/18**
- **CAB “Intervention” cohort: 10/1/18 – 5/31/19**
  - Post-intervention, CAB not used (usual care)
  - Post-intervention, CAB used

# Results

	Pre-CAB Control (n = 352)	Post-No CAB (n = 602)	Post-CAB (n = 172)	P value*
Time to Antibiotics start, Minutes, mean (SD)	185.8 (129)	165.6 (140)	98.3 (75)	<0.001
Duration from Triage to Fluid Complete, Mean (SD)	176.2 (127)	174.7 (132)	127.2 (77)	<0.001
Mortality, N (%)	82 (23%)	84 (14%)	15 (9%)	<0.01
Admitted to ICU, N (%)	194 (55%)	265 (43%)	69 (40%)	<0.001
ICU Hours if Admitted to ICU, Mean (SD)	134.2 (263)	128.1 (206)	84.8 (100)	0.11

\*P value for Pre-CAB vs Post-CAB

# Discussion

- **Limitations**

- No random assignment to treatment
- Increased sensitivity/response by providers even if they didn't choose CAB therapy (*heightened focus around sepsis*)
- Difficulty in determining fluid end time (*assume 30 minutes?*)
- Variability in antibiotic accessibility

- **Further analysis**

- Continually evaluating data set, assessing for outliers

For additional questions, please contact:

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