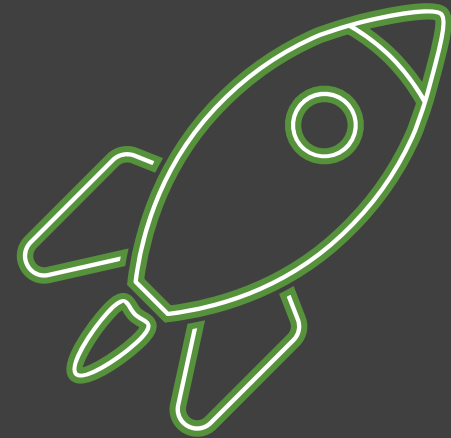




Fighting Sepsis with B.L.A.S.T.E.R.S.



Malika Alibhai Qureshi
MBA, BSN, RN, CPHQ

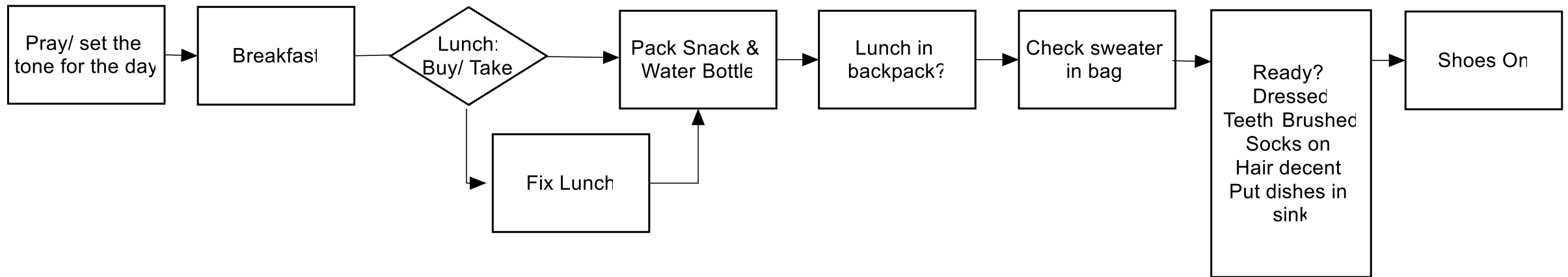
Objectives

- 1) Recognize communication breakdown as a top contributor of SEP-1 bundle fallouts
- 2) Use of B.L.A. mnemonic to treat all patients with suspected sepsis
- 3) When indicated, use of S.T.E.R.S. mnemonic

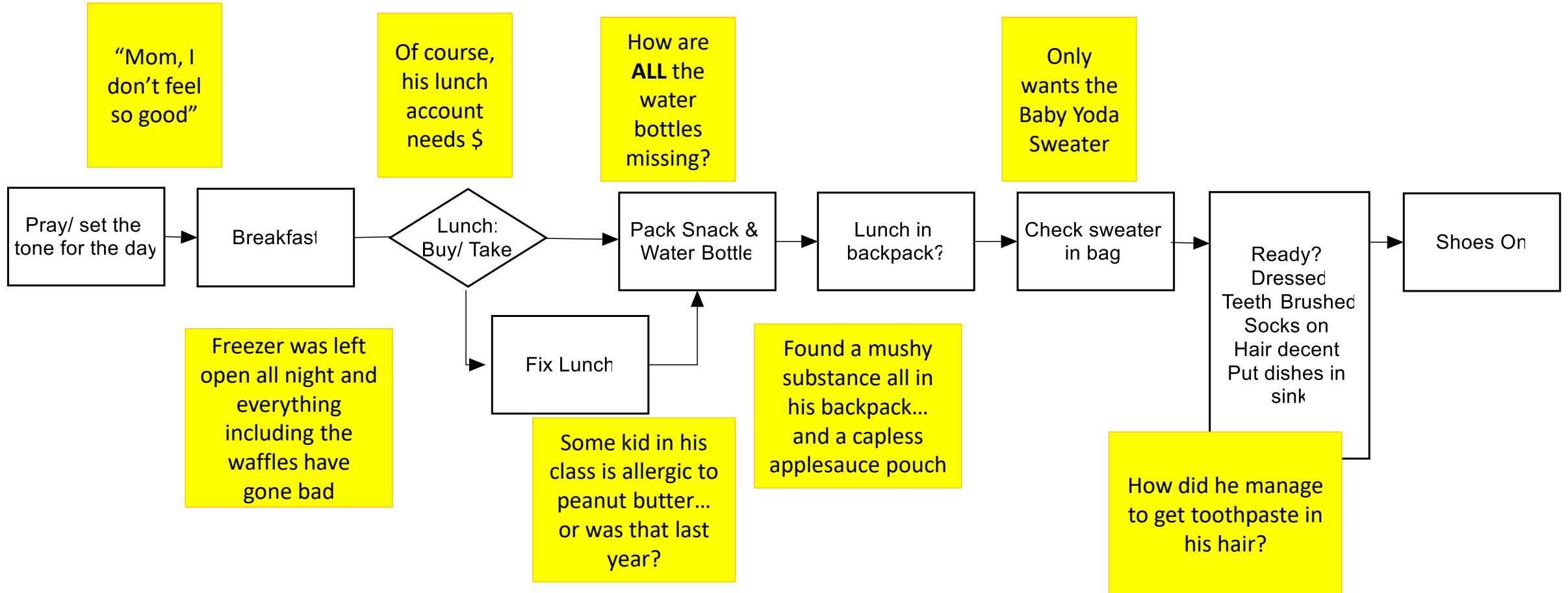
Conflict of Interest Statement

No conflict of interest was identified.

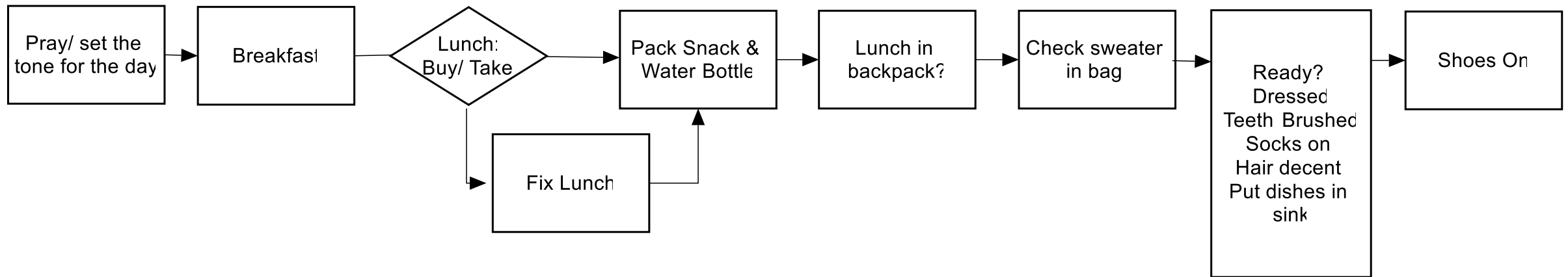
Processes



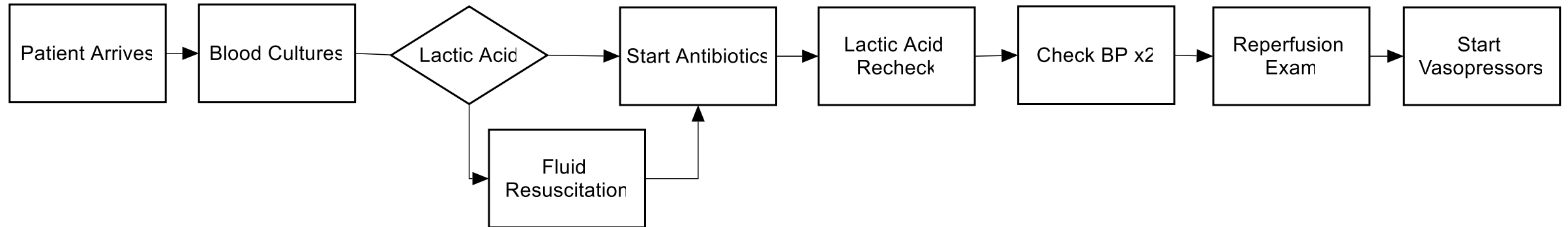
Inevitable Issues



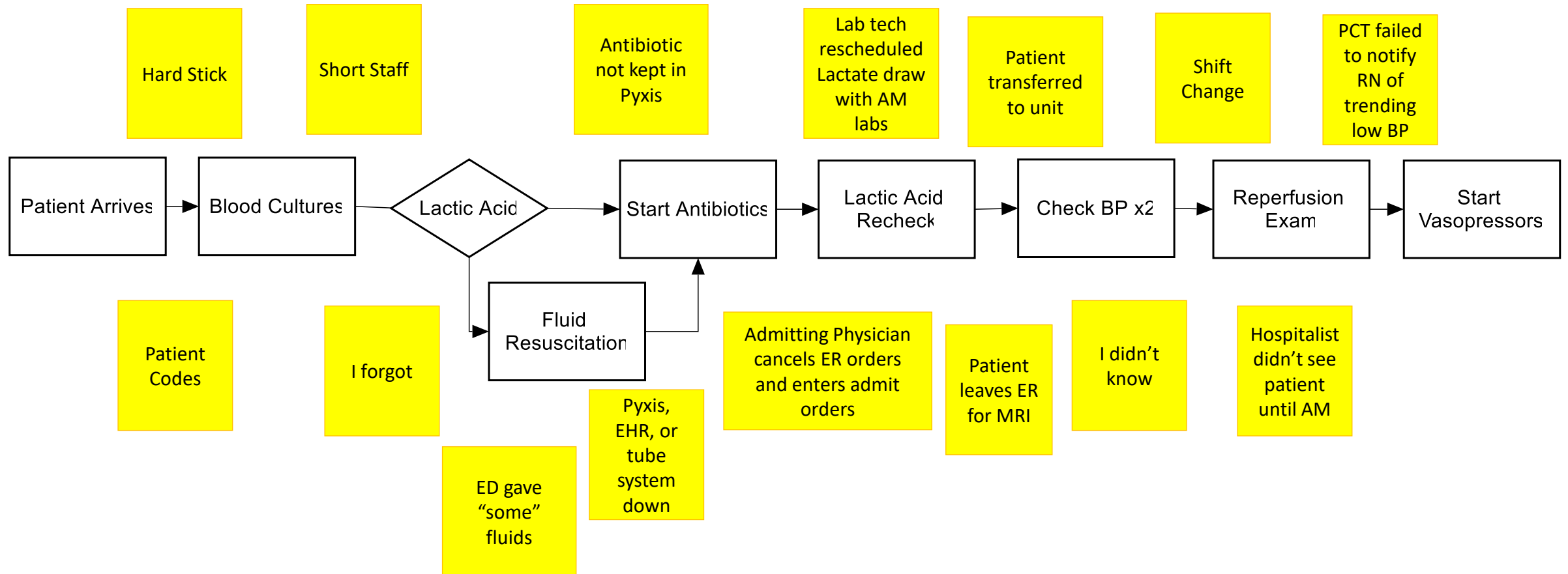
Processes



Processes: Sepsis Care



Inevitable Issues



Common Denominator?

PCT had
difficulty
establishing
access

Lab tech
rescheduled
Lactate draw
with AM labs

Admitting Physician
cancelled ER orders and
entered admit orders

Short staff,
RN had
multiple
priorities

Patient
transferred to
unit

Shift Change

PCT failed to
notify RN of
trending low
BP

Patient
Coded

Antibiotic not
kept in Pyxis

Pyxis, EHR,
or tube
system
down

ED gave
“some” fluids

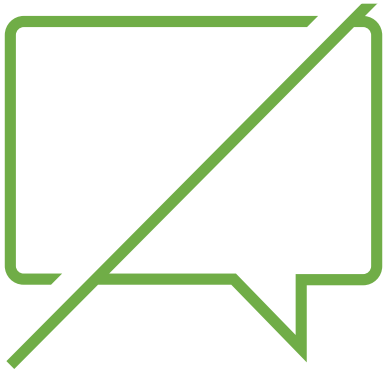
Patient left
ER for MRI

Hospitalist
didn't see
patient until
AM

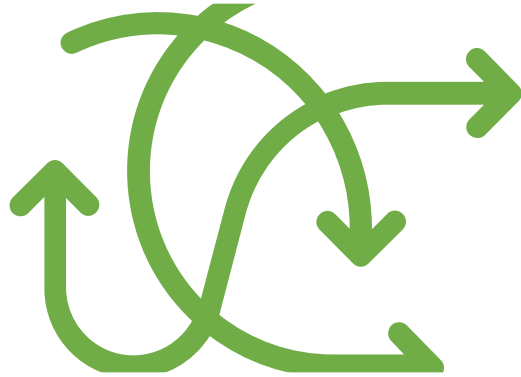
I forgot

I didn't
know

Common Denominators



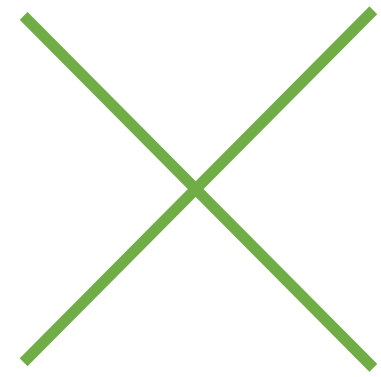
Communication
Breakdown



Complex Process



Lack of education/
knowledge



Human Error

Why a Checklist

1. Human Error Is Inevitable

Checklists help compensate for our natural tendency to forget or overlook steps—especially under pressure.

2. Promote Predictability

They reduce cognitive overload by streamlining tasks into manageable, repeatable actions.

3. Boost Efficiency

Checklists improve organization, enhance preparedness, and foster better team coordination by making responsibilities clear and directable.

4. Enhance Accuracy

By minimizing distractions and mitigating the effects of interruptions, checklists help maintain focus and precision.

5. Flexible and Adaptable

Easy to update and modify as processes evolve, making them a dynamic tool for continuous improvement.

Checklists

Morning Process

- ☐ Breakfast
- ☐ Lunch
- ☐ Snack
- ☐ Water
- ☐ School supplies/ folder
- ☐ Sweater
- ☐ Dressed
- ☐ Clean(ish)
- ☐ Attitude/ Pray
- ☐ Stretch goal (clean up his own dishes)

Sepsis Process

- ☐ Blood Cultures
- ☐ 1st Lactic Acid
- ☐ Antibiotics
- ☐ 2nd Lactic Acid
- ☐ Fluid Bolus
- ☐ Recheck BP x2
- ☐ Physician Reassessment
- ☐ Start Vasopressors

Still a lot to remember...

Where do I even keep this list?

Not applicable to all patients...

Eventually staff will “see” the list without seeing it/habitation

Birth of B.L.A.S.T.E.R.S.

Evidence-based treatment

Mnemonic

Goals

Handoff communication

SEPSIS BLASTERS TOOL

PATIENT STICKER

This flowsheet is a tool to ensure continuity of care, prevent gaps, and optimize patient outcomes. It **does not supersede physician orders** and is intended to be used as a reference for collaborative discussions. Always discuss treatment options with patient/ family and document any refusal of care.

Keep this tool in the patient's chart until completed.

*If you think your patient may be septic, use **BLASTERS!***

	(A) Time Sepsis is first suspected or Triage End Time	Time	Goal	
B	Blood Cultures		< 60 minutes from (A)	
L	Lactic Acid (Initial):		< 60 minutes from (A)	
A	Antibiotics: IV Antibiotics STAT		< 60 minutes from (A)	
S	Serial Lactic Acid Order: Repeat every 2 hours x 3 total 2 nd lactate (regardless of 1 st level)		2 hours from 1 st lactic acid collection	
	3 rd lactate (regardless of 1 st and 2 nd levels)		2 hours from 2 nd lactic acid collection	
(B) Time Lactic Acid resulted ≥4 or Hypotension developed				
T	Thirty (30) mL/kg Crystalloid (LR or NS) IV Fluid Bolus: Only required for lactic acid ≥4 or hypotension (SBP<90 or MAP<65) Not recommended for patients with COVID19		< 3 hours from (B)	
	pt weight (kg) x 30 mL = _____ mL (recommended total volume)			
	Fluid bolus volume already infused _____ (clarify per MAR)			
E	Tips: - If using ideal body weight, physician/ ACNP must document patient is obese or BMI>30 and IBW calculation must be documented in the chart - If patient has CHF or ESRF, can order less than 30mL/kg but must use the sepsis order set and ERSEPSIS or Inpatient Sepsis Note to ensure documentation requirements are met. - If concerned patient will not tolerate full 30mL/kg at ≥ 999mL/hr, physicians/NP can consider: - Slow bolus: 30mL/kg of crystalloid fluids infusing @ a rate of ≤ 126mL/hr		< 3 hours from (B)	
	Examination of Fluid Status by Physician/ACNP: Fluid status reassessment/ reperfusion exam completed and documented			
	Recheck Vitals x2: Complete and document 2 full sets of vitals			
S	Start Vasopressors: If hypotensive within the hour of bolus completion, start vasopressors ASAP - Central line or minimum of 2 PIV's - Acceptable to start vasopressors while fluid bolus is still infusing		Within 1 hour of bolus completion	
	Time of Transfer to ICU _____ Palliative Care or Hospice Consult? Yes No			

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	S Serial Lactic Acid Order: Repeat every 2 hours x 3 total 2 nd lactate (regardless of 1 st level)		2 hours from 1 st lactic acid collection
	3 rd lactate (regardless of 1 st and 2 nd levels)		2 hours from 2 nd lactic acid collection

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	Tips: - If using ideal body weight, physician/ ACNP must document patient is obese or BMI>30 and IBW calculation must be documented in the chart - If patient has CHF or ESRF, can order less than 30mL/kg but must use the sepsis order set <u>and</u> .ERSEPSIS or Inpatient Sepsis Note to ensure documentation requirements are met. - If concerned patient will not tolerate full 30mL/kg at ≥ 999mL/hr, physician/NP can consider: - Slow bolus: 30mL/kg of crystalloid fluids infusing @ a rate of ≥ 126mL/hr			
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Time of Transfer to ICU			Palliative Care or Hospice Consult?	
			Yes	No

Rollout

Initial Barriers

Paper

Buy In

Accountability

Leadership Support

Staff turnover



Today

System Level

- Required annual training for all inpatient RNs across THR
- Reference in system policy
- Reference in EHR

Hospital Level

- New hire training
- Binder on every unit
- Taught at staff meetings/ unit-based skill fairs
- Disease specific online reference
- Purposeful rounding
- Kudos and Opportunity forms

Using BLASTERS to Decrease Time to Antibiotics in the ED

Stephanie Mariot, MSN, RN, RNC-OB, C-EFM



SEPSIS BLASTERS TOOL		PATIENT STICKER
Keep this tool in the patient's chart, or with the patient, until completed.		
If you think your patient may be septic, use BLASTERS!		
(A) Time Sepsis is first suspected or Triage End Time		
B Blood Cultures	Time	Goal
L Lactic Acid #1 - 1st level drawn, and serial order entered		< 60 minutes from (A)
A Antibiotics: Broad spectrum IV Antibiotic STAT		< 90 minutes from (A)
S Serial Lactic Acid #2 - Result must be on the chart two hours from prior result (be sure to give yourself time to draw and send).		2 hours from 1 st lactic acid result
S Serial Lactic Acid #3 - 3 rd lactate may be canceled if the first two are each less than or equal to 2.0 after consulting with physician (be sure to give yourself time to draw and send).		2 hours from 2 nd lactic acid result
(B) Time Lactic Acid resulted 24 or Hypotension developed (SHOCK)		
T Thirty (30) mL/kg Crystalloid (LR or NS) IV Fluid Bolus. Only required for lactic acid 24 or hypotension (SBP < 90 or MAP < 65). pt weight (kg) x 30 mL = _____ mL (recommended total volume) Fluid bolus volume already infused _____ (initially per MAR). If volume is restricted, MD will document reason for restriction of volume. Tips: • If using ideal body weight, physician/ACNP must document patient is obese or BMI > 30 and IBW calculation must be documented in the chart. • If concentrated patient will not tolerate full 30mL/kg at $\geq 88\text{mL/kg}$, physician/ACNP can consider: • Slow bolus: 30mL/kg of crystalloid fluid infusing @ a rate of $\geq 12\text{mL/kg/hr}$.		< 3 hours from (B)
E Examination of Fluid Status by Physician/ACNP: Fluid status reassessment/reperfusion exam completed and documented with time of exam noted and "Tissue perfusion assessment or Focused Sepsis Exam" documented in note.		< 3 hours from (B)
R Rincheck Vitals x2: Complete and document 2 full sets of vitals		Within 1 hour of bolus completion
S Start Vasopressors: Notify physician if hypotensive within the hour immediately following bolus completion; start vasopressors ASAP, as ordered. • Consider central line or minimum of 2 PIV's • Accessible to start vasopressors while fluid bolus is still infusing		Within 1 hour of bolus completion

Practice Problem

- Time to antibiotics had increased to an average of over 100 minutes from end triage to antibiotic administration time for patients receiving antibiotics under an ED Sepsis Phase 1 Order Set.

Implementation

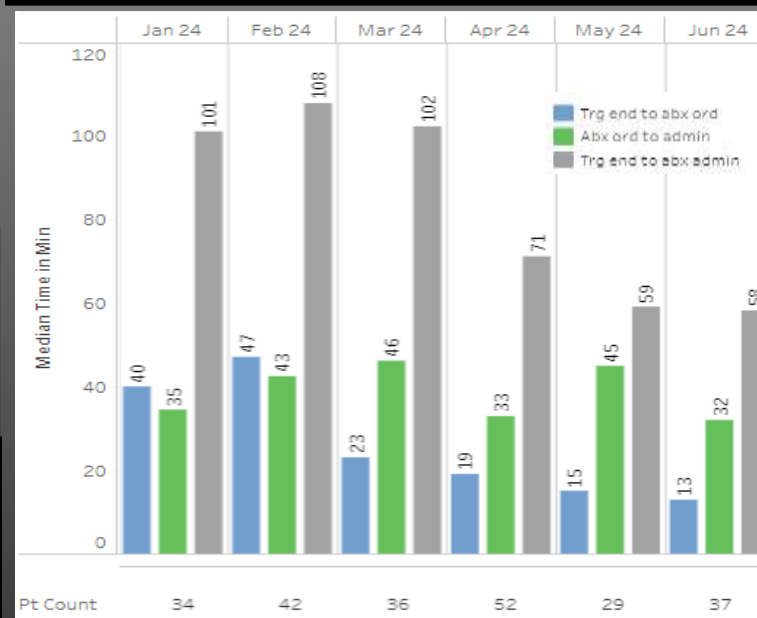
- A review of the BLASTERS tool and project was completed at two ED staff meetings in May.
- During the first week of implementation, the project lead rounding daily to review BLASTERS tool.
- A project champion in the ED assisted with staff questions and concerns, ensured tools were stocked and available, and communicated with project lead if there were needs or concerns.
- A laminated copy of the BLASTERS tool was posted in dictation room for ED providers to reference.

Literature/Evidence

Scan me for References



- A systematic search of research literature was completed regarding sepsis bundle compliance and use of mnemonics in nursing and healthcare using CINAHL and university libraries.
- A 2019 Journal review by Maheshwari and Kaur highlighted the advantage of using mnemonics and acronyms to aid in recall of complex nursing procedures.



PICOT Question

- Does implementing a mnemonic tool guiding sepsis protocol in the ED decrease time from end triage to time to antibiotic administration as compared to current practice without a mnemonic tool over a one-month time frame in May 2024?

Key Change

- ED RNs used the BLASTERS tool for any patient with an ED Sepsis Phase 1 Order Set ordered by the provider to guide implementation of the sepsis protocol.

Findings/Goals

Goals MET:

- Decrease end triage to antibiotic administration times to less than 90 minutes to meet goal.
✓ **Met at 58 Minutes**
- Stretch Goal: decrease sepsis length of stay for patients with sepsis diagnosis to align with system KPI/KPM goals
✓ **MET AT 0.73**
- Opportunity to increase use of complete order set for all components of bundle to improve bundle compliance and further decrease time to antibiotics.

References

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- Haynes AB, Weiser TG, Berry WR, Lipsitz SR, Breizat AH, Dellinger EP, Herbosa T, Joseph S, Kibatala PL, Lapitan MC, Merry AF, Moorthy K, Reznick RK, Taylor B, Gawande AA, Safe Surgery Saves Lives Study Group. A surgical safety checklist to reduce morbidity and mortality in a global population. *N Engl J Med* 2009; **360**: 491–499.
- Kohn L, Corrigan J, Donaldson M. *To err is human. Building a safer health system*. Washington, DC: National Academy Press, 2000.
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- Thomassen, O., Espeland, A., Softeland, E. *et al*. Implementation of checklists in health care; learning from high-reliability organisations. *Scand J Trauma Resusc Emerg Med* **19**, 53 (2011).
<https://doi.org/10.1186/1757-7241-19-53>