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# Preventing PICS: Targeted QI in the ICU

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# ABCDEF bundle

- **A**ssess, prevent, and manage pain
- **B**oth spontaneous awakening and breathing trials
- **C**hoice of analgesia and sedation
- **D**elirium: assess, prevent, and manage
- **E**arly mobility and exercise
- **F**amily empowerment and engagement

Ely, *Crit Care Med* 2017

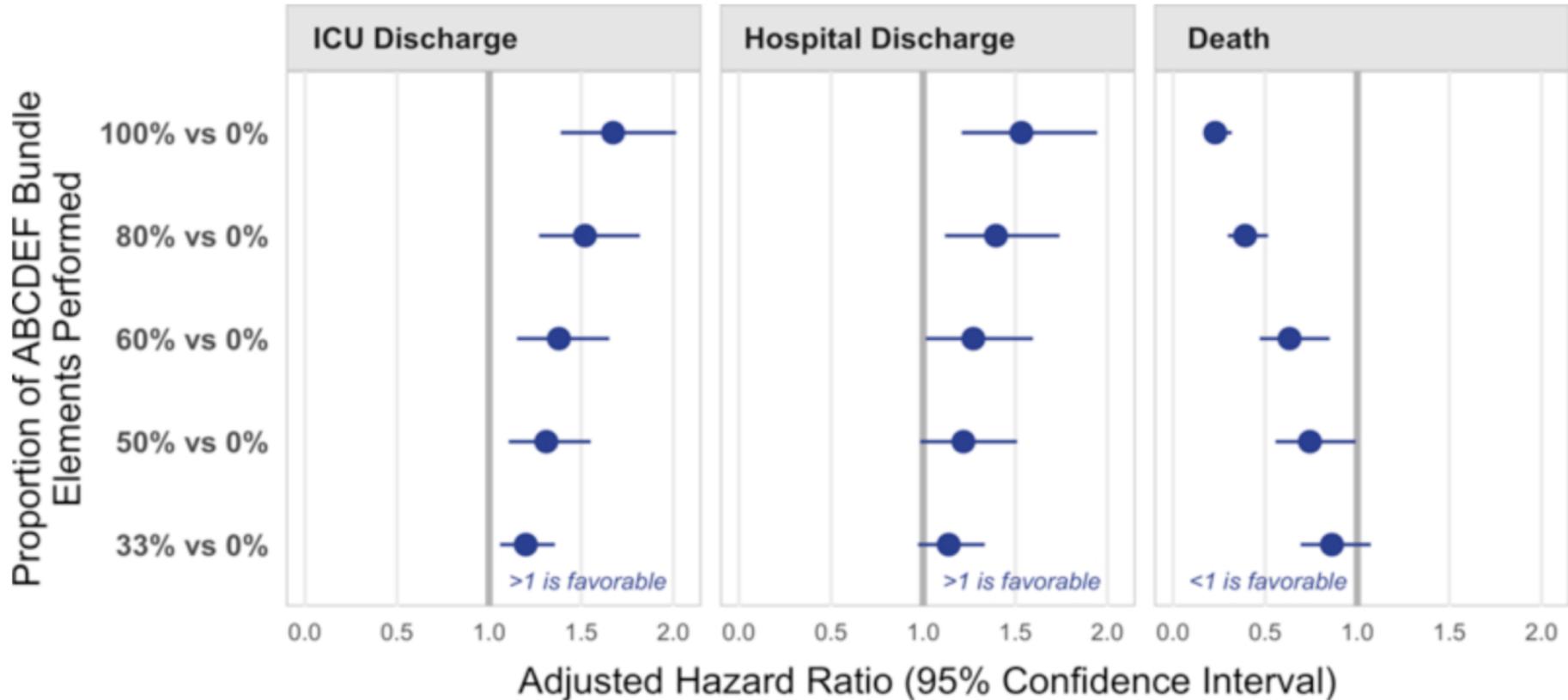
# ICU Liberation Collaborative

- 15,226 patients
- 68 ICUs
- Complete bundle performance → improved outcomes

Outcomes	Complete Bundle Performance	p Value
<b>Patient-Related Outcomes</b>	<b>AHR (95% CI)</b>	
ICU discharge <sup>a</sup>	1.17 (1.05–1.30)	< 0.004
Hospital discharge <sup>b</sup>	1.19 (1.01–1.40)	< 0.033
Death <sup>c</sup>	0.32 (0.17–0.62)	< 0.001
<b>Symptom-Related Outcomes<sup>d</sup></b>	<b>AOR (95%CI)</b>	
Mechanical ventilation	0.28 (0.22–0.36)	< 0.0001
Coma	0.35 (0.22–0.56)	< 0.0001
Delirium	0.60 (0.49–0.72)	< 0.0001
Significant pain	1.03 (0.88–1.21)	0.7000
Physical restraints	0.37 (0.30–0.46)	< 0.0001
<b>System-Related Outcomes</b>	<b>Adjusted OR (95%CI)</b>	
ICU readmission <sup>e</sup>	0.54 (0.37–0.79)	< 0.001
Discharge destination <sup>f</sup>	0.64 (0.51–0.80)	< 0.001

Pun et al, *Crit Care Med* 2019

# ICU Liberation Collaborative



Pun et al, *Crit Care Med* 2019

# Ensure smooth transitions in care

- Medications
  - Resume chronic meds
  - Stop unnecessary meds
  - Adjust medication doses
- PT/OT assessment
- Tubes/lines/devices
- **Identify caregiver**
- Arrange follow-up
- Educate about PICS

Bell et al, *JAMA* 2011

Scales et al *J Gen Intern Med* 2016

Taylor et al *Ann Am Thorac Soc* 2020

Kovacic *J Pharm Pract* 2020

# How post-ICU activities can improve ICU care

- Identifying otherwise unseen targets for ICU QI
- Creating a new role for survivors in the ICU
- Inviting ICU providers to the post-ICU program as a learning strategy
- Challenging clinician's own understanding of patient experience
- Improving morale and meaningfulness of ICU work

Haines et al, *Intensive Care Med* 2019



# Feedback from PICS clinic

- 53M with h/o HTN admitted to the ICU with COVID-19 PNA and severe ARDS
- Intubated x 10 days
- Discharged to rehab facility
- Seen post-ICU clinic 6 weeks later

# Feedback → QI

- Neuropathy in R wrist (site of arterial line)
  - Updated inpatient ICU guidance to recommend arterial line placement on non-dominant side
- Facial pressure ulcers from proning
  - Discussed with inpatient RN team → proning protocol modified
- Returned home when many thought his illness was not survivable
  - Improves GOC discussions
  - Improves morale!

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# Thank you!

