Multidisciplinary Implementation of the ABCDEF Bundle: Reducing Patient Harm

Kathleen M. Vollman MSN, RN, CCNS, FCCM, FAAN
Clinical Nurse Specialist / Educator / Consultant
ADVANCING NURSING
kvollman@comcast.net
Northville Michigan
www.Vollman.com

Additional Resources:  www.ICUliberation.org
www.ICUdelirium.org
Disclosures

- Sage Products Speaker Bureau & Consultant
- Hill-Rom Speaker Bureau & Consultant
- Eloquest Healthcare Speaker Bureau & Consultant
ASSESS, PREVENT & MANAGE PAIN

BOTH SAT & SBT

CHOICE OF SEDATION

DELIRIUM

EARLY MOBILITY

FAMILY/PATIENT ENGAGEMENT

COORDINATION & COMPREHENSIVE ORAL CARE

FEEDING
The Why
Post Intensive Care Syndrome

Epidemiology of ICU Delirium

- 20 - 80% of ICU patients have delirium during ICU
- Frequently unrecognized or misdiagnosed by clinicians
- **Subtypes:**
  - Hyperactive (agitated, increased motor activity) 1%
  - Hypoactive (sleepy, inattentive, decreased motor activity) 44%
  - Mixed 55%
- Onset: ICU Day 2 (+/- 2)
- Duration: 4 (+/- 2) days
- 50% & 10% of ARDS pts delirious at ICU & hospital d/c

Ely, EW, et al. JAMA 2001; 286, 2703-2710
McNicoll L, JAGS 2003:51:591-98;
Delirium and Patient Outcomes

- Independently associated with increased risk of death
- Duration associated with short & long term cognitive impairment
- 1 out of 4 patients had cognitive impairment at 12 months
- Mech Vent duration
- ICU & Hospital Length of Stay
- Estimated national costs $4 to $16 Billion
- Post-d/c anxiety/ PTSD symptom from delirious memory

Klouwenberg *BMJ* 2014;349:g6652; Ely. ICM 2001; 27, 1892-1900 Ely, JAMA 2004; 291: 1753-1762 ; Lin, SM CCM 2004; 32: 2254-2259
PICS-Physical Dysfunction

- Less than 10% of patients on mechanical ventilation for > 4 d are alive and fully independent 1 yr later
- Caregiver assistance ranging from assistance with activities of daily living to full care is required by patients 1 yr later
- Half of patients with adult respiratory distress syndrome have not returned to work 1 yr later
- ICU-acquired weakness that can persist for years can develop in 25–80% of those with sepsis or on mechanical ventilation for > 4 d

Incidence of VAP in Australian ICU’s: Use of a Clinical Surveillance Checklist in a Multisite Audit

- Develop a checklist for clinical surveillance of VAP through consensus process
  - Bi-national professional society
  - Used modified Delphi technique
- Audit ICU’s in Australia and New Zealand
- Outcomes measured:
  - Presence of items on screening checklist, VAP dx. Clinical characteristics, Investigations, Treatments, Outcomes

### Table 1: VAP checklist items

<table>
<thead>
<tr>
<th>Item</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>PaO₂/FIO₂ ratio* ≤300 mm Hg Deterioration in gas exchange over past 24 h in the absence of cardiogenic pulmonary oedema or pulmonary disease</td>
</tr>
<tr>
<td>2</td>
<td>Sputum changes A change in sputum characteristics, increased volume or colour changes (yellow or green)</td>
</tr>
<tr>
<td>3</td>
<td>CXR infiltrates New localised or diffuse infiltrates on a single CXR (not explained by cardiogenic pulmonary oedema or pulmonary disease)</td>
</tr>
<tr>
<td>4</td>
<td>Inflammatory response A. ↑ Temperature ≥1 of the following (in the absence of immunocompromise) New and persistent (past 24 h) elevated body temperature ≥38°C (or &gt;37.5°C if concurrent antipyretic medication administration)</td>
</tr>
<tr>
<td></td>
<td>B. WCC ≤4 or ≥12 cells 10⁶/L for 2 days</td>
</tr>
<tr>
<td></td>
<td>C. ↑ Inflammation Elevated serum inflammatory markers: C reactive protein (&gt;100 mg/L) or procalcitonin (&gt;2.5 ng/L) for a single blood test</td>
</tr>
<tr>
<td>5</td>
<td>Microbial growth Microbial growth in tracheal secretions obtained by tracheal suctioning or bronchoscopy (ie. &gt;25 neutrophils per low power field or equivalent)</td>
</tr>
</tbody>
</table>

*PaO₂/FIO₂ ratio=arterial oxygen tension/fraction of inspired oxygen.

Incidence of VAP in Australian ICU’s: Use of a Clinical Surveillance Checklist in a Multisite Audit

• Results:
  – Hospitals: 7 tertiary referral (Level III), 1 (Level II) and 2 (Level I)
  – 169 MV patients for > 72hrs
  – 29 patients screen (Items 1-4) for VAP (25.9 per 1000 ventilator days)
  – 30 patients treating MD independently diagnosis VAP (26.7 per 1000 vent days)
  – Only 17% had both the screen and treating physician VAP diagnosis

Similarities of the developed screen to new NHSN/CDC approach for surveillance

“Four Cornerstones for Success”

- Evidence Based Practice
- Inter-Professional Teams
- Reduction of Practice Variation
- System Collaboration
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ASSESS, PREVENT & MANAGE PAIN

Society of Critical Care Medicine PAD Guidelines 2013

CPOT and BPS most valid and reliable

The American Society of Pain Management Nursing July 2011

CPOT is acceptable for the critically ill/unconscious
Critical Care Pain Observation Tool (CPOT)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Description</th>
<th>Score</th>
</tr>
</thead>
</table>
| Facial expression | No muscular tension observed  
Presence of frowning, brow lowering, orbit tightening, and levator contraction  
All of the above facial movements plus eyelid tightly closed | Relaxed, neutral  
Tense  
Grimacing | 0  
1  
2 |
| Body movements | Does not move at all (does not necessarily mean absence of pain)  
Slow, cautious movements, touching or rubbing the pain site, seeking attention through movements  
Pulling tube, attempting to sit up, moving limbs/thrashing, not following commands, striking at staff, trying to climb out of bed | Absence of movements  
Protection  
Restlessness | 0  
1  
2 |
| Muscle tension  
Evaluation by passive flexion and extension of upper extremities | No resistance to passive movements  
Resistance to passive movements  
Strong resistance to passive movements, inability to complete them | Relaxed  
Tense, rigid  
Very tense or rigid | 0  
1  
2 |
| Compliance with the ventilator (intubated patients) | Alarms not activated, easy ventilation  
Alarms stop spontaneously  
Asynchrony: blocking ventilation, alarms frequently activated | Tolerating ventilator or movement  
Coughing but tolerating  
Fighting ventilator | 0  
1  
2 |
| OR | Talking in normal tone or no sound  
Sighing, moaning  
Crying out, sobbing | Talking in normal tone  
or no sound  
Sighing, moaning  
Crying out, sobbing | 0  
1  
2 |
| Total, range | | | 0-8 |
ICU Liberation Program

Assess
- Assess pain ≥ 4x/shift & PRN
- Significant pain with NRS >3, BPS >5, or CPOT>2

Treat
- Treat pain within 30 minutes of detecting significant pain & REASSESS:
  - Non-pharmacological treatment (e.g. relaxation)
  - Pharmacological treatment

Prevent
- Administer pre-procedural analgesia and/or non-pharmacological interventions
- Treat pain first, then sedate

www.iculiberation.org
Procedures Hurt More Than We Think

- Most Painful
  - Turning
  - Wound drain removal
  - Wound care
  - Chest tube removal
  - Arterial line insertion

- Others
  - ET suctioning
  - Tracheal suctioning
  - Femoral sheath removal
  - Mobilization
  - Peripheral blood draw & IV
  - Positioning
  - Respiratory exercises
  - Central line removal

Puntillo K AJCC 2001;10:238-251
Puntillo K AJRCCM, 2014;89:39-47
## Treating Acute Pain in the ICU

<table>
<thead>
<tr>
<th>Situation</th>
<th>Preferred Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute pain</td>
<td>Fentanyl IVP until pain resolves</td>
</tr>
<tr>
<td>Acute pain that persists/recurs</td>
<td>Fentanyl infusion plus fentanyl IVP for breakthrough</td>
</tr>
<tr>
<td>Acute pain in chronic opioid user?</td>
<td>Account for previous opioid use when using IV opioid (may consider ketamine)</td>
</tr>
<tr>
<td>Planned transition out of ICU and patient on IV opioid infusion</td>
<td>Start scheduled oral/enteral opioid therapy (e.g., oxycodone) plus intermittent IV opioid (e.g., IVP or PCA)</td>
</tr>
</tbody>
</table>

[www.ICU liberation.org](http://www.ICU liberation.org)
Agitation

- **Avoid deep sedation/coma:**
  - Sedative medications should be titrated to maintain lighter levels
  - Use daily awakening or a titrated sedation strategy to maintain patient wakefulness.

- **Choice of sedative:**
  - Non-benzodiazepines may be preferred over benzodiazepines to improve clinical outcomes in mechanically ventilated ICU patients.

- **Reduction in sedation requirements:**
  - Use of an analgesia-first (i.e., analog-sedation) strategy is recommended in mechanically ventilated patients.

Non-Benzodiazepine Sedative Medications are Associated with Better ICU Outcomes

- Systematic review and meta-analysis of 6 RCTs comparing benzodiazepine vs. non-benzodiazepine ICU sedation regimens:
  - ↓ ICU LOS (6 studies)
    - Difference of 1.6 days, \( P = 0.0007 \)
  - ↓ Duration of mechanical ventilation (4 studies)
    - Difference of 1.9 days, \( P < 0.00001 \)
  - Similar delirium prevalence and short-term mortality.

Fraser G. Crit Care Med. 2013; 41:S30-8
Agitation

• Assess q 4hrs or prn with change in dose or patients condition
• Use validated tool (RASS or SAS)
• RASS target -1 to +1
• SAS target 3 to 4

<table>
<thead>
<tr>
<th>Score</th>
<th>Term</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>+4</td>
<td>Combative</td>
<td>Overtly combative or violent; immediate danger to staff</td>
</tr>
<tr>
<td>+3</td>
<td>Very agitation</td>
<td>Pulls on or removes tube(s) or catheter(s) or has aggressive behavior toward staff</td>
</tr>
<tr>
<td>+2</td>
<td>Agitated</td>
<td>Frequent nonpurposeful movement or patient–ventilator dyssynchrony</td>
</tr>
<tr>
<td>+1</td>
<td>Restless</td>
<td>Anxious or apprehensive but movements not aggressive or vigorous</td>
</tr>
<tr>
<td>0</td>
<td>Alert and calm</td>
<td>Not fully alert, but has sustained (more than 10 seconds) awakening,</td>
</tr>
<tr>
<td>-1</td>
<td>Drowsy</td>
<td>with eye contact, to voice</td>
</tr>
<tr>
<td>-2</td>
<td>Light sedation</td>
<td>Briefly (less than 10 seconds) awakens with eye contact to voice</td>
</tr>
<tr>
<td>-3</td>
<td>Moderate sedation</td>
<td>Any movement (but no eye contact) to voice</td>
</tr>
<tr>
<td>-4</td>
<td>Deep sedation</td>
<td>No response to voice, but any movement to physical stimulation</td>
</tr>
<tr>
<td>-5</td>
<td>Unarousable</td>
<td>No response to voice or physical stimulation</td>
</tr>
</tbody>
</table>

Procedure
1. Observe patient. Is patient alert and calm (score 0)?
   Does patient have behavior that is consistent with restlessness or agitation (score +1 to +4 using the criteria listed above, under DESCRIPTION)?
2. If patient is not alert, in a loud speaking voice state patient’s name and direct patient to open eyes and look at speaker. Repeat once if necessary. Can prompt patient to continue looking at speaker. Patient has eye opening and eye contact, which is sustained for more than 10 seconds (score –1).
   Patient has eye opening and eye contact, but this is not sustained for 10 seconds (score –2).
   Patient has any movement in response to voice, excluding eye contact (score –3).
3. If patient does not respond to voice, physically stimulate patient by shaking shoulder and then rubbing sternum if there is no response to shaking shoulder. Patient has any movement to physical stimulation (score –4).
   Patient has no response to voice or physical stimulation (score –5).

www.iculiberation.org
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COORDINATION & COMPREHENSIVE ORAL CARE

FEEDING
TRUST THE PROCESS
### ABC Trial (RCT Paired Sedation & Vent Weaning Protocols)

<table>
<thead>
<tr>
<th>Outcome*</th>
<th>SBT</th>
<th>SAT+SBT</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ventilator-free days</td>
<td>12</td>
<td>15</td>
<td>0.02</td>
</tr>
<tr>
<td>Time-to-event, days</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Successful extubation, days</td>
<td>7.0</td>
<td>5</td>
<td>0.05</td>
</tr>
<tr>
<td>ICU discharge, days</td>
<td>13</td>
<td>9</td>
<td>0.02</td>
</tr>
<tr>
<td>Hospital discharge, days</td>
<td>19</td>
<td>15</td>
<td>0.04</td>
</tr>
<tr>
<td>Death at 1 year, n (%)</td>
<td>97 (58%)</td>
<td>74 (44%)</td>
<td>0.01</td>
</tr>
<tr>
<td>Days of brain dysfunction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coma</td>
<td>3.0</td>
<td>2.0</td>
<td>0.002</td>
</tr>
<tr>
<td>Delirium</td>
<td>2.0</td>
<td>2.0</td>
<td>0.50</td>
</tr>
</tbody>
</table>

*Median, except as noted

ABC Trail: Mortality at 1 Year

Outcome of SAT/SBT

- Decreased days of mechanical ventilation
- Reduced weaning time
- Reduced reintubation rates
- Fewer days with delirium
- Decreased length of ICU stay
- Decreased length of hospital stay

Esteban A. Am J Respir Crit Care Med. 1999;159:512-8
www.ICUliberation.org
Making it Happen: Wake Up & Breathe

• Process Measure: Daily audit of SAT/SBT compliance or documentation of contraindication
  – Determine if they meet SAT criteria
  – Decrease or stop sedation per protocol
  – Determine if patient meets Readiness to Wean
  – Determine if meet SBT protocol criteria
  – Consider same time daily (sometimes x2)
  – Discuss results in multidisciplinary rounds
  – Include in nurse to nurse handoff/other handoffs
  – Ventilator LOS posted/Extubation rates posted
Building Resiliency Into Interventions

- Forcing Functions and Constraints
- Automation and Computerization
- Standardization and Protocols
- Checklist and Independent Check Systems
- Rules and Policies
- Education and Information
- Vague Warning – “Be More Careful!”

Strongest

STRENGTH OF INTERVENTION

Weakest
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COORDINATION & COMPREHENSIVE ORAL CARE
FEEDING
Delirium: First Focus on Prevention

- Pain and sedation scores
- Analgesia and Sedative Algorithm
  - Control pain first, then anxiety
  - Use intermittent meds first before continuous
- Target RASS + 1 to -1
- Daily SAT (spontaneous awakening trial)
- Daily SBT (spontaneous breathing trial)
- Implement non-pharmacological strategies
Delirium Assessment & Management

- Delirium Assessment:
  - ICU-CAM
  - ICU Delirium Screening Checklist
- Frequency:
  - Q shift & prn
In Rounds When ICU-CAM is +

- When reporting the CAM ICU in rounds, if it is positive the following evaluation should occur.
- Dr. Dre
  - Dr: diseases; diseases that contributes to delirium (sepsis, hypoxia, COPD)
  - Dr: drug removal; benzodiazepines or any drug interactions that may contribute to delirium
  - E: environment; nonpharmacological interventions to reduce delirium. This may include reorientation sleep protocol, unrestrained, eyeglasses, hearing aids etc.

Pandharipande P et al. (Lorazepam) *Anesthesiology* 2006;104:21–26;
Oimet ICM 2007; 33:1007-1013;
Pandharipande P et al. (Midazolam) *J Trauma* 2008
Harvey M, Davidson J. *Crit Care Med*, 2016;44(2):381-385
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COORDINATION & COMPREHENSIVE ORAL CARE
FEEDING
Outcomes of Early Progressive Mobility Program

- ↓ incidence of skin injury
- ↓ time on the ventilator
- ↓ incidence of VAP
- ↓ days of sedation
- ↓ delirium
- ↑ ambulatory distance
- Improved function

Thomsen GE, et al. CCM 2008;36;1119-1124
Winkelmann C et al; CCN,2010;30:36-60
**Progressive Mobility Continuum**

<table>
<thead>
<tr>
<th>LEVEL I</th>
<th>LEVEL II</th>
<th>LEVEL III</th>
<th>LEVEL IV</th>
<th>LEVEL V</th>
</tr>
</thead>
<tbody>
<tr>
<td>RASS -5 to - 3</td>
<td>RASS -3 &amp; up</td>
<td>RASS -1 &amp; up</td>
<td>RASS 0 &amp; up</td>
<td>RASS 0 &amp; up</td>
</tr>
</tbody>
</table>

**Goal:** clinical stability, passive ROM

**Activity:**
- Q 2 hr turning
  - HOB > 30º
  - Passively /Active ROM
  - Full assist into cardiac chair 2X/day

**Goal:** upright sitting, increased strength and moves arm against gravity

**Activity:**
- PT consultation prn
- OT consultation prn

**Goal:** Increased trunk strength, moves leg against gravity and readiness to weight bear

**Activity:**
- PT: Active Resistance
  - Once a day, strength exercises
  - OT consultation prn

**Goal:** stands w/min to mod. assist, able to march in place, weight bear and transfer to chair

**Activity:**
- PT x 2 daily
- OT x 1 daily

**Goal:** clinical stability; passive ROM

**Activity:**
- *Passive /Active ROM 3x/d
  - HOB 45º: X 15 min.
  - HOB 45º, Legs in dependent position X 15 min.
  - HOB 65º, Legs in dependent position X 15 min.
  - Step (3) & full chair mode X20 min. 3X/d
- Full assist into cardiac chair 2X/day

**Goal:** Increase distance in ambulation & ability to perform some ADLs

**Activity:**
- PT x 2 daily
- OT x 1 daily

**Goal:** increases in ambulation & ability to perform some ADLs

**Activity:**

---

*Mobility is the responsibility of the RN, with the assistance from the RT's Unlicensed Assistive Personnel and PT/OT. PT and OT may assist the team with placement to the appropriate mobility level of activity, always prioritizing patient and provider safety. Placement is based on clinical judgment.*
## Consensus on Safe Criteria for Active Mobilization

Hodgson CL, et. al Critical Care, 2014;18:658

- Systematic review performed with 23 international experts to reach consensus

### Consensus reach on all criteria. If no other contraindications; vasoactives, endotracheal tube, FIO2 < 60% with SaO2 90% & RR < 30/min were considered safe criteria

<table>
<thead>
<tr>
<th>Category</th>
<th>Risk Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respiratory</td>
<td>Green (Low)</td>
<td>Low risk of an adverse event. Proceed as usual according to each ICU’s protocols and procedures.</td>
</tr>
<tr>
<td>Cardiovascular</td>
<td>Yellow (Potential)</td>
<td>Potential risk and consequences of an adverse event are higher than green, but may be outweighed by the potential benefits of mobilization. The precautions or contraindications should be clarified prior to any mobilization episode. If mobilized, consideration should be given to doing so gradually and cautiously.</td>
</tr>
<tr>
<td>Neurological</td>
<td>Red (Significant)</td>
<td>Significant potential risk or consequences of an adverse event. Active mobilization should not occur unless specifically authorized by the treating intensive care specialist in consultation with the senior physical therapist and senior nursing staff.</td>
</tr>
</tbody>
</table>

### Categories
- Respiratory
- Cardiovascular
- Neurological
- Other Considerations
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FEEDING
Good communication with the family is critical at every step of a patient’s clinical course, and empowering the family to be part of the team to ensure best care is adhered to diligently will improve many aspects of the patient’s experience. The F was recently added to help to keep patients and families as the center and focus of care.

www.icudelirium.org
ABCDE Bundle Reduces Ventilation, Delirium & ↑OOB

- Eighteen-month, prospective, cohort, before-after study
- 5 adult ICU’s, 1 step down, 1 oncology unit
- Compared 296 patients (146 pre-bundle) & 150 post bundle
- Intervention: ABCDE
- Measured:
  - For mechanical ventilation patients (187) examined ventilator free days
  - All patients examined incidence of delirium, mortality, time to discharge and compliance with the bundle

<table>
<thead>
<tr>
<th>ABCDE Bundle Component Outcome</th>
<th>Pre-ABCDE Bundle (n = 146)</th>
<th>Post-ABCDE Bundle (n = 150)</th>
<th>Unadjusted p</th>
<th>Adjusted Odds Ratio</th>
<th>Adjusted p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awakening and breathing coordination*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ventilator-free days*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean (±)</td>
<td>15 (11.4)</td>
<td>18 (10.6)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median (IQR)</td>
<td>21 (0–25)</td>
<td>24 (7–26)</td>
<td>0.04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delirium monitoring/management</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delirium anytime, n (%)</td>
<td>91 (62.3)</td>
<td>73 (48.7)</td>
<td>0.02</td>
<td>0.55* (0.33–0.93)</td>
<td>0.03</td>
</tr>
<tr>
<td>Duration of delirium, days, median (IQR)</td>
<td>3 (1–5)</td>
<td>2 (1–4)</td>
<td>0.52</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percent ICU days spent delirious, median (IQR)</td>
<td>50 (30–64.3)</td>
<td>33.3 (18.8–50)</td>
<td>0.003</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coma anytime, n (%)</td>
<td>41 (28.1)</td>
<td>43 (28.7)</td>
<td>0.91</td>
<td>1.00*</td>
<td>0.99</td>
</tr>
<tr>
<td>Coma days, median (IQR)</td>
<td>2 (1–4)</td>
<td>2 (1–5)</td>
<td>0.35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percent ICU days spent in coma, median (IQR)</td>
<td>25 (18.2–44.4)</td>
<td>25 (12.5–42.9)</td>
<td>0.89</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Richmond Agitation-Sedation Scale Score, mean (±)</td>
<td>0.02 (1.4)</td>
<td>-1.03 (1.2)</td>
<td>0.38</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Early exercise/mobility</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobilized out of bed anytime in ICU, n (%)</td>
<td>70 (48)</td>
<td>99 (66.0)</td>
<td>0.002</td>
<td>2.11* (1.30–3.45)</td>
<td>0.003</td>
</tr>
<tr>
<td>28-day mortality*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospital mortality (ICU and post-ICU), n (%)</td>
<td>29 (19.9)</td>
<td>17 (11.3)</td>
<td>0.04</td>
<td>0.56* (0.28–1.10)</td>
<td>0.09</td>
</tr>
<tr>
<td>ICU mortality, n (%)</td>
<td>24 (16.4)</td>
<td>14 (9.3)</td>
<td>0.07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time to discharge*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>From ICU, median (IQR)</td>
<td>5 (3, 8)</td>
<td>4 (3, 5)</td>
<td>0.21</td>
<td>1.16* (0.89–1.50)</td>
<td>0.27</td>
</tr>
<tr>
<td>From hospital, median (IQR)</td>
<td>13 (9, 15)</td>
<td>11 (9, 13)</td>
<td>0.99</td>
<td>1.01* (0.77–1.31)</td>
<td>0.96</td>
</tr>
</tbody>
</table>

Integrating ABCDEF into ICU culture

• Talk about all the ABCDEF bundle as ONE.
• Utilize Change Champions in all aspects of integration
  – Demonstrate/Mentor staff
  – Ground Up
• Daily Rounds with Multidisciplinary Team
  • Expectation is for RN to speak the language
• Don’t start each intervention separate from the others
  – Group interventions together, demonstrate how they connect and evaluate together
Summary

- Critical illness is catabolic and depleting, rapidly and potentially lasting for years
- A prolonged ICU stay can cause delirium and cognitive changes for most patients
- Mobility combined with minimal or no sedation started at the beginning of an ICU stay is protective and preventative
- Approach the task with structured QI project, collaboration, barrier identification—MAKE IT THE NEW NORM

Implement the ABCDEF Bundle in your ICU today
“QUALITY IS NEVER AN ACCIDENT. IT REPRESENTS THE WISE CHOICE OF MANY ALTERNATIVES.”

Willa Foster