Survivorship: Beyond the Walls of the ICU

SARAH CROWE, MN, NP(F), CNCC(C)

A. FUCHSIA HOWARD, PHD, RN
Sarah and Fuchsia are co-investigators on several research studies involving various aspects of ICU survivorship and have funding from the Michael Smith Foundation for Health Research and the Canadian Institute of Health Research.
The goals of this session are:

- The meaning of survivorship, including describing the four different groups of ICU survivors

- Highlight research that has shown to have an impact on survivors

- Highlight the role critical care nurses’ play in the patient journey

- Discuss resources available to aide clinicians
What is ICU Survivorship?

And what does it mean to you and your practice?

So who survives ICU?
Patients
Families
Families of Non-Survivors
When can we impact an ICU survivors’ journey to improve outcomes?
Pre - Hospital Care

- Chronic disease management
- Lifestyle choices
- Social determinants of health

CHRONIC DISEASES IN NUMBERS

- 49.8% of adults have 1 or more chronic diseases
- 7 out of 10 deaths are caused by chronic diseases
- 63.4% of diabetes patients have some mobility limitation
Early Hospitalization

- Appropriate care
- ICU outreach services
- Early recognition and management of deteriorating patients
- Early / appropriate resuscitation

CCOT
Critical Care Outreach Team
right time • right people • right place
• Evidence based practices
  ○ Early resuscitation – sepsis bundles
  ○ Nosocomial infection prevention
    ▪ VAP prevention
    ▪ CLABSI prevention
    ▪ CAUTI prevention
    ▪ Hand hygiene
  ○ Delirium prevention – PAD bundle
  ○ Early mobilization
  ○ Enhanced communication
  ○ Goal directed therapies supportive of patient directed goals of care
  ○ PICS prevention
Post – ICU discharge

- Need for continuation of rehabilitation and ongoing medical care to support return to baseline
- ICU follow-up care
What does leaving hospital look like for these patients?

Ongoing need for community supports and follow up
Implementation of evidence based practices for the ICU and post-ICU stay
Post-ICU Care Syndrome (PICS)

- Improving outcomes not only means surviving an ICU stay, but also have quality of life afterwards.
- There are many long term complications of ICU, collectively called PICS which include:
  - Hospital / ventilator acquired pneumonia
  - Delirium
  - Muscle wasting
  - Depression / Post-traumatic stress disorder
  - Pressure injuries, falls, and immobility
A group of symptoms collectively known as PICS

Includes any new or worsening impairment in physical, cognitive or mental health status that arises after a critical illness and persists beyond discharge from acute care.

### PICS

<table>
<thead>
<tr>
<th>Cognitive Impairment Associated with:</th>
<th>Mental Health Impact Associated with:</th>
<th>Physical ICU Acquired Weakness Associated with:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• ICU delirium (immobility, sleep, medications)</td>
<td>• As with cognitive impairment, plus:</td>
<td>• Prolonged ventilation</td>
</tr>
<tr>
<td>• Acute brain dysfunction (stroke, ETOH)</td>
<td>• Female gender</td>
<td>• Sepsis</td>
</tr>
<tr>
<td>• Hypoxia (ARDS, Arrest)</td>
<td>• Lower education level</td>
<td>• Multi-system organ failure</td>
</tr>
<tr>
<td>• Hypotension (sepsis, trauma)</td>
<td>• Preexisting disability</td>
<td>• Deep sedation</td>
</tr>
<tr>
<td>• Glucose dysregulation</td>
<td>• Use of sedatives</td>
<td></td>
</tr>
<tr>
<td>• ARDS; Prolonged ventilation</td>
<td>• Use of analgesia</td>
<td></td>
</tr>
<tr>
<td>• Severe sepsis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Prior poor cognitive function (older age, preexisting cognitive deficits, premorbid conditions)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Why Does PICS matter to us?

- Our whole goal in ICU is to stabilize patients and return them to their previous functioning baseline.
- Many of our patients experience a variety of cognitive, psychological and physical symptoms post ICU.
- Common reported symptoms include:
  - Generalized weakness
  - Decreased mobility
  - Depressed mood / anxiety
  - Cognitive impairments – poor memory, slow processing, impaired concentration
- These symptoms can last months to YEARS!
Evidence to date has shown us that we need to focus on:

- Delirium prevention
- Early mobilization
- Nosocomial infection prevention
- Communication
Delirium

- Delirium is estimated to impact 60-80% of ventilated adult ICU patients

- Delirium is associated with many adverse outcomes including increased mortality, falls, functional decline, cognitive impairment decline and significant costs
ABCDEF

• ICU Liberation - To counteract PICS, the Society of Critical Care Medicine promote an ‘ABCDEF Bundle’ approach to care.
• If we can reduce the mental health disturbances, cognitive decline, and physical impairment of critical illness, we can anticipate a post-ICU population with improved morbidity and an improved falls risk profile.
• A ‘less is more’ approach - less drugs, less ventilation, less sedation, less bedrest.
• Focuses on improved management of pain, agitation, delirium, immobility and sleep (PADIS)
What is the **ABCDF** Bundle?

**Bundling for Success**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Assess, prevent and manage pain</td>
</tr>
<tr>
<td>B</td>
<td>Both Spontaneous Awake Trials and Spontaneous Breathing Trials Targeted sedation</td>
</tr>
<tr>
<td>C</td>
<td>Choice of analgesia and sedation</td>
</tr>
<tr>
<td>D</td>
<td>Delirium: assess, prevent and manage</td>
</tr>
<tr>
<td>E</td>
<td>Early mobility and exercise</td>
</tr>
<tr>
<td>F</td>
<td>Family engagement and empowerment</td>
</tr>
</tbody>
</table>

Vanderbilt University:  
http://www.icudelirium.org/index.html  
(http://www.iculiberation.org)
Early Mobilization

- One of the few therapies or actions that we can take as critical care nurses to help reduce PICS
- Bedridden patients have an increased risk of death and other complications such as:
  - Delirium
  - Muscle wasting (including heart deconditioning)
  - ICU – acquired muscle weakness and falls
  - Skin breakdown and pressure related injuries
  - Pneumonia
  - Increased insulin resistance
  - Poor quality of life

https://idiopathicmedicine.wordpress.com/category/intensive-care/
Early Mobilization

- Using a protocolized approach the majority of critical care patients can be mobilized
Nosocomial Infection Prevention

- VAP reduction
  - Frequent mouth care
  - HOB elevated to at least 30 degrees

- CAUTI reduction
  - Does the patient really need a foley catheter?
  - Good peri-care

- CLABSI reduction

- Hand hygiene
## Communication

<table>
<thead>
<tr>
<th>Patient Concerns</th>
<th>Family Concerns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Helpless</td>
<td>Lack of understanding</td>
</tr>
<tr>
<td>Inability to communicate</td>
<td>Frequent questions</td>
</tr>
<tr>
<td>Gaps in memories</td>
<td>Medical jargon</td>
</tr>
<tr>
<td>Confusion</td>
<td></td>
</tr>
<tr>
<td>Fear</td>
<td></td>
</tr>
</tbody>
</table>
Communication Strategies

- Sometimes we need to get creative
And sometimes we need to tell a story....

**Words that heal: ICU journals at Penn help patients and staff**

*by Stacey Burling, Posted: April 20, 2018*

_Courtesy of Leisa Nappi_
What was once important in ICU is just as important on the wards...

- Delirium prevention
- Nosocomial infection prevention
- Mobilization
- Communication
Post-Discharge

- Where do our patients end up?
  - Home?
  - Institutions?

- Who cares for them?
  - Family practitioners
  - Family members
Current State

- **Specialized follow up clinics**
  - Neurological ICU / Traumatic Brain Injury
  - Respiratory rehabilitation
  - Cardiac rehabilitation

- **Generalized ICU follow up clinics**
  - Many sites are now offering generalized follow up for ICU survivors but the effectiveness and outcomes are variable
To date research has been evolving to try to determine the best approach to support ICU survivors, but more work needs to be done.
What is Known

- ICU follow up care should be provided by ICU clinicians, and a multidisciplinary team approach is probably better.

- More education is needed for primary care providers to better understand their patients and families who are ICU survivors.
Some of the research to date has looked at the variety of needs and challenges experienced by survivors, but very little has proven to help them cope or improve their outcomes

- Peer support groups but has not been able to show effectiveness in supporting survivors
- Journaling has proven to be beneficial in the emotional and psychological outcomes of survivors
- Many have concluded that a new way to structure the health care system is needed to improve outcomes, but no one can decide on how
Planning for Follow Up

- We are actively involved in a systematic review of literature to determine the types of services and needs that are required by our patients.

- We are looking to open an ICU survivor community follow up clinic in the near future, knowing that it needs to be:
  - Interdisciplinary
  - Address all aspects of PICS
Split into 4 groups

Discuss the following:
- What do you think will help ICU survivors?
- Biggest barriers you encounter?
- What could we do differently?

Report back 1 response to each question
Join Us

- Our purpose is to improve quality ICU survivorship and reduce PICS

- Join us as we build a national community of practice to focus on improving survivorship to ERASE PICS
## ERASE PICS Bundle

<table>
<thead>
<tr>
<th>E</th>
<th>Early recognition of deterioration</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>Rapid treatment</td>
</tr>
<tr>
<td>A</td>
<td>Awake and breathing spontaneously as soon as possible</td>
</tr>
<tr>
<td>S</td>
<td>Sleep – uninterrupted</td>
</tr>
<tr>
<td>E</td>
<td>Early mobilization</td>
</tr>
<tr>
<td>P</td>
<td>Prevent nosocomial infections</td>
</tr>
<tr>
<td>I</td>
<td>Interdisciplinary follow up and support</td>
</tr>
<tr>
<td>C</td>
<td>Communication with Patients and Families</td>
</tr>
<tr>
<td>S</td>
<td>Support and Follow – up in the community</td>
</tr>
</tbody>
</table>
Questions / Comments?

Sarah.crowe@fraserhealth.ca

Or

Fuchsia.howard@ubc.ca
References

- Ferguson, A., Uldall, K., Dunn, J., Blackmore, C.C. & Williams, B. (2018). Effectiveness of a multifaceted delirium screening, prevention, and treatment initiative on the rate of delirium falls in the acute care setting. *Critical Care Medicine 46*(9), e825-e873