ICU Recovery in Clinical Trials

1. Survival – very important but not the whole story
2. Current measures of recovery
3. Emerging trends
4. Target PROMS in ICU trials
Surrogate markers:
- Decreased ICP
- Decreased therapies for ICP
- Decreased ICU LOS

Decompressive Craniectomy:
- Standard Care:
  - Full Recovery
  - Significant Morbidity
  - Dead

Not just survival but quality of survival
- Day 1
- Day 3
- Day 24
- Day 35
1. Survival – very important but not the whole story
2. Current measures of recovery
3. Emerging trends
4. Target PROMS in ICU trials
5. Future directions

Disability
- Physical
- Psychological
- Cognitive

Ongoing for > 5 years

QoL after ICU - Systematic Review
- 53 multicentre ICU trials included HRQoL
- SF36 used by 55%, EQ5D in 21%

- QoL reduced in ICU survivors
- Worst QoL in ICU survivors of:
  - severe ARDS
  - sepsis
  - long term MV

• Follow-up - least six months
• SF-36 and EQ-5D - best-suited for measuring QoL in multicenter ICU trials
• Further methodologic research and instrument design
1. Survival – very important but not the whole story
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CTG Trials and Long Term Outcomes

WHO conceptual model

Physical and mental / cognitive baseline status
- Acute illness
- Organ function - impairment
- Activity - functional limitation
- Participation - disability
- Quality of life

Acute illness

Herridge et al, NEJM, 2011

Five Year Outcomes of ARDS
- Survival
- Distance walked
- SF-36 at 5 years

Activity and HRQoL

Herridge et al, NEJM, 2011
Can I manage round the house?

**Iwashyna 2010**

**Figure 3. Functional Trajectories by Baseline Functioning**

- Before sepsis
- After sepsis

<table>
<thead>
<tr>
<th>Survey</th>
<th>Before Sepsis</th>
<th>After Sepsis</th>
</tr>
</thead>
<tbody>
<tr>
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<td>High</td>
</tr>
<tr>
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<td>Low</td>
</tr>
<tr>
<td>Last Survey</td>
<td>Moderate</td>
<td>Low</td>
</tr>
</tbody>
</table>

Will I have have my faculties?

**Iwashyna 2010**

**Qualitative Interview of ICU survivors**

**Tramm 2015**

1. Survival is not enough
2. What is currently used to measure recovery
3. Emerging trends
4. **How to target PROMS in ICU trials**
5. Future directions

- The ICU Experience
  - Immobility & weakness
2. Memories
  - Nightmares and memory gaps
3. Family & significant others
  - The most important support during the period
4. Survival
  - Felt it was a matter of life and death
  - Gaining new life perspectives and priorities
  - Happy to have survived
1. Survival – very important but not the whole story
2. Current measures of recovery
3. Emerging trends
4. Target PROMS in ICU trials
5. **Future directions**

**Improved patient reported outcome measures**

- Important
- Patient-centered
- Valid and reliable
- Feasible

**International Collaboration**

**In conclusion**

1. Survival is only part of the story
2. Potential to widen the recovery profile to include function, activity & participation (WHO) alongside HRQoL
3. Future directions must include international collaborations

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