Quality of life of PICU survivors

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Paediatric intensive care through the years
Paediatric intensive care through the years
Mortality in PICU

- 1980s: 20%
- 1998: 5.3%
- 2013: 2.8%

New morbidities

Health

’a state of complete physical, mental and social wellbeing, and not merely the absence of disease or infirmity’

WHO, 1948
Outcomes

Functional outcome

Quality of life
Outcomes

Functional outcome
- An individual’s ability to perform normal daily activities
  - essential to meet basic needs
  - fulfill usual roles
  - maintain health and well-being

Quality of life
- An individual’s perception of their position in life
  - in the context of the culture and value systems
  - in relation to their goals, expectations, standards and concerns

HRQoL

• Quality of life in which a dimension of personal judgement over one’s health and disease is added

• Factors influencing HRQoL in children
  • Ability to participate in peer groups
  • Ability to keep up with developmental needs
QoL measuring tools?

- Lack of consensus on suitable instruments
- Need for different instruments in different age groups
- Need of proxy reporting by parents or clinicians for children younger than 8 years of age
Evaluation of HRQoL measures

• ‘Ideal’ HRQoL measures
  • Multidimensional
  • Psychometric properties – reliability, validity and reproducibility
  • Responsive or sensitive to change
  • Interpretability of scores
  • Response burden
  • Mode of administration
  • Instrument adaptation

Quality of Life:
What the studies show
Quality of life – an overview

![Bar chart showing the percentage of children with normal or good quality of life from various studies.](chart.png)

- Gemke et al. 1995
- Morrison et al. 2002
- Taylor et al. 2003
- Ambuehl et al. 2007
- Jayshree et al. 2003
HRQoL following severe infection

HRQoL following severe infection

- Worst performance seen in
  - younger age group
  - lower socio-economic status

- Meningococcal septic shock
  - Impairment of HRQoL especially physical domain
  - Significantly poorer HRQoL associated with less favourable behavioural and emotional scores

QoL pre-admission and 6 months post-ICU

No statistically significant difference in preadmission and followup global scores

QoL pre-admission and 6 months post-ICU

QoL pre-admission and 6 months post-ICU

HRQoL at 12 months

- Overall health improved or equal to pre-ICU: 72.6%

HRQoL at 12 months

QoL over time post-ICU: at 12 and 24 months

21% had new chronic disease

QoL beyond 24 months post-PICU admission

QoL beyond 24 months post-PICU admission

HRQoL in long stay PICU patients: 2-10 years later

% of patients with HRQoL scores > 1SD below population mean

<table>
<thead>
<tr>
<th>Total score</th>
<th>42.9</th>
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<tr>
<td>Physical</td>
<td>31.4</td>
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<tr>
<td>Psychosocial</td>
<td>47.1</td>
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<td>37.1</td>
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<td>School</td>
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20% poor HRQoL with ongoing disabling health problems

Predictors of quality of life

- Increased length of stay
- Presence of comorbidities
- Older age
- Higher PRISM scores
- Malignancy

## Key determinants of HRQoL

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Quality of Life in Adult ICU survivors

- Lower QoL prior to ICU admission
- After discharge QoL improved but remained lower than general population levels

Summary

- Mortality relatively rare
- Importance of HRQoL as outcome
- HRQoL assessment is challenging because developmental changes occur over time
- Validated paediatric HRQoL instruments are available
- Quality of life outcome good in majority of PICU survivors
- Physical, psychosocial and neurocognitive deficits seen in PICU survivors
Conclusion

• Mortality reduction first frontier for paediatric critical care medicine

• Reduction of long-term morbidity should be the new frontier in terms of clinically meaningful outcomes
Thank you