Outcomes of Extremely Low Birth Weight Infants

ALEX STEVENSON
NEONATOLOGY FELLOW
UNIVERSITY OF CAPE TOWN
AND
UNIVERSITY OF ZIMBABWE
# Outcomes

<table>
<thead>
<tr>
<th>Who</th>
<th>What</th>
<th>When</th>
<th>Where</th>
<th>Why</th>
<th>How</th>
</tr>
</thead>
</table>

ELBW in Kenya

Multicentre study 2013

<table>
<thead>
<tr>
<th>Weight Category</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELBW (&lt;1000g)</td>
<td>0.4%</td>
</tr>
<tr>
<td>VLBW (1000-1499)</td>
<td>1.3%</td>
</tr>
<tr>
<td>LBW (&lt;2500g)</td>
<td>10%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Country</th>
<th>Year</th>
<th>ELBW Mortality</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Africa (Cape Town)</td>
<td>2016</td>
<td>35.7%</td>
<td>VON data</td>
</tr>
</tbody>
</table>
Mortality

Current data
Groote Schuur Mortality before discharge 2016

Key Performance Measures - All VLBW Infants
Combined mortality or severe disability
### Short Term morbidity- Groote Schuur 2016

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Groote Schuur</th>
<th>All VON network</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severe ROP</td>
<td>2.1%</td>
<td>6.3%</td>
</tr>
<tr>
<td>Cystic PVL</td>
<td>2.1%</td>
<td>2.9%</td>
</tr>
<tr>
<td>NEC</td>
<td>3.1%</td>
<td>4.5%</td>
</tr>
<tr>
<td>Nosocomial sepsis</td>
<td>5.0%</td>
<td>11.9%</td>
</tr>
<tr>
<td>Chronic Lung Disease</td>
<td>4.2%</td>
<td>24.1%</td>
</tr>
</tbody>
</table>
117 ELBW discharged alive

67 seen at high risk clinic

57 (85%) Normal

10 (15%) abnormal:
6: Developmental delay
1: FAS/ID
1: CP
1: Epilepsy syndrome/severe ID

10 known to be alive but neurological status unknown

2 known to be deceased

20 lost to follow up

Barday M., Tooke L, Thompson C, University of Cape Town 2018
EPICure

EPICure 1: All extremely preterm births in every single maternity unit (n=270) in UK and Ireland in 1995

Epicure 2: 2006

Assessed mortality, short term morbidity before discharge

Follow up:

2.5 years: Neurological examination, Growth, hearing, vision, Standardised Development Test (Bayley Scales)

6 years and 11 years: As above plus psychometric tests for cognitive ability/intelligence. Also documentation of social, behavioral, educational, psychiatric outcomes. Furthermore analysis of respiratory, cardiac and sensory outcomes
Epicure

Epicure: outcomes at 11 years

- 23% of extremely preterm babies had a diagnosed psychiatric condition
- 8% had autism 11.5% had ADHD
- Increased risk Emotional problems (OR 4.2), Social problems (OR 2.5) increased FEV1
- Greater reversibility to bronchodilators
- Increased BP
- Increased augmentation index
Long term outcomes

Cardiovascular disease
Diabetes
Cancer
Impact on family

Family stress
Marriage break up
Financial burden
Decreased chance having another child
Cost

Direct medical costs of admissions (vary approx KSh 7 million in Aus to KSh 22 million in USA)

Then readmission costs (aprox KSh 2 million)

Include costs of

Parental loss of employment

Loss of future earnings of baby

Ongoing disability care

Western Cape Guidelines

<27 weeks or 500-650g
  ◦ IV fluids, IV antibiotics
  ◦ Fluid, warmth, feeds
  ◦ Caffeine
  ◦ High flow oxygen
  ◦ CPAP if inborn and in good condition
  ◦ Palliative care if failing to respond

 ◦ No: surfactant, ventilation, blood tests
Western Cape Guidelines

≥ 27 weeks AND ≥650g to 799g

As above plus one dose of surfactant

Not for ventilation

≥27 weeks AND ≥800g: for all interventions, including second dose surfactant and ventilation
References


