Growth Assessment of the Breastfed Baby: Comparing WHO vs CDC Growth Charts

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CDC 2016 Breastfeeding Report Card

<table>
<thead>
<tr>
<th></th>
<th>Maine</th>
<th>National</th>
<th>Healthy People 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ever Breastfed</td>
<td>86.6%</td>
<td>81.1%</td>
<td>81.9%</td>
</tr>
<tr>
<td>Breastfeeding at 6 months</td>
<td>61.1%</td>
<td>51.8%</td>
<td>60.6%</td>
</tr>
<tr>
<td>Breastfeeding at 12 months</td>
<td>42.2%</td>
<td>30.7%</td>
<td>34.1%</td>
</tr>
<tr>
<td>Exclusive breastfeeding at 3 months</td>
<td>53.7%</td>
<td>44.4%</td>
<td>46.2%</td>
</tr>
<tr>
<td>Exclusive breastfeeding at 6 months</td>
<td>32.0%</td>
<td>22.3%</td>
<td>25.5%</td>
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</tbody>
</table>

https://www.cdc.gov/breastfeeding/data/reportcard.htm
Comparison of WHO and CDC Growth Charts

WHO 0-24 Months Growth Charts

Data from Multicenter Growth Reference Study 1997-2003
• Longitudinal data with weight/length measurements at 1, 2, 4, 6, and 8 weeks; and 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14, 16, 18, 20, 22, and 24 months
• 18,973 observations for 903 children

CDC Birth – 36 Month Growth Charts

Data from NHANES from 1971-1994; Vital statistics in Missouri and Wisconsin
• Cross-sectional data on weight/length starting at 2 months; mathematical model connects birth measurements to survey data
• 4,697 observations for 4,697 children
### Comparison of CDC and WHO Growth Charts

#### WHO 0-24 Months Growth Charts

Exclusion criteria:
- Low SES
- Born at high altitude
- <37 wks or >42 wks gestation
- Multiple births
- Perinatal morbidities
- Health conditions affecting growth
- Maternal smoking
- Not breastfed to 12 mo. of age
- Complementary foods introduced before 4 mo. or after 6 mo.
- Weight-for-length measurements > 3 SD away from median for sex

#### CDC Birth – 36 Month Growth Charts

Exclusion criteria:
- Very low birth weight (<1500g; < 3lbs 5 oz.)

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### Comparison of CDC and WHO Growth Charts

#### WHO 0-24 Months Growth Charts

Infant feeding:
- 100% ever breastfed
- 100% predominantly breastfed at 4 months
- 100% breastfed at 12 months
- Complementary foods introduced, on average, at 5 ½ months of age

#### CDC Birth – 36 Month Growth Charts

Infant feeding:
- 50% ever breastfed
- 33% breastfed at 3 months
Comparison of CDC and WHO Growth Charts

What is considered normal, healthy range?

- WHO 0-24 months
  - 2%ile – 98%ile
- CDC Birth-36 months
  - 5%ile – 95%ile

Comparison of CDC and WHO Growth Charts

[Graph showing growth charts for WHO and CDC]
Comparison of CDC and WHO Growth Charts

Breastfed Babies in WIC

- Accurate anthropometric assessment of breastfed babies
  - Use of WHO growth charts for 0-24 months
  - Length measured with two people using recumbent boards
  - Assessment based on weight-for-length
- Weight/Length measurements obtained, at a minimum, every 3 months.
  - More frequently for high risk infants
- Promote duration
  - Electric breastpump rentals
  - Breastfeeding peer counselors
- Growth charts used in conjunction with other breastfeeding assessment metrics
  - Frequency of feeds
  - Number wet/dirty diapers
  - Feeding based on cues, not clock
Questions?

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