Improving Nutrition Services in the Care of the Ill and Vulnerable Newborn and Child

Anne Detjen, UNICEF, New York
Nigel Rollins, World Health Organization, Geneva
The world ... and child health are changing
Under-5 mortality in 2017: Success but significant unfinished agenda

Nutrition related factors contribute to 45% of deaths in children under 5 years. Malnourished children die at higher rates from diarrhoea, pneumonia and malaria.

Neonatal deaths are a greater percentage of all deaths across 6 out of 7 modified regions. For African LMICs, all three age categories have the same percent of total deaths.
The world is urban (urban and rural population 1950 – 2050)

- 54 per cent of the world’s population residing in urban areas in 2014.
- In 1950, 30 per cent of the world’s population was urban.
- By 2050, 66 per cent of the world’s population is projected to be urban.
- The rural population has grown since 1950 and will soon peak at 3.4 billion and then decrease to 3.2 billion.

World Urbanisation Prospects. UN. 2014
Urban and rural population as proportion of total population, by area. 1950 - 2050

- Urbanisation has occurred in all areas yet Africa and Asia remain mostly rural .... for now

World Urbanisation Prospects.
UN. 2014
Percentage urban and location of urban agglomerations with at least 500,000 inhabitants. 2014

• Upper, middle income countries have experience the fastest pace of urbanisation

World Urbanisation Prospects. UN. 2014
Private sector engagement

- Both the public and private sectors are important sources of sick child care.
- The private sector serves the poor as well as the wealthy. Two in five caregivers from the poorest households and three in five caregivers from the wealthiest households rely on the private sector for sick child care.
- 96% of public sector care seekers seek care from a clinical facility, not from a community healthworker.

On average across the 24 priority countries and among all caregivers who seek sick child care outside the home, 50% seek treatment or advice from public sector sources and 43% from private sector sources.

USAID SHOPS plus, DHS survey in 24 priority countries
The breast milk substitute (BMS) industry is large and growing

- In 2014, global sales of all baby milk formula were about US$ 44.8 billion
- By 2019, the market value is projected to reach US$ 70.6 billion.
Disasters, Emergencies and Fragile states (alphabetical order)

- Drought
- Earthquakes
- Ebola
- Famine
- Migrants
- Tsunamis
- War
- Zika

The refugee crisis: Through the eyes of one family

Effects on this and future generations not quantified
Looking forward ...

The United Nations Sustainable Development Summit for the adoption of the post-2015 development agenda and the Sustainable Development Goals will be held from 25 to 27 September 2015 in New York and convened as a high-level plenary meeting of the General Assembly.
Achieving the SDGs for child health

Promote health, growth and development
- Nurturing care at home
- Infant and young child feeding, nutrition
- Care-seeking for illness
- Stimulation and care for child development

Prevent illness
- Immunization
- Water and sanitation, reduced indoor air pollution, safe and clean environment
- HIV prevention
- Malaria control

Treat sick newborns and children
- IMCI and iCCM jointly implemented (Primary Health Care)
- Referral level care

Communities and families

NEWBORNs AND CHILDREN SURVIVE AND THRIVE

Community engagement
- Leadership, decision-making, participation

Effective health systems
- Leadership and governance, financing, skilled health workers, information systems and essential commodities
## World Health Assembly Global Nutrition Targets

<table>
<thead>
<tr>
<th>TARGET</th>
<th>BASELINE 2012</th>
<th>TARGET FOR 2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 40% Reduction in the number of children under 5 who are stunted</td>
<td>162 million</td>
<td>≈100 million</td>
</tr>
<tr>
<td>2. 50% Reduction of anaemia in women of reproductive age</td>
<td>29%</td>
<td>15%</td>
</tr>
<tr>
<td>3. 30% Reduction in low birth weight</td>
<td>15%</td>
<td>10%</td>
</tr>
<tr>
<td>4. No increase in childhood overweight</td>
<td>7%</td>
<td>≤7%</td>
</tr>
<tr>
<td>5. Increase the rate of exclusive breastfeeding in the first 6 months up to at least 50%</td>
<td>38%</td>
<td>≥50%</td>
</tr>
<tr>
<td>6. Reduce and maintain childhood wasting to less than 5%</td>
<td>8%</td>
<td>&lt;5%</td>
</tr>
</tbody>
</table>
THE GLOBAL STRATEGY FOR WOMEN’S, CHILDREN’S AND ADOLESCENTS’ HEALTH (2016-2030)
SURVIVE THRIVE TRANSFORM
Objectives

1. **SURVIVE**
   End preventable deaths

2. **THRIVE**
   Ensure health and well-being

3. **TRANSFORM**
   Expand enabling environments
Nurturing care for early childhood development:  
A framework for linking survive and thrive to promote health and human potential

• The early years, starting from conception, are a period of special sensitivity for child development

• The most formative experience of young children come from NURTURING CARE

• Early investment has lifelong and intergenerational benefits

• Policies, information and services are important

• Multisectoral collaboration is essential and the health sector has a special role to play
The Nurturing Care framework

Components of nurturing care:
- Good Health
- Adequate Nutrition
- Opportunities for Early Learning
- Responsive Caregiving
- Security and Safety
Primary health care revisited
Astana. 25-26 October 2018

From Alma-Ata towards Universal Health Coverage and the Sustainable Development Goals

To address the health and development challenges of the modern era, we need PHC that:

• empowers people and communities as owners of their health, as advocates for the policies that promote and protect it, and as architects of the health and social services that contribute to it;

• addresses the social, economic, environmental and commercial determinants of health through evidence-based policies and actions across all sectors; and

• ensures strong public health and primary care throughout people’s lives, as the core of integrated service delivery
Breastfeeding practices over time and economic development

For each doubling in national GDP per capita, breastfeeding prevalence at 12 months decreases by 10 percentage points.
Bangladesh, Ethiopia and Viet Nam

Alive and Thrive 2015

Exclusive breastfeeding improved in all three countries. The rate tripled in Viet Nam and reached more than 80% in Bangladesh and Ethiopia.

Exclusive breastfeeding means giving breastmilk only and no other foods or fluids for the first six months.
Inpatient case fatality among children admitted to hospital with pneumonia

Mortality risk after discharge from hospital
Among children with pneumonia
HOW POVERTY AFFECTS THE BRAIN

A unprecedented study in Bangladesh could reveal how malnutrition, poor sanitation and other challenges make their mark on child development.

By Carinae Stairs

In the late 1960s, a team of researchers began studying a nutritious supplement to provide young children in rural Guatemala. They were testing the assumption that providing enough protein in the first few years of life would reduce the incidence of stunted growth. Today Children who get supplements grow longer, better than those in a control group but the benefits aren’t enough. That’s why researchers want to strengthen or even add a Mambo mom, and women’s health of the early 1990s, women who had received the supplements in the first three years of their child’s life with middle-class children on scores from some schools at age 17.

A picture slowly emerged that being too poor can lead to lifelong outcomes in terms of education, health, and social status. That poor and stunted children are at risk for mental health and cognitive disorders, and that those at risk are more likely to have chronic diseases.

The study probably would have lasted longer for growth, says Kishor Mahendra, a specialist in maternal and child nutrition at Emory University in Atlanta, Georgia, who led the follow-up studies. Indeed, he says, the findings made financial implications such as the World Bank think that any nutritional intervention is important for human development.

Since the Guatemalan research, studies around the world — in India, China, and some in the Philippines, Kenya and Tanzania — have all associated poor or stunted growth in young children without cognitive development scores in some schools at age 17. A recent study in Bangladesh, which offers an estimated 60 million children worldwide, is struggling with these health outcomes. Now researchers are trying to untangle the links between growth and neurodevelopment. In this narrative, how does the caliber? What about emotional neglect, intimate abuse, the challenges they face?

Shannahah Kalboni is the first to try to answer these questions in the study of children in Bangladesh, where about 45% of children have stunted growth by the age of two. As a medical officer at the International Centre for Innovative Brain Research, the National Centre in Dhaka, he found that, over brain-imaging scans of children with stunted growth, "It’s a very good idea in Bangladesh to do brain imaging studies," she Kalboni.

Therapeutic is innovative in other respects, too. Funded by the Nih and Malnutrition

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Growth trajectories and coronary events in adulthood

- 8760 people born in Helsinki 1934-1944 in whom childhood growth had been recorded
- 357 men and 87 women admitted or died with coronary heart disease
- Risk factors measured in 2003 people

Children who later had coronary events:

- Smaller at birth
- At 2 years were thin
- BMI increased relative to that of other children
- Low BMI at 2 years and increased BMI between 2-11 years associated with raised fasting insulin as adults (p<0.001 for both)
• We want children to Survive and to achieve their full developmental potential – to Thrive and Transform

• Mortality in children happens mainly in the first two years – and nutrition remains a major consideration

• Interventions and facility care is not enough ..... without coverage and the quality of care (no intervention without a system)
Implementing comprehensive packages at community and PHC facilities averts preventable deaths
### Essential interventions for child health

<table>
<thead>
<tr>
<th>Community or health post*</th>
<th>Primary health centre†</th>
<th>First-level and referral hospitals‡</th>
</tr>
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<tbody>
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<td>1 Promote breastfeeding or complementary feeding§</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Provide vitamin A, zinc, and food supplementation§</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Immunisations$§†</td>
<td></td>
<td></td>
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<tr>
<td>4 Co-trimoxazole for HIV-positive children§</td>
<td>1 ART for HIV-positive children§</td>
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<td>5 Education on safe disposal of children’s stools and handwashing§</td>
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<tr>
<td>6 Distribute and promote use of ITNs or IRS, or both§</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Detect and refer children with severe acute malnutrition§</td>
<td>2 Treat severe acute malnutrition§</td>
<td>1 Treat severe acute malnutrition associated with serious infection§</td>
</tr>
<tr>
<td>8 Detect and treat serious infections without danger signs ([CCM][1]); refer if danger signs appear§</td>
<td>3 Detect and treat serious infections with danger signs ([IMCI][2])§</td>
<td>2 Detect and treat serious infections with danger signs with full supportive care§</td>
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Black Lancet 2016
<table>
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<tr>
<th>Routine entry points</th>
<th>Pregnancy</th>
<th>Birth</th>
<th>Infancy</th>
<th>Early Childhood</th>
<th>Middle Childhood</th>
<th>Adolescence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ANC 8</td>
<td>Immunization (I)</td>
<td>I: 6, 10, 14 weeks</td>
<td>I: (9-)12 months</td>
<td>I: ~9 years School</td>
<td>School</td>
</tr>
</tbody>
</table>

**MISSED OPPORTUNITIES**

PREVENTION, PROMOTION, COUNSELING

Needs based care and counseling

Healthy child

Vulnerable child

Chronic conditions (e.g. disability, HIV)

Sick child
Community Systems for PHC

"For every girl and boy to survive and thrive"

UNICEF | for every child
What does it mean to integrate nutrition into health services?

From disease-specific to systems focus

• **Patient**: receives comprehensive, child-centered care
• **Care provider**: routinely and systematically manages co-morbidities (data driven), collaboration with providers and services
• **Health manager**: commitment & coordination between programs, shared accountability
• **Policy maker**: Negotiation, prioritization to strengthen the overall system
• **Donor**: coordination of investments, flexibility, systems focus
Integration is a strategy

- to improve prevention, diagnosis and care
- to strengthen health systems and improve efficiencies in service delivery

Integration strategy
Integration at the different levels, HSS interventions

Clinical outcome
Integrated childcare

Service outcome
Improved
  - Quality
  - Coverage
  - Cost-effectiveness
  - Ownership
  - Sustainability

Impact
Improved
  - Health
  - Cost
  - Care
Key messages

• Optimizing existing opportunities along the lifecycle will increase efficiencies

• As systems approach is essential to deliver a package of services with quality and at scale
Thank you