The Challenge of Appropriate Pneumonia Case Management and the Impact for Child Health

Dr. Shamim Qazi

Department of Maternal, Newborn, Child and Adolescent Health
Major causes of death in children under-five
World - 2013

935,000 pneumonia deaths
578,000 diarrhoea deaths

Incidence and mortality are higher in less developed countries

Effective interventions exist for prevention and management

45% of global under-five deaths associated with nutrition-related factors

Trend towards reaching MDG4

Source: UN Inter-agency Group for Child Mortality Estimation 2013.
Effective interventions are available

<table>
<thead>
<tr>
<th>Postnatal (newborn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediate thermal care</td>
</tr>
<tr>
<td>Initiation of exclusive breastfeeding within first hour</td>
</tr>
<tr>
<td>Hygienic cord and skin care</td>
</tr>
<tr>
<td>Neonatal resuscitation with bag and mask (professional health worker)</td>
</tr>
<tr>
<td>Case management of neonatal sepsis, meningitis and pneumonia</td>
</tr>
<tr>
<td>Kangaroo mother care for preterm and for less than 2000g babies</td>
</tr>
<tr>
<td>Management of newborns with jaundice</td>
</tr>
<tr>
<td>Surfactant to prevent respiratory distress syndrome in preterm babies</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Childbirth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continuous postnatal respiratory distress</td>
</tr>
<tr>
<td>Induction of labour for prolonged pregnancy</td>
</tr>
<tr>
<td>Prophylactic uterotonic to prevent postpartum haemorrhage</td>
</tr>
<tr>
<td>Active management of third stage of labour to prevent postpartum haemorrhage</td>
</tr>
<tr>
<td>Management of postpartum haemorrhage (e.g. uterotonic, uterine massage)</td>
</tr>
<tr>
<td>Caesarean section for maternal foetal indication</td>
</tr>
<tr>
<td>Prevention and Prophylactic antibiotics for caesarean section</td>
</tr>
<tr>
<td>Vitamin A supplementation</td>
</tr>
<tr>
<td>Comprehensive family planning</td>
</tr>
<tr>
<td>Routine immune and rotavirus vaccines</td>
</tr>
<tr>
<td>Prevent and treat maternal anaemia</td>
</tr>
<tr>
<td>Detect and manage postpartum sepsis</td>
</tr>
<tr>
<td>Management of postpartum sepsis</td>
</tr>
<tr>
<td>Case management</td>
</tr>
<tr>
<td>Screen and initiate or continue antiretroviral therapy for HIV</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Postnatal (mother)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediate thermal care</td>
</tr>
<tr>
<td>Initiation of exclusive breastfeeding within first hour</td>
</tr>
<tr>
<td>Hygienic cord and skin care</td>
</tr>
<tr>
<td>Neonatal resuscitation with bag and mask (professional health worker)</td>
</tr>
<tr>
<td>Case management of neonatal sepsis, meningitis and pneumonia</td>
</tr>
<tr>
<td>Kangaroo mother care for preterm and for less than 2000g babies</td>
</tr>
<tr>
<td>Management of newborns with jaundice</td>
</tr>
<tr>
<td>Surfactant to prevent respiratory distress syndrome in preterm babies</td>
</tr>
<tr>
<td>Continuous positive airway pressure (CPAP) to manage babies with respiratory distress syndrome</td>
</tr>
<tr>
<td>Extra support for feeding small and preterm babies</td>
</tr>
<tr>
<td>Presumptive antibiotic therapy for newborns at risk of bacterial infections</td>
</tr>
</tbody>
</table>
Coverage of core interventions remains low

Source: UNICEF's State of the World's Children 2013
Multiple initiatives affirm commitment

Country leadership & Implementation

Key initiatives in support of Every Woman Every Child

- Family Planning 2020
- UN Commission on Life Saving Commodities
- A Promise Renewed

Global action plans: Every Newborn, Scaling up Nutrition, GAPPD, DoV/GVAP, WASH, others

Global mechanisms for coordinated action and advocacy

- PMNCH
- H4+
- GAVI
- RMNCH Fund
- MDG Alliance
- Innovation Working Group

Commission on Information and Accountability
Independent Expert Review Group
New Opportunities

- Vaccines for **preventing** pneumonia and diarrhoea
  - Hib, pneumococcal conjugate vaccines
  - Rotavirus vaccines

- Improvements in **case management**
  - Low osmolarity ORS
  - Zinc supplementation
  - Short course antibiotics for non-severe pneumonia
  - Oral amoxicillin for severe pneumonia

- New evidence on other **preventive** modalities
  - Reduction of indoor air pollution
  - Hand washing
The need for a multi-pronged approach

- Pneumonia and diarrhoea caused by multiple pathogens - no single intervention will address entirety of the problem.

- Vaccines alone do not protect against all causes of pneumonia and diarrhoea.

- Multiple interventions of proven effectiveness exist - complementary but not implemented in a coordinated fashion.

- Establishing better coordination between existing programmes can lead to synergies and efficiencies that will maximize the benefits of the individual interventions.
The Integrated Global Action Plan for the Prevention and Control of Pneumonia and Diarrhoea (GAPPD)
Ending Preventable Child Deaths from Pneumonia and Diarrhoea by 2025

The integrated Global Action Plan for Pneumonia and Diarrhoea (GAPPD)
Purpose

- Provide general framework and guidance to countries and partners for scaling up interventions in coordinated way

- Propose action steps and programme activities to move forward efficiently

- Build broad coalition of global and national policy-makers, planners, donor agencies and civil society
Vision

Ending preventable child deaths from pneumonia and diarrhoea – 2025
Goals for 2025

For children under 5 years of age

- reduce mortality from pneumonia to fewer than 3 per 1000 live births;
- reduce mortality from diarrhoea to fewer than 1 per 1000 live births;
- reduce the incidence of severe pneumonia by 75% compared to 2010 levels;
- reduce the incidence of severe diarrhoea by 75% compared to 2010 levels;
- reduce by 40% the global number who are stunted compared to 2010 levels.
Coverage targets for 2025

- 90% full-dose coverage of each relevant vaccine (with 80% coverage in every district);

- 90% access to appropriate pneumonia and diarrhoea case management (with 80% coverage in every district);

- at least 50% coverage of exclusive breastfeeding during the first 6 months of life;

- virtual elimination of paediatric HIV.
Coverage targets for 2030

- universal access to basic drinking-water in health care facilities and homes;
- universal access to adequate sanitation in health care facilities by 2030 and in homes by 2040;
- universal access to hand-washing facilities (water and soap) in health care facilities and homes;
- universal access to clean and safe energy technologies in health care facilities and homes.
Strategies for preventing and treating pneumonia

- Protection
  - Breastfeeding promotion
  - Hand washing promotion
  - Zinc supplementation
  - Adequate nutrition
  - Reduce indoor air pollution

- Prevention
  - Vaccination
    - New: Pneumococcal, Hib
    - Routine: Measles, pertussis
  - HIV prevention

- Treatment
  - Improve care seeking behaviour
  - Community case management
  - Health facility case management
  - Antibiotics

Strategies for preventing and treating diarrhoea

- Protection
  - Breastfeeding promotion
  - Hand washing promotion
  - Vitamin A and Zinc supplementation
  - Adequate nutrition
  - Safe water and sanitation

- Prevention
  - Vaccination
    - New: Rotavirus
    - Routine: Measles
  - HIV prevention

- Treatment
  - Improve care seeking behaviour
  - Community case management
  - Health facility case management
  - Low-osmolarity ORS + Zinc

Many interventions and treatment strategies are identical
Strategies for preventing and treating pneumonia and diarrhoea

**Diarrhoea**
- Vitamin A supplementation
- Vaccination: rotavirus
- Safe water & improved sanitation
- Low-osmolarity ORS, zinc & continued feeding

**Pneumonia**
- Vaccination (PCV, Hib, pertussis)
- Reduced household air pollution
- Antibiotics for pneumonia
- Oxygen therapy (where indicated)

**Protect**
- Breastfeeding promotion & support
- Adequate complementary feeding

**Prevent**
- Measles vaccination
- Handwashing with soap
- Prevention of HIV

**Treat**
- Improved care seeking behaviour and referral
- Improved case management at community and health facility levels
- Continued feeding

Source: Adapted PATH: Tackling the deadliest diseases for the world’s poorest children.
Framework for Protection, Prevention, Treatment

PROTECT
Children by establishing good health practices from birth
- Exclusive breastfeeding for 6 months
- Adequate complementary feeding
- Vitamin A supplementation

PREVENT
Children becoming ill from pneumonia and diarrhoea
- Vaccines: pertussis, measles, Hib, PCV and rotavirus
  - Handwashing with soap
  - Safe drinking-water and sanitation
  - Reduce household air pollution
    - HIV prevention
  - Cotrimoxazole prophylaxis for HIV-infected and exposed children

TREAT
Children who are ill from pneumonia and diarrhoea with appropriate treatment
- Improved care seeking and referral
- Case management at the health facility and community level
- Supplies: Low-osmolarity ORS, zinc, antibiotics and oxygen
  - Continued feeding (including breastfeeding)
GAPPD: Key Actions

- An integrated approach to saving lives
- Engaging all sectors and actors
- Focus on country impact
- Action at country level
  - Strengthen national leadership
  - Foster intersectoral collaboration
  - Prioritize interventions and close equity gap
  - Increase investment in research and be open to innovations
  - Ensure accountability for results
Integrated Approaches: Lessons Learned

- Not a new project or programme, but a framework for strengthening coordination of existing interventions
- Abundant need for coordination within ministries, within agencies and between programmes and partners
- Need for joint advocacy platform for maternal, child and adolescent health
- Changing behaviours takes time
Towards a more comprehensive approach