Introduction

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**Abbreviations**

<table>
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<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>AIDS</td>
<td>Acquired Immunodeficiency Syndrome</td>
</tr>
<tr>
<td>ANC</td>
<td>Antenatal care</td>
</tr>
<tr>
<td>ARI</td>
<td>Acute respiratory infection</td>
</tr>
<tr>
<td>ART</td>
<td>Antiretroviral therapy</td>
</tr>
<tr>
<td>ARV</td>
<td>Antiretroviral</td>
</tr>
<tr>
<td>CAH</td>
<td>Child and Adolescent Health and Development</td>
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<tr>
<td>CHW</td>
<td>Community health worker</td>
</tr>
<tr>
<td>CRC</td>
<td>Convention on the Rights of the Child</td>
</tr>
<tr>
<td>DHS</td>
<td>Demographic and Health Survey</td>
</tr>
<tr>
<td>EBF</td>
<td>Exclusive breastfeeding</td>
</tr>
<tr>
<td>EPI</td>
<td>Expanded Programme on Immunization</td>
</tr>
<tr>
<td>ETAT</td>
<td>Emergency triage, assessment and treatment</td>
</tr>
<tr>
<td>Hib</td>
<td>Haemophilus influenzae Type B</td>
</tr>
<tr>
<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
</tr>
<tr>
<td>HMIS</td>
<td>Health management information system</td>
</tr>
<tr>
<td>IMCI</td>
<td>Integrated Management of Childhood Illness</td>
</tr>
<tr>
<td>IMR</td>
<td>Infant Mortality Rate</td>
</tr>
<tr>
<td>IPT</td>
<td>Intermittent preventive therapy</td>
</tr>
<tr>
<td>ITN</td>
<td>Insecticide-treated bednets</td>
</tr>
<tr>
<td>IRIS</td>
<td>Immune reconstitution inflammatory syndrome</td>
</tr>
<tr>
<td>IYCF</td>
<td>Infant and young child feeding</td>
</tr>
<tr>
<td>LBW</td>
<td>Low-birth-weight</td>
</tr>
<tr>
<td>MCH</td>
<td>Maternal and Child Health</td>
</tr>
<tr>
<td>MDG</td>
<td>Millennium Development Goal</td>
</tr>
<tr>
<td>MICS</td>
<td>Multiple Indicator Cluster Survey</td>
</tr>
<tr>
<td>MNCH-HHS</td>
<td>Maternal, Newborn, and Child Health – Household Survey</td>
</tr>
<tr>
<td>MOH</td>
<td>Ministry of Health</td>
</tr>
<tr>
<td>NGO</td>
<td>Nongovernmental Organization</td>
</tr>
<tr>
<td>ORS</td>
<td>Oral rehydration solution</td>
</tr>
<tr>
<td>ORT</td>
<td>Oral rehydration therapy</td>
</tr>
<tr>
<td>PMTCT</td>
<td>Prevention of mother-to-child transmission (of HIV)</td>
</tr>
<tr>
<td>SBA</td>
<td>Skilled birth attendant</td>
</tr>
<tr>
<td>SPA</td>
<td>Service Provision Assessment</td>
</tr>
<tr>
<td>UNFPA</td>
<td>United Nations Population Fund</td>
</tr>
<tr>
<td>UNICEF</td>
<td>United Nations Children’s Fund</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
</tr>
</tbody>
</table>
Acknowledgements

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Introduction

Managing programmes to improve child health

Child health interventions are treatments, technologies, and key family practices that prevent or treat childhood illness and reduce deaths in children under age 5 years. There are simple low-cost interventions for the prevention and treatment of all the most common causes of newborn, infant and child mortality. An effective child health programme must focus on achieving a high level of coverage\(^1\) with the interventions that have the greatest potential to reduce child mortality in the country.

At the national level, child health programme management and partners should select the most important child health interventions to implement in the country. This selection should be based on consideration of the primary causes of morbidity and mortality in the country and the feasibility of implementing different interventions there.

Child health programme managers at the other administrative levels, such as the region (or province), sub-region, and district, must understand the child survival problems in their area and the framework specified in the country’s strategic plan for child health. They must then plan to implement the selected interventions for child health in a way that will be effective in their administrative areas, manage that implementation on an ongoing basis, and periodically evaluate what has been achieved.

Managing programmes to improve child health is an ongoing cycle for every country, carried out in somewhat different ways at different management levels. The overall programme planning and management cycle has two parts, the strategic planning cycle and the implementation planning cycle.

Figure 1 on the next page shows the parts of the overall programme planning and management cycle. The boxes in dotted lines show the strategic planning cycle. The strategic planning cycle includes an evaluation of current coverage with child health interventions and child health status (the impact of efforts in the previous years). Based on this thorough evaluation, a strategic plan will be developed to guide the child health programme in the next 5 to 10 years. The plan will set goals, specify the priority child health interventions, and outline how they should be packaged and delivered.

Strategic planning is usually done at the national level every 5 to 10 years and is sometimes done at regional or other levels also. Strategic plans are used to ensure commitment of stakeholders and to advocate for programme resources. They provide overall guidance for implementation and financing to ensure the achievement of the goals. A strategic plan provides the framework for developing implementation plans.\(^2\)

\(^1\) Coverage is the proportion of the target population that receives the intervention. It is a population-based indicator, usually measured in a community/household survey.

\(^2\) Strategic planning is not discussed in detail in these guidelines. Detailed guidelines on strategic planning will be presented in a separate manual: “Strategic Planning for Child Health: Workshop Guidelines” currently in development by WHO/CAH.
The implementation planning cycle, in shaded boxes, includes planning how the interventions will be implemented, managing implementation on an ongoing basis, and after 1-2 years of activity, reviewing how well implementation was carried out. Then the cycle repeats, beginning with using the results of the review to inform planning for the next year.

Planning implementation helps managers at the national and sub-national levels work out how the interventions can be effectively delivered and what activities and resources will be required. It is usually done every 1 to 2 years. If a strategic plan is available, it states the objectives for child health and the priority interventions to be implemented and thereby provides the framework for the implementation (operational) plans. If a strategic plan has not been developed, it is still necessary to do implementation planning to manage the child health programme in the short term.

Figure 1

Programme Planning and Management Cycle
### Comparison of Strategic and Implementation Plans

<table>
<thead>
<tr>
<th>Strategic plan</th>
<th>Implementation plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prepared at national level to guide the country’s child health efforts</td>
<td>Prepared for a geographic area to guide implementation in that area (the country, a region, a district)</td>
</tr>
<tr>
<td>Reflects a broad perspective of progress needed in child survival and health and how progress should be achieved in the future</td>
<td>Reflects specific knowledge of how interventions can be implemented in the community, at first-level health facilities and at referral facilities; what the programme can do or provide to enable successful implementation; and resources required to carry out activities</td>
</tr>
<tr>
<td>Usually for 5–10 years</td>
<td>Usually for 1 (or 2) years</td>
</tr>
<tr>
<td>The country’s major partners in child health should be involved in its development</td>
<td>Stakeholders and partners in the geographic area should be involved in its development</td>
</tr>
<tr>
<td>Provides framework; states goals, objectives, priority interventions, coverage targets</td>
<td>States targets for activities</td>
</tr>
<tr>
<td>Specifies priority interventions to be implemented to address major causes of morbidity and mortality</td>
<td>Specifies activities to be implemented to deliver the priority interventions in the geographic area</td>
</tr>
<tr>
<td>Includes impact and coverage indicators that will be evaluated every 3–5 years</td>
<td>Includes activity-related indicators that will be monitored and also reviewed at year-end</td>
</tr>
<tr>
<td>Includes overall guidance on financing needed</td>
<td>Includes budget for the year, based on activities planned (in order to meet needs of children in the geographic area)</td>
</tr>
</tbody>
</table>

**Where can a programme enter these cycles?**

A sub-national area may start planning at almost any point in these cycles. To develop an implementation plan, managers should get together and use the best available evaluation data on what has been done so far and the results of the work. If the available data is very little, the implementation plan should include an increase in evaluation activities, so that better data will be available for the next planning cycle.

If the country **has** a strategic plan, it will provide some direction for planning implementation, such as the objectives for child health and the priority interventions that should be implemented. If a country **not** have a national strategic plan, a strategic planning cycle should begin with an evaluation of child health status and coverage of child health services.
Learning objectives

At the end of this module, you will understand:

- The purpose of this training
- The global child health situation and the importance of epidemiology for planning effective child health programmes
- Recommended child health interventions and packages
- Principles for delivery of interventions: the continua of care, packaging of interventions, coverage and equity
- Definitions of terms that are important for planning and managing child health programmes including goal, objective, indicator, activity, coverage, impact, target.

You will practise:

- Interpreting child health data
- Selecting an intervention package and selecting the most important level to implement it
- Using terms important for planning and managing child health programmes including goal, objective, indicator, activity, coverage, impact, target.
1. About this training

*Managing Programmes to Improve Child Health* is designed to give managers essential knowledge and skills that they can use to improve programme management. Many child health managers have backgrounds in medicine or nursing, and have never received training in programme management. It is assumed that they will pick up necessary skills, although this is often not the case. For this reason, training in key management concepts and skills is essential.

Better planning and management of child health programmes is urgently needed. Although simple and effective interventions to reduce child deaths are available, these interventions are often not reaching the children who most need them. Programmes that are well planned and managed are more likely to improve intervention coverage and therefore reduce child deaths. These programmes are more likely to reach the Millennium Development Goal for child mortality (a two-thirds reduction in under-five mortality by 2015 from 1990 levels).

1.1 Who is the target audience?

These guidelines are designed primarily for managers of programmes related to child health at the sub-national levels such as regional, provincial, sub-regional, and district. These are the managers that must take the vision for child health described by the national-level planners in the strategic plan and turn it into action on the ground. Many parts of this course may be relevant to national-level managers also.

In some countries, a child health programme as such does not exist, and an overall child health programme manager at national level and/or child health managers at sub-national levels also do not exist. The child health programme(s) will be a configuration of many small and larger programmes and activities with different funding and directors. For example, there may be different managers for nutrition, safe motherhood, and child health including IMCI.

Managers who are responsible for part of the child health-related activities can apply the skills described in this training for that part. In addition, the training will broaden perspectives on how any child health activities should fit with activities of other departments or programmes directed at the same goals of improving child health, and the advantages of collaborative planning.

1.2 What is taught?

*Managing Programmes to Improve Child Health* describes in detail how to perform two major steps in the implementation planning cycle. Those steps are:

- develop an implementation plan and
- manage implementation.

This course teaches how to do these steps as they would be done by managers at sub-national levels. These steps may also be done at the national level in a way that is appropriate for that level.
Below is a brief description of the steps addressed in this course.

**Develop implementation plan**

Implementation plans specify in detail how interventions will be delivered and include activities, tasks, budget, and monitoring. An implementation plan is usually developed every 1-2 years, based on the framework of the strategic decisions for child health made at the national level.

Key steps in developing an implementation plan include:

1. *Prepare for planning* – forming a planning team, involving stakeholders, and reviewing the timing and resources needed.
2. *Review implementation status* – using data from different sources to assess strengths and weaknesses of previous implementation.
3. Decide on *programme activities* – setting activity-related targets and planning activities to implement interventions in the home and community, first-level health facilities and referral facilities.
4. Plan *monitoring of implementation of activities* – selecting monitoring indicators and planning how to monitor them.
5. Plan for *the next review of implementation status* – planning what will be assessed, how data will be collected, and who will conduct the review.
6. Write a *workplan and budget*.

These steps are addressed in *Module 2: Planning Implementation*. 
**Manage implementation**

*Managing implementation* is the process of getting activities and tasks done according to the implementation plan. Important management skills are often general skills that cut across several technical areas. Steps involved in managing implementation are listed below, with key skills needed to perform them.

1. Advocate for child health
   - Preparing and giving an advocacy presentation
2. Mobilize resources
   - Preparing a presentation to ask for support from a strategic partner
   - Preparing a letter of intent to a donor
3. Manage resources
   - Calculating quantities of medicines needed
   - Monitoring expenditures
4. Manage supervision
   - Analysing common problems found during supervision
   - Giving feedback during supervision
5. Monitor progress
   - Analysing monitoring indicators to identify successes and problem areas

These steps and skills are addressed in *Module 3: Managing Implementation*.

On the next two pages are flowcharts that show the substeps described in *Module 2: Planning Implementation* and *Module 3: Managing Implementation*.

These training materials are not a comprehensive guide to management. More detailed information on all aspects of management is available from many sources, including WHO reference documents, textbooks, journal articles and other publications. Useful references have been listed at the end of each module.

These materials focus on **improving coverage with effective child health interventions**. They also address the important concepts of quality of care (providing services of a good quality), and equity (ensuring that all children receive services, not just the children who are closer, or economically better off, or part of the majority social groups).

This planning is child-centred and needs-based. That means that plans should be written for delivering specific interventions in a way that will reach as many children as possible, in order to improve child survival and health. Funding is then sought in amounts sufficient to implement the plans. The alternative is resource-based planning, which usually means planning to use the available resources to implement activities that are easily funded, or only to continue what was done last year, or to use limited resources to help geographic areas or social groups that are easiest to reach or politically favoured. Resource-based planning is not recommended, as it is unlikely to enable achievement of child health objectives.
2.1. Review programme goals and objectives.
2.2. Review current coverage of interventions and compare it to targets.
2.3. Review status of indicators related to availability, access, demand, and quality of health services and knowledge of families related to child health.
2.4. Review major activities in the last plan and assess how well they were implemented.
2.5. Analyse information and generate ideas on what is needed to reach targets.
3.1. Affirm the programme’s goals and objectives.
3.2. Set activity-related targets.
3.3. Decide on activities to implement interventions/packages in the home and community, first-level health facilities and referral facilities.
3.4. List tasks in each activity.
3.5. Specify types of resources that will be needed for activities.
4.1. Plan to monitor whether activities are completed as planned.
4.2. Choose priority indicators for monitoring implementation of activities.
4.3. Decide how to monitor, when, and who will monitor.
4.4. Plan how to summarize, analyse and interpret data, and use and disseminate results from monitoring.
5.1. Decide when the next review of implementation status will be conducted.
5.2. Decide what to review and choose the specific indicators to assess.
5.3. Decide methods to collect data and how data will be summarized.
5.4. Plan who will conduct the next review of implementation status and how it will be conducted.
5.5. Plan how to use the results of the review of implementation status.
6.1. Decide how to scale up implementation.
6.2. Schedule activities and set a timetable.
6.3. Estimate resource needs and develop a budget.
6.4. Write the workplan and share it with stakeholders.
Figure 5

Flowchart: Manage implementation

1. Advocate for child health
   - 1.1. Review policy and programme changes needed.
   - 1.2. Identify the target audience.
   - 1.3. Decide on advocacy messages.
   - 1.4. Decide how best to deliver messages.
   - 1.5. Develop a plan to monitor effectiveness of advocacy.

2. Mobilize resources
   - 2.1. Form strategic partnerships.
   - 2.2. Mobilize donor funds.

3. Manage human, material and financial resources
   - 3.1. Manage human resources.
   - 3.2. Manage material resources.
   - 3.3. Manage financial resources.

4. Manage supervision
   - 4.1. Review and improve the organization of supervision.
   - 4.2. Ensure that supervisors are well prepared.
   - 4.3. Ensure sufficient management of transportation and funding for supervision.
   - 4.4. Supervise the supervisors.

5. Monitor progress and use results
   - 5.1. Analyse monitoring data.
   - 5.2. Use monitoring data to improve the programme.
1.3 **What materials and learning methods are used?**

There are 3 modules. These are summarized below.

<table>
<thead>
<tr>
<th>Module title</th>
<th>Content</th>
<th>Learning methods</th>
<th>Practice methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: Introduction</td>
<td>The programme planning and management cycle</td>
<td>Presentation/reading/written exercises/group discussions</td>
<td>Individual and group exercises</td>
</tr>
<tr>
<td></td>
<td>The implementation planning cycle</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Purpose of this training</td>
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<tr>
<td></td>
<td>Background to child health: understanding the problem</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Effective interventions</td>
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<td></td>
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<tr>
<td></td>
<td>Principles of delivery of interventions</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Definitions of terms</td>
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<td></td>
</tr>
<tr>
<td>2: Planning Implementation</td>
<td>Prepare for planning</td>
<td>Reading/presentations/interpretation of local data/written exercises/group discussion</td>
<td>Use of available data to review implementation status</td>
</tr>
<tr>
<td></td>
<td>Review implementation status</td>
<td></td>
<td>Planning activities for implementation of an intervention package</td>
</tr>
<tr>
<td></td>
<td>Decide on programme activities</td>
<td></td>
<td>Practice of skills in exercises about fictional country</td>
</tr>
<tr>
<td></td>
<td>Plan monitoring of implementation of activities</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Plan for a review of implementation status</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Write a workplan and budget</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3: Managing implementation</td>
<td>Advocate for child health</td>
<td>Role play presentations</td>
<td>Application of management skills to your implementation plan</td>
</tr>
<tr>
<td></td>
<td>Mobilize resources</td>
<td></td>
<td>Application of skills to exercises about fictional country</td>
</tr>
<tr>
<td></td>
<td>Manage human, material and financial resources</td>
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<tr>
<td></td>
<td>Manage supervision</td>
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<td></td>
<td>Monitor progress and use results</td>
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</tbody>
</table>

1.4 **How are the materials to be used?**

These materials are designed to be used as guidelines for a **facilitated workshop**.

**Background data is needed for this workshop:** You will use policy and programme information from your own setting to help develop your skills in planning implementation. You should have received a list of the information needed in advance of the workshop. If possible, regional and district managers brought data from their own regions or districts. If local data are not available, facilitators may provide some.

If these materials can be adapted appropriately, they might be used in other ways, such as a reference guide for self-learning, for on-the-job training, or as a part of pre-service training.
2. Child health epidemiology and effective interventions

Child health programme managers at sub-national levels, such as the region (or province), sub-region, or district level, must understand the child survival problem in their geographic/administrative area and the framework specified in the country’s strategic plan for child health. They must then plan to implement the selected interventions for child health in a way that will be effective in their areas, manage that implementation on an ongoing basis, and periodically evaluate what has been achieved.

2.1 What is the target population for child health programmes?

Child health programmes focus on children from birth up to 5 years of age. Figure 6 shows the human life-cycle including the life stages from pregnancy through birth, the neonatal period, infancy, childhood, adolescence and adulthood. The target population for child health programmes includes the following children:

- newborn or neonate (birth up to 28 days of life)
- infant (birth up to age 1 year), and
- child age 1 up to 5 years (12 up to 60 months old)

The relative mortality and morbidity rates for newborns, infants and all children will differ between countries and sometimes within countries. For example, the contribution of newborn mortality to total mortality in children less than 5 years of age ranges from 16% to 50%. In countries where newborn mortality contributes 30% or more of total under-five mortality, programmes require a very substantial emphasis on newborn health.

Figure 6
2.2 What is the problem?

Child mortality remains unacceptably high in many developing countries. The World Summit for Children in 1990 set a goal for reducing infant and child mortality by one third between 1990 and the year 2000, or reducing infant and child mortality to 50 and 70 per 1,000 live births respectively, whichever is less. However, this goal remained far from being achieved. Between the early 1990’s and 2000, worldwide under-five mortality declined by only slightly over 10%, from 91 deaths per 1000 to 79 per 1000, falling short of the one-third reduction target.

Millennium Development Goals

In 2000, building upon a decade of major United Nations conferences and summits, world leaders came together at the Millennium Summit in New York and adopted the United Nations Millennium Declaration, committing all nations to achieve eight goals that are known as the Millennium Development Goals (MDGs) and a series of time-bound targets with a deadline of 2015. They represent a vision for the next millennium in the areas of poverty, hunger, education, gender equality, health, and environment. The MDGs form a blueprint that was agreed to by all the world’s countries and leading development institutions.

The fourth of eight MDGs is to reduce child mortality with a target of reducing under-five deaths by two-thirds between 1990 and 2015.

A gap remains between our knowledge of what needs to be done and action on the ground. Better management of health systems and resources is one essential element required to apply interventions more effectively in order to reach the MDGs.

Key points: Target group for child health programmes

- Child health programmes focus on all children from birth up to 5 years of age.
- A child is classified as newborn from: Birth up to 28 days of life.
- A child is classified as an infant from: Birth up to 12 months of age (up to age 1 year).
- The relative mortality rates of newborns, infants and children under 5 years of age should help define which interventions are selected and how they are implemented.

The Millennium Development Goals

1. Eradicate extreme poverty and hunger
2. Achieve universal primary education
3. Promote gender equality and empower women
4. Reduce child mortality
5. Improve maternal health
6. Combat HIV/AIDS, malaria and other diseases
7. Ensure environmental sustainability
8. Develop a global partnership for development
The Rights of the Child

In many countries, the rights of children are seriously neglected or violated. The Convention on the Rights of the Child (CRC) is the principal international human rights treaty which sets out the particular rights of children and adolescents up to the age of eighteen. CRC principles should guide all activities directed towards children, including child health activities.

The four key principles of the Convention on the Rights of the Child are:

- **Non-discrimination** (Article 2): to ensure that rights apply to all children irrespective of their or their caregivers’ race, sex, language, ethnicity, opinion or other characteristics
- **Best interests of the child** (Article 3): to ensure that policies and programmes should always consider the best interests of all affected children
- **The right to life, survival and development** (Article 6): to ensure these rights are recognized as fundamental to a State’s obligation to promote the health and well-being of children
- **Respect for the views of the child**: to ensure that children and their caregivers participate as much as possible in programming and policy making.

Child rights are implicit in all aspects of child health programming and can be measured in three broad categories:

- **Policies and guidelines** which are required to implement technically sound programmes, including laws and strategies to protect children.
- **Interventions to improve health and survival** which need to be available, accessible, of an appropriate quality, and equitable.
- **Mortality and morbidity** rates which are markers of how effectively programmes are reaching children and caregivers.

Annex A outlines definitions and indicators for the rights of the child.

**2.3 What are the major causes of morbidity and mortality in children?**

In most developing countries a relatively limited number of conditions cause at least 70% of all child mortality and should be the focus of child health programmes (see Figure 10). These conditions are: neonatal causes, pneumonia, diarrhoea, malaria, measles, HIV/AIDS. The relative importance of these conditions will vary between countries and sometimes within the same country. Recent published estimates indicate that nutrition-related factors are underlying causes for about 35% of all under-five deaths; therefore, interventions to address undernutrition are critical to all child health programmes, regardless of the primary causes of mortality. In addition, co-morbidity (the presence of two or more infectious diseases at the same time) may result in additional deaths–greater than that expected from either cause alone.

The epidemiology of mortality in children is important for planning since it will help determine which interventions should be given the most emphasis. For example, in sub-Saharan Africa, malaria and HIV contribute more to total child mortality than newborn causes. In contrast, in South-East Asia, malaria and HIV contribute much less to total child mortality, and newborn causes contribute much more. See Figures 11 and 12 for regional differences in mortality.
Deaths among children under-five

- Diarrhoeal diseases (postneonatal) 16%
- Malaria 7%
- Measles 4%
- HIV/AIDS 2%
- Other infectious and parasitic diseases 9%
- Neonatal tetanus 3%
- Congenital anomalies 7%
- Birth asphyxia and birth trauma 23%
- Prematurity and low birth weight 31%
- Other 9%

35% of under-five deaths are due to the presence of undernutrition*

Key Points: Causes of death in children

- Sound epidemiological data are essential for planning
- Most under-five mortality is caused by problems in the newborn period and by 5 conditions: pneumonia, diarrhoea, malaria, measles, HIV/AIDS
- Undernutrition and/or micronutrient deficiencies are underlying causes for about 35% of all under-five deaths
- Primary causes of mortality vary between and within countries

Major causes of death in neonates and children under-five in the world - 2004

Figure 11

**Distribution of causes of under-five deaths by WHO region**


Figure 12

**Number of under-five deaths by cause in each WHO region**

Sources: CHERG/CAH/WHO: 2000 estimates of the distribution of causes of death; MHI/IER/WHO: 2006 estimates of number of deaths
2.4 How can child deaths be prevented?

Relatively simple low-cost interventions are available for the prevention and treatment of almost all of the most common causes of newborn, infant and child mortality.

**Figure 13**

<table>
<thead>
<tr>
<th>About Child Health Interventions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child health interventions can prevent or treat illness and reduce deaths in children under age 5 years.</td>
</tr>
<tr>
<td>• Examples of <strong>preventive interventions</strong> include tetanus toxoid immunization, exclusive breastfeeding, and sleeping under an insecticide-treated bednet.</td>
</tr>
<tr>
<td>• Examples of <strong>treatment interventions</strong> include emergency obstetric care, oral rehydration therapy, antibiotics for dysentery and for pneumonia, and management of severe malnutrition.</td>
</tr>
</tbody>
</table>

Interventions are usually delivered using a combination of:  
  a) services (to provide preventive and treatment interventions)  
  b) health education (to improve knowledge and practices)  
  c) distribution of essential commodities (such as bednets), and  
  d) infrastructure (such as potable water and latrines).

An intervention is **efficacious** if it has been demonstrated to reduce child deaths under controlled (research) conditions.

An intervention is **effective** if it has been demonstrated to reduce child deaths under real-life (programme) conditions.

**Effective interventions to improve child survival should form the basis for all child health programmes. Global coverage with most of these effective interventions, however, is still below 50% – sometimes substantially so. In most regions of the world with high child mortality, effective interventions are not reaching enough of the mothers and children who need them.**

Effective interventions for the prevention or treatment of all important causes of death in children and newborns are summarized in Figure 14.
Figure 14

Examples of effective interventions for improving newborn and child survival

<table>
<thead>
<tr>
<th>Pregnancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetanus toxoid immunization</td>
</tr>
<tr>
<td>Birth and emergency planning</td>
</tr>
<tr>
<td>Detection and management of problems complicating pregnancy (e.g. hypertensive disorders, bleeding, malpresentations, multiple pregnancy, anaemia)</td>
</tr>
<tr>
<td>Detection and treatment of syphilis</td>
</tr>
<tr>
<td>Intermittent preventive therapy for malaria#</td>
</tr>
<tr>
<td>Information and counselling on self-care, nutrition, safer sex, breastfeeding, family planning</td>
</tr>
<tr>
<td>Sleeping under an insecticide-treated bednet#</td>
</tr>
<tr>
<td>Prevention of mother-to-child transmission of HIV* ##</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Labour, birth and 1-2 hours after birth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitoring progress of labour, maternal and foetal well-being with partograph</td>
</tr>
<tr>
<td>Social support (companion) during birth</td>
</tr>
<tr>
<td>Immediate newborn care (resuscitation if required, thermal care, hygienic cord care, early initiation of breastfeeding)</td>
</tr>
<tr>
<td>Emergency obstetric and newborn care for complications</td>
</tr>
<tr>
<td>Antibiotics for preterm premature rupture of membranes*</td>
</tr>
<tr>
<td>Antenatal corticosteroids for preterm labour*</td>
</tr>
<tr>
<td>Prevention of mother-to-child transmission of HIV* ##</td>
</tr>
</tbody>
</table>

* Requires a stronger health system. Consider introducing when simpler interventions are at high coverage.

# Situational intervention, only necessary in setting where malaria is endemic

## Situational intervention, only necessary in setting where HIV prevalence is high

* The four pillars of prevention of mother-to-child transmission of HIV (PMTCT) include:
  (i) preventing HIV infection in women
  (ii) preventing unintended pregnancy among HIV-infected women
  (iii) preventing transmission from an HIV-infected woman to her baby by caesarean section, antiretrovirals and safer infant feeding options
  (iv) providing care, support and treatment for HIV-infected women, their infants and children.
Figure 14 (continued)
Effective interventions for improving newborn and child survival (continued)

<table>
<thead>
<tr>
<th><strong>Newborn period (after the first 1-2 hours after birth up to 1 month)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Exclusive breastfeeding</td>
</tr>
<tr>
<td>Thermal care</td>
</tr>
<tr>
<td>Hygienic cord care</td>
</tr>
<tr>
<td>Prompt care-seeking for illness</td>
</tr>
<tr>
<td>Extra care of low-birth-weight (LBW) infants</td>
</tr>
<tr>
<td>Immunization</td>
</tr>
<tr>
<td>Management of newborn illness</td>
</tr>
<tr>
<td>Prevention of mother-to-child transmission of HIV* **</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Older infants and children (1 month up to 5 years)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Preventive interventions</strong></td>
</tr>
<tr>
<td>Exclusive breastfeeding (up to age 6 months)</td>
</tr>
<tr>
<td>Safe and appropriate complementary feeding starting at 6 months with continued breastfeeding (up to age 2 years and beyond)</td>
</tr>
<tr>
<td>Sleeping under an insecticide-treated bednet #</td>
</tr>
<tr>
<td>Immunization</td>
</tr>
<tr>
<td>Vitamin A supplementation</td>
</tr>
<tr>
<td>Handwashing and proper disposal of faeces</td>
</tr>
<tr>
<td>Birth spacing of 24 months or more</td>
</tr>
<tr>
<td><strong>Treatment interventions</strong></td>
</tr>
<tr>
<td>Oral rehydration therapy for diarrhoea</td>
</tr>
<tr>
<td>Zinc for diarrhoea</td>
</tr>
<tr>
<td>Antibiotics for dysentery</td>
</tr>
<tr>
<td>Antibiotics for pneumonia</td>
</tr>
<tr>
<td>Antimalarials</td>
</tr>
<tr>
<td>Management of severe malnutrition</td>
</tr>
<tr>
<td>Management of HIV-exposed and HIV-infected children##</td>
</tr>
</tbody>
</table>

# Situational intervention only necessary in setting where malaria is endemic
## Situational intervention only necessary in setting where HIV prevalence is high

* The four pillars of PMTCT include:
  (i) preventing HIV infection in women
  (ii) preventing unintended pregnancy among HIV-infected women
  (iii) preventing transmission from an HIV-infected woman to her baby by caesarean section, antiretrovirals and safer infant feeding options
  (iv) providing care, support and treatment for HIV-infected women, their infants and children.
Criteria for effective interventions include:

- Sufficient evidence of efficacy. A causal relationship has been established between the intervention and reductions in cause-specific mortality in children under age five years in developing countries.
- Feasibility for high levels of implementation in low-income countries.

It has been estimated that 99% coverage with interventions against the most important causes of child mortality would prevent at least 63% of all childhood deaths each year in the 42 countries with the highest mortality rates. Of all child deaths (approximately 10 million in 2000), it is estimated that 6 million are preventable.

**Figure 15**

**Interventions most effective in improving child survival**

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Reduction in under-five deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antenatal care</td>
<td>4%*</td>
</tr>
<tr>
<td>Skilled care at birth</td>
<td>13%*</td>
</tr>
<tr>
<td>Postnatal care: routine care for all newborns, additional care for LBW, treatment of neonatal sepsis</td>
<td>13%*</td>
</tr>
<tr>
<td>Exclusive breastfeeding</td>
<td>13%</td>
</tr>
<tr>
<td>Appropriate complementary feeding, including micronutrients</td>
<td>6%</td>
</tr>
<tr>
<td>Immunization</td>
<td>5%</td>
</tr>
<tr>
<td>Insecticide-treated bednets</td>
<td>7%</td>
</tr>
<tr>
<td>ORT and zinc for diarrhoea</td>
<td>19%</td>
</tr>
<tr>
<td>Treatment of suspected pneumonia</td>
<td>6%</td>
</tr>
<tr>
<td>Treatment of malaria</td>
<td>5%</td>
</tr>
</tbody>
</table>

* Estimates from Lancet Neonatal Survival Series Paper 2  
All other estimates are from Lancet Child Survival Series Paper 2.
2.5  How well are effective interventions reaching children?

Although global coverage with breastfeeding and measles vaccine is relatively high, coverage with most of the effective preventive and treatment interventions remains low or very low. The 2008 estimates of coverage with key interventions, in 68 countries accounting for 97% of maternal and under-five deaths, is summarized in Figure 16 below. Clearly, effective interventions are not reaching children who need them. Poor children, in particular, are far less likely to receive these interventions compared to children living in countries, communities and families with better resources. There are a number of reasons why coverage has remained low, including acceptability, cost-effectiveness, and complexity of the interventions.

2.6 Integration and coordination with other programmes bring opportunities

Each child health programme needs to work with and coordinate with the other health programmes that address the same target groups and have activities in common with the child health interventions (see Figure 17 below). Some of these programmes may be able to prepare an implementation plan together and integrate some activities. Even if separate plans will be written, it is important to communicate with other health programmes to understand what they have accomplished and what is planned, so that your plan can avoid conflicts or duplication and better meet the needs of the target population.

Figure 17

Several programmes contribute to child health

Coordinating with programmes beyond the Ministry of Health can also bring opportunities, such as to provide information to families and communities. For example, programmes involved in food security and distribution and income generation programmes may have contact with community members and may be willing to address child health-related topics that complement their purposes.
### Key Points: Interventions to prevent child deaths

- Effective interventions that are feasible for implementation in developing countries are available. These include strategies to both prevent disease and treat disease when it occurs.
- Interventions that have been proven to be effective for child health should form the basis for all child health programmes.
- Coverage with most of the effective interventions is still universally low.
- More interventions will become available as data on effectiveness are collected.
EXERCISE A – Review child health epidemiology and effective interventions

In this exercise you will answer questions about child health epidemiology globally and child health planning in your country or area of work.

1. Write “T” by the statements that are True. Write “F” by the statements that are False.

   a. ____ The global overall rate of decline in under-five mortality in the last 10 years has been sufficient to meet the Millennium Development Goal for child health.

   b. ____ Undernutrition is an important contributor to child deaths from the major causes.

   c. ____ On a global level, coverage with ORT for diarrhoea and with antibiotics for pneumonia is high, because these interventions have been promoted for a long time.

2. What are the major causes of child mortality in your own country or area?

   Is the epidemiology of child health uniform in your country or are there regional differences? What are the differences?

   How would you use data on the epidemiological differences between regions in your own country to plan for child health?
3. Name three interventions that would have the greatest impact on improving child survival in your country:

   a) 

   b) 

   c) 

4. Does your country have a national strategic plan or national policy on child health?

   If yes, is it based on epidemiological data that takes into account the major causes of morbidity and mortality in children in your own country?

When you have completed this exercise, tell your facilitator that you are ready for the group discussion.
3. **Principles of delivery of interventions**

3.1 **The continua of care for child health**

The two continua of care are guiding principles for planning child health programmes.

The continuum of care for the **mother and child** includes the life stages from pregnancy, through birth, the newborn period, infancy and childhood. Interventions should be targeted at all of these stages in order to maximize impact.

The continuum of care across the **health system** includes the levels at which interventions are delivered: home and community, first-level health facilities and referral facilities. Implementation must occur at each of these levels in order for interventions to be most effective. Facility-based interventions should be balanced with those in the home and community, since the prevention and management of child illness and mortality begins in the home.

Thinking about the two continua of care can be a useful way of organizing programme planning and implementation. It allows decisions to be made more easily about:

- what interventions to implement, and
- where interventions should be implemented.

See Figure 19 for example interventions along the two continua of care.

**Continuum of care for mother and child (from pregnancy, through birth, the newborn period, infancy and childhood) – deciding what interventions to implement**

There are a number of factors that need to be taken into consideration when deciding what interventions to implement in order to prevent deaths, including causes and distribution of child mortality, proven efficacy of interventions, and feasibility, cost, acceptability, and health system requirements of implementation.

For example, when the focus of the programme is on reducing newborn mortality, then interventions need to be considered that address the target populations at these stages:

- pregnancy
- at birth and 1–2 hours after birth, and
- during the newborn period.

**Continuum of care across the health system – deciding where to implement interventions**

Where to implement which interventions will be guided by a number of factors, including technical complexity, availability of trained staff, acceptability to community members, access to health facilities, demand for services, and equity. Levels for delivery of interventions include:

- **Home and community.** Many interventions need to be directed at this level. Community-based health workers can provide some services close to home. Caregivers can be trained in appropriate care-giving practices. They can also be trained to recognize illness, treat it at home if appropriate, and recognize signs that
mean they need to take a child to the next level of the health system for medical care. A number of issues are important when developing programmes at this level, including how to deliver key messages, how to support sustained changes in behaviour, how to train and support community workers, and how to achieve equity of coverage.

- **First-level health facilities.** In most settings, this level is required in order to provide additional preventive and treatment services, such as standard case management and immunization, as well as counselling and referral. Key implementation issues include how to train and supervise health staff, how to manage staff turnover, how to provide medicines and supplies, how to maintain quality of care, and how to better link facilities with communities.

- **Referral facilities.** These are required in most settings in order to provide high-level care such as the management of obstetric complications or the management of severely ill children. Key implementation issues include availability of referral services to the target population and their access to those services; these are often limited.

All levels have a role in implementation, but the balance between them should be appropriate for local conditions. For example, in areas where access to health facilities is limited, most babies are born at home. In this setting, interventions to improve postnatal newborn care (early and exclusive breastfeeding, thermal care, hygienic cord care, extra care of LBW infants, and prompt care-seeking for illness) need to be directed to the home and community in addition to health facilities. At the same time, health facilities need to be strengthened to provide appropriate care for newborn illness.
## Interventions for Improvement of Child Health along the Continua of Care

<table>
<thead>
<tr>
<th></th>
<th>Home and community</th>
<th>First-level health facility</th>
<th>Referral facility</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pregnancy</strong></td>
<td>Promote and support antenatal care (ANC)</td>
<td>Tetanus toxoid immunization</td>
<td>Management of complications of pregnancy</td>
</tr>
<tr>
<td></td>
<td>Information and counselling on self-care, nutrition, safer sex, breastfeeding, family planning</td>
<td>Birth and emergency planning</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Birth and emergency planning</td>
<td>Detection and treatment of syphilis</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sleeping under insecticide-treated bednets</td>
<td>Intermittent preventive therapy (IPT) for malaria</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Prevention of mother-to-child transmission of HIV (PMTCT)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Detection of complications of pregnancy</td>
<td></td>
</tr>
<tr>
<td><strong>Birth and 1-2 hours after birth</strong></td>
<td>Promote and support skilled care at birth</td>
<td>Monitoring progress during labour</td>
<td>Clinical management of obstetric complications</td>
</tr>
<tr>
<td></td>
<td>Promote and support key practices, e.g.</td>
<td>Social support (companion) during birth</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Clean delivery</td>
<td>Immediate newborn care (resuscitation if required, thermal care, hygienic cord care, early initiation of breastfeeding)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Social support (companion) during birth</td>
<td>Prevention of mother-to-child transmission of HIV</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Early initiation of breastfeeding</td>
<td>Detection of obstetric complications</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Newborn thermal care</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Newborn period</strong></td>
<td>Promote and support key practices, e.g.</td>
<td>Exclusive breastfeeding</td>
<td>Management of severe newborn illness</td>
</tr>
<tr>
<td></td>
<td>- Exclusive breastfeeding</td>
<td>Thermal care</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Thermal care</td>
<td>Hygienic cord care</td>
<td></td>
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<tr>
<td></td>
<td>- Hygienic cord care</td>
<td>Extra care of LBW infants</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Extra care of LBW infants</td>
<td>Prevention of mother-to-child transmission of HIV</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Prompt care-seeking for illness</td>
<td>Management of newborn illness</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Immunization</td>
<td></td>
</tr>
<tr>
<td><strong>Infancy and childhood</strong></td>
<td>Promote and support key practices, e.g.</td>
<td>Vitamin A supplementation</td>
<td>Management of severe infant and childhood illness</td>
</tr>
<tr>
<td></td>
<td>- Exclusive breastfeeding</td>
<td>Standard case management including:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Complementary feeding</td>
<td>- ORT and zinc for diarrhoea</td>
<td></td>
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<tr>
<td></td>
<td>- Sleeping under insecticide-treated bednets</td>
<td>- Antibiotics for dysentery</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Handwashing and proper disposal of faeces</td>
<td>- Antibiotics for pneumonia</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Care-seeking for preventive interventions (e.g. vaccines)</td>
<td>- Antimalarials</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Care-seeking for illness</td>
<td>Care for HIV-exposed and HIV-infected children</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Community case management of diarrhoea, pneumonia, malaria and malnutrition</td>
<td>- Co-trimoxazole prophylaxis</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>- ART</td>
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</tr>
</tbody>
</table>
3.2 Packaging of interventions

In order to determine whether interventions are efficacious (in a research environment) and effective (in a real programme), they are tested individually—so that their impact on overall mortality can be measured. However, in the real world, it is not practical to implement interventions on their own. Instead, the most cost-effective strategy for implementing child health interventions is as "packages" of several interventions together.

Several newborn and child health intervention packages already exist. Most new child health interventions can be added or linked to existing intervention packages. For example, vitamin A supplementation is often added to existing immunization programmes.

In some cases, new intervention packages may need to be added. For example, a country with vertical disease control programmes that wants to move towards a more integrated approach to child care might adopt the IMCI package, so that health workers managing sick children are taught to use the IMCI approach, rather than separate case-management approaches for managing diarrhoea, pneumonia, malaria and malnutrition.

Packaging is a way of integrating or combining child health interventions. Integration is essential for making programmes feasible, because it reduces programme costs and improves programme effectiveness. Costs are much higher when individual interventions are delivered separately, and the burden on both the health system and on clients makes separate programmes more difficult to sustain.

Packaging interventions can reduce programme costs by:

- Minimizing programme start-up costs by linking with existing interventions. Adding on to existing programmes avoids some costs of starting a new programme activity since staff and systems to support the programme are already in place.
  
  Example: Care of an HIV-exposed or HIV-infected child was added to the IMCI package.

- Promoting or implementing more than one intervention at the same time; using the same health workers and communication channels to deliver several interventions. This is particularly important when the number of staff and number of contacts with women and children are limited.
  
  Examples: Health workers giving immunizations can be trained to give micronutrients or to conduct simple counselling on feeding. Community-based health workers responsible for primary health-care education and counselling can be trained to give essential pregnancy, newborn and child health messages as well. Activities to improve the availability of essential medicines and vaccines can improve the availability of supplies for several interventions (immunization, micronutrients, essential antibiotics) at the same time.

- Reducing the costs of training. If training for different interventions is done together, rather than separately, then training costs and time away from work can be reduced.
Examples: IMCI training saves time as compared to separate training courses on management of diarrhoea, management of ARI, and malaria treatment. "Infant and Young Child Feeding Counselling: An integrated course” reduces the training days from 11 to 5 and the Training of Trainers from 11 to 5 days by bringing together three previously separate courses:

- Breastfeeding Counselling: A training course – 5 day course (5 day TOT)
- HIV and infant feeding counselling: A training course – 3 day course (3 day TOT)
- Complementary feeding counselling: A training course – 3 day course (3 day TOT)

Making supervision and disease surveillance more efficient.

Integrated supervisory checklists, which use the same supervisors to review several technical areas at one time, can save in staff and travel expenses. Similarly, integrated health information systems, which collect information on several diseases at the same time, avoid duplication of work.

Packaging interventions can increase programme effectiveness by:

- Ensuring that all important causes of mortality are addressed at the same time.

Example: The IMCI approach aims to prevent or treat all the most important causes of infant and child mortality, and provide nutrition screening and counselling. It replaces vertical programmes for diarrhoea, pneumonia and malaria. This approach recognizes that children often have more than one problem at the same time and that undernutrition is a factor in a high proportion of all child deaths. All causes need to be addressed in order to maximize impact on mortality.

Example: Properly training a skilled birth attendant (including how to use a partograph, conduct a clean delivery, warm the newborn, initiate breastfeeding early, recognize when to refer for a birth complication or for severe illness, and give counselling on breastfeeding and recognition of danger signs) will potentially limit mortality from hypothermia, neonatal tetanus, sepsis, and birth complications. Training the skilled birth attendant to apply just one or two of these interventions is less likely to reduce overall newborn mortality than training an attendant to apply all of them.

- Increasing the impact on mortality reduction compared to the expected impact of each intervention alone. By combining interventions that act by different mechanisms, the impact on mortality can be maximized.

Example: Improving breastfeeding practices can reduce the incidence of diarrhoea and pneumonia. Supplementation with vitamin A can prevent complications of measles. Hib vaccination will prevent Hib pneumonia. Measles vaccine will prevent measles. Combining improved breastfeeding, supplementation with vitamin A, Hib vaccine and measles vaccine will reduce the incidence of diarrhoea and pneumonia, prevent measles and its complications, and will prevent Hib pneumonia.
### Intervention packages for improving child health

<table>
<thead>
<tr>
<th>Care during pregnancy</th>
<th>Universal packages (recommended in all settings)</th>
<th>Situational packages (where warranted)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Antenatal care:</strong></td>
<td>Tetanus toxoid immunization</td>
<td>Intermittent preventive therapy (IPT) for malaria</td>
</tr>
<tr>
<td></td>
<td>Birth and emergency planning</td>
<td>Sleeping under insecticide-treated bednets</td>
</tr>
<tr>
<td></td>
<td>Detection and management of complications</td>
<td>Prevention of mother-to-child transmission of HIV</td>
</tr>
<tr>
<td></td>
<td>Detection and treatment of syphilis</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Information and counselling on self-care, nutrition, safer sex, breastfeeding, family planning for birth spacing</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Care during labour, birth and 1-2 hours after birth</th>
<th>Skilled care at birth: Monitoring progress during labour</th>
<th>Prevention of mother-to-child transmission of HIV</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Monitoring progress during labour</strong></td>
<td>Social support (companion) during birth</td>
<td></td>
</tr>
<tr>
<td><strong>Immediate newborn care</strong> (resuscitation if required, thermal care, hygienic cord care, early initiation of breastfeeding)</td>
<td>Emergency obstetric and newborn care: Detection and clinical management of obstetric and newborn complications</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Postnatal/Newborn care</th>
<th>Routine postnatal care of mother and newborn: Exclusive breastfeeding</th>
<th>Prevention of mother-to-child transmission of HIV</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Thermal care</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hygienic cord care</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Extra care of LBW infants</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Prompt care-seeking for illness</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Immunization</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Management of newborn illness</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Care during infancy and childhood</th>
<th>Community case management of diarrhoea, pneumonia, malaria and malnutrition</th>
<th>Sleeping under an insecticide-treated bednet to prevent malaria</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMCI (first-level health facilities): Algorithm-based management of diarrhoea (with ORT and zinc), pneumonia, malaria, malnutrition and newborn illness; care for HIV-exposed and HIV-infected children</td>
<td>Prevention of HIV</td>
<td>Care of HIV-exposed and HIV-infected children</td>
</tr>
<tr>
<td>IMCI (referral facilities): Management of severe infant and child illnesses</td>
<td>Vitamin A supplementation</td>
<td></td>
</tr>
<tr>
<td>Community IMCI: Community mobilization and communication to promote: Exclusive breastfeeding</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safe and appropriate complementary feeding starting at 6 months with continued breastfeeding</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hand washing and proper disposal of faeces</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Care-seeking for preventive interventions (e.g. vaccines)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home care for illness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Care-seeking for illness</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| EPI: Delivery of essential vaccines | | |

30
Figure 21 describes one initiative in Africa where packaging child health interventions improved the coverage and equity of selected interventions.

Accelerated Child Survival and Development (ACSD)

ACSD is a UNICEF child-survival initiative that started in 2001 in four countries in West Africa (Benin, Ghana, Mali and Senegal) with the aim of reducing under-five mortality in high-mortality areas. The interventions were delivered as integrated packages:

- **EPI-plus**: immunization, vitamin A supplementation and de-worming.
- **IMCI-plus**: distribution and promotion of insecticide-treated bednets (ITN), ORT for diarrhoea, antimalarials for fever presumed to be malaria, antibiotics for pneumonia, and promotion of exclusive breastfeeding and complementary feeding.
- **ANC-plus**: intermittent preventive therapy for malaria during pregnancy, iron and folic acid supplementation and the use of ITNs for pregnant women.

Three service delivery approaches were employed with the aim of increasing intervention coverage for women and children:

- Outreach and campaigns to deliver immunization, Vitamin A, antihelminths and selected prenatal services.
- Community-based promotion of a package of family health, nutrition and hygiene practices carried out primarily by volunteers.
- Facility-based delivery of an integrated minimum care package consisting of all the selected priority interventions, with particular emphasis on case management of childhood illnesses.

In addition, five crosscutting strategies were used to support facility-based service delivery: advocacy, social mobilization and communication for behaviour change; service delivery at community level; district-based monitoring and micro-planning; integrated training; and improved supply systems.

ACSD was implemented intensely in 16 districts in Benin, Ghana, Mali and Senegal, between 2001 and 2005. A large-scale retrospective impact evaluation of ACSD conducted by The Institute for International Programs at Johns Hopkins University Found that the approach increased coverage for preventive interventions, such as immunization, relative to national comparison areas in Ghana and Mali. In Mali, ACSD implementation was associated with reduced inequities in coverage of essential interventions, especially for ANC services delivered through an outreach strategy. Under-five mortality decreased in ACSD districts in Benin, Ghana and Mali over the implementation period. However, mortality declines in Benin and Mali were not significantly different than those experienced in the national comparison area; no comparison data were available in Ghana.

The evaluation concluded that efforts to scale-up approaches similar to ACSD will need to emphasize: 1) national policies that support strategies to increase access to treatment for childhood diarrhoea, malaria and pneumonia, such as community case management, 2) better alignment between resource allocation and the causes of child deaths, 3) greater attention to improving child nutrition, 4) greater attention to preventing deaths in the neonatal period, 5) reinforced efforts to ensure continuous availability of essential commodities, and 6) improved supportive clinical supervision.
3.3 Coverage and equity

The concepts of coverage and equity are guiding principles for planning child health programmes. The desire to reach as many members of the target population as possible, that is, to achieve a high level of coverage, should drive all health-care planning. At the same time, planners must be mindful to address equity of coverage.

Equity in health care means that there should be no avoidable or remediable health-related differences among populations or groups defined socially, economically, demographically, or geographically. There should be no differences in health status, coverage, or access to the resources needed to improve and maintain health. Children that are most likely to experience health inequities include children of poor or marginalized groups, and children of racial and ethnic minorities. Child health programmes must plan activities to remedy and prevent inequities in implementing interventions.
EXERCISE B – Review intervention packages and the continua of care

1. Complete the table below.

- For each intervention, specify the package in which the intervention could logically be implemented (refer to Figure 20 on page 31 if needed).
- Then place a tick to indicate the most important level at which implementation of the package could logically take place (home and community, first-level health facility, or referral facility). The first is done for you.

<table>
<thead>
<tr>
<th>Intervention(s)</th>
<th>Intervention package(s)</th>
<th>Most important level for implementation of package (tick column)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Case management of pneumonia</td>
<td>IMCI</td>
<td><img src="image" alt="Checkmark" /></td>
</tr>
<tr>
<td>b) Care-seeking for pneumonia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) Measles vaccine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d) Handwashing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e) Screening for syphilis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f) Immediate newborn care</td>
<td></td>
<td></td>
</tr>
<tr>
<td>g) Give zinc and ORS to children with diarrhoea</td>
<td></td>
<td></td>
</tr>
<tr>
<td>h) Sleep under an insecticide-treated bednet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>i) Extra care of LBW infants</td>
<td></td>
<td></td>
</tr>
<tr>
<td>j) Management of obstetric complications</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2. Although packaging seems to be a reasonable approach to implementation, some programmes are not yet implementing interventions in packages. What challenges have you faced packaging interventions?

3. Are there groups or populations that experience inequities in health in your country? Who are they?

What are the current efforts to reach them?

When you have completed this exercise, discuss your work with a facilitator.
4. Definitions of terms

In order to plan and manage programmes, you need to understand some terms that are commonly used. This section discusses the following terms:

1. Goals and objectives
2. Activity-related indicators
3. Population-based coverage indicators
4. Impact indicators
5. Targets

Some terms have different connotations to different people, or may be defined differently in some organizations’ planning schemes. This section describes how the following terms are used in this course, so that we may all have a common vocabulary for learning about planning and management of programme implementation.

4.1 Goals and objectives

Programmes need to define clearly their ultimate goals (what the programme is going to achieve in the long term) and their objectives (what the programme is going to achieve in the shorter term, in order to reach the goals). Indicators are used to measure what the programme is accomplishing.

Goals

Goals are long-term improvements in child survival and health that are expected by a programme. For example, the Millennium Development Goal for child health is:

- To reduce child mortality

Goals are desired changes in childhood nutritional status, morbidity or mortality and may take 5–10 years or longer to achieve. All child health interventions implemented by the programme are directed at achieving the programme’s goals.

Objectives

Objectives are based on the interventions that will be implemented by the programme and the progress expected in the short or medium term. An objective of any child health programme is to increase the proportion of the target population who receives an intervention (the population-based coverage of the intervention). For example:

- To increase the proportion of infants under 6 months who are exclusively breastfed
- To increase the proportion of children with diarrhoea who receive ORT

A programme could have additional objectives, such as to reduce inequity in coverage of interventions, or to increase quality of care. For example:

- To increase the coverage of treatment for diarrhoea, malaria, and pneumonia among the poorest children.
- To improve the quality of health care provided to children under age 5 years at first-level health facilities.
Some countries quantify their objectives, such as:

- **To increase the proportion of infants under age 6 months exclusively breastfed from 50% (in 2008) to 65% in 2011.**

If objectives are not met, then it is unlikely that goals for reductions in child morbidity and mortality will be met.

### 4.2 Activity-related indicators

Programme activities are the work that is done to implement interventions. Activities are planned and conducted for a reason, such as to increase the availability or access of services to the target population, to improve the demand for the services, to improve the quality of the services provided, or to increase the knowledge of families and communities regarding child health. Most activities will affect one or more of these aims. Indicators that measure the completion of activities or the results of activities are called activity-related indicators in this course. (Some documents call these “process indicators” and “output indicators.”)

Programmes will track indicators of whether planned activities were implemented and the extent of completion. They may track the number completed, or the proportion of the planned activities that were completed. For example:

- Proportion of planned IMCI training courses for first-level health facility workers that were conducted
- Proportion of the planned number of CHWs that were recruited and trained to promote key family and community practices
- Proportion of planned supervisory visits that were completed last year

Activity-related indicators may also describe the results of activities, that is, improvements (or declines) in availability or access to the service, demand for the service, quality of the service, or knowledge of families and communities regarding child health. For example:

- Proportion of health facilities that have at least 60% of health workers caring for children trained in IMCI
- Proportion of primary health facilities that provide basic emergency obstetric and newborn care (24 hours/day, 7 days/week)
- Proportion of first-level health facilities that received a supervisory visit in the previous 6 months
- Proportion of villages in the district that have a CHW trained to provide education on key family and community practices
- Proportion of newly-trained CHWs who conducted 10 or more household visits to promote key family and community practices in the previous month

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3 Specific definitions of availability, access, demand, quality, and knowledge of families and community are provided in the glossary at the end of this module and are described in more detail in *Module 2: Planning Implementation.*
Data to measure many activity-related indicators may be collected from programme records as a part of monitoring. However, indicators of the quality of care provided at health facilities are measured by a special health facility survey. A health facility survey measures whether health workers provide a service correctly to the target population when children or their caregivers are seen in health facilities. For example, it can measure indicators such as:

- **Proportion of sick children attending health facilities who need an antibiotic and/or an antimalarial who are prescribed the medicine correctly**
- **Proportion of caregivers of sick children prescribed ORS and/or an antibiotic and/or an antimalarial at a health facility who can describe correctly how to give the treatment**
- **Proportion of children who need immunizations who leave the facility with all needed immunizations**

### 4.3 Population-based coverage indicators

Population-based coverage is the proportion of the target population (children, their caregivers, or pregnant women) that need an intervention in a given geographic area who receive the intervention. The denominator of a coverage indicator is the number of the target population living in the geographic area\(^4\). These materials emphasize that programmes should direct their activities towards providing interventions to as many children as possible, including all geographical and social subgroups in an area. High levels of population coverage will be key indicators of an effective programme. Examples of population-based coverage indicators (in a given geographic area) include:

- **Proportion of children with suspected pneumonia who received an antibiotic**
- **Proportion of children under 6 months of age who are exclusively breastfed**
- **Proportion of children aged 12–23 months who are fully immunized**
- **Proportion of newborns protected against tetanus**
- **Proportion of deliveries (pregnant women giving birth) attended by a skilled birth attendant**

Population-based coverage must be measured in a community/household-level survey, which will provide the best measure of how well interventions are reaching the target population. A coverage target is a specific and quantified statement of an expected improvement in a population-based coverage indicator (see 4.5 below).

### 4.4 Impact indicators

The impact of a programme is the change in child health or survival that results from improved coverage of the population with effective interventions.

Impact is the ultimate purpose of a child health programme – what you hope to achieve in the long term. Expected impact changes are programme goals. An impact indicator is stated as a

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\(^4\) Some organizations also use the word “coverage” to describe the proportion of health facilities that provide a particular service, or the proportion of the population that live within a specified distance of a health facility that provides a particular service. These materials limit the definition of coverage to the proportion of the target population that receives the service/intervention.
measurement of morbidity, mortality, or nutritional status and has as its denominator the target population in the country, region or province, etc. For example, impact indicators would be:

- **Under-five mortality**
- **Under-five mortality due to measles**
- **Proportion of children under 5 years of age who are low weight-for-age (underweight)**

Significant and measurable changes in such indicators are expected over periods of 5–10 years or longer. Impact indicators are measured using large-sample household surveys, which allow mortality rates to be calculated.

Figure 22 provides examples of different possible indicators related to one intervention.

**Figure 22**

<table>
<thead>
<tr>
<th>Example indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Impact indicator:</strong> &amp; Under-five diarrhoea-related mortality</td>
</tr>
<tr>
<td><strong>Population-based coverage indicator:</strong> &amp; Proportion of all children under age 5 years with diarrhoea in the district who received ORT</td>
</tr>
<tr>
<td><strong>Activity-related indicators:</strong> &amp; Proportion of IMCI training courses planned for health staff in the district that were conducted</td>
</tr>
<tr>
<td>&amp; Proportion of health facilities that have at least 60% of health workers caring for children trained in IMCI</td>
</tr>
<tr>
<td>&amp; Proportion of children under age 5 years who came to a health facility sick with diarrhoea who received ORT and other appropriate treatment</td>
</tr>
</tbody>
</table>
4.5 Targets

A target is a quantified statement of desired change in a key indicator over a given time period in a specified geographic area. Evaluation compares the target and actual level of achievement after the given period of time, to determine whether or not the programme is being implemented effectively.

A programme will revise and add to its targets as it adds new activities. However, the list of targets should never become too large. A limited number of targets should be selected and should be kept simple – they must be useful for planning activities and resource needs and be useful for evaluation.
1. Decide whether each indicator is an activity-related, coverage, or impact indicator and place a tick in the appropriate column.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Activity-related indicator</th>
<th>Coverage indicator</th>
<th>Impact indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Proportion of health workers scheduled to be trained in IMCI who were trained in IMCI</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Proportion of children under age 5 with diarrhoea who were given ORT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) Proportion of children under age 5 who are wasted</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d) Proportion of children under age 5 who sleep under an insecticide-treated bednet</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e) Proportion of children under age 5 visiting a health facility because of diarrhoea who are assessed and treated correctly</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f) Proportion of health facilities with at least 60% of health workers who manage sick children trained in IMCI</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g) Proportion of caregivers who know 2 signs to seek care immediately</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>h) Proportion of facilities with all essential vaccines available</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i) Proportion of planned CHW training sessions completed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>j) Proportion of villages with a trained CHW</td>
<td></td>
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<tr>
<td>k) Proportion of women whose last baby was delivered by a skilled birth attendant</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>l) Proportion of children under 6 months of age who are exclusively breastfed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>m) Infant mortality rate</td>
<td></td>
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</tbody>
</table>
2. Read the phrase in the left column of the box. Then choose the phrase from the right column of that box that will best complete the sentence. Draw a line to connect them.

| A. | • A population-based coverage indicator | • Is measured with a health facility survey. |
|    | • An impact indicator | • Must be measured with a large-sample population survey. |
|    | • A quality of care indicator | • Is measured with a community-level survey. |

| B. | • An indicator of population-based coverage with pneumonia treatment | • Has as a denominator the planned activities |
|    | • An indicator of the quality of care for pneumonia at facilities | • Has as a denominator the number of children in the geographic area who had pneumonia. |
|    | • An indicator of planned activities completed | • Has as a denominator the number of children who came to a health facility with pneumonia. |

| C. | • An example target for improvement in population-based coverage with an intervention is | • “In 2010, 80% of children who come to a facility needing an antibiotic or antimalarial will be prescribed the medicine correctly.” |
|    | • An example of a target for improving quality is | • “In 2010, 75% of villages will have a CHW trained to give standard pneumonia case management.” |
|    | • An example of a target for improving access is | • “In 2010, 95% of children will be fully vaccinated by one year of age.” |

When you have completed this exercise, discuss your work with a facilitator.
Annex A

Rights of the child: Definitions and indicators
Rights of the Child – Definitions

**Convention on the Rights of the Child (CRC):** This is the legally binding document adopted in 1989 that sets out fundamental freedoms and inherent rights of all children. The convention contains social, political, economic, and cultural rights, including the right to health. Ratifying governments are obliged to respect, protect and fulfil these rights. They must also submit periodic reports to the Committee on the Rights of the Child on the status of child rights in their country. Many ratifying governments have passed legislation and mechanisms to ensure the realization of the CRC.

**Committee on the Rights of the Child:** Article 43 of the Convention on the Right of the Child (CRC) calls for the establishment of a specific monitoring mechanism, namely the United Nations Committee on the Rights of the Child. The responsibility of the Committee is to examine how far states have gone in meeting their commitments under the CRC, the progress made and the difficulties that have been encountered. When a state ratifies the CRC, it enters a continuous cycle of monitoring and reporting to the Committee on the capacity of children and adolescents in a state to enjoy their rights.

**Structural Indicators:** These indicators examine whether the mechanisms and structures necessary for the realization of the right to health are in place. These are often framed in a yes/no format. Structural indicators are rooted in the norms and principles of the Convention on the Rights of Child. (For example, does state legislation explicitly recognize children's right to health? Does the state have a plan/strategy to disseminate information on child health to vulnerable groups?)

Rights of the Child – Indicators

Key areas of measurement for assessing the status of child rights include:

**Structural indicators of the policy and legal environment,** including whether the country has:

- Ratified the Convention on the Rights of the Child
- Included the right to health in the constitution
- Recognized the right to universal health care for children in legislation
- A national human rights institution that oversees child health
- A national policy/strategy for child health
- A strategy for disseminating information on child health to the population in a way that ensures that all risk groups are reached effectively

**Measures of morbidity and mortality,** including:

- Trends over time
- Variations between sub-groups by: geographic area, ethnic group, gender etc.

**Measures of coverage with key child health interventions,** ensuring that:

- Effective child health interventions are included.
- Implementation is done collaboratively with partners and stakeholders at all levels.
- Strategies include all stages of the continuum of care between pregnancy, delivery, the early newborn period, infancy and childhood in order to maximize impact on overall morbidity and mortality.
Annex B

References: General child health
References: General child health


Glossary
(defined as used in these modules)

access .....................the extent of caregivers’ ability to reach and use health services, when they are available. Possible barriers to access include distance, finances (unable to afford costs of transport, goods or services), culture (husband or other family members may not agree for women to take their sick children to a health facility on their own), or time limitations.

activity ......................work (a group of tasks) that is done to implement interventions

activity-related indicator ....a measurement of completion of an activity or the result of activities that is repeated over time to assess progress

availability ......................the extent that the health services (preventive and treatment) are available to those who need them. For example, the availability of counselling on breastfeeding (preventive service) can be improved by training health workers on breastfeeding counselling. The availability of treatment services can be improved by increasing the opening hours of the clinic, by increasing the number of health workers available to run the clinic, and by ensuring regular supplies of necessary medicines.

continuum of care ........uninterrupted sequence of care

The continuum of care for mother and child includes care during pregnancy, through birth, the newborn period, infancy, and childhood.

The continuum of care across the health system includes care in the home and community, first-level health facilities and referral facilities.

coverage ......................proportion of the target population in a geographic area that receives an intervention. Intervention coverage is the proportion of children under 5 (or their caregivers, or pregnant women) in the population who needed the intervention and have received it. Coverage is a population-based indicator, usually measured in a community/household survey.

coverage indicator ...............a measurement of how well interventions are reaching the target population that is repeated over time to assess progress. The denominator of a coverage indicator is the target population in a geographic area.

demand ......................motivation to seek and make use of the health services. Improved demand indicates that clients have knowledge of the
availability and benefits of the services and are motivated to use them.

effective .........................proven to have impact on health status (morbidity, mortality or nutritional status) when used under programme conditions

efficatious .........................proven to have impact in controlled research settings

equity .............................in health care, no health-related differences among populations or groups defined socially, economically, demographically, or geographically; specifically there should be no differences in health status, coverage, or access to the resources needed to improve and maintain health.

evaluation ...........................the process of assessing a programme’s status, achievements, and impact in order to detect and solve problems and plan future emphases

first-level health facility ......a facility that provides basic preventive and treatment services, such as standard case management and immunization, as well as counselling and referral, and is considered the first facility within the health system where the population in the area seeks care. A first-level health facility may be a health centre, clinic, rural health post, dispensary, or outpatient department of a small hospital.

goal ....................................long-term improvements in child health and survival that a programme aims to do or achieve, for example, to reduce child mortality by two-thirds between 1990 and 2015.

health facility survey .............a method of data collection in which surveyors visit a representative sample of outpatient health facilities to ask a series of standard questions and make observations to investigate the quality of care received by sick children and their caregivers attending first-level health facilities. In the WHO Health Facility Survey, health workers are observed and their practice is compared to the IMCI clinical standard to determine whether sick children are managed correctly. The survey measures key indicators of the quality of health worker practices and the availability of facility supports that are required for quality practice, such as supervision, essential medicines, vaccines and supplies. Interviews with caregivers and health workers are often included also.

household or community survey ..........................a method of data collection in which surveyors visit a representative sample of households to ask a standard series of questions to measure intervention coverage (such as with treatment of diarrhoea or pneumonia, or exclusive breastfeeding) and other indicators of caregivers’ practices (such as feeding practices, and actions taken by families when children are sick)
Small-sample household surveys can also measure activity-related indicators in the population, such as availability of immunization and case management services, access to insecticide-treated bednets (ITNs), and knowledge of families about child health-related practices.

Large-scale household surveys, usually undertaken at the national level, are required to calculate mortality rates for children under age 5, infants, and neonates. Commonly conducted large-scale surveys include the DHS survey (http://www.measuredhs.com) and UNICEF MICS3 survey (http://www.childinfo.org/mics/mics3) which require extensive resources.

**impact** ........................................change in childhood mortality, morbidity or nutritional status as a result of programme(s) activities

**impact indicator** ......................a measurement of morbidity, mortality, or nutritional status that is repeated over time to track progress

**implementation plan** ...............an operational plan that describes how the priority interventions will be delivered and what activities and resources will be required in the next 1–2 years.

**indicator** .................................a measurable number, proportion, percentage, or rate that suggests or indicates the extent of a programme’s achievement or the level of some condition among the population; a measurement that is repeated over time to track progress

**infant** ......................................child from birth up to age 1 year; infancy is the period from birth up to age 1 year

**intervention** ...............................treatments, technologies, and key family practices that prevent or treat illness and reduce death. Child health interventions are treatments, technologies, and key family practices that prevent or treat child illness and reduce deaths in children under age 5 years.

**intervention package** ...............several interventions that are implemented together. For example, routine postnatal care of mother and newborn is a package that includes the following interventions: exclusive breastfeeding, thermal care, hygienic cord care, essential immunizations, extra care of low-birth-weight infants, and prompt care-seeking for illness.

**knowledge (of families and communities related to child health)** ........................................information that caregivers know about the appropriate home care practices during health and illness, as well as when and where to seek care outside the home. Educational,
communication and counselling activities aim to improve this knowledge.

**monitoring** regularly checking to see that programme activities are being carried out as planned. Programmes monitor implementation to identify and solve problems so that activities can be implemented effectively.

**newborn** a child from birth up to age 28 days; same as neonate

**objective** the desired result that a programme aims to achieve in the shorter term, in order to achieve its goals. For example, objectives of a child health programme would be to increase coverage of specified interventions. It may also have additional objectives such as to increase quality of care at first-level health facilities, or to increase coverage of the poorest children.

**percentage** a part of a whole expressed in hundredths. If 50% of a population is female, it means that 50 out of 100 people are female. The following examples show different ways of expressing the same value as a percentage, a decimal fraction, and a fraction: 50% = 0.50 = 50/100; 4% = 0.04 = 4/100

**population-based** an indicator in which the denominator is all the population or all of the members of a subgroup of the population in the geographic area, such as all children under age 5 years in the district, all infants in the district

**proportion** the relation of one part to a whole. When written as a fraction, the numerator signifies the part, and the denominator signifies the whole, for example, 2/3, 1/2. Proportions also can be written as a decimal fraction or percentage if the whole is expressed in hundredths, for example, 0.17 or 17%.

**quality** a standard for how health services are provided. Good quality services are provided according to technical standards, and in a way that is appropriate for the target population. Increasing the quality of a service often increases demand for it.

**referral facility** a health facility that provides high-level care such as the management of obstetric complications or the management of severely ill children

**stakeholders** those who have a ‘stake’ or an interest in child health and child health programmes. They can be individuals, organizations, or unorganized groups. Stakeholders may include: international actors (e.g. donors, cooperating partners), national or political figures (e.g. legislators, governors), local governments (e.g. mayor, city council), public sector agencies, local community and traditional leaders, medical/nursing associations, academic institutions, commercial/private for-profit organization (e.g. pharmacies), nonprofit organizations (e.g. NGOs, foundations),
community-based organizations (women’s groups, mother’s groups), faith-based organizations, schools and teachers, health-care workers, users of health services, community members.

**strategic plan** .........................a plan that provides a framework to guide a programme for the next 5–10 years. It usually specifies goals and objectives, targets, priority interventions, and gives overall guidance for implementation and financing to achieve the programme’s goals.

**supervision** ............................overseeing or watching over an activity or task being done by someone and ensuring that it is performed correctly. Supervision of health staff includes observation of practice, assessing conditions in the health facility, giving feedback with guidance or training if needed, and giving support.

**target** .....................................a quantified statement of desired change in a key indicator of programme implementation over a given time period in a specified geographic area. Targets can be set for impact, coverage, and completion or results of activities.

**target population** .....................the group who an intervention is designed to help. The target population for antenatal care is pregnant women. The target population for IMCI is children less than 5 years of age.