Acute diarrhoea and respiratory infections (ARI) are the two leading causes of mortality in children under age 5 worldwide, with the highest burdens being in sub-Saharan Africa and in countries of the WHO South-East Asia (SEA) Region. The burden of these diseases is also high in other age groups. Achieving the Millennium Development Goal on child mortality, MDG-4, in the Region will not be possible without making coordinated efforts to both prevent and control these diseases. A tangible reduction in morbidity will also require addressing the problem across the age spectrum.

WHO Regional Technical Advisory Group (RTAG) reviewed the current situation and available interventions in 2008. Based on the advice of RTAG members and on regional and global experiences, this strategy document focuses on the coordinated approach to prevention and control of acute diarrhoea and respiratory infections across the age spectrum. The strategy emphasizes integration of preventive interventions with improved case management, at all community and facility levels and in all age groups. It also highlights the significance of coordinating efforts to mobilize communities, provide appropriate training, and conduct monitoring and research to strengthen the preventive and control interventions.

Strategy for coordinated approach to prevention and control of acute diarrhoea and respiratory infection in the South-East Asia Region
Strategy for coordinated approach to prevention and control of acute diarrhoea and respiratory infection in the South-East Asia Region
## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary</td>
<td>v</td>
</tr>
<tr>
<td>1. Background and historical perspective</td>
<td>1</td>
</tr>
<tr>
<td>2. Rationale for a regional strategy: why a new approach?</td>
<td>3</td>
</tr>
<tr>
<td>3. Guiding principles</td>
<td>6</td>
</tr>
<tr>
<td>4. Goals and objectives</td>
<td>8</td>
</tr>
<tr>
<td>4.1 Objectives</td>
<td>8</td>
</tr>
<tr>
<td>4.2 Targets</td>
<td>8</td>
</tr>
<tr>
<td>5. Strategic elements</td>
<td>9</td>
</tr>
<tr>
<td>5.1 Disease prevention</td>
<td>10</td>
</tr>
<tr>
<td>5.2 Case management</td>
<td>11</td>
</tr>
<tr>
<td>5.3 Community mobilization and empowerment</td>
<td>12</td>
</tr>
<tr>
<td>5.4 Surveillance and research</td>
<td>13</td>
</tr>
<tr>
<td>5.5 Mobilizing national and international response</td>
<td>13</td>
</tr>
<tr>
<td>6. Implementation: process and steps</td>
<td>14</td>
</tr>
<tr>
<td>7. Monitoring and evaluation</td>
<td>18</td>
</tr>
<tr>
<td>8. Conclusions</td>
<td>18</td>
</tr>
</tbody>
</table>
Summary

Millennium Development Goal - 4 that calls for a reduction by two thirds of the under-five mortality rate compared to the 1990 baseline by 2015 is unlikely to be achieved in the South-East Asia Region without specifically addressing the problem of acute diarrhoea and respiratory infections. These conditions account for 18% and 19% respectively of all under-five deaths in the Region and lead all other causes of death in this age group. The Region has the highest incidence of childhood pneumonia with an estimated 0.36 episodes/child-year. Across all age groups, lower respiratory infections and diarrhoeal diseases have been the leading causes of disability adjusted life years (DALYs) globally and are also among the five leading causes of death.

Risk factors for both conditions are widely prevalent in the SEA Region. Poverty coupled with polluted and unhygienic living conditions and a conspicuous lack of safe water, sanitation, proper nutrition, and essential health services, and an alarming lack of awareness about the availability of simple, safe and relatively inexpensive interventions are at the bottom of the high burden of these diseases in the Region. Interventions that have been mainly facility-based under the Integrated Management of Childhood Illnesses (IMCI) have failed to reach the most needy segments of the populations on the peripheries of health systems. The problems of acute diarrhoea and respiratory infections in the over-five population and the issues of mortality and socio-economic impact from these have never been addressed with appropriate public health action.

With a view to seeking a tangible solution to this important public health problem, the WHO Regional Office for South-East Asia (SEARO) took a proactive role in 2008 by establishing a Regional Technical Advisory Group for the intensified integrated programme for the prevention and control of acute diarrhoea and respiratory infections (RTAG-ICDR). This Group formulated the regional strategy after extensive deliberations in April 2009. The Strategy comprised five major elements.

- Preventive interventions
- Case management
- Community mobilization and empowerment
- Surveillance, research, monitoring and evaluation
- Mobilizing national and international response
The programme is intended primarily to focus on the implementation of these interventions at the community and facility levels, especially for those not reached by the existing prevention and control efforts. Community mobilization and empowerment are emphasized for wider application of health promotional activities along with disease prevention and early and active case management at the community and household levels. Community-based participatory action research should be relevant in this context.

Improved breastfeeding practices, appropriate complementary feeding, expanded immunization coverage, handwashing, improved water quality at the point of use and community sanitation practices, and zinc supplements have been identified as the core preventive strategies. Active case-finding of pneumonia, categorizing its severity, treating pneumonia and uncomplicated severe pneumonia with oral antibiotics at home and referring very severe disease to an appropriate facility, and similarly managing diarrhoea cases with appropriate ORT and zinc and referring severely dehydrated cases would constitute the basis of case management at the community level and at the first-level facility.
1. Background and historical perspective

Millennium Development Goal 4 (MDG4) calls for a reduction by two-thirds of the under-five mortality rate by 2015 compared to the 1990 baseline. Acute diarrhoea and respiratory infections (ARI) are the two leading causes of mortality in children worldwide with the highest burdens being in sub-Saharan Africa and in countries of the WHO South-East Asia (SEA) Region. In the SEA Region acute diarrhoea and pneumonia, both communicable problems, still account for 18% and 19% respectively of all under-five deaths. It is, therefore, becoming increasingly clear that without specifically addressing the problem of acute diarrhoea and respiratory infections MDG4 is unlikely to be achieved, at least in the SEA Region.

Acute diarrhoea and ARI are a significant problem in communities which have high rates of under-five mortality because of the huge burden placed on the families and health systems, notwithstanding the fact that simple, safe and relatively inexpensive solutions are available for their prevention and control. The poor with inadequate access to proper nutrition, essential health services, safe water and sanitation facilities, and above all, having deficient knowledge and awareness about effective interventions are the most vulnerable and thus frequently suffer from and succumb to these diseases. Besides causing high mortality in the under-five population, acute diarrhoea and respiratory infection also cause high morbidity and suffering among the adult and elderly populations. Frequent outbreaks of acute diarrhoea or influenza-like acute respiratory illnesses have also been the cause of high rates of morbidity and significant mortality across all age groups, often also causing serious damage to the household economy as well as impacting the national economy.

Over the entire decade of the 1980s and the early 1990s dedicated prevention and control programmes for diarrhoeal diseases and respiratory infections impressively contributed to the rapid reduction of the under-five mortality rates across most parts of the Region. Having had a tangible impact on reducing the under-five mortality rate, the programmes paved the way in the mid-1990s for institution-based Integrated Management of Childhood Illnesses (IMCI). This fostered treatment-seeking outside the
home for a number of sicknesses, including acute diarrhoea and respiratory infections. The main objective was to provide comprehensive care to sick children. However, in recent years neither the disease burden nor the rate of decline of mortality from acute diarrhoea or respiratory infections has improved in the Region.

During the 1980s and 1990s the proportion of under-five mortality caused by diarrhoea in developing countries was falling by approximately one per cent per year. Had the same rate of decline continued, by 2009 the proportional deaths due to diarrhoea would have come down to around 4% to 5% among the under-fives. Instead, diarrhoea still accounts for 18% of under-five mortality. Loss of focus by the prevention and control efforts for these diseases with consequent loss of coverage of these interventions in areas where they are most needed has been attributed as the main reason.

Figure 1. Diarrhoea proportional mortality among children under-five between late 1970s and 1990s and extrapolation (red lines) to subsequent years (dotted black line shows the actual trend after 1990)

\[ y = -0.5004x + 1013.6 \]

\[ R^2 = 0.9267 \]

2. Rationale for a regional strategy: why a new approach?

Globally, one third of all attendance at primary healthcare facilities by people above the age of five years is for respiratory symptoms, with non-tubercular respiratory infections accounting for the majority of cases. In high-mortality countries in the SEA Region, namely, Bangladesh, DPR Korea, India, Myanmar and Nepal, non-tubercular respiratory infections account for 10% or more of the total deaths across all age groups and lead all other causes of death. In the 0-5 year age group in this Region, ARI and diarrhoeal diseases were together responsible for almost 45% of the estimated 3.1 million annual deaths in 2003. The estimated number of new cases of pneumonia in this age group in the SEA Region is 61 million per year and the estimated incidence — the highest among all the WHO regions — is 0.36 episodes per child-year. Pneumonia is also a serious consequence of the current pandemic influenza. Other emerging and re-emerging acute respiratory infections such as severe acute respiratory syndrome (SARS) and avian influenza have also on occasion posed serious public health threats in the SEA Region with their potential to cause a pandemic.

Figure 1.: Distribution of child deaths for selected causes by selected WHO region, 2004

Current estimates of morbidity from acute diarrhoeal diseases (ADD) worldwide in under-five children are to the tune of 1.4 billion episodes per year or three episodes per child per year, and 123 million clinic visits and 9 million hospitalizations annually leading to a loss of 62 million DALYs. This average masks the real morbidity rates of up to 10-12 episodes a year among children in some developing countries. The long-term effects of diarrhoeal illness on childhood health are extremely serious and include malnutrition and growth faltering. Of the little less than two million annual deaths worldwide from acute diarrhoea in under-five children, 552 000 deaths are estimated to occur in the SEA Region.

Newer data have indicated that the problem of mortality from acute diarrhoea exists across the populations of all ages with deaths of more than one million people of over-five age group worldwide every year. Morbidity rates are likely to be very high but global or regional estimates are lacking.

Polluted and unhygienic living conditions and lack of safe water, sanitation, proper nutrition, essential health services and awareness about effective interventions are the major risk factors. Simple, safe and relatively inexpensive interventions are, however, available and can greatly reduce the loss of lives. Improved breastfeeding practices and other nutritional interventions with frequent hand-washing, safe water and sanitation practices, timely immunizations and improved case management at community and facility levels can both prevent and control acute diarrhoea and respiratory infection.

The level of coverage and utilization of services provided by the existing programme also remains unacceptably low and the focus that these two diseases attracted in the past has been lost. According to a recent report by the United Nations Children’s Fund (UNICEF), in more than 40 of the 82 countries with available data fewer than 50% of all children with ARI were taken to a health-care provider. Children from the poorest families are significantly less likely to be brought to health facilities, and may receive lower quality care once they arrive there. Preliminary results of the multi-country evaluation (MCE) of IMCI indicate that even in cases where impressive gains are made in the quality of care in health facilities the level of careseeking from these same facilities remains sub-optimal. Careseeking practices in general remain very poor.

Even in Nepal, where the IMCI strategy has been implemented at the community level, only 25% of under-five children with suspected
pneumonia in 2005-2006 received antibiotics. The reasons for this sub-optimal utilization of available services under IMCI are diverse. These include inadequate political commitment, paucity of resources with facilities being few and far between, fragmented implementation, weak linkages between community and health facility components, and most importantly, lack of visibility. Inadequate capacity and poor motivation of health-care personnel are also contributory factors.

It is, therefore, clear that the major causes of deaths among children in the Region have not been targeted properly by appropriate health programmes. Furthermore, because of the infectious nature of both conditions, measures to break the transmission cycle are crucial to their prevention and control. This too has not been addressed by the existing health programme. Furthermore, there is no programme yet to address the high burden and prevention and control across age groups.

In order to deal with these gaps a programme is needed that has a coordinated approach with constant programmatic focus for wide coverage by relevant interventions and full involvement of the community. The Region lacks such a programme.

In the context of improving child survival and also for the prevention and control of these diseases among the general population in the Region, bringing back the focus on acute diarrhoea and respiratory infection has, therefore, assumed a sense of urgency. In order to comprehensively address the public health problems posed by these diseases and suggest concrete recommendations on how best to strategize their prevention and control, Dr Samlee Plianbangchang, Regional Director, WHO South-East Asia Region, established a Regional Technical Advisory Group (RTAG-ICDR) comprising regional and international experts in 2008.

The Group met on 23-24 April 2009 at the National Institute of Cholera and Enteric Diseases (NICED), Kolkata, India, to review the epidemiological situation of ARI and diarrhoeal diseases in the South-East Asia Region and recommend appropriate intervention packages and strategies for their implementation.

Among others, the following important observations were made by the Group:

(1) Loss of visibility of acute diarrhoeal diseases and respiratory infections, the leading killers of young children, by being overshadowed by competing programmes on child health or
non-child-health related issues in the health sector led to these problems being overlooked or even neglected by policy-makers.

(2) Political commitment for the control of these diseases had been inadequate.

(3) Even the most cost-effective interventions remain unimplemented to scale till date.

(4) IMCI, though an excellent concept, has not been easy to take up and implement widely at the community level. As a facility-oriented concept, it has also not been “poor-friendly”.

Two main recommendations made by the Group were:

(1) A new programme in the Region to complement IMCI and oriented towards the poor and more vulnerable and based on the principles of equity

(2) The programme should be able to address the burning ethical consideration that lack of or inadequate implementation of effective low-cost interventions for disease prevention, health promotion and restoration is taking a high toll on the health of the most vulnerable groups of the poor and marginalized.

An intensified and coordinated approach to prevention and control to complement the existing IMCI strategy is therefore felt necessary to address this important public health problem. Tackling these diseases to reduce child mortality to the level set by MDG4 is possible only through a determined collaborative effort to ensure that available, safe and relatively inexpensive interventions are implemented with universal coverage. Coordination between various programmes at the country level and coordinated support by all partner organizations and agencies are major requirements for the successful implementation of these strategies among the neediest, the remote and hard-to-reach and impoverished communities.

3. Guiding principles

Improvements in care at health facilities through IMCI and other initiatives are imperative, but not enough to achieve the desired goal of reducing disease morbidity and mortality. Efforts to strengthen and extend the reach of facility-based care have to be complemented with community-based interventions directed at health promotion, disease prevention and case
management with appropriate support from health systems. It is being widely recognized that the tangible reduction in burden of acute diarrhoea and respiratory infections requires behavioural change interventions and other preventive measures, especially in areas such as nutrition, immunization, hygiene, and water and sanitation. A strong system of management, which includes maintaining the necessary supplies and drugs, and constant supervision by competent and dedicated professionals are key to successful implementation of such a programme. Integration of the facility and community-based interventions across age groups and the intersectoral collaboration needed for implementing these will require intense coordination efforts.

The new programme will need to seek synergy through effective intersectoral collaboration and coordination among various existing programmes. Mobilizing national and international support and involvement of donor agencies, civil societies and other partners will also be equally important for such a programme. To sum up, the following are the broad guiding principles for strategizing a new approach to the prevention and control of acute diarrhoea and respiratory infections:

- Integrate prevention and control of acute diarrhoea with that of acute respiratory infections, especially pneumonia, across the age spectrum.
- Integrate case management with behavioural change interventions and preventive measures such as improvement in nutrition, immunization, water supply and quality at the point-of-use, environment, etc.
- Seek support for effective implementation of case management and preventive interventions through close coordination among other components of the programme such as surveillance, research, M&E, and advocacy for mobilizing national and international support and involvement of donor agencies, civil society and other partners.
- Establish a sound structure and mechanism for collaboration and coordination among the relevant sectors.

The three main guiding principles for programme implementation would be:
(1) To build a strong partnership between the programme and the community, with a strong level of trust in the community toward the programme;

(2) To build on the existing infrastructure, mainly of the primary health care service delivery system and IMCI; and

(3) To integrate all efforts at health promotion, protection and restoration through an effective mechanism for coordination and involvement of all relevant sectors.

Strong training and supporting community-based health workers in every way possible are imperative for the successful implementation of such a programme. Training of community-based health workers has to be a dynamic process and must incorporate relevant and important advancements made in the public health armamentarium.

4. Goals and objectives

The overall goal of the programme is to reduce morbidity and mortality from acute diarrhoea and respiratory infection in all age groups to a level where they cease to be a public health problem in the Region.

4.1 Objectives

- To integrate prevention and control of pneumonia with that of acute diarrhoea across the age spectrum.
- To strengthen case management at the community and facility levels.
- To integrate case management with preventive interventions.
- To strengthen other essential elements such as surveillance, research, M&E, and advocacy for implementing the prevention and control programme.
- To establish a mechanism for intersectoral coordination with sectors inside and outside health.

4.2 Targets
At present the pneumonia and diarrhoea proportional mortality in the Region are estimated at 19% and 18% respectively. The targets of the intensified coordinated approach for the prevention and control of acute diarrhoea and respiratory infection in the Region are to reduce by 2015:

- Acute diarrhoea proportional mortality in the under-5 population to less than 9%;
- The pneumonia proportional mortality in the under-5 population to less than 9% and
- The disease burden related to acute diarrhoea and lower respiratory infections and morbidity and mortality from them in all age groups by one third of the baseline estimated at the start of the programme.

As a management guide to implement the core technical strategies of the programme, it is necessary to outline key objectives and timelines. To be able to achieve the MDG4 in the stipulated timeframe the national programme should be able to establish an enabling environment by the end of 2010, complete capacity-building efforts by the end of 2011, and start work on surveillance from the beginning of 2011. WHO needs to provide technical support for these activities and also for community mobilization, behaviour change communication and operational research. Priority for implementing these strategies should be given to those countries and subnational states having the highest rates of under-five mortality.

5. Strategic elements

A programme for the coordinated approach to prevention and control of acute diarrhoea and respiratory infections – called the Coordinated Approach to Prevention and Control of Acute Diarrhoea and Respiratory infections (CDR) – should be positioned in a strategic way so that the current IMCI strategy is not undermined while, at the same time, the new approach as a community-based thrust for rapid implementation can be undertaken smoothly. This will be possible using a package comprising the following major elements accessible to the communities:

1. Preventive interventions,
2. Case management,
Strategy for coordinated approach to prevention and control of acute diarrhoea and respiratory infection in the SEA Region

(3) Community mobilization and empowerment,

(4) Surveillance, research, monitoring and evaluation, and

(5) Mobilizing national and international response.

This means that CDR has a major focus on the community-based activities for prevention and control while IMCI focuses mainly on the facilities. Both should be implemented simultaneously in a coordinated manner.

5.1 Disease prevention

Improved breastfeeding practices, appropriate complementary feeding, expanded immunization coverage, hand-washing and zinc supplements have been identified as core preventive strategies for diarrhoeal diseases as well as acute respiratory infections. In addition, the provision of safe water at the point of use and of safe sanitation practices would be effective in preventing diarrhoeal diseases.

As for feeding practices, exclusive breastfeeding for the first six months followed by appropriate nutrient-dense, complementary feeding coupled with continued breastfeeding for 12 to 24 months should be recommended. For appropriate complementary feeding, nutritional counselling focusing on the better quality of nutrients from diverse food sources served in appropriate quantities should be made a priority. Best practices on food handling, preparation and storage prior to consumption need to be identified and disseminated.

Adherence to these practices by the household and members of the community should be ensured by implementing appropriate behavioural change communications (BCC) strategies. Ensuring expanded coverage with vaccination against measles, pertussis and diphtheria and taking steps to achieve the Global Immunization Vision and Strategy targets for these vaccines will assist in preventing pneumonia and diarrhoea. Adding haemophilus influenzae type b (Hib) and pneumococcal conjugate vaccines (PCV) for the prevention of pneumonia and oral cholera and rotavirus vaccines to the national immunization programmes may or may not be a consideration for a particular Member State depending on the local situation and disease epidemiology.
5.2 Case management

In the case management strategy for acute watery diarrhoea, oral rehydration therapy (ORT), especially with low osmolarity, new formulation of oral rehydration salts (ORS) or by using rehydrating home-based fluids (RHF) needs to be strongly promoted at the community and household levels. ORT has already saved more than 40 million lives globally in the past 40 years and is successful in preventing and reversing dehydration in more than 90% of acute diarrhoea patients.

Low osmolarity formulations are even better as their use is associated with significant reduction in the need for unscheduled intravenous rehydration, total stool output and vomiting. Addition of zinc in doses of 10 to 20 mg twice daily for 10 to 14 days reduces the duration of diarrhoea by 15% and also significantly reduces the incidence of both acute diarrhoea and pneumonia over the following period of two to three months. Continued feeding or breastfeeding forms part of the case management and prevents the onset of malnutrition. Antibiotics such as co-trimoxazole or cipro or norfloxacin are indicated for acute bloody diarrhoea.

Promoting prompt diagnosis of ARI, especially pneumonia, by training health workers to use the WHO algorithm that takes into account the rate of breathing and the presence/absence of in-drawing of the lower chest wall, categorizing its severity, and referring to a facility or treating cases of pneumonia with antibiotics and other supportive care such as oxygen therapy at home or a health-facility and preventing misuse of antibiotics in
non-pneumonic cases form the core of the ARI case management strategy. The new programme needs to adopt community case management as a national policy supported by policy-makers and strengthen it to reach areas not reached by the existing programme. For the purpose of facility-level care, oral or parenteral antibiotics, training of health-care workers in assessment for hypoxia by pulse oximetry, wheezing by auscultation and supportive treatment with oxygen and nebulized bronchodilator as indicated were identified as the core strategies.

5.3 Community mobilization and empowerment

Improvement in care-seeking and child-rearing practices; health education and promotion; social accountability and advocacy have been identified as the core components of the community mobilization strategy of the programme. Intersectoral collaboration within and outside the health sector should be a major component of this strategy for the long-term improvement in water and sanitation safety, agricultural support for community nutrition programmes and support from the transport sector for appropriate care-seeking and care provisioning.

As part of the total package, community-based workers have to be trained not only in counselling skills to improve child care and feeding and care-seeking practices but also in community development facilitating skills. They need to be equipped with the right capability in social mobilization, bottom-up planning, advocacy, partnership building, etc. Community mobilization is essential to promote behaviour change with regard to care seeking and improving hygiene, nutritional and child-care practices. Community mobilization is also needed to increase local demand for improved supply of safe water, improved sanitation infrastructure, improved housing and air quality and, above all, to increase their participation in the programme itself. Advocacy is needed to enhance visibility and prioritization at all levels, to increase awareness to ensure political commitment and resource mobilization, and to promote community participation.
5.4 Surveillance and research

Monitoring of disease occurrence, trends, outbreaks and follow-up actions in the communities are as important as the monitoring of community practices and of risk factors. Programme performance and community response and practices should be continuously monitored. Periodic evaluations of the programme outcomes and the impact on disease burden should also be a component of this strategy. Surveillance of antibiotic use in the community and emergence of anti-microbial resistance are also going to be crucial for the success of the prevention and control strategy. Indicators need to be developed and tested for all these activities prior to programme implementation.

Another important component of this strategy is operational research to guide the entire programme. The focus should be on implementation and action research, identification of progress barriers and facilitating factors, and policy research and on the effective means of knowledge dissemination and translation into practice. Community-based action research would be crucial for active community mobilization, empowerment and involvement. Socio-cultural research on knowledge, attitudes, perceptions and cultural practices, and health seeking behaviours related to these two diseases should be strengthened in high-burden countries.

5.5 Mobilizing national and international response

Generating and presenting in the appropriate national and international forums the relevant data on the disease burden, the human and socio-economic impacts arising from this burden and the available cost-effective interventions as a solution to this problem must be an integral part of this programme of coordinated approach to prevention and control of acute diarrhoea and respiratory infections.

Visibility can be enhanced and expanded by working in cohesion with national and international partners. Mobilizing people’s own and other identified needed resources, including those not previously used, would be facilitated by such partnering. The programme will need to network with other programmes and social groups — national and international — which have similar goals and objectives in order to achieve a critical mass of
people concerned with reducing the burden of acute diarrhoea and respiratory infections. Besides reducing excess mortality, morbidity and disability, especially in poor and marginalized populations, mobilizing a unified response from national and international partners would also assist in framing an enabling policy and creating an institutional environment for implementing the programme.

6. Implementation: process and steps

Firm political commitment should be ensured by convincing the decision-makers that the agenda of previous ARI and CDD programmes remains far from being achieved and needs to be pursued urgently. The programme needs to mobilize resources, human, material and technological, in a substantial manner.

Community case management, especially of pneumonia, has remained a contentious issue in some Member States despite proof of its manifold benefits emerging from several studies and past experience. Policies in Member States about community case management are inconsistent. Challenges remain in introducing this strategy into the policy frameworks and standardizing the protocol and maintaining uniformly good quality across the Region. Standardization of referral systems and
compliance with referral policies are other significant areas requiring the attention of policy makers.

A strong system of management, which includes maintaining the necessary supplies and drugs, and constant supervision by competent and dedicated professionals are key to successful implementation of such a programme.

Prior and on-going implementation research needs to give direction to the implementation process. The process needs to be flexible at the local level, and modified as necessary based on ethnographic, cultural, socio-economic and other considerations such as disease burden and risk factors. High burden districts should be given priority in launching the national programme for prevention and control. Appropriately trained health workers and adequate logistical arrangements with uninterrupted supplies are key to successful implementation. The following key points should be considered during programme implementation:

- The health system at the community level be it at home or a facility has to earn the trust, confidence and respect of the community to ensure high levels of coverage by key interventions. This is possible only through the provision of quality services including treating clients with respect.

- Effectiveness of the community-based programme, therefore, depends upon having a well-trained and skilled community-based workforce and a strong outreach system.

- A sound system of selecting and training new groups of community-based workers should be in place to replace those who are no longer functioning or to extend the programme to newer areas.

- A system of developing and maintaining contact with caregivers at home including routine systematic visits to all homes by community health workers is necessary in order to identify cases needing services at home and for those who need to be moved to a facility.

- Household-level behaviour change interventions such as hygiene behaviour patterns, feeding and care-seeking practices, etc should be an important focus for community health workers as
there is usually perceptible resistance to these interventions if made from outside the community.

- For maximizing the return from a community-based programme, it should be supported by a good referral system and quality care at the facility level.

Strong advocacy to promote the programme as a national policy needs to be supplemented by resource mobilization from national and international sources for its effective implementation.

The strategies outlined above are best implemented as a national programme starting in areas with a high disease burden and then expanded gradually. The programme requires coordination among various sectors at all levels of health-care, from the basic unit of health service to the central or ministerial level and also with ample support from WHO and other partners. Many of the health promotional and disease preventive strategies mentioned here also require cooperation or even active steps taken as part of healthy public policy by development sectors that fall outside the arena of health. The WHO Regional Office for South-East Asia will be expected to provide technical support to national governments of Member States in terms of developing training materials, providing training to national trainers and also in coordinating with other international partners for resource mobilization and logistics.

A sound system of command and coordination down to the primary care level supported continuously by adequate resources, surveillance, training and constant supervision of the community and first-level facility health-care workers as the prime players of the game can be effective in moving the strategy forward. Management of logistics needs to take priority. Operationalization of these strategies at the field level requires inputs from national experts and programme managers and modules should be developed in conjunction with the development of training modules.

The proposed programme is expected to focus mainly on the following activities:

- Advocacy for policy acceptance and mobilization of national and international response to establish a national working group at the Ministry of Health chaired by the Health Secretary or another policy maker of similar rank and with representation from all the relevant sectors and stakeholders.
Establishment of a unit/ focal point in the Ministry or the Directorate of Health Services under the department of infectious diseases to develop a national strategic framework for ICDR programme, coordinate with all the relevant sectors and put into operation national policies on acute diarrhoea and respiratory infections as put forth by the national working group.

Training needs assessment; developing training curricula and modules; and organizing training at various levels.

Developing and establishing sound mechanisms for programme logistics, surveillance, monitoring and supervision.

Collaborating and coordinating with relevant sectors to develop and implement communication and social mobilization strategies for enhancing knowledge, awareness and responsive behaviour and multi-sectoral participation for fostering harmonized planning and oversight.

Collaborating and coordinating implementation of surveillance and generation of evidence on disease burden and local risk factors, and available interventions and their utilization.

Implementing preventive and case management interventions.

Promoting operations research particularly related to the enhancement of access to, acceptability and utilization of proposed interventions. Cost-effectiveness, affordability and feasibility of inclusion of Hib, pneumococcal conjugate vaccines and oral vaccines for cholera and rotavirus in the existing national immunization programmes and low-cost production of these vaccines within the SEA Region may be considered as the next important steps in the research agenda.

Implementing planned monitoring on a continual basis and performing periodic evaluation of the programme.

Coordinating in a timely manner the feedback from surveillance, research and M&E with the decision makers at various levels, including the national working group for further planning and policy modifications.

It may not be possible to immediately implement all the listed interventions in a severely resource-constrained setting. Policy makers, programme managers and development partners will have to weigh
carefully the merit of each against the required resource investment, and decide which interventions are most cost-effective in reducing mortality for the area in question and prioritize them accordingly.

7. Monitoring and evaluation

The prevention and control programme for acute diarrhoea and respiratory infections in Member States will require a sound mechanism for monitoring and evaluation implemented through directives from the national working group and coordinated by the national focal point. The programme should be monitored by programme managers by using pre-tested indicators for collecting and analyzing data on scaling-up and also for the process of implementing prevention and control strategies such as hygiene behaviour, immunization, breastfeeding and complementary feeding practices, and case management of acute diarrhoea and respiratory infections. National baseline data will need to be established at the onset of the programme. In addition, targets and timelines will be fixed as deemed relevant for the country, state or district. The indicators for processes, outcomes and impact will be streamlined prior to the commencement of the programme along with the means of verification and the frequency of monitoring. Mid-term evaluation will be done at the end of the third year of the programme and final evaluation at the end of the fifth year. The national working group will regularly review the data generated through M&E and provide guidance for programme modification as deemed necessary.

8. Conclusions

Acute diarrhoea and respiratory infections are high burden diseases in the South-East Asia Region of WHO. Dedicated programmes for both were successful in reducing mortality among the under-five population. Despite the programmes, high morbidity persisted. Furthermore, in recent years they have continued to lead the causes of under-five deaths in the Region and also globally. This has been the main impediment in the achievement of MDG4 by the Region. Simple, safe, effective and yet relatively inexpensive interventions have been available for both prevention and control for at least three decades but are not reaching the communities that need them most. The burden in the over-five population also appears to be high but remains largely unaddressed. There is now a need to design and launch national programmes that encompass all age groups. A regional strategic framework based on a coordinated approach to integrate universal
access to quality care with preventive interventions has been presented. Necessary support for these interventions in communities and first-level health facilities by strong advocacy, mobilization of national and international responses, community mobilization and empowerment, training, research, and monitoring and evaluation is discussed. Member States may opt to design their national prevention and control programmes based on this regional strategic framework.
Acute diarrhoea and respiratory infections (ARI) are the two leading causes of mortality in children under age 5 worldwide, with the highest burdens being in sub-Saharan Africa and in countries of the WHO South-East Asia (SEA) Region. The burden of these diseases is also high in other age groups. Achieving the Millennium Development Goal on child mortality, MDG-4, in the Region will not be possible without making coordinated efforts to both prevent and control these diseases. A tangible reduction in morbidity will also require addressing the problem across the age spectrum.

WHO Regional Technical Advisory Group (RTAG) reviewed the current situation and available interventions in 2008. Based on the advice of RTAG members and on regional and global experiences, this strategy document focuses on the coordinated approach to prevention and control of acute diarrhoea and respiratory infections across the age spectrum. The strategy emphasizes integration of preventive interventions with improved case management, at both community and facility levels and in all age groups. It also highlights the significance of coordinating efforts to mobilize communities, provide appropriate training, and conduct monitoring and research to strengthen the preventive and control interventions.

Strategy for coordinated approach to prevention and control of acute diarrhoea and respiratory infection in the South-East Asia Region

World Health Organization
Regional Office for South-East Asia
World Health House
Indragnatha Estate,
Mehatma Gandhi Marg,
New Delhi 110012, Ind.
Website: www.searo.who.int