

World Health Organization/United Nations Children's Fund Joint Statement on Integrated Community Case Management: An Equity-Focused Strategy to Improve Access to Essential Treatment Services for Children

Mark Young,* Cathy Wolfheim, David R. Marsh, and Diaa Hammamy

Health Section, United Nations Children's Fund, New York, New York; Department of Maternal, Newborn, Child and Adolescent Health, World Health Organization, Geneva, Switzerland; Save the Children USA, Springfield, Massachusetts, and Washington, District of Columbia; United States Agency for International Development, and Futures Group International, Washington, District of Columbia

Abstract. This statement presents the latest evidence for integrated community case management of childhood illness, describes the necessary program elements and support tools for effective implementation, and lays out actions that countries and partners can take to support the implementation of integrated community case management at scale.

BRINGING TREATMENT CLOSER TO HOME

Despite the progress made in reducing mortality in children less than five years of age, 75% of the deaths are still caused by a handful of conditions, specifically pneumonia, diarrhea, malaria, and newborn conditions. Malnutrition is associated with approximately one-third of the deaths.

The correct treatment of childhood pneumonia, diarrhea, and malaria is one of the most powerful interventions for reducing mortality.¹ However, in most countries with high mortality rates, facility-based services alone do not provide adequate access to treatment,^{2,3} and most importantly not within the crucial window of 24 hours after onset of symptoms. If child mortality is to be adequately addressed, the challenge of access must be undertaken.

Community health workers, appropriately trained, supervised, and supported with an uninterrupted supply of medicines and equipment, can identify and correctly treat most children who have the conditions mentioned above.^{4,5} In 2004, the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) issued joint statements on the management of pneumonia in community settings⁶ and the clinical management of acute diarrhea,⁷ both of which highlighted the important role of community-based treatment. A recent review by the Child Health Epidemiology Reference Group estimated that community management of all cases of childhood pneumonia could result in a 70% reduction in mortality from pneumonia in children less than five years of age.⁸ Community case management (CCM) of malaria can reduce overall and malaria-specific mortality in children less than five years of age by 40% and 60%, respectively, and severe malaria morbidity by 53%.^{9,10} Oral rehydration salts (ORS) and zinc are effective against diarrhea mortality in home and community settings, and ORS is estimated to prevent 70–90% of deaths caused by acute watery diarrhea,¹¹ and zinc is estimated to decrease diarrhea mortality by 11.5%.¹²

For these reasons, UNICEF, WHO, and partners working in an increasing number of countries are supporting the integrated CCM (iCCM) strategy to train, supply, and supervise front-line workers to treat children for diarrhea and pneumonia, and for malaria in malaria-affected countries, using ORS and zinc, oral antibiotics, and artemisinin-based combina-

tion therapy. In addition, the availability of high-quality rapid diagnostic tests for malaria has made it possible to test for malaria at the community level. Use of these tests will make the need for high quality integrated treatment, including iCCM, even more pressing, to ensure adequate health worker response to febrile children with or without malaria. Finally, iCCM also enables community health workers to identify children with severe acute malnutrition through the assessment of mid-upper-arm circumference.

CURRENT CONTEXT

The number of children dying worldwide continues to decrease, and although this is encouraging, the decrease has been slow, stagnating or even reversing in many countries, particularly in sub-Saharan Africa. Although new preventive interventions, especially pneumococcal conjugate and rotavirus vaccines, will also help reduce mortality, prompt and effective treatment of pneumonia, diarrhea, and malaria remains essential.

The delivery of health services is often weakest where the needs are greatest, and low coverage of the most needed interventions results in a significant unmet need for treatment of these major child killers. In developing countries, current treatment levels are unacceptably low: only 39% of children receive correct treatment of diarrhea,¹³ only 30% of children with suspected pneumonia receive an antibiotic,¹³ and less than 20% of children with fever in sub-Saharan Africa received a finger/heel stick for malaria testing, in 11 of 13 countries with available data in the region.¹⁴

Poor and disadvantaged children without access to facility-based case management are at even greater risk, as shown in Figure 1. The role of community health workers in improving access to treatment in underserved areas is shown in Figure 2.

JUSTIFICATION FOR INTEGRATED CCM

Programmatic experience shows that an integrated strategy can be effective in achieving high treatment coverage and delivering high quality of care to sick children in the community. In Nepal, which has more than 20 years of experience in community-based management of child illness, 69% of children less than five years of age have access to treatment,¹⁵ and the case-fatality rate for acute diarrhea and the proportion of severe pneumonia among acute respiratory infection cases across the country have significantly decreased.¹⁶ In

* Address correspondence to Mark Young, Health Section, United Nations Children's Fund, 3 UN Plaza, New York, NY 10017. E-mail: myoung@unicef.org

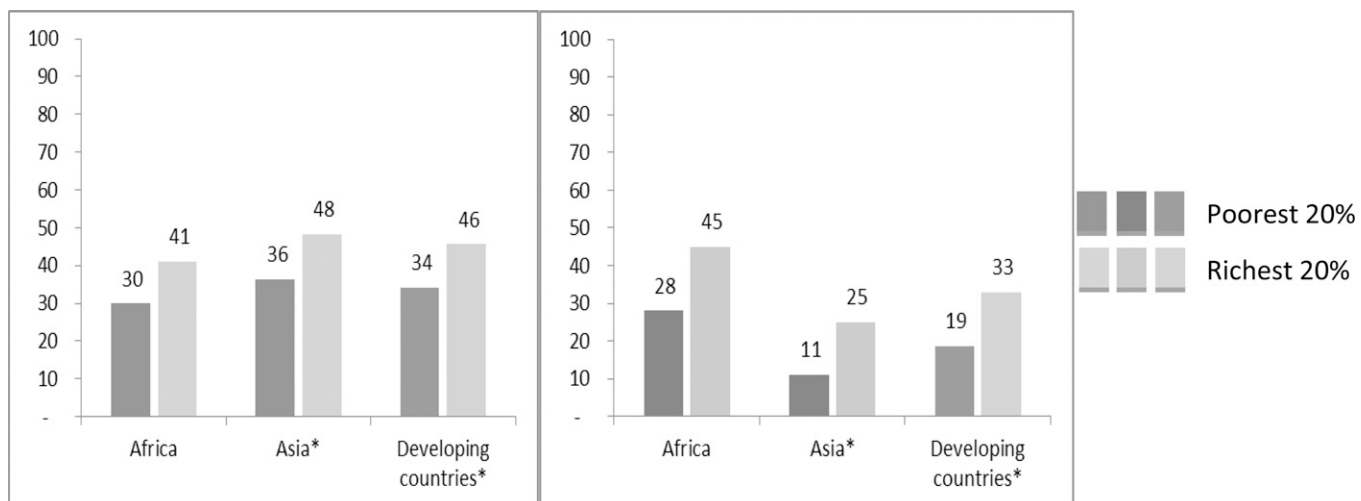


FIGURE 1. Proportion of children <math>< 1-59</math> months of age with diarrhea receiving oral rehydration salts (ORS) therapy with continued feeding (CF) and those with suspected pneumonia receiving antibiotic, 2006–2011. UNICEF = United Nations Children's Fund.

Notes: Estimates are based on a subset of 59 countries for ORT+CF and 34 countries for the antibiotics indicator, with wealth data for the period 2006-2011 covering 65 per cent and 50 per cent, respectively, of the total under-five population in developing countries (excluding China, for which comparable data are not available).

Oral rehydration therapy refers to ORS packets, recommended home-made fluids or increased fluids.

*Excludes China

Source: UNICEF global databases, 2012

Ghana, 92% of caregivers of sick children sought treatment from community-based agents trained to manage pneumonia and malaria. Most sought care for their children with fever within 24 hours of onset of fever.¹⁷ In Zambia, a CCM study on pneumonia and malaria found that 68% of children with pneumonia received early and appropriate treatment from community health workers, and that overtreatment of malaria significantly decreased.⁵ In Ethiopia, workers deployed in

remote communities delivered two and a half times as many treatments for the three diseases than all the facility-based providers in the same district.¹⁸ The proportion of children receiving artemisinin-based combination therapy globally is also increasing, although significant gaps remain.¹⁴

With adequate training and supervision, community health workers can retain the skills and knowledge necessary to provide appropriate care. In Malawi, 68% of classifications of

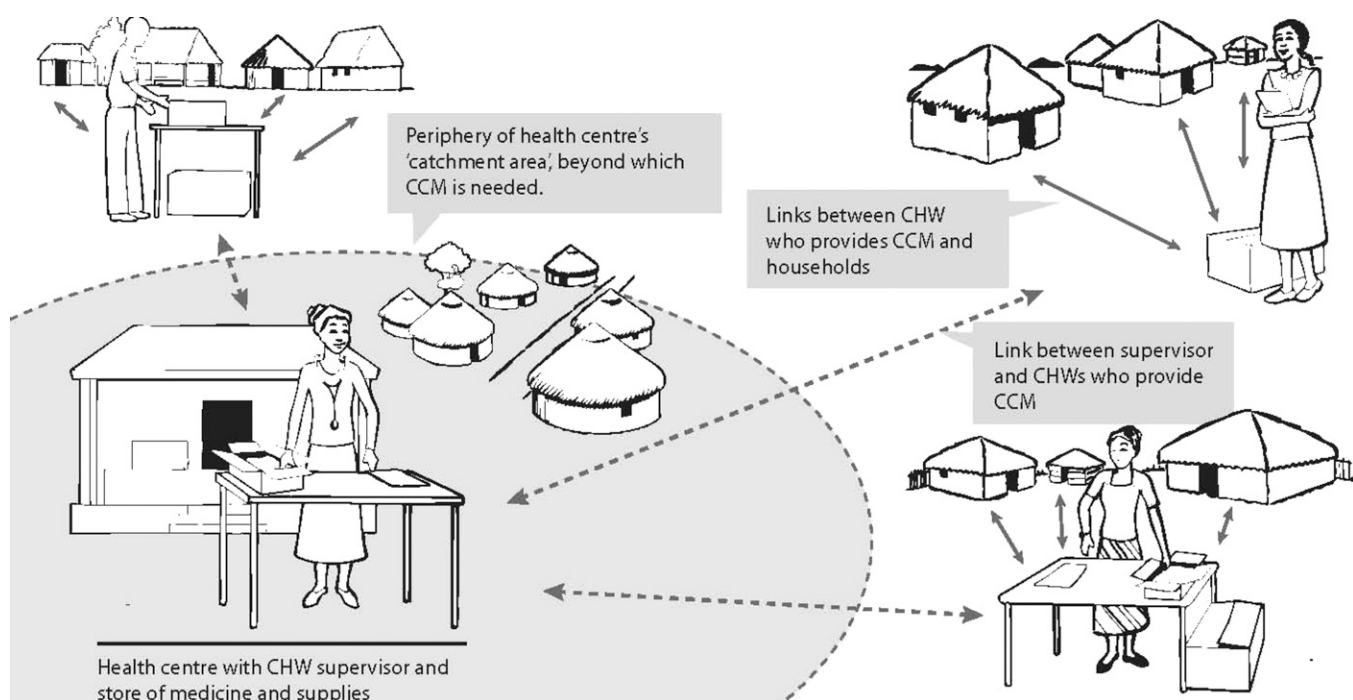


FIGURE 2. Role of community health workers in improving access to treatment in underserved areas. CHW = community health worker; CCM = community case management.

common illnesses by health surveillance assistants were in agreement with assessments done by physicians, and 63% of children were prescribed appropriate medication.¹⁹

DEPLOYING COMMUNITY HEALTH WORKERS CAN INCREASE COVERAGE AND ACCESS TO TREATMENT

Community health workers are an effective option for investment as part of a comprehensive primary health care system. However, CCM should not be viewed as an inexpensive or low-cost measure. Effective implementation requires policy support, training, supervision, performance maintenance, and regular supplies. In addition, community health workers are increasingly responsible for many health and development tasks, and expansion of their duties needs to be carefully considered in this light.

RESPONSIBILITIES OF COUNTRIES THAT DECIDE TO DEPLOY COMMUNITY HEALTH WORKERS TO INCREASE COVERAGE OF ICCM

Examine the policy options. Existing policies may need to be modified, or new policies put in place, to enable non-medical community health workers to administer antibiotics.

TABLE 1
Eight benchmarks for implementation

Country-level planning, implementation, monitoring, and assessment of integrated community case management (iCCM) activities can be facilitated using a set of benchmarks (www.CCMCentral.com) that were developed by an interagency team.* These benchmarks are organized according to eight system components, each of which key activities and milestones to guide the process:

1. **Coordination and policymaking:** Needs assessment and situation analysis for community-based treatment services, including geographical mapping of communities suitable for iCCM; national policies and guidelines in place to allow treatment at the community level; mapping of current CCM activities and partners; and a national coordination mechanism for iCCM.
2. **Costing and financing:** Costing exercise to ensure that necessary financing is secured.
3. **Human resources:** Clear and well-articulated roles and expectations for community health workers and communities; comprehensive basic and refresher training plan for community health workers; and strategies for retention and motivation.
4. **Supply chain management:** Appropriate child-friendly medicines and supplies for iCCM included in the national essential medicines list; and procurement plan, inventory control, resupply logistics system and logistics management and information system for iCCM with standard operating procedures.
5. **Service delivery and referral:** Appropriate guidelines for clinical assessment, diagnosis, management and referral, including plans for rational use of medicines (and rapid diagnostic tests where applicable); and referral and counter-referral system for iCCM.
6. **Communication and social mobilization:** Communication and social mobilization plan and strategy; and materials and messages for iCCM.
7. **Supervision and performance quality assurance:** Plan and appropriate tools to support effective supervision; trained supervisors; and resources (e.g., vehicles, fuel) to conduct supervision and provide skills coaching to community health workers.
8. **Monitoring and evaluation and health information systems:** Comprehensive monitoring framework and system for all CCM components, integrated within the national health sector plan and health information system; and operational research agenda for iCCM.

* McGorman L and others.²⁰

Build on existing programs and initiatives. In many countries, community-based programs for single diseases, such as malaria, have been institutionalized and even scaled up. In these cases, the experience gained from malaria management can serve as a foundation to which case management of pneumonia and diarrhea can be added.

Ensure quality of care. Community health workers need support to maintain and enhance their skills in assessing and managing child illness. Refresher training should be undertaken at periodic intervals, and supportive supervision needs to be planned and carried out on a regular basis. New approaches, such as peer supervision, clinical mentoring, and the use of electronic devices (e.g., cell phones and DVDs), are being used or tried out in some situations.

Ensure adequate and uninterrupted supplies and medicines. It is critical that medicines for iCCM meet the particular needs of young children and their families, and that appropriate formulations, dosages, and packaging designed to improve adherence are used. Coordinated efforts to consolidate systems and support the supply chain management function can be aided by a functioning logistics management information system.

Monitor and assess. A systematic approach to gathering, aggregating, analyzing and reporting data will serve to map and identify key gaps in treatment coverage. Analysis of national and sub-national data related to causes of death, patterns of care-seeking, coverage of interventions, quality of care, and other key indicators can help identify where deployment of community health workers for iCCM may be most effective.

One potential model for such an approach is the Expanded Program of Immunization's Reaching Every District strategy. Through this approach, data on the number of children receiving appropriate treatment for pneumonia, diarrhea, and malaria could be made available to respond to surges in

TABLE 2
Implementation support tools

Training in clinical skills: The World Health Organization and the United Nations Children's Fund have developed an integrated package to train community health workers to manage illness in children 2–59 months of age. Caring for the Sick Child in the Community is the gold standard training package for integrated community case management (iCCM). The interventions require the use of four low-cost medicines and one test: an antibiotic, an antimalarial drug, oral rehydration salts, zinc treatment, and rapid diagnostic test (see treatment recommendations in Table 3). In addition, the guidelines support an assessment using the mid-upper arm circumference strip. The sequence to be followed by the community health worker is based on the principle that one observation leads to one action, and does not depend on individual judgment.

Program management: The CORE Group of non-governmental organizations, with support of the U.S. Agency for International Development, published *Introduction to Community Case Management Essentials: A Guide for Program Managers*, which contains guidance for iCCM. WHO produced a five-day training course, *Managing Programs to Improve Child Health*, which includes CCM as a crucial ingredient in national child health programming.

These and other tools are available at www.CCMCentral.com.

This website, set up by the global CCM Task Force, is a virtual resource center for iCCM tools and information, including relevant publications and case studies.

TABLE 3
Current treatment recommendations*

<input type="checkbox"/> If diarrhea (< 14 days AND no blood in stool)	<input type="checkbox"/> Give oral rehydration salts (ORS). Help the caregiver give the child ORS solution in front of you until the child is no longer thirsty.
	<input type="checkbox"/> Give the caregiver 2 ORS packets to take home. Advise to give as much as the child wants, but at least 1/2 cup of ORS solution after each loose stool.
	<input type="checkbox"/> Give a zinc supplement. Give 1 dose daily for 10 days:
	<input type="checkbox"/> Age 2–6 months: 1/2 tablet (total = 5 tablets)
	<input type="checkbox"/> Age 6 months–5 years: 1 tablet (total = 10 tablets)
<input type="checkbox"/> If fever (< 7 days) in a malaria-endemic area	<input type="checkbox"/> Do a rapid diagnostic test (RDT). __Positive __Negative
	<input type="checkbox"/> If RDT result is positive, give the oral antimalarial artemether-lumefantrine.
	Give twice a day for 3 days:
	<input type="checkbox"/> Age 2 months–3 years: 1 tablet (total = 6 tablets)
	<input type="checkbox"/> Age 3–5 years: 2 tablets (total = 12 tablets)
<input type="checkbox"/> If fast breathing	<input type="checkbox"/> Give an oral antibiotic (250 mg amoxicillin tablet). Give twice a day for 5 days:
	<input type="checkbox"/> Age 2–12 months: 1 tablet (total = 10 tablets)
	<input type="checkbox"/> Age 12 months–5 years: 2 tablets (total = 20 tablets)

* Adapted from World Health Organization, Integrated Management of Childhood Illness: Caring for Newborns and Children in the Community, 2011. Geneva: World Health Organization.

the number of cases and to assess performance, adjust strategies, and monitor supplies.

SUPPORT OF MINISTRIES OF HEALTH IN THESE STEPS BY WHO, UNICEF, AND PARTNERS

A systematic set of benchmarks is shown in Table 1. These will, among other things, help identify research priorities, determine the support needed for operational and implementation research activities, and document and disseminate good practices from current and emerging iCCM implementation. Implementation support tools are shown in Table 2. Current treatment recommendations are shown in Table 3.

CONCLUSIONS

Accelerated action against the main child killers is imperative as countries work to reduce mortality rates in children less than five years of age by two-thirds to achieve the fourth Millennium Development Goal by 2015. Action includes reaching out to underserved populations to provide them with the essential health services they need. Appropriately trained and equipped community health workers, provided with the necessary system supports, can deliver iCCM for malaria, pneumonia, and diarrhea as an effective intervention that increases access to and availability of treatment services for children. WHO and UNICEF support iCCM as an essential strategy that can both foster equity and contribute to sustained reduction in child mortality.

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Authors' addresses: Mark Young, Health Section, United Nations Children's Fund, New York, NY, E-mail: myoung@unicef.org. Cathy Wolfheim, Department of Maternal, Newborn, Child and Adolescent Health, World Health Organization, Geneva, Switzerland, E-mail: wolfheimc@who.int. David Marsh, Save the Children USA, Springfield, MA, E-mail: DMarsh@savechildren.org. Diaa Hammamy, Futures Group International, Washington, DC, E-mail: DHammamy@futuresgroup.com.

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