

Summary

Newborn Health

Newborn health overlaps with several other interventions: safe motherhood (including malaria prevention), immunization, and nutrition (especially breastfeeding). It includes both prevention and treatment behaviors. Newborn health begins with care of the pregnant woman and extends through the first 28 days of life. Behaviors fall into several categories:

- Pregnancy (preventive behaviors and planning for delivery)
- Immediate care of the newborn
- Continued postnatal care

Specific essential newborn care (ENC) behaviors will vary according to the magnitude of newborn mortality, use of ANC services, and access to skilled birth attendance. One of the central challenges of newborn health is selecting interventions and specifying priority behaviors (see box page 30.)

PREVENTION *and* TREATMENT: ESSENTIAL NEWBORN CARE

Audiences and Actions in a Nutshell

Policymakers

- Take concrete steps to promote and mainstream newborn health:
 - Adopt a national policy supporting newborn care

- Design and fund a country strategy
- Incorporate newborn in health protocols, training curricula
- Specify goals for reduction in neonatal mortality rates
- Establish universalized registration of births and deaths

Press and Other Stakeholders

- Draw public attention to newborn health/rights of newborn

Communities

- Collective action – Identify emergency transport for newborns (as well as mothers)
- Village chiefs – Sign newborn death certificates

Mothers/Those Present at the Birth

- Complete TT immunization
- Plan for the birth (identify skilled attendant or plan for hygienic birth; have a plan in case of emergency)
- In malaria endemic areas – take malaria chemoprophylaxis and sleep under ITN
- Dry baby immediately and wrap in warm cloths—place with mother
- Breastfeed immediately and on demand

- Keep baby warm and dry
- Keep mother and baby together
- Delay the baby’s first bath for 24 hours
- Be alert for danger signs and seek emergency care
- Practice kangaroo care for a low birth weight baby
- Seek or accept a postpartum visit and have infant vaccinated

Health Workers (ANC)

- Counsel the pregnant woman (and family) on essential newborn care practices

What are the Key Challenges?

Until recently the newborn has been almost invisible at both the health system and community levels.

Advocacy and design of appropriate programs is urgent. An important task is to specify feasible key behaviors for given mortality and cultural contexts and coordinate across program areas.

- The medical community may think mortality reduction is only possible through high technology/high-cost approaches not feasible for most births.
- At the community level, fatalism may be linked to common experience as well as spiritual beliefs; many newborn deaths may not even be counted or “observed” by the community.
- The list of essential newborn care behaviors is extremely long and may be difficult for program planners to prioritize and integrate (see box at right.)
- Only trained attendants can manage some problems during the first 24 hours after birth when 40 percent of mortality occurs (e.g., due to birth asphyxia).

How are Priority Behaviors Selected?

Priority behaviors for newborn health will vary by country and by region. Behaviors must be *feasible* and have an *impact on mortality*.

The list of priority newborn health behaviors is very long, and communication specialists may feel pressured to focus on all of them.

But often the greatest impact will be gained by strengthening existing programs. In high mortality areas, this includes increasing tetanus toxoid coverage, improving exclusive breastfeeding rates, and—in endemic areas—malaria prevention.

Emphasizing family care of the *normal newborn*—drying and warming the baby, delaying the bath, and keeping mother and baby together—is also important.

WHO only recommends focusing on practices to support the *non-normal newborn* when access to skilled attendants is high (and neonatal mortality is below 50 per 1000 births).

- In many countries the majority of women have no access to skilled attendants, and may not prefer to use them even when available.
- Traditional practices vary and some may be harmful; e.g., ignoring the baby until the placenta has been born, giving a bath too early, separating mother and baby, delaying breastfeeding. Many of these behaviors have never been addressed before; determinants and relative strength of beliefs may be unknown; no “buzz” has ever been created to begin the process of changing norms.

- In most cultures the newborn is kept indoors for several weeks and the practice of a postpartum visit is unknown. These traditions delay the first immunization and may prevent early detection of problems in the first vulnerable month.

How Can Communication Approaches Contribute?

Advocacy

- Raise awareness at policy levels about the high mortality in this age group as well as the feasibility of preventing deaths even among the underserved. Focus on specific steps needed to adopt/launch/fund new programs. Facilitate collaboration between safe motherhood and child survival programs.
- Stimulate a grassroots movement, for example linked to the White Ribbon alliance, cutting across institutions and involving the media.
- When promotion of ANC visits is part of the newborn strategy, support WHO's recommendation for *fewer visits* focused on *essential services* and increased attention to *counseling*, with birth preparation discussed at the earliest visit.

Research and Program Design

- Promote a systematic process of selecting priority behaviors, focusing on those that are appropriate for the given level of mortality and current infrastructure, are feasible, and will have an impact in the short and long terms, respectively (see WHO/SEA guidance on three scenarios).
- Support the integration of key practices into ongoing safe motherhood and child health programs.
- Conduct formative research on barriers and enablers to priority essential newborn care

practices. Conduct positive deviance (doer/non-doer) research regarding those practices that are already changing (e.g., in some areas, willingness to take an infant for a postpartum visit).

- Support operations research to test new strategies; e.g., working with TBAs to carry out postpartum visits, use of simple equipment to prevent birth asphyxia, etc.

Families/Communities

- Support creative strategies at the community level for “recognizing” the newborn. Promote responsibility of village chiefs for registering births and deaths. Promote collective actions (e.g., supplying transport) for protecting newborns.
- Test/promote messages for specific actors commonly responsible for specific essential practices. At the same time, promote collective responsibility for “watching” the newborn.
- Design/test “harm reduction” strategies for those behaviors that research shows are particularly resistant to change and test messages for feasibility.
- Assure benefits to *mothers* of early BF initiation are emphasized in BF promotion activities.
- Promote first vaccination according to local postpartum strategy—using the vaccination benefit to encourage early contact with the health system. At the postpartum visit, assure importance of vaccinations is stressed and the child receives a health card.

Providers/Health System

- Design job aids for ANCs to help introduce essential newborn practices (e.g., to include newborn in discussion of emergency transport, to counsel on essential practices).

- Support training for ANC and appropriate community workers regarding counseling for essential newborn practices. Focus on negotiation skills related to new behaviors, discussing harm reduction possibilities.
- Revise the standard mother's card to include appropriate newborn behaviors.
- Facilitate a postnatal contact for all babies; provide vaccination "referrals" and "counter referrals" for babies born away from their catchment areas.

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Summary

Childhood Immunization

Immunization according to a recommended schedule in a child's first year of life protects against infection and possibly death due to a range of diseases including tetanus, diphtheria, pertussis, polio, measles, hepatitis B, *haemophilus influenzae* type b (which causes some meningitis and pneumonia), yellow fever, and tuberculosis.

PREVENTION

Audiences and Actions in a Nutshell

Families

- Complete the series of routine or “primary” vaccinations by the child's first birthday (*five visits beginning at birth or as specified on the child's health card*)
- During any supplemental campaigns, take a child of the recommended age to a vaccination post (*or assure the child is at home during a house-to-house campaign*)
- Treat side effects as recommended
- Take the child's vaccination card whenever visiting a vaccination post or health center

Health Workers

- Fill out the vaccination card and explain what is being written. (*Tell caretaker when to return for the next vaccination; explain how many visits remain.*)

- Explain what to do in case of side effects
- During a campaign, explain that the routine vaccinations are still necessary at the health facility or outreach site

Communities

- Work with health staff to plan convenient times and locations for vaccinations
- Provide logistical support (*help with transport or supplies for the cold chain*)
- Help mobilize families and help track down the hard-to-reach or dropouts

Policymakers

- Increase funding and program support for routine immunization (*in addition to single disease campaigns*)
- Ensure that messages about routine immunizations are reinforced during campaigns
- Ensure synergy between immunization and any “piggybacked” interventions during campaigns

What are the Key Challenges?

Routine immunization rates have stalled or dropped in many countries during the last decade. Immunization has suffered in some countries from sector-wide approaches and the trend away from vertical programs. And donors interested in immunization have focused

on campaigns to eliminate specific diseases (polio, measles) rather than on strengthening basic services.

- Every child's immunization schedule is unique to that child; a parent must understand *when* and *where* to go for *that child*.
- If a woman goes to her parents' home to give birth ("out of catchment area") her child may not receive a timely first vaccination or a vaccination card.
- Immunization cards indicating a child's schedule are rarely designed for low-literate parents.
- A health worker may not explain what is written, or may not fill it out at all.
- Children who are completely *left out* may be "hard to reach" or "hard to convince," or face other barriers. Good segmentation data may not exist, or may have been collected but not used to address these problems.
- *Dropouts* may be a bigger problem than *leftouts* but research is rarely done to analyze dropout problems.
- "Missed opportunities" to vaccinate are linked to a number of health provider issues (both logistical and behavioral).
- Communication programs generally focus on "demand creation" even though many barriers center around the vaccination experience and *health worker* behaviors.
- Campaigns may cause confusion in parents' minds about when and how they should complete the child's primary vaccinations.
- The "piggybacking" of other interventions on immunization campaigns reduces the time available for sharing critical information.
- Campaigns can become lightning rods for rumors or for political conflict.

How Can Communication Approaches Contribute?

Research

- Use coverage data and qualitative research to target children who are "left out." Conduct exit interviews and observations to analyze "dropout" problems as well as missed opportunities, and to understand health worker-client communication. Doer-nondoer research (in-depth interview or group discussions) may also be helpful.

Providers

- Strengthen role of the health worker as a primary communication channel: Create job aids that address identified problems, such as updates on protocols to prevent missed opportunities, Q&As on new vaccines.
- Strengthen training in interpersonal counseling. At a minimum, supply simple guidelines on key messages.
- Collaborate with antenatal programs to assure antenatal contacts include emphasis on where/when/how to obtain the first vaccination—use the vaccination "benefit" to promote early postpartum contact.
- Design vaccination "referrals" and "cross referrals" for providers to give mothers whose babies will be born away from their catchment areas/assure information reaches local vaccinators.
- Motivate vaccinators to send accurate information up the system: complete monitoring forms, report stock-outs.
- Find opportunities to reward health workers and communities for *routine* vaccinations as well as campaign achievements.
- Add specific communication messages/skills to supervision checklist for providers.

Demand Creation or Personal Attention?

We usually think of the family as the primary “audience” for behavior change interventions. But for immunization, health worker behaviors are especially critical.

Although we often think of immunization as a “mass” activity requiring intensive mobilization, completion of the primary vaccinations is a highly individual behavior. Each parent needs to know how many times to vaccinate his or her child and when.

Many children “drop out” of the immunization process because health workers don’t explain when they should return, may fail to warn them about side effects, or may make the parent uncomfortable. A health worker may also “miss the opportunity” to vaccinate a child who comes to the health center.

Exit interviews and clinic observations help reveal the reasons for dropouts and missed opportunities. Simple job aids and training can make a difference.

Families and Communities

- Design vaccination cards that can be interpreted by non-literate parents. Provide these to parents as early as possible (during antenatal care for example).
- Promote the concepts of *completing a series of visits* and finishing the series in a *timely way* (for example, by the child’s first birthday if appropriate).
- Highlight and reward “timely completion” (e.g., give diploma); design activities to reward communities/celebrate coverage of large numbers of “completed” children.

Health System and Community Linkages

- Encourage health system/community problem solving. Empower communities to negotiate convenient times for vaccinations, support vaccination teams, mobilize citizens (town criers, etc.)
- Create simple data collection and mapping tools to inform communities about problems, engage them in tracking down leftouts and dropouts.

Campaign Coordination

- Early in campaign preparation, draw attention to key behavior issues, rather than just demand creation.
- Balance “generic” national level communication with support for community-level mobilization as well as community-level *planning*.
- During planning, analyze total integrated “message” package and design/pretest how these will be delivered by available providers/volunteers.
- Design messages that reinforce/clarify messages related to routine immunization visits.
- Use training opportunities in campaigns to model/role-play interpersonal communication skills.
- Prepare health workers and local leaders for common rumors; supply Q&A and guidelines related to dealing with rumors.

Advocacy and Press Relations

- Cultivate ongoing relations with the national as well as local press. Supply basic facts and Q&As in advance of campaigns, introduction of new vaccines, and periodically for the routine program. Make contact quickly in case of rumors, especially at the local level.

Summary

Diarrheal Disease

Treatment. Behavior change approaches focus on prevention of dehydration (through oral rehydration therapy), feeding practices during illness and recuperation, zinc supplementation (which also prevents recurrence of illness) and treatment of severe disease. Dysentery requires treatment with antibiotics; persistent diarrhea requires special feeding behaviors.

Prevention. Exclusive breastfeeding up to six months and continued breastfeeding thereafter provides significant protection. Adequate and hygienic feeding practices help prevent infection and the cycle of malnutrition and illness. Immunization against measles reduces both morbidity and mortality from diarrhea. The primary prevention behaviors are environmental and include appropriate handwashing, use of latrines, appropriate home water storage and disinfection, and community practices to protect water. Collaboration between CDD, nutrition, and hygiene programs is important to prevent diarrheal deaths.

TREATMENT

Audiences and Actions in a Nutshell

Policymakers

- Increase attention to this major cause of mortality
- Support policies and strategies that will improve program effectiveness, including:
 - Adopting new zinc supplementation protocols and launching new products

- Integrating CDD, nutrition, and hygiene efforts
- Collaborating with the private sector (providers, drug sellers, manufacturers)

Families

- For simple diarrhea, give home-based fluids or ORS
- Continue breastfeeding if the child is breastfed; give frequent and small amounts of food
- Give adequate attention to the child during recuperation; continue with catch-up feeding
- Recognize signs of severity and seek appropriate help promptly
- Give zinc (tablets or syrup) when recommended/available
- Refrain from giving antidiarrheals
- Give antibiotics when prescribed (i.e., for bloody diarrhea, and *not* for watery diarrhea)

Private Providers

- Practitioners recommend and teach ORT, ask about danger signs, discourage use of antidiarrheals, and prescribe antibiotics appropriately
- Drug sellers recommend ORS/ORT and refrain from selling antidiarrheals to treat childhood diarrhea; ask about presence of blood in the stool and refer to an appropriate provider

- Both practitioners and drug sellers counsel parents regarding feeding/fluids during illness and recuperation; when available, recommend zinc supplements and emphasize giving the full course

Community-Based Volunteers

- Explain the importance of rehydration; recommend and teach correct use of ORT
- Provide ORS (and zinc tablets or syrup if available)
- Counsel parents regarding feeding/fluids during illness and recuperation
- Discourage use of antidiarrheals and inappropriate use of antibiotics
- Teach parents signs of severity
- Recognize signs of severity and refer to a health center

Health Workers

- Explain the importance of rehydration; recommend and teach correct use of ORT
- Provide ORS (and zinc tablets or syrup if available)
- Counsel parents regarding feeding/fluids during illness and recuperation
- Discourage use of antidiarrheals and inappropriate use of antibiotics
- Treat severe cases appropriately

What are the Key Challenges?

Many community-level CDD programs lost funding with the introduction of IMCI. For health workers, IMCI has also meant reduced training specifically on CDD (e.g., in counseling skills). Many of the early behavioral challenges related to ORS use remain prevalent.

- Programs suffer from an artificial separation among health, nutrition, and environmental strategies, especially at the community level.
- Indicators for CDD are very complex and have changed often over time, making both program feedback and advocacy difficult.

What Do Mothers Really Want?

Where Do They Really Go For Help?

Many experts believe the focus of current CDD programs should be on private providers, where the majority of families go for help.

Despite 25 years of ORT promotion, most caretakers still want, first and foremost, to stop their child's diarrhea. The most effective remedies, they believe, are antidiarrheals and antibiotics.

The majority of cases of childhood diarrhea, moreover, are treated in the private sector. Even providers and drug sellers that know WHO protocols may prescribe or sell inappropriate drugs. And cases of bloody diarrhea often do not receive antibiotics. It is crucial to understand the practices *and* the underlying motivations and barriers of private providers.

As zinc supplementation is launched, CDD programs will have new opportunities to collaborate with private practitioners and drug sellers. However, a new product "launch" should not become a distraction from other key practices, and public/private collaboration is crucial even where zinc is not being introduced.

- Feeding messages are crucial, are the most difficult for caretakers to practice and for providers to negotiate, and are often overlooked completely.
- Oral rehydration therapy is a unique treatment model and requires that caretakers understand the concept of rehydration. ORT is also a cluster of behaviors over several days. However, caretakers often give ORS briefly, and in small amounts, just like a medicine.
- What mothers want most is to stop a child's diarrhea, which ORS does not do.

- Parents demand other treatments (especially antidiarrheals and antibiotics). Providers want to please parents. And drug sellers can make a higher profit on remedies other than ORS.
- Zinc supplements will help satisfy families' desires for a "drug" and for stopping the diarrhea.
- However, completing the full course of 10-14 days' treatment will be challenging, especially once a child no longer appears ill.
- Launching of zinc will be a complex and lengthy process requiring changes in protocols, product development and consumer research, and promotion among both providers and the public.
- A large percent of cases are treated in the private sector, but most programs are aimed at public providers. Also, governments may be reluctant to deal directly with unlicensed practitioners.
- Both community and private providers miss signs of severity and treat inappropriately.

How Can Communication Approaches Contribute?

Advocacy

- Advocate with donors and ministries to increase attention to diarrhea morbidity/mortality. Integrate efforts with nutrition and hygiene programs; promote collaboration with private providers.
- Promote attention to new studies and WHO's recommendations related to zinc supplementation to draw fresh attention to CDD challenges and opportunities.

Research and Strategy Design

- Analyze coverage data and focus formative research on key issues including low status of ORS, misuse of antidiarrheals and antibiotics, feeding practices, prescribing practices of private providers.

- Conduct an ethnomedical study of local terms related to both simple diarrhea and dysentery to understand practices; include local terms in caretaker materials and provider training.
- Study feeding practices during and after diarrhea. Work with a nutritionist to identify "special" local foods and food-based liquids that can reduce duration of episodes.
- Conduct observations and exit interviews and use mystery clients to understand prescribing practices of private providers.
- Carry out operations research regarding introduction of zinc supplements.
- Help program planners focus on key behaviors. Develop monitoring indicators for specific problems (vs. just measuring "use of ORT").

Families

- Design/test strategies to increase focus on feeding and attention by the whole family throughout illness and recuperation; include focus on special foods (that reduce duration) where appropriate.
- Test strategies to reposition ORS as a high quality product for rehydrating a child.
- Design a strategy to promote improved caregiver mixing/administration skills.
- Where necessary (ORS is not available) or appropriate, promote approved food-based ORS recipe.
- Design a marketing strategy to launch zinc supplements. Focus on the benefits of zinc and promote the full course of treatment. Design/test product instruction materials.

Private Providers

- Help design training programs for private providers based on their perceived benefits of current prescribing practices and barriers to ideal practices.

- Focus on the problem of training *at scale*.
- Create job aids, point-of-purchase materials for private providers.
- Introduce zinc protocols where appropriate. (Use updates as an opportunity to review key prescribing and counseling practices.)

Health Workers/Community-based Volunteers

- Improve counseling skills of health workers/ community volunteers through focus on negotiation of harmful practices, discussion of feeding practices, and instruction in ORS mixing skills.
- Improve recognition and treatment of danger signs, especially bloody diarrhea. If actual training is not possible, disseminate “technical updates.”
- Focus on diarrhea as a “moment of opportunity” to analyze serious offending feeding or hygiene

behaviors. Collaborate with nutrition programs to target this important moment.

- Introduce zinc supplements, when available, through technical updates; design supporting job aids. (Use zinc updates as an opportunity to review the *cluster* of key messages.)
- Design job aids for health workers: prescription pads (for special food), counseling cards, message guidelines, Q&As.
- Improve supervision checklists (e.g., include counseling on nutrition and harmful remedies, etc.)

Commercial Sector Collaboration

- Support work with manufacturers to improve packaging, instructions, and detailing to providers—for ORS and especially as zinc products are introduced.

Summary

Malaria

Behavior change approaches can contribute to both prevention and control of malaria. Major interventions include:¹

- Use of insecticide-treated nets (ITNs) by pregnant women and children
- Case management of childhood fevers
- Intermittent preventive therapy (or “IPT”—for pregnant women, to protect them and the fetus)

In malaria endemic areas, child survival programs will focus on the first two interventions. Attention specifically to *newborn health* should also include links with programs focusing on IPT. That intervention is usually managed by safe motherhood programs (and is not discussed here).

PREVENTION: INSECTICIDE-TREATED NETS (ITNS)

Audiences and Actions in a Nutshell

Families

- Acquire ITNs and use them correctly:
 - Pregnant women and children sleep under ITNs every night
 - Family retreats the ITN about every six months

— Family replaces the ITN after about three years.

- The pregnant woman or mother may have to *acquire the ITN* and is the target user, along with young children
- But husbands are likely to *supply the money* and they must *support ITN use* by these more vulnerable family members

Health Workers and Community-based Volunteers

- Promote ITNs at key moments (ANC visits, when child is treated for malaria)
- Give mothers information about how/when to use ITN (correct use)
- Remind mothers ITNs must be retreated

Shopkeepers

- Give mothers (or other purchaser) information about how/when to use ITN
- Remind purchaser ITNs must be retreated

Community Leaders, Organizations

- Organize and promote retreatment “events” (as well as promote ITN use)

¹ See footnote 3 on page 81 about environmental measures such as larval control and indoor residual spraying (IRS).

Policymakers

- Reduce taxes and tariffs on netting and include treatment kits in essential drug lists

What are the Key Challenges?

ITNs are still a new product as well as a new concept in many countries. Formative research is necessary to understand how to position the product and also understand the behavioral challenges and tailor strategies for particular delivery systems.

- Many families do not understand the connection between malaria and night-biting mosquitoes. They also prefer more familiar products (like aerosols, coils, or traditional methods) for killing mosquitoes.
- ITNs are not widely available and affordable.
- Programs may be focused on access and cost and give little attention to correct *use*.
- Programs may be preoccupied with ITNs and not give sufficient attention to *retreatment*.
- Even where ITNs are available, retreatment kits may not be.
- Behavior and communication challenges (for families as well as providers) will vary according to the local delivery system for ITNs/vouchers. Common models include:
 - Subsidized ITNs sold at health clinics
 - Coupons/vouchers for ITNs distributed at health clinics
 - Subsidized ITNs sold through community-based groups
 - ITNs (or vouchers) distributed free during campaigns
- Communication experts may be asked to support pilot efforts (e.g., large distribution ITNs from a

donor on Malaria Day) or to piggyback onto an immunization campaign with little time to analyze specific behavioral issues or plan beyond demand creation.

How Can Communication Approaches Contribute?

Research

- Conduct research to understand the “competition” and how to position ITNs as a necessity rather than a luxury, as well as key factors regarding *use* in the home and *retreatment*.
- Anticipate and monitor “unintended effects” of demand creation activities (on piggybacked interventions such as ANC or EPI, and on families in nearby areas with no supply of ITNs).

Families

- Position ITNs vis a vis the competition (ITNs kill mosquitoes, prevent malaria).
- Design messages to raise the value of ITNs (not a luxury item but a necessity to be saved for).
- Design communication strategies to promote a “net culture” (ITN use will be seen as the norm).
- Inform families where/how they can get ITNs (or vouchers and how to redeem them).
- Promote (and measure) correct *use* by key target audiences (pregnant women and children).
- Promote (and measure) ITN *retreatment* (see box page 103)

Communities

- Encourage local innovation related to treatment promotion strategies (e.g., organize at a central location on National Malaria Day, incorporate in Boy Scout badges, etc.)

It's the *Insecticide*— Not Just the Net!

After about six months (depending on the number of washings) ITNs lose their potency.

Retreatment with insecticides is essential. But many communication programs have considered this behavior a “down-stream” issue, focusing on getting families to *acquire* ITNs.

Every ITN-promotion strategy must be paired with a retreatment-promotion strategy.

Countries that have achieved high retreatment rates (such as Viet Nam and China) focused on *community* strategies. On specified dates, families are encouraged to bring their nets to a central location for “community dipping.” This is fertile ground for innovative community and communication strategies.

Health Workers and Community-based Volunteers

- Support providers with simple job aids/message guidelines tailored to a specific delivery channel.

Shop Keepers

- Promote involvement in voucher programs where relevant.
- Create point-of-purchase materials and reminders/flyers regarding retreatment.

Advocacy

- Support efforts to reduce taxes and tariffs on net materials and insecticides where these still exist.
- Promote increased attention to *retreatment* strategies, as well as demand creation for ITNs.
- Support efforts to promote both sustainability and equity of ITN availability (a *long-term strategy* for supplying ITNs to all segments of affected population) rather than piecemeal efforts.

TREATMENT: CASE MANAGEMENT OF CHILDHOOD FEVERS

Audiences and Actions in a Nutshell

Families

- Recognize signs and symptoms of malaria and seek treatment promptly.
- Give the right antimalarial, in the right dose, for the right number of days.
- Recognize signs of severity and seek appropriate help promptly.

Private Sector Drug Suppliers

- Sell the right antimalarial in the right doses for children with fever.
- Ask about signs of severity and refer to a health center.

Community-based Volunteers

- Ask about previous treatments (to identify treatment failures) and signs of severity.
- Give or sell the right antimalarial in the right doses for children with fever.
- Recognize signs of severity and refer to a health center.
- Recommend the child sleep under an ITN.

Health Workers

- Ask about previous treatments (to identify treatment failures) and signs of severity.
- Give the right anti-malarial in the right doses for children with fever.
- Recognize signs of severity and treat or refer.
- Recommend the child sleep under an ITN.

Policymakers

- Support strategies that bring treatment closer to families (working with private providers, allowing community health workers to dispense drugs, supporting pre-packing)

What are the Key Challenges?

Careseeking studies have shown that behavioral challenges vary greatly by country and region, and formative research is always necessary to identify primary challenges. Common challenges include:

- Parents may not understand the signs and symptoms of *severe* malaria, and may delay seeking appropriate treatment
- A large proportion of parents may seek malaria treatment in the *private sector*—but most programs focus on *public* providers. (And no private provider programs have reached scale.)
- Private providers often over-prescribe antipyretics and under-prescribe antimalarials; they rarely ask about signs of severity.
- Parents often give inadequate doses, contributing to antimicrobial resistance.
- Due to drug resistance, treatment failure is a common problem. Yet providers rarely ask about previous drug use.
- Referral systems for severe cases are weak.

- Changes in drug policies create confusion among both providers and families.
- Policymakers may be reluctant to promote treatment in the private sector or to give drugs to community health workers.

How Can Communication Approaches Contribute?

Research

- Conduct formative research on careseeking patterns for simple and severe malaria as well as

Dealing with Drug Resistance

Drug resistance has made chloroquine and now SP ineffective against malaria in much of the world. “Caretaker compliance” is typically viewed as the problem. But are other actors and behaviors involved?

Many providers (whether public, private, or volunteers) fail to give parents clear instructions on the proper dose and duration for a child’s treatment. Written instructions may be lacking, or poor, or indecipherable to someone who isn’t literate. The *importance* of giving a full dose is often not emphasized—even if the *instructions* are given.

When *policies* change, even providers can become confused. Clear, written protocols need to be updated and shared. Q&A’s can help.

Convenient *packaging* is helpful. “Pre-packs” with graphic instructions can simplify the concept of “completing” a course of treatment.

“treatment failures.” Identify key problems and any corresponding provider or policy issues.

- Assess behaviors of *public providers* (through exit interviews, observations); identify key problems.
- Assess prescribing practices of *private providers*; identify barriers and benefits to ideal practices.

Families

- Design strategies to promote careseeking from appropriate providers at the right times. Include messages to target the problem of treatment failures.
- Promote the importance of completing a full dose of antibiotics (the right drug, in the right dose, for the right amount of time).

Private Providers

- Support training programs for private providers with skills-based approaches and materials.

Health Workers and Community-Based Volunteers

- Create appropriate job aids (diagnosis and treatment charts, Q&A sheets). Target specific problems.
- Create training materials/approaches and job aids for community-based workers.
- Design and test referral and counter-referral materials to improve treatment of severe cases.
- Improve package design and graphic instruction materials for antimalarials (e.g., pre-packs).
- Create materials to support changes in drug policies (new dosage materials, Q&A sheets).

Advocacy

- Promote strategies that bring treatment closer to families (working with private providers, allowing community health workers to dispense drugs, supporting pre-packing).

Summary

Acute Respiratory Infections

Treatment Behavior change approaches focus primarily on treatment of Acute Respiratory Infections (ARI). Treatment consists of case management of illness: careseeking and caregiving.

Prevention Exclusive breastfeeding is especially important to protect young infants, who are the most vulnerable to death from pneumonia. Immunization against pertussis and measles protect against some serious infections.

Environmental health projects have investigated a number of other prevention behaviors—for example, ways to limit indoor smoke. Handwashing can also play a significant role in reducing infection.

TREATMENT: CARESEEKING AND CAREGIVING

Audiences and Actions in a Nutshell

Policymakers

- Adopt policies that give increased attention to ARI, including:
 - Management of ARI at the community level (CHWs and private providers)
 - ARI in the context of Newborn Health
- Support strategies that bring treatment closer to families (allow community health workers to dispense antibiotics, work with private providers, and support pre-packing)

Families

- Recognize signs of ARI and seek treatment promptly
- Give the right antibiotic, in the right dose, for the right number of days
- Recognize signs of severity and seek appropriate help promptly
- Encourage food/fluids during illness and give an extra meal during recuperation

Private Sector Drug Suppliers

- Sell the right antibiotic in the right doses for children with rapid/difficult breathing
- When parents ask for drugs to treat childhood fever, ask about symptoms of ARI

Community-Based Volunteers

- Give/sell the right antibiotic in the right doses for children with rapid/difficult breathing
- Recognize signs of severity and refer to a health center
- Counsel parents about signs of severity and feeding/fluids during illness, recuperation

Health Workers

- Give the right antibiotic in the right doses for children with rapid/difficult breathing

- Recognize signs of severity and treat or refer
- Counsel parents about signs of severity and feeding/fluids during illness, recuperation

What are the Key Challenges?

Many community-level ARI programs lost funding or disappeared with the introduction of IMCI. Program advocacy, formative research, training, and communication program design may all have to be launched as if this were a new health area.

- Policymakers and health system staff may not understand the need for community strategies or may not trust community workers to dispense antibiotics.
- In malaria endemic areas, presumptive treatment of fever may divert attention from ARI. Even when cases are “seen,” they may be “missed” (see box at right).
- Signs of ARI are harder for both parents and community workers to recognize than those of other major childhood diseases.
- Formative research is essential to understand local terms for symptoms and illness concepts as well as careseeking. Patterns may vary by ethnic group.
- Mortality from ARI is highest in the first six months of life, but many families are reluctant to take young infants out of the home for treatment.
- Although 50-90 percent of antibiotics are provided by the private sector, only a very small number of projects have worked with drug sellers regarding ARI.
- Referral systems for severe cases are often very weak.
- Parents often give inadequate doses of antibiotics, contributing to anti-microbial resistance. (Cotrimoxazole, the first line drug, must be taken for five days.)

Why is ARI a Special Problem in Malaria Endemic Areas?

In malaria endemic areas, children with fever are “presumed” to have malaria. But many of these children also (or only) have ARI.

In many parts of Africa, it may even be difficult to know how many children are dying of ARI. Many ARI deaths may be attributed to malaria, or to malaria “treatment failure.”

Why? Incidence of malaria is higher than ARI in these areas, so assessing /treating malaria may seem most urgent. Malaria is much better funded than ARI. And community workers trained to assess malaria are rarely trained to look for signs of ARI.

Fever and fast breathing often occur together. Parents are used to watching a fever for a few days to see if it subsides. But delay can be fatal in the case of ARI.

In 2002 WHO concluded that it is unethical for community-based malaria programs not to include assessment and treatment for ARI.

- Protocols may be outdated, especially at the community level, and the importance of fast/difficult breathing may not be emphasized. (Some programs still focus on blocked /clogged noses.)
- Most successful programs to date have relied on active *case seeking*, which is labor intensive.

How Can Communication Approaches Contribute?

Behavior change approaches can contribute at multiple levels: advocacy for needed programs, strategies to educate parents and promote use of CHWs, and improved training programs and materials for providers at several levels.

Advocacy

- Conduct advocacy with health policymakers for programs that bring treatment closer to communities (via both community health workers and private providers).
- Improve acceptance of existing programs by feeding monitoring data back to policymakers to demonstrate effectiveness/safety of interventions.
- Encourage local health system support for community programs (highlight monitoring data that shows decreased burden on health system, etc.)
- Promote collaboration with newborn programs. Strategies for newborns require active caseseeking because most are not taken out of the home.

Research

- Conduct focused ethnographic research to investigate family practices and local terms. Integrate these in training and communication materials.
- Conduct formative research on prescribing and counseling behaviors of both public and private providers. Analyze barriers/benefits to ideal practices from their perspectives.

Providers and Health System Linkages

- Support providers with simple materials/messages to improve counseling skills.

- Create job aids for health workers and community volunteers (diagnosis and treatment charts).
- Support training programs for health workers and community volunteers with participatory and skill-based approaches. Observation of real cases and practice are both key. Videos are very helpful.
- Help design training programs for private providers; support with simple reminder materials, point-of-purchase materials.
- Promote strong links between community volunteers and the health system. Including supervisors from the health system in training for CHWs will improve their skills as well and can be a draw for them.
- Design and test materials to improve referral and counter-referral.
- Help design simplified, low-literacy algorithm for integrated ARI, malaria, and CDD programs.
- Strengthen supervision systems with behavioral approaches, streamlined materials such as checklists.

Families/Communities

- Design activities to educate communities about signs of ARI and the need for seeking appropriate care without delay. Use local terms/illness concepts.
- Design strategies to promote careseeking from appropriate providers (e.g., CHWs if they are trained and have drug supplies). Focus on family members who are in charge of care decisions. (Care outside the home may require approval by males.)
- Promote the importance of completing a full dose of antibiotics.
- Design incentives, motivation strategies to help retain CHWs.

Summary

Nutrition

Nutritional deficiencies contribute to a large percentage of deaths associated with the other child survival interventions. In addition to focusing on the problems of moderate and severe malnutrition and micronutrient deficiencies, the public health community has recently turned its attention to the importance of undernutrition, which causes about 80 percent of nutrition-related mortality. Poor nutrition causes most harm in early life, particularly between 4 to 12 months of age.

Behavioral challenges are the most diverse of any health area. Interventions are often launched parallel to child survival efforts and parallel to each other. This document provides only a brief overview of the need to advocate for nutrition; the challenge of integrating nutrition in clinic- and community-based programs; and an outline of behavioral issues related to several major intervention areas.

ADVOCACY FOR NUTRITION

Nutrition is often a low priority in the Ministry of Health. The national nutrition policy may also be out of date or may exist only on paper—or not at all. Selected approaches to raise awareness and promote policies include:

- Organize scientific updates (conferences, etc.) to galvanize attention and clarify policies
- Focus multiple stakeholders on country nutrition data and cost of interventions—e.g., via PROFILES advocacy process
- Launch/join a regional network that can instigate government commitment
- Support NGO leadership, especially when joined in a strong network with focused strategies

ATTEMPTS TO INTEGRATE NUTRITION AT THE CLINIC AND COMMUNITY LEVEL

Nutrition is a lifecycle intervention that belongs everywhere and is owned by no one. Advocates have struggled to find the most effective entry points for nutrition interventions and to decide whether nutrition itself can serve as a platform for other child survival practices. Selected approaches¹ include:

Essential Nutrition Actions Framework (ENA)

ENA highlights six priority interventions and six specific corresponding contacts with the health system. ENA can serve as a conceptual checklist to assure that priority interventions are included in health delivery

¹ HEARTH (see page 159) another community-based approach, and is discussed under malnutrition. The strategic use of mass media can also be considered an “approach” to promoting changes in nutrition behavior.

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systems and counseling messages. ENA builds on a very similar earlier framework, the Nutrition Minimum Package (MinPak).

Community Growth Promotion

Regular weighing and charting of changes can help diagnose nutrition problems, make them “visible” to parents, and create an opportunity for counseling. Growth promotion (GP) has also been combined with other services. There have been some successful programs, but the number of ineffective GP programs has caused some to question how feasible this labor intensive approach is in developing countries.

Cross-sectoral Community Approaches

Malnutrition is strongly associated with poverty. Some programs link nutrition with other sectoral activities. The Credit with Education approach combines small-scale loans with training in small business skills as well as health and nutrition education. Women’s literacy programs, early childhood education (including day care for infants of women who work) have also been linked to improved child nutrition when combined with a focus on specific nutrition practices.

KEY INTERVENTIONS

Exclusive Breastfeeding through Six Months

Practices fall into two clusters: *early initiation* and *duration* of breastfeeding up to six months. For early initiation, programs have chiefly emphasized benefits *to the child* of colostrum. Breastfeeding’s dramatic benefits *to the mother* should also be promoted during birth preparation and at delivery. Initiation is strongly associated with place of birth. Institutional policies, training of providers, and good counseling aids are key. For home births, the family (especially the mother-in-law) is highly influential.

Common barriers to exclusive breastfeeding include:

- Belief that a baby needs water, especially in summer
- Belief that a mother can have “insufficient milk”
- Separation due to work outside the home

Few providers can provide good counseling. Training and job aides are needed. Home visits by peer counselors have been effective, and mother support groups have had some success. The conflict between work and breastfeeding is a major barrier and has not received adequate attention.

Complementary Feeding and Continued Breastfeeding

PAHO/WHO recently issued detailed guidelines on ten categories of feeding practices. Indicators are also being revised. The guidelines will allow for better advocacy and program development. Nutrition counseling in the field has often remained stuck on the basic food groups.

Formative research with help from nutritionists can identify a small number of feasible changes in feeding practices. Trials of Improved Practices (TIPS) help determine what is acceptable to mothers. Recommended foods should be incorporated in the IMCI “food box.” Common major offenders include:

- Foods are usually introduced *too early* (South Asia is the exception)
- Foods are poor *quality*, e.g., thin gruels
- *Frequency* of feeding is not adequate
- Little attention given to feeding during *recovery from illness*, which is a critical period

Nutrition is about care as much as about food. Children at greatest risk are often in the care of older siblings. *Who* feeds the child is often at the root of

what and *how often* the child is fed. Few interventions have focused on this crucial issue. In many cultures children are not adequately coaxed to eat; feeding an undernourished child takes special persistence. Feeding during *illness* and during *recuperation* require different beliefs and skills. Children may receive special foods during illness but parents are rarely aware of the need for additional meals during recovery. Illness is a key *moment of opportunity* for counseling, but providers rarely discuss feeding practices at that point (see box at right).

Infant Feeding in the Context of HIV

Counseling about feeding options is a critical part of any program to prevent mother-to-child transmission (PMTCT) of HIV. For most children in the developing world whose mothers are HIV positive, the risks of not being breastfed are greater than those of being infected through their mothers' milk *for about the first six months of life*. The mother who considers not breastfeeding should be counseled to choose replacement feeding (formula or home-modified animal milk) only if it is Acceptable, Feasible, Affordable, Sustainable, and Safe (AFASS).

The danger associated with *mixed* feeding (breastfeeding that is not exclusive) is higher than that of either breastfeeding alone or giving no breastmilk. Therefore, for those women who breastfeed,

- *Exclusive* breastfeeding behaviors are extremely important
- The infant must be *weaned rapidly* at about six months

No matter what a woman's choice, feeding practices are very challenging and require excellent ongoing counseling.

Is There a “Moment of Opportunity” for Child Nutrition?

Mothers are usually concerned about *what* and *how* to feed a child during illness. This is a valuable window for change that is usually completely overlooked.

During illness children tend to lose their appetites as well as their strength, causing mothers to be concerned about feeding. In many cultures families encourage a sick child to eat and offer special foods.

Although “key practices” for all the major childhood illnesses include advising a mother about how to feed her child during and after illness, few providers take the time—or even know what to advise. But this is the moment when mothers are most receptive to making changes. It is also the moment when changes can be most crucial. Children need additional food and patient attention during recovery. Families rarely understand this need.

Targeting children who are frequently ill is also a natural way of capturing those at highest risk. The first step is to ask questions about how a child is usually fed. The next is to negotiate specific small changes that will make a difference. *Care* is often the biggest challenge; it requires help from family members or others.

Vitamin A—Supplementation Strategies

Children 6 to 59 months should receive high dose vitamin A capsules twice a year. Successful distribution strategies have included vitamin A days (National Micronutrient Days) twice yearly; Child Health Weeks (vitamin A and a package of child health services) twice yearly; and generalized monthly health outreach (two selected months per year). All are campaign-like approaches and many of the behavioral issues are similar to those of immunization campaigns.

Vitamin A is a simple and generally a desirable product with few barriers.

- Young programs may have to reposition the product (which is known for protecting the eyes) to emphasize its broader “survival” value to children.
- Mature programs can focus on establishing the logistical norms: when, where, and for whom.
- Fears have centered on toxicity; rumors along this line have derailed at least one program.

Distribution strategies often depend heavily on semi-literate volunteers. Training to assure safety and job aids with key messages and answers to common questions are important. Successful programs have focused heavily on motivating and providing recognition for workers.

Vitamin A—Household Strategies

Household approaches include promoting consumption of vitamin A-rich foods and preservation techniques. Successful programs often collaborate with agricultural extension activities, especially kitchen garden or animal husbandry efforts (see fortification on page 159).

Efforts to improve the micronutrient value of the family diet require specialized nutrition research,

seasonal calendars, recipe trials, and product testing. Recommended dietary changes should be as simple and specific as possible. The best sources of vitamin A—animal products—are the most expensive and are usually reserved for males. Successful strategies have often included emphasis on *intra-household food allocation* and increasing women’s *control over resources* to purchase foods.

Iron and Anemia

Anemia can be caused by low dietary iron intake, malaria, helminth infections (such as hookworm or schistosomiasis), and sickle cell disease. Repeated infections are also linked with anemia. Prevention and treatment of anemia require an integrated strategy based on the local epidemiology. Low birthweight babies require iron supplements from *2 to 23 months of age*. WHO also recommends supplementation for children 6 to 24 months old where the prevalence of anemia is 40 percent or higher.

In areas where hookworm (helminth) infection is greater than 20 percent among children, WHO recommends twice yearly deworming for *children over two*. Deworming is often included in Child Health Weeks; it is appreciated by parents and can be promoted as a draw in connection with other services.

Animal products are the most important sources of iron. Agricultural projects promoting small animal husbandry and fishponds can improve children’s iron as well as vitamin A status. Consumption of whole grains reduces absorption, as does drinking tea with meals; however, even small amounts of vitamin C promote absorption. Various technologies also increase the bioavailability or absorption of plant-based iron. Any efforts to improve the family diet must consider these factors.

Zinc

In therapeutic trials zinc has been helpful in both preventing and treating childhood diseases. WHO and UNICEF now recommend that children with diarrhea should receive zinc supplements for 10 to 14 days to treat the illness and reduce recurrence. Any preventive strategies involving zinc would be more complex. To improve general stores, zinc must be taken regularly in small doses according to a child's age.

Food Fortification

Food fortification is a cost-effective and sustainable approach for reducing micronutrient deficiencies, making this an important approach to promote at the policy level. Food fortification requires understanding the benefits and barriers of both manufacturers and distributors, and good public private collaboration. Universal salt iodization has depended upon legislation and vigilant enforcement.

Whether or not fortification is mandatory, a new product requires careful consumer research and social marketing. Packaging, labels, logos, and positioning are crucial. Common food vehicles for different micronutrients include sugar, wheat and corn flour, salt, fats and oils, and milk. All of these staples may be associated with intangible qualities that the public may

fear altering. Suspicions of a hidden family planning agenda are also common in some regions.

Severe Malnutrition

Rehabilitation in the Home

Traditionally, severely malnourished children are rehabilitated in a hospital or therapeutic feeding center (TFC). Facility-based care is often not feasible even when accessible, because a family member needs to stay with the child for many days. Several trial programs of a home-based therapeutic care approach have shown that mortality and recovery rates can exceed those of facility-based interventions. A ready-to-use therapeutic food product (RUTF) is central to this approach. Rations are often shared with other family members and may be increased to allow for this.

Rehabilitation in the Community

The HEARTH/Positive Deviance approach looks for cost effective solutions to childhood malnutrition within the community by analyzing how poor but healthy children are fed. It promotes these “positive deviant” behaviors to parents of malnourished children through cooking demonstrations, guided group practice, and home visits.

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