WHO/UNICEF Integrated Management of Childhood Illness (IMCI) and Child Health Redesign

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Summary

IMCI Technical Updates

- 2005
- 2008
- 2012
- 2019 and implementation research

Child Health Redesign

IMCI Updates…do we need them?

New research results are emerging from randomized, controlled trials

Recommendations are being regularly reviewed and updated

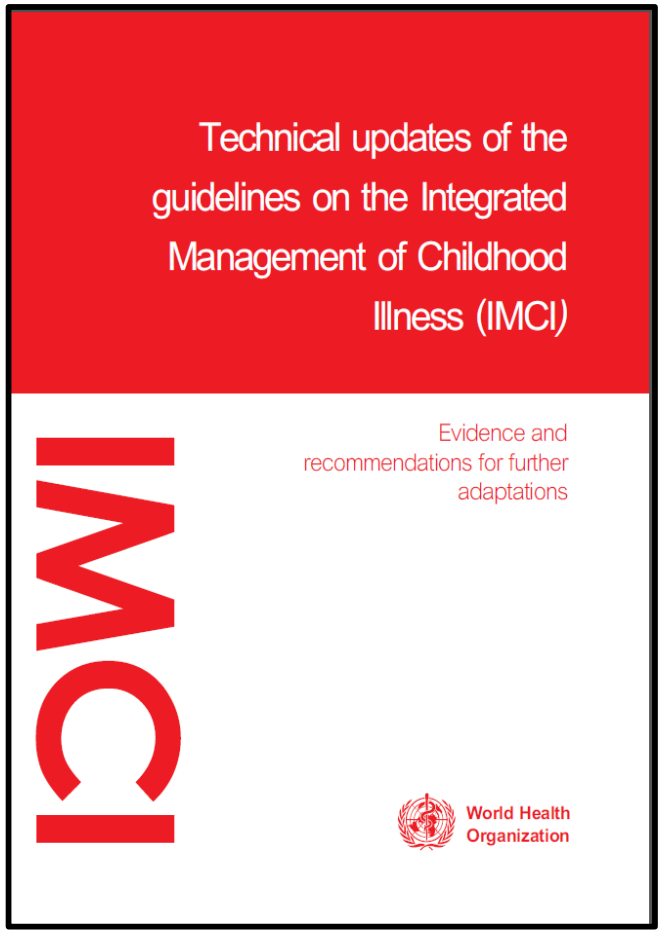
Changing disease epidemiology- neonatal deaths are gaining increasing prominence in total U5 deaths

New ways of IMCI training need to be introduced

2005 IMCI Updates

The updates covered six areas:

- Antibiotic treatment of severe and non-severe pneumonia & inclusion of wheeze
- Low osmolarity ORS, Zinc and antibiotic treatment for bloody diarrhoea
- Treatment of malaria with ACTs
- Treatment of ear infections with topical quinolones
- Infant and young child feeding
- Treatment of helminthiasis

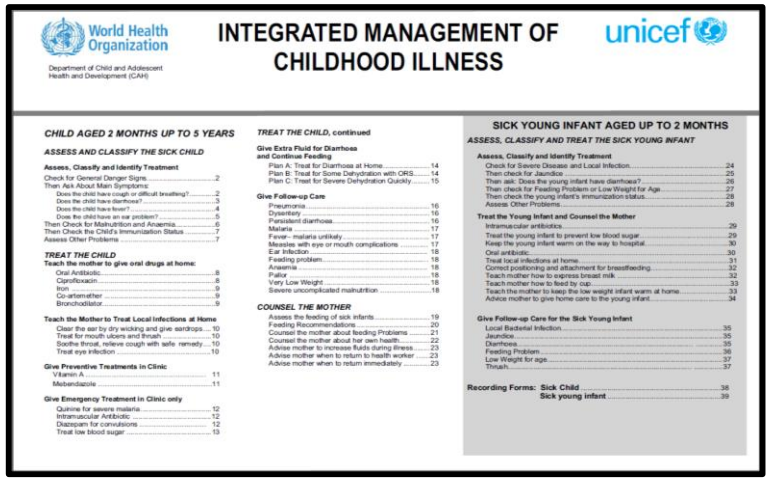


2008 IMCI Updates

The updates covered mainly sick young infant

- New sections on the management of illness in the first week of a child's life.
- Young infant module for IMCI training
- Included HIV section in high HIV settings.

Note: Training modules were updated only in ICATT


World Health Organization
Department of Child and Adolescent Health and Development (CAH)

INTEGRATED MANAGEMENT OF CHILDHOOD ILLNESS

unicef

CHILD AGED 2 MONTHS UP TO 5 YEARS

ASSESS AND CLASSIFY THE SICK CHILD

Assess, Classify and Identify Treatment

Check for General Danger Signs 2
Then Ask About Main Symptoms:
Does the child have cough or difficult breathing? 2
Does the child have diarrhoea? 3
Does the child have fever? 4
Does the child have an ear problem? 5
Then Check for Malnutrition and Anaemia 6
Then Check the Child's Immunization Status 7
Assess Other Problems 7

TREAT THE CHILD
Teach the mother to give oral drugs at home:
Oral Antibiotic 8
Ciprofloxacin 8
Iron 9
Co-artemether 9
Bronchodilator 9

Teach the Mother to Treat Local Infections at Home
Clear the ear by dry wicking and give eardrops 10
Treat for mouth ulcers and thrush 10
Soothe throat, relieve cough with safe remedy 10
Treat eye infection 10

Give Preventive Treatments in Clinic
Vitamin A 11
Mebendazole 11

Give Emergency Treatment in Clinic only
Quinine for severe malaria 12
Intramuscular Antibiotic 12
Diazepam for convulsions 12
Treat low blood sugar 13

TREAT THE CHILD, continued

Give Extra Fluid for Diarrhoea and Continue Feeding
Plan A: Treat for Diarrhoea at Home 14
Plan B: Treat for Some Dehydration with ORS 14
Plan C: Treat for Severe Dehydration Quickly 15

Give Follow-up Care
Pneumonia 16
Dysentery 16
Persistent diarrhoea 16
Malaria 17
Fever– malaria unlikely 17
Measles with eye or mouth complications 17
Ear Infection 18
Feeding problem 18
Anaemia 18
Pallor 18
Very Low Weight 18
Severe uncomplicated malnutrition 18

COUNSEL THE MOTHER
Assess the feeding of sick infants 19
Feeding Recommendations 20
Counsel the mother about feeding Problems 21
Counsel the mother about her own health 22
Advise mother to increase fluids during illness 23
Advise mother when to return to health worker 23
Advise mother when to return immediately 23

SICK YOUNG INFANT AGED UP TO 2 MONTHS

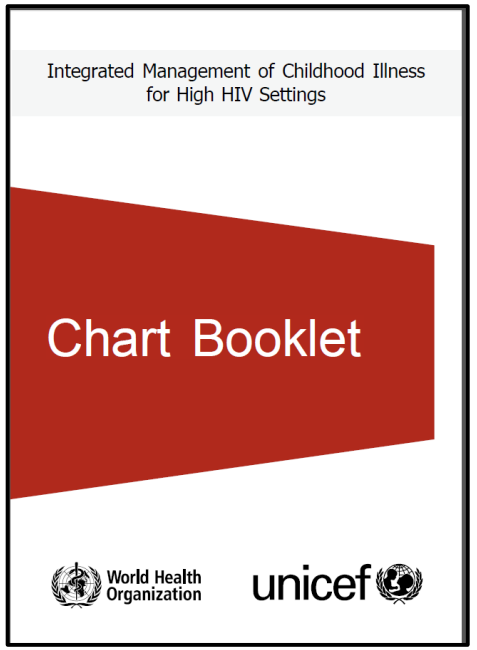
ASSESS, CLASSIFY AND TREAT THE SICK YOUNG INFANT

Assess, Classify and Identify Treatment
Check for Severe Disease and Local Infection 24
Then check for Jaundice 25
Then ask: Does the young infant have diarrhoea? 26
Then check for Feeding Problem or Low Weight for Age 27
Then check the young infant's immunization status 28
Assess Other Problems 28

Treat the Young Infant and Counsel the Mother
Intramuscular antibiotics 29
Treat the young infant to prevent low blood sugar 29
Keep the young infant warm on the way to hospital 30
Oral antibiotic 30
Treat local infections at home 31
Correct positioning and attachment for breastfeeding 32
Teach mother how to express breast milk 32
Teach mother how to feed by cup 33
Teach the mother to keep the low weight infant warm at home 33
Advice mother to give home care to the young infant 34

Give Follow-up Care for the Sick Young Infant
Local Bacterial Infection 35
Jaundice 35
Diarrhoea 35
Feeding Problem 36
Low Weight for age 37
Thrush 37

Recording Forms: Sick Child 38
Sick young infant 39



2012 IMCI Updates

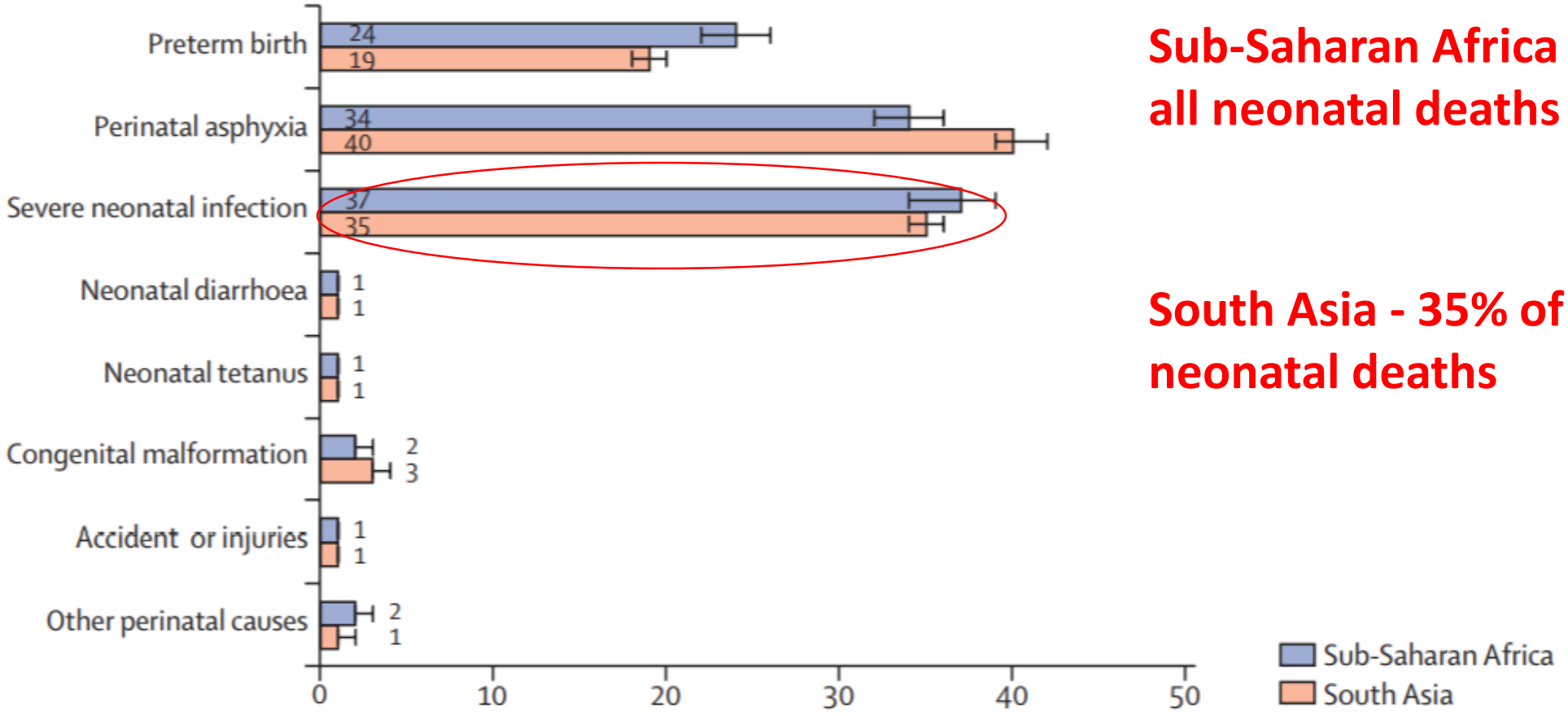
Changes in Assessment and Management of Children aged 2 months up to 5 years

- Check general danger signs
- Cough or difficult breathing
- Diarrhoea
- Fever/measles
- Ear problem
- Malnutrition
- Anaemia
- HIV infection

IMCI Update 2019

Young infant up to 2 months of age

Neonatal Infections burden



Sub-Saharan Africa - 37% of all neonatal deaths

South Asia - 35% of all neonatal deaths

WHO AMANHI study, Lancet GH 2018

Treatment of Newborn Infections

Management of neonatal infections

- Initial diagnosis is based on clinical signs
- Treatment is IV/IM antibiotics and supportive care in a hospital
- Only 25% of newborns with possible serious infection receive hospital treatment in high-mortality settings

AFRINEST & SATT studies (2010-2013): WHO/MCA led research

- To find deliverable, effective treatment for newborns with signs of severe infection where referral is not possible

Oral amoxicillin compared with injectable procaine benzylpenicillin plus gentamicin for treatment of neonates and young infants with fast breathing when referral is not possible: a randomised, open-label, equivalence trial

African Neonatal Sepsis Trial (AFRINEST) group, Antoinette Tshefu, Adrien Lokangaka, Serge Ngaima, Cyril Engmann, Fabien Esamai, Peter Ghana, Adejumoke Idowu Ayede, Adegoke Gbolagunjo Falade, Ebunoluwa A Adejuyigbe, Chinenye Henry Anyabolu, Robinson D Wammanda, Ciara L Ejembi, William N Ogala, Lu Grant, Simon Cousens

AFRINEST (DRC, Kenya, Nigeria) Lancet 2015

Simplified antibiotic regimens compared with injectable procaine benzylpenicillin plus gentamicin for treatment of neonates and young infants with clinical signs of possible serious bacterial infection when referral is not possible: a randomised, open-label, equivalence trial

African Neonatal Sepsis Trial (AFRINEST) group, Antoinette Tshefu, Adrien Lokangaka, Serge Ngaima, Cyril Engmann, Fabien Esamai, Peter Ghana, Adejumoke Idowu Ayede, Adegoke Gbolagunjo Falade, Ebunoluwa A Adejuyigbe, Chinenye Henry Anyabolu, Robinson D Wammanda, Ciara L Ejembi, William N Ogala, Lu Grant, Simon Cousens

AFRINEST (DRC, Kenya, Nigeria) Lancet 2015

Safety and efficacy of alternative antibiotic regimens compared with 7 day injectable procaine benzylpenicillin and gentamicin for outpatient treatment of neonates and young infants with clinical signs of severe infection when referral is not possible: a randomised, open-label, equivalence trial

Abdullah H Baqui, Samir K Saha, A S M Nawshad Uddin Ahmed, Mohammad Shahidullah, Iftekhar Quasem, Daniel F Roth, A K M Samsuzzaman, Wasir Ahmed, S M Shahnawaz Bin Tabib, Dipak K Mitra, Nazma Begum, Mahbubul Islam, Arif Mahmud, Mohammad Hafizur Rahman, Mamun-ibne Moin, Luke C Mullany, Simon Cousens, Shams El Arifeen, Stephen Wall, Neal Brandes, Madhuram Santosham, Robert E Black, for the Projahnmo Study Group in Bangladesh*

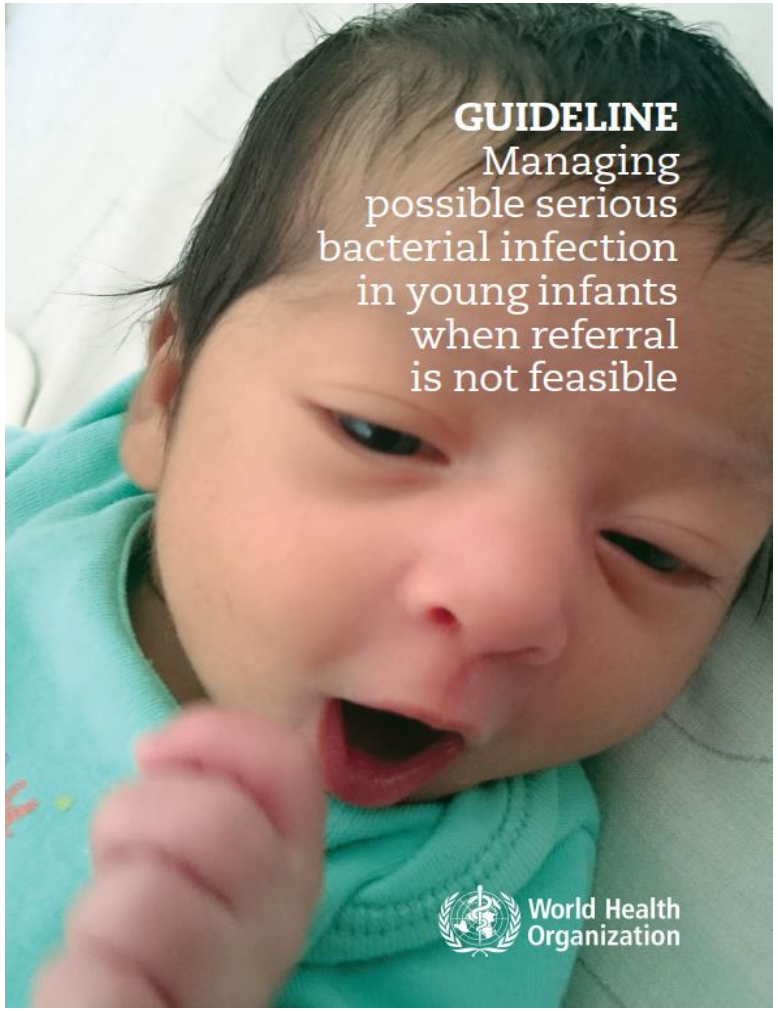
SATT Bangladesh Lancet Global Health 2015

Simplified antibiotic regimens for treatment of clinical severe infection in the outpatient setting when referral is not possible for young infants in Pakistan (Simplified Antibiotic Therapy Trial [SATT]): a randomised, open-label, equivalence trial

Fatima Mir, Imran Nisar, Shiyam S Tikmani, Benazir Baloch, Sadia Shakoor, Fyezah Jehan, Imran Ahmed, Simon Cousens, Anita K M Zaidi

SATT Pakistan Lancet Global Health 2016

WHO guideline 2015



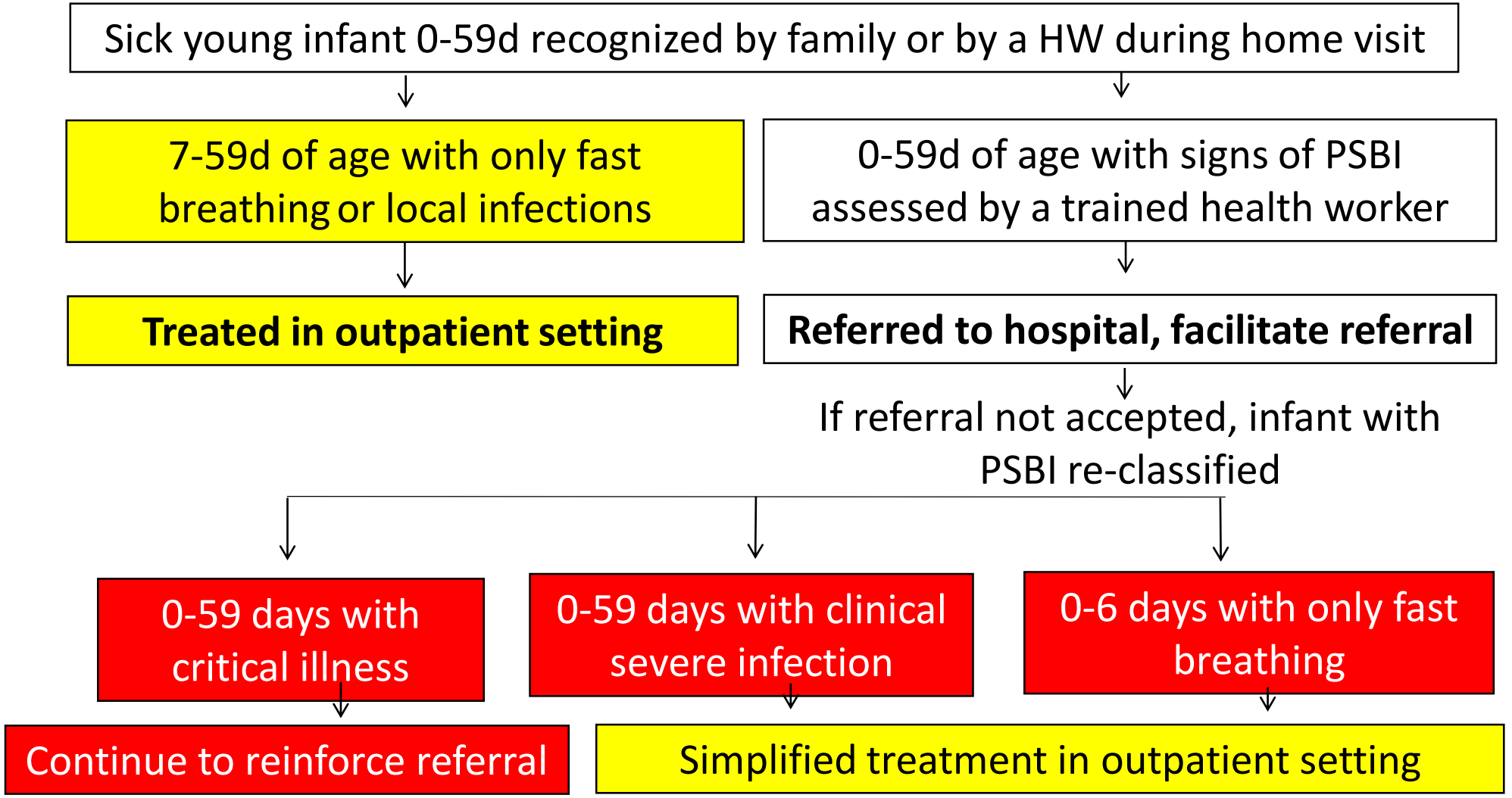
Fast breathing as the only sign of illness (7-59d age) should be treated with oral amoxicillin for 7 days.

Facilitate referral of all other babies with clinical signs of severe infection to a hospital.

If referral is not feasible, outpatient treatment with twice daily oral amoxicillin for 7 days and injection gentamicin for 2 or 7 days.

http://apps.who.int/iris/bitstream/10665/181426/1/9789241509268_eng.pdf?ua=1

IMCI algorithm revised



Critically ill young infants for whom referral is not accepted by families after best efforts should be treated with once daily injectable gentamicin plus at least twice daily injection ampicillin for 7 days

New implementation strategy

- Improved identification of infants with PSBI by families and CHWs
- Treatment of fast breathing in 7-59 day olds with oral antibiotics at first level health facilities
- Improved referral to hospital for other cases of PSBI
- If referral is not possible, provided outpatient treatment at first level health facilities

WHO led Implementation research

AFRINEST & SATT were implemented in 3 million population, but not implemented by the health system

Policy guideline was available in India and Ethiopia but implementation was challenging

Some countries wanted more implementation experience before making a policy change

Implementation research as a BRIDGE to full-scale implementation

Issues with scale-up of this intervention

High risk population: severe neonatal infection

- Up to 15% mortality without treatment
- At least 2% mortality even with treatment

Complex intervention: injectable + oral antibiotics

- India ICMR Study: Few workers actually treated young infants
- India ANM guideline: Hardly any ANM treated young infants
- Ethiopia HEW guideline: low treatment rates for young infants

ESSENTIAL to have technical back up and support in early implementation phase

Steps in Implementation Research

Orientation and Policy dialogue at country level

Informed decisions on treatment choices for early implementation in selected sites

Establishment of early implementation sites & Technical Support Units (TSU)

[**Bangladesh** – two sites; **Democratic Republic of Congo** – one site; **Ethiopia** – two sites; **Malawi** – one site; **Nigeria** – two sites; **India** – four sites; **Pakistan** – one site]

Building capacity and creating a learning platform (TSU)

Implementation, supervision, and monitoring

Child Health Redesign

IMNCI Strategic Review Conclusions and Recommendations

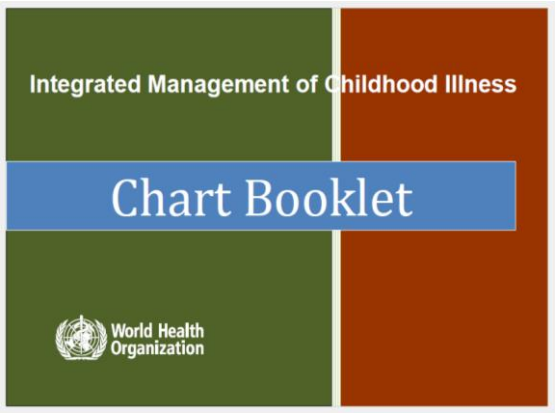
Benefits of IMNCI in design and impact

Positive effects on health worker practices and **quality of care**.

15% reduction in child mortality* when fully implemented in health facilities and communities.

IMNCI is perceived as **holistic** and **child-centred**.

Simple, comprehensive and **targeted** the major causes of mortality



"IMNCI is very relevant for the country. It is a complete holistic module with child health, development, newborn, etc. Nothing needs to be taken out."

- Policymaker (Myanmar)

* Cochrane review on IMCI (2016)

Conclusions and Recommendations– Strategic Review

- Global fragmentation of child health strategies undermined programming and limited impact.
- Need for systematic evidence generation, capture and integration into policy and programming.
- Accountability for corresponding clear programme targets and strong monitoring.
- Strategies sufficiently tailored to country context, and with improved end-user designed tools.
- Child health SDG goals will not be met without adequate funding and delivery to marginalized populations

Why child health redesign?

New global architecture: MDGs → SDGs, Universal Health Coverage (UHC), revitalized PHC & UN secretary General's Global MNCH Strategy

Shifting epidemiology:

- **Age** and **structure**: shifting age in mortality and morbidly patterns
- Aetiological **causes**: changing burden and emerging priorities
- Geospatial **distribution** of morbidity and mortality

Greater emphasis on health determinants requiring more **community engagement** and interventions **beyond the health sector***

**Kuruvilla S et al. Success factors for reducing maternal and child mortality. Bull WHO 2014*

Why Child Health Redesign? (2)

Expanded scientific evidence on the best clinical interventions and delivery strategies.

New technologies and **innovations**:

- new vaccines, diagnostics and treatment innovations, mHealth, eHealth, …

Demand for content that responds to the changing country context:

- **harmonized** and **optimized** content
- **flexible** and **adaptable** to country contexts

Conceptualizing Redesign

Taking a **life course approach** to child health in the context of SDGs

- Redefine and reposition "**the child**"

Refocus and prioritize the **child survival** agenda

- leading causes of mortality, target age group

Define, prioritize and address emerging child health priorities

Conceptualizing Redesign (2)

Define, prioritize, and mainstream **thrive** agenda

- What ? When? Where?

Harmonize and mainstream "**Promote**", "**Prevent**" and "**Treat**" across all levels of care

Optimize guidance to improve flexibility and adaptability

Child Health Redesign Conceptual Framework

World Health Organization

Goal=Optimally healthy, appropriately educated child socially prepared for adulthood

←Age appropriate Nutrition Interventions→

Prevent / Promote / Treat

Diversity of Settings

0 3 6 9 12 15 18 years

Vision = UHC for Children (0-18 y.o.) in the SDG era

Thank you