

Revised WHO classification and treatment of childhood pneumonia at health facilities

• EVIDENCE SUMMARIES •



World Health
Organization

**Revised WHO classification
and treatment
of childhood pneumonia
at health facilities**

EVIDENCE SUMMARIES



**World Health
Organization**

WHO Library Cataloguing-in-Publication Data

Revised WHO classification and treatment of pneumonia in children at health facilities: evidence summaries.

1.Pneumonia – drug therapy. 2.Child. 3.Health Facilities. 4.Guideline.
I.World Health Organization.

ISBN 978 92 4 150781 3

(NLM classification: WA 320)

This document is derived from previously published WHO guidelines on the management of childhood pneumonia and is not a guideline per se. References for the guidelines are: [1] Integrated Management of Childhood Illness (IMCI). WHO recommendations on the management of diarrhoea and pneumonia in HIV-infected infants and children. Geneva: World Health Organization; 2010 (http://www.who.int/maternal_child_adolescent/documents/9789241548083/en) AND [2] Recommendations for management of common childhood conditions, Evidence for technical update of pocket book recommendations. Geneva: World Health Organization; 2012 (http://www.who.int/maternal_child_adolescent/documents/management_childhood_conditions/en).

© World Health Organization 2014

All rights reserved. Publications of the World Health Organization are available on the WHO website (www.who.int) or can be purchased from WHO Press, World Health Organization, 20 Avenue Appia, 1211 Geneva 27, Switzerland (tel.: +41 22 791 3264; fax: +41 22 791 4857; e-mail: bookorders@who.int). Requests for permission to reproduce or translate WHO publications – whether for sale or for non-commercial distribution – should be addressed to WHO Press through the WHO website (www.who.int/about/licensing/copyright_form/en/index.html).

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by the World Health Organization in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by the World Health Organization to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall the World Health Organization be liable for damages arising from its use.

Designed by minimum graphics
Printed in Switzerland

Contents

Executive Summary	1
Introduction	4
1. Scientific basis of WHO recommendations for treatment of pneumonia	6
1.1 Recommendation 1	6
1.1.1 The effectiveness of various antibiotics in community-acquired childhood pneumonia: a systematic review	6
1.1.2 A three-day course of antibiotics is as effective as a five-day course in treating children with fast-breathing pneumonia	7
1.2 Recommendation 2	7
1.2.1 Oral amoxicillin is as effective as injectable penicillin in the treatment of chest indrawing pneumonia in children 3–59 months of age	7
1.2.2 Oral amoxicillin is equally effective for pneumonia of various severities in a high resource setting	8
1.2.3 It is safe to treat chest indrawing pneumonia at home with oral amoxicillin	8
1.2.4 Home therapy with oral amoxicillin is effective in a wide and diverse range of settings	8
1.2.5 Efficacy of higher dose (80-90 mg/kg/day) vs. standard dose (45 mg/kg/day) of amoxicillin	9
1.2.5.1 Amoxicillin is more effective when given in higher doses	9
1.2.5.2 Amoxicillin can be given twice instead of thrice daily for children with fast breathing and chest indrawing pneumonia	9
1.3 Recommendation 3	10
1.3.1 Penicillin/gentamicin vs. chloramphenicol at high altitude	11
1.3.2 Penicillin/gentamicin vs. chloramphenicol at low altitude	11
1.3.3 Ceftriaxone as second-line treatment	11
1.4 Recommendation 4	11
1.5 Recommendation 5	12
1.6 Additional information on the implementation of the management of pneumonia at community level	12
1.6.1 Management of pneumonia at community level	12
1.6.2 Community management of chest indrawing pneumonia	13

2. Costs of treatment of pneumonia with the new recommendations	15
2.1 Household treatment costs for pneumonia	15
2.2 Outpatient treatment costs for pneumonia	15
2.3 Inpatient treatment costs for pneumonia	15
2.4 Comparison of inpatient costs for pneumonia at different tiers of health facilities	16
3. Flexible Solid Oral Dosage: Dispersible formulations of amoxicillin	17
4. Implications for implementation	18
4.1 Implications for policy	18
4.2 Implications for implementation at community level	20
4.3 Implications for implementation at health facility level	20
4.4 Implications for implementation at hospital level	26
5. References	22

Executive Summary

In the early 1980s, the global burden of childhood mortality due to pneumonia led the World Health Organization (WHO) to develop a pneumonia control strategy suitable for countries with limited resources and constrained health systems. Management of pneumonia cases formed the cornerstone of this strategy. Simple signs were identified to classify varying severities of pneumonia in settings with little or no access to diagnostic technology; the classifications determined the appropriate case management actions. Children with fast breathing were classified as having “pneumonia” and were given an oral antibiotic (at that time oral cotrimoxazole) to take at home for five days. Children who had chest indrawing with or without fast breathing were classified as having “severe pneumonia” and were referred to the closest higher-level health facility for treatment with injectable penicillin. Children who had any general danger signs were classified as having “severe pneumonia or very severe disease”. These children received a first dose of oral antibiotic and were then urgently referred to a higher-level health facility for further evaluation and treatment with parenteral antibiotics.

These pneumonia classification and management guidelines had been developed based on evidence generated in the 1970s and early 1980s, and were incorporated into the original version of Integrated Management of Childhood Illness (IMCI). In the intervening time, new evidence has emerged which prompted the development of revised guidelines.

Research results provided solid scientific evidence to guide and support the revision of the pneumonia guidelines. During two related consultations, a panel of experts assessed the new evidence according to the GRADE methodology (“Grading of Recommendations, Assessment, Development and Evaluation”). The consultations aimed to summarize the new WHO recommendations for policy and practice, to review GRADE evidence profiles, and to discuss the factors that determined the strength of the recommendations. The first consultation resulted in updated recommendations for preventing and managing pneumonia in HIV-infected and -exposed infants and children; these were published in 2010.¹ The second resulted in updated recommendations for managing pneumonia in non-HIV affected infants and children, published in 2012.²

The revisions include changing the recommendation for the first-line antibiotic and re-defining the classification of pneumonia severity. The data show that oral amoxicillin is preferable to oral cotrimoxazole for the treatment of “fast breathing pneumonia” and is equivalent to injectable penicillin/ampicillin in cases of “chest indrawing pneumonia”. Hence, in a programmatic context, the distinction between previously defined “pneumonia” (fast breathing) and “severe pneumonia”

¹ Integrated Management of Childhood Illness (IMCI). WHO recommendations on the management of diarrhoea and pneumonia in HIV-infected infants and children. Geneva: World Health Organization; 2010 (http://www.who.int/maternal_child_adolescent/documents/9789241548083/en).

² Recommendations for management of common childhood conditions, Evidence for technical update of pocket book recommendations. Geneva: World Health Organization; 2012 (http://www.who.int/maternal_child_adolescent/documents/management_childhood_conditions/en).

(chest indrawing) loses its significance. The new classification is therefore simplified to include only two categories of pneumonia; “pneumonia” with fast breathing and/or chest indrawing, which requires home therapy with oral amoxicillin, and “severe pneumonia”, pneumonia with any general danger sign, which requires referral and injectable therapy.

Dosages for pneumonia treatment at health facilities have been revised to reflect three age bands: 2 months up to 12 months (4–<10 kg); 12 months up to 3 years (10–<14 kg); 3 years up to 5 years (14–19 kg). Dosages and age bands for treatment of fast breathing pneumonia by community health workers (CHWs) have not changed.

National child health programmes will benefit from the revised recommendations and are encouraged to incorporate them into their existing guidelines for care at health facilities. The recommendations concerning the use of amoxicillin should also be included in guidelines for integrated community case management (iCCM). Programmes should recognize the importance of these revisions, which will result in a substantially lower need for referral, and in better treatment outcomes. Local adaptations may be required, particularly the arrangements to include amoxicillin as the first-line therapy; facility-level health workers will also need to be re-trained in the new system of classification and treatment.

The purpose of this document is to provide a summary of WHO-approved recommendations,^{1,2} and the evidence supporting them, and to assist national child health programmes in revising their guidelines to conform to the new recommendations.

The revised recommendations are:

Recommendation 1

Children with fast breathing pneumonia with no chest indrawing or general danger sign should be treated with oral amoxicillin: at least 40mg/kg/dose twice daily (80mg/kg/day) for five days. In areas with low HIV prevalence, give amoxicillin for three days.

Children with fast-breathing pneumonia who fail on first-line treatment with amoxicillin should have the option of referral to a facility where there is appropriate second-line treatment.

Recommendation 2

Children age 2–59 months with chest indrawing pneumonia should be treated with oral amoxicillin: at least 40mg/kg/dose twice daily for five days.

Recommendation 3

Children aged 2–59 months with severe pneumonia should be treated with parenteral ampicillin

预览已结束，完整报告链接和二维码如下：

https://www.yunbaogao.cn/report/index/report?reportId=5_27831

