

# Towards a Grand Convergence for child survival and health:

## *A strategic review of options for the future building on lessons learnt from IMNCI*

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### *Desk review on adaptations to IMNCI*

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IMNCI survey: analysis of Q114-Q118 & Q236

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June 2<sup>nd</sup> 2016

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### **Extending the Sick Young Infant section to the first week of life and conditions added into the national IMCI guidelines**

*(Q 114. Do IMCI guidelines include care of sick newborns in the first week of life? And Q 115. In addition to the generic IMCI guidelines, which conditions have been added into your national adaptation?)*

Eighty three (93.3%) of 89 countries for which data are available, included care of the sick newborn in the first week of life into the national IMCI guidelines. All except one of the 6 countries (AFR 2 countries, AMR 2, EMR 1 EUR 1) who have not extended the national guidelines to the first week of life report updating the national guidelines between 2011 – 2015, which is long after this update was suggested by WHO in 2008.

Including the first week of life into the guidelines resulted in neonatal jaundice being the most frequently added condition. It has been included in 67 (77%) of 87 countries for which the response was available; all of them except one are those that have included the sick newborn.

The second most frequently added condition is HIV that has been included by 52 (59.8 % of 87 countries for which data are available: AFR 34; AMR 9; EMR 2; EUR 2; SEAR 4; WPR 1); 26 (50%) of these countries also included skin conditions. Skin conditions have also been included in 12 countries without HIV in the guidelines (AFR 1; AMR 2; EMR 3; SEAR 2; WPR 4). Twenty-seven countries with HIV in the guidelines have also included tuberculosis. Tuberculosis has also been included in 3 countries without HIV (AFR 2, EUR 1).

Dengue has been included in 24 (27.6 % of 87 countries for which data are available: AFR 1; AMR 10; EMR 2; EUR 1; SEAR 6; WPR 4). Fifty-two (59.8% of 97) countries have included sore throat (AFR 13; AMR 12; EMR 10; EUR 7; SEAR 5; WPR 5). Thirty seven (42.5% of 97) countries have included other condition(s) into the national guidelines. Based on a previous survey<sup>1</sup>, among them are: febrile conditions with rash other than measles, rickets, avitaminosis A not related to measles, hearing loss, eye infection in the young infant, child abuse and neglect, and development assessment/problems.

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<sup>1</sup> Kudlova E. IMCI guidelines: Global Status and Analysis of Adaptations. 2002 Unpublished document.

Some countries, albeit rarely, have deleted some of the generic symptoms/classifications, among them: measles, severe measles, and mastoiditis in ear problem<sup>2</sup>.

## Last national update of IMCI chart booklet and conditions updated

*Q 116. When was the last update of the IMCI chart booklet completed?*

*Q117. If in 2014, was the update based on the 2014 WHO Generic IMCI chart booklet?*

*Q 118 If yes, which conditions have been updated?*

### Overview of the WHO updates of IMCI generic guidelines

Since the generic IMCI materials were finalized in the late 1990s, the Department of Maternal, Newborn Child and Adolescent Health (MCA) has been reviewing and updating the IMCI guidelines based on new evidence. Major updates were undertaken in 2005, 2008, and 2012.

The updates in 2005 IMCI<sup>3</sup> covered six areas:

- Change of the antibiotic for treatment of severe and non-severe pneumonia and inclusion of wheeze, in the cough and difficult breathing.
- Use of low osmolarity ORS, zinc supplements and change of first line antibiotic treatment for bloody diarrhoea to ciprofloxacin was introduced,
- First line malaria treatment for *p. falciparum* malaria was changed to artemisinin based combination Therapy (ACTs),
- Introduced the treatment of chronic ear infections with topical quinolones,
- Infant and young child feeding and treatment of helminthiasis were also updated in line with the respective new guidelines.

The **2008 updates**<sup>4</sup> included a **new HIV section** for high HIV settings into the Sick Child Age 2 Months up to 2 Years. To the updated Sick Young infant aged up to 2 months the management of illness in the **first week of a child's life** was added, the number of signs for the classification Very Severe Disease was reduced to 7 signs, and "not feeding well" and some rare classifications (e.g. persistent diarrhoea and dysentery) were removed. Also assessment of neonatal jaundice was introduced as a possible adaptation and guidance on additional support for breastfeeding and skin to skin care for low birth weight was added as well as checking the young infant for HIV and advising on feeding.

The key **2012**<sup>5</sup> **updates** in the Sick Child Age 2 Months up to 2 Years section included:

- **Cough or difficult breathing** – revision in the assessment, classification and antibiotic treatment for pneumonia,
- Change in the assessment and classification of **fever** to include use of the malaria test,
- Extensive revision in the assessment, classification and treatment of **malnutrition** and minor changes in the assessment of anaemia in malaria high risk areas.
- Change in the assessment for **HIV** infection in children in view of the need for early diagnosis and confirmation of HIV infection, use different HIV tests, and ARV prevention and treatment,
- Consequent changes in the follow-up advice for pneumonia, malaria and malnutrition, and
- Change in the feeding recommendations including in HIV infected/exposed children.

No major changes done in the Sick Young infant aged up to 2 months section. Areas that needed to be aligned with recent guidelines on HIV and infant feeding included: changes in assessment and management of the young infant for HIV infection and infant feeding and care of HIV exposed infant.

<sup>2</sup> Kudlova E. IMCI guidelines: Global Status and Analysis of Adaptations. 2002 Unpublished document.

<sup>3</sup> WHO: Technical updates of the guidelines on the Integrated Management of Childhood Illness, 2005.

<sup>4</sup> WHO: IMCI chart booklet, 2008.

[http://www.who.int/maternal\\_child\\_adolescent/documents/IMCI\\_chartbooklet/en/index.html](http://www.who.int/maternal_child_adolescent/documents/IMCI_chartbooklet/en/index.html)

<sup>5</sup> WHO: IMCI chart booklet, 2014.

[http://www.who.int/maternal\\_child\\_adolescent/documents/IMCI\\_chartbooklet/en/](http://www.who.int/maternal_child_adolescent/documents/IMCI_chartbooklet/en/)

Data show that countries follow the WHO guidance as almost two thirds (55; 62.5%) of 88 countries which provided the response) completed the last update of the national IMCI chart booklet between 2014 and 2016, i.e. having access to the last WHO update of the guidelines in 2014<sup>6</sup> and at least 47 of them based their update on the 2014 WHO Generic IMCI chart booklet (possibly more – see table note below). Thirty (34.1%) of countries completed the last national update between 2008 and 2013, i.e. having access to the WHO update of the guidelines in 2008<sup>7</sup>; two countries completed the last national update in 2005, when the first WHO major update became available, and in one country the guidelines were not updated. Eighty percent or more of countries updated Cough or difficult breathing, Fever, and HIV. Almost one half of countries (24 / 46.2%) updated all 6 conditions listed in the questionnaire. Only 12 countries updated only one up to three conditions, mostly the three conditions already mentioned.

**ORIGINAL Q117.** If in 2014, was the update based on the 2014 WHO Generic IMCI chart booklet?

Status	Number of countries	% of countries
1-Yes	16	94.1
2-No		0.0
3-Unknown		0.0
No response	1	5.9
Total	17	100.0

**REVISED WORDING FOR results Q117.** If in 2014 OR LATER, was the update based on the 2014 WHO Generic IMCI chart booklet?

Status	Number of countries	% of countries
Yes	47	85.5
No*	3	5.5
Unknown	1	1.8
No response*	4	7.3
Total	55	100.0

\* “No response” may mean that they did use generic 2014 but did not enter the response because the update was later than in 2014 ... the same may potentially even apply to “No”

		v116 last update	v117 based on generic 2014
AFR	Angola	2014	No response
AMR	Nicaragua	2015	No
AMR	Brazil	2016	No
EMR	Djibouti	2015	No
EUR	Ukraine	2015	No response

<sup>6</sup> WHO: IMCI chart booklet, 2014.

[http://www.who.int/maternal\\_child\\_adolescent/documents/IMCI\\_chartbooklet/en/](http://www.who.int/maternal_child_adolescent/documents/IMCI_chartbooklet/en/)

<sup>7</sup> WHO: IMCI chart booklet, 2008.

[http://www.who.int/maternal\\_child\\_adolescent/documents/IMCI\\_chartbooklet/en/index.html](http://www.who.int/maternal_child_adolescent/documents/IMCI_chartbooklet/en/index.html)

EUR	Kyrgyzstan	2015	Not known
SEAR	Nepal	2015	No response
SEAR	Bangladesh	2015	No response

**ORIGINAL Q 118** If yes, which conditions have been updated?

Condition	Number of countries (N=17)	% of countries (N=17)
Cough or difficult breathing	14	82.4
Diarrhoea	12	70.6
Fever	14	82.4
HIV	13	76.5
Malnutrition	14	82.4
Anaemia	11	64.7

**REVISED Q 118** Conditions updated since 2014

Condition	Updated (No of countries)	Not updated (No of countries)	Total responded (No of countries)	Updated (% of countries)
Cough or difficult breathing	47	8	55	85.5
Diarrhoea	40	15	55	72.7
Fever	45	7	52	86.5
HIV	42	10	52	80.8
Malnutrition	35	13	48	72.9
Anaemia	32	20	52	61.5

Number of conditions updated

No of conditions updated	Countries (No)	Countries (%)
1	2	3.8
2	5	9.6
3	5	9.6
4	10	19.2
5	6	11.5
6	24	46.2
Total	52	100.0

### IMCI drugs in the national Essential Medicines list

(Q 236 Does the national Essential Medicines list include the following medicines for use in children <5years?)

Among antibiotics, the National Essential Medicines Lists of all countries include amoxicillin. Of 86 countries that provided responses, cotrimoxazole is included in 95.3% of countries, benzyl penicillin and gentamycin 93.0%, injectable ampicillin 84.9%, ciprofloxacin 82.6%, and ceftriaxone in 77.9% of countries.

New standard/low osmolarity ORS for oral rehydration of children with diarrhoea is included in the National Essential Medicines Lists of 93.0% countries, zinc tablets used in the treatment of diarrhoea 79.1% countries. Salbutamol inhaler is included in 87.2% of countries.

The inclusion of antimalarials used in the treatment of falciparum malaria listed in the IMNCI survey questionnaire (artemisinin combination therapy, parenteral or rectal artesunate) into the National Essential Medicines Lists depends on the malaria epidemiology – presence of falciparum malaria in the country. In the AFR most of 36 countries for which data were available included artemisinin combination therapy (88.9%) and parenteral artesunate (75.0%), rectal artesunate was included in 47.2% of countries. Four countries have neither parenteral, nor rectal artesunate. *Two countries (CHECK: Comoros and Swaziland)* do not have either of antimalarials listed in the questionnaire despite having falciparum risk.

**NOTE EK: Summary table is not informative for antimalarials – needs to be checked by country against falciparum malaria epidemiology**

#### REVISED TABLE FOR ANTIMALARIALS

WHO region (Number of countries that responded)	Included into the national Essential Medicines list	v236_Artemisinin combination therapy		v236_Artesunate (Parental)		v236_Rectal artesunate	
		Number	%	Number	%	Number	%
AFR (N=36)	Yes	32	88.9	27	75.0	17	47.2
	No	4		9		19	
AMR (N=13)	Yes	4	30.8	2	15.4	1	7.7
	No	9		11		12	
EMR (N=14)	Yes	7	53.8	3	23.1	1	
	No	7		11		13	
EUR (N=7)	Nil + Not applicable						
SEAR (N=9)	Yes	4	44.4	5	55.6	2	22.2
	No	5		4		7	
WPR (N=8)	Yes	4	50.0	4	44.4	4	44.4
	No	4		4		4	

## Tables – from Dilip

Q 114 Do IMCI guidelines include care of sick newborn in the first week of life?

Status	Number of countries
Yes	37
No	2
Unknown	
Total	39

Q 115. In addition to the generic IMCI guidelines, which conditions have been added in your national adaptation (Check all that apply):

Condition	Number of countries
a. Dengue	11
b. Tuberculosis	15
c. HIV	18
d. Skin conditions	18
e. Sore throat	25
f. Jaundice	32
h. Unknown/ not applicable	2

Q 116 When was the last update of the IMCI chart booklet completed?

Year	Number of countries
2005	1
2008	2
2010	1
2011	2
2012	2
2013	3
2014	3
2015	14
2016	8
Unknown	3
Total	39

Q 217 If in 2014, was the update based on the 2014 WHO Generic IMCI chart booklet?

Status	Number of countries
1-Yes	24
2-No	6
3-Unknown	1
No response	8
Total	39

Q 118 If yes, which conditions have been updated?

Condition	Number of countries
Cough or difficult breathing	25
Diarrhoea	21
Fever	24
HIV	21
Malnutrition	16
Anaemia	3

Q 236 Does the national Essential Medicines list include the following medicines for use in children <5years? (Check all that apply)

	Number of countries
Amoxicillin	37
Ampicillin (Injectable)	32
Artemisinin combination therapy	22
Artesunate (Parental)	18
Benzyl penicillin	36
Ceftriaxone	29
Ciprofloxacin	32
Cotrimoxazole	37
Gentamycin	36
New standard/Low osmolarity ORS	33
Rectal artesunate	15
Salbutamol inhaler	34

Zinc tablets
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