Inventory of IMCI training and supervision tools in PMI countries

Lawrence Barat

on behalf of Michel Pacqué, Consultant

USAID Maternal and Child Health Integrated Program

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Methods

- Training and supervision materials voluntarily provided by PMI countries
- Desk review
  - Tools compared with most updated IMCI algorithms
    - Incorporates diagnostic testing for malaria
  - Particular attention to adherence to updated WHO guidelines on diagnostic testing and management of severe febrile illness
- Spreadsheet developed comparing specific steps in the algorithm with what is contained in country training and supervision materials

Countries Included

	COUNTRY	IMCI and or Malaria Tools	Supervision Tools
1	ANGOLA	N	N
2	BENIN	Y (IMCI)	N
3	DRC	Y (IMCI/CCM – NMCP)	Y
4	ETHIOPIA	Y (IMCI/CCM – NMCP)	Y
5	GHANA	N	N
6	GUINEA	N	N
7	KENYA	Y (IMCI)	N
8	LIBERIA	N	Y
9	MADAGASCAR	Y (IMCI)	N
10	MALAWI	Y (IMCI)	Y
11	MALI	Y (IMCI)	Y
12	MOZAMBIQUE	Y (IMCI – NMCP)	Y
13	NIGERIA	Y (IMCI)	N
14	RWANDA	Y (IMCI)	Y
15	SENEGAL	Y (IMCI)	N
16	TANZANIA (Zanzibar)	N	Y
17	UGANDA	Y (IMCI/CCM – NMCP)	N
18	ZAMBIA	Y (IMCI)	N
19	ZIMBABWE	Y (IMCI)	N
	Total Received	14	8
	Total Assessed	13	7

Classification of Fever

A child will be considered as "having fever" if:

- The child has had any fever with the current illness
- The child feels hot
- The child has an axillary (underarm) temperature of 37.5°C (38°C rectal) or above

High fever is defined as a temperature of 38.5°C or above

- 12 countries defined fever correctly
  - Mali: Fever defined only as measured axillary temperature ≥38 degrees C

Severe febrile illness:

Fever plus

- Any general danger sign (unable to drink or breastfeed; vomits everything; convulsion(s); lethargic or unconscious)

And/or

- Stiff neck

- 8 countries classified severe febrile illness in line with IMCI guidelines
  - Rwanda: Differentiates *Severe Malaria* from *Very Severe Febrile Illness*, based on diagnostic test result

Diagnostic Testing for Malaria

WHO Guidelines for Parasitological/laboratory diagnosis of malaria

Prompt ***parasitological confirmation*** by microscopy, or RDT, is recommended in all patients suspected of malaria before treatment is started.

Treatment solely on the basis of clinical suspicion should only be considered when a parasitological diagnosis is not accessible or will be delayed for more than two hours.

However, patients with suspected severe malaria, and other high risk groups, should be treated immediately on clinical grounds.

- Nine countries have introduced diagnostic testing for malaria in their fever algorithms
  - Only four have instructions on how to perform an RDT
- Four countries have included malaria test by RDT or microscopy in the classification of Severe Febrile Illness/Severe Malaria
- Only two countries include instructions to perform an RDT when a child has been identified as having anemia

Classification of Uncomplicated Malaria

COUNTRY	RDT required	Uncomplicated malaria
Benin	Yes	Standard
Democratic Republic of Congo	Yes	Standard
Ethiopia	Yes	Standard
Kenya	Yes	Standard
Madagascar	Yes	Standard
Malawi	Yes	Standard
Mali	Yes NMCP No IMCI	
Nigeria	No	
Rwanda	Yes	Standard
Senegal	Yes	Standard
Uganda	No (IMCI in process of updating)	
Zambia	No	
Zimbabwe	Yes	Standard

First-line drug for pre-referral treatment of severe febrile disease

IMCI guidelines	Pre-referral treatments of choice: artesunate or quinine
Benin	Artesunate suppository
Democratic Republic of Congo	Artesunate suppository
Ethiopia	Artesunate suppository
Kenya	Quinine or parenteral artesunate or artemether
Madagascar	Quinine
Malawi	Quinine
Mali	IMCI: Quinine - NMCP: Artemether or Artesunate or quinine
Nigeria	Quinine
Rwanda	Artemether
Senegal	Quinine
Uganda	Artesunate or Quinine or Artemether
Zambia	Quinine
Zimbabwe	Quinine

Treatment of Uncomplicated Malaria and Anemia

COUNTRY	ACT	Paracetamol	Severe Anemia	Anemia and malaria treatment
Benin	Yes	Yes + ASA	Transfusion	Yes
Democratic Republic of Congo	Yes	Yes	no	N/A
Ethiopia	Yes	Yes	Transfusion	N/A
Kenya	Yes	Yes	Transfusion	Yes
Madagascar	Yes	Yes	Transfusion	Yes
Malawi	Yes	Yes	Transfusion	Yes
Mali	Yes	Yes + ASA	Transfusion	Yes
Nigeria	Yes	Yes	Transfusion	N/A
Rwanda	Yes	Yes	Transfusion	Yes
Senegal	Yes	Yes +ASA	Transfusion	no
Uganda	Yes	Yes	Transfusion	Yes
Zambia	Yes	Yes	Transfusion	Yes
Zimbabwe	Yes	Yes	Transfusion	Yes

Management of Treatment Failure

If fever persists after 2 days, or child returns within 14 days:

- Do a full reassessment of the child.
- If any general danger signs or stiff neck: treat for VERY SEVERE FEBRILE DISEASE – and refer to hospital.
- If any cause of fever other than malaria: provide treatment for that cause.
- If the fever has been present for 7 days: refer for assessment.
- If there is no other apparent cause of fever:
  - *For children who were classified as **having malaria**:*
    - Do microscopy. If parasites are present and the child has finished a full course of the first line antimalarial, give the second-line antimalarial, if available, or refer the child to a hospital.
    - If you do not have a microscope to check for parasites, refer the child to a hospital.

DO NOT REPEAT the Rapid Diagnostic Test if it was positive on the initial visit

  - *For children who had fever and were classified as **having no malaria***:
    - Repeat the malaria test. If a child has a positive malaria test, give first-line oral antimalarial. Advise the mother to return in 3 days if the fever persists.

- Eleven countries addressed treatment failure
  - Five have retesting with a RDT in the protocol
  - Another 5 countries use a clinical diagnosis to re-classify the child

Conclusions

- In almost all countries assessed, there were one or more areas where training materials significantly deviated from the most recent WHO guidance
- In some countries, IMCI guidelines also deviated from national malaria treatment guidelines
- Some of the disparities may be because national policies were last updated before these new guidelines were issued
- Supervision tools appear to be available in only a minority of countries, raising the question whether standardized supervision checklists are used in some countries
- All countries should review and revise their guidelines and training materials, as appropriate, to ensure they align with the latest WHO guidance, and then on a regular basis thereafter