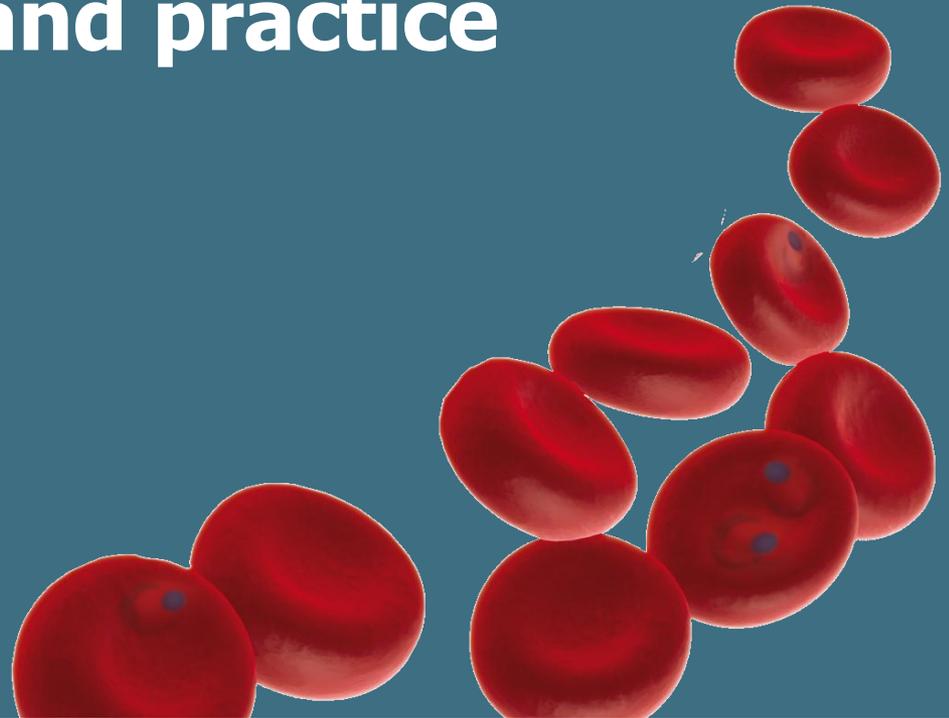


WHO Informal Consultation on fever management in peripheral health care settings: a global review of evidence and practice



WHO Informal Consultation on fever management in peripheral health care settings

Background for organising the meeting:

- Deployment of malaria testing + decreasing malaria transmission =
↑ proportion of febrile patients being diagnosed as not having malaria
- If no guidance and medicines for management of non-malaria fevers
 - clinicians tend to ignore the malaria test result
 - or they tend to overprescribe antibiotics

Consequences:

- undermines clinical benefits of parasitological diagnosis
- aggravates wastage of antimalarials and antibiotics
- accelerates development of resistance to antimicrobials

- Clear algorithms for management of fevers at different levels of the health system, as well as good implementation support tools, are now available

WHO Informal Consultation on fever management in peripheral health care settings

Main aims of improving management of fevers:

To increase appropriate treatment and referral to

- reduce severe diseases and deaths
- reduce morbidity (length of febrile episode...)

To reduce unnecessary antibiotics and antimalarials prescription to

- reduce drug pressures and development of resistance
- decrease risk of drug adverse events
- save money

Objectives of the meeting:

- a) Review existing evidence and guidance on management of malaria and non-malaria fevers at primary care and community levels
- b) Provide practical recommendations and operational tools for implementation of integrated management of fevers at peripheral level
- c) Identify and discuss major research gaps

Section I - Review on etiologies and management of febrile illness

Recommendation 1

Studies on etiologies of fevers should be undertaken at different levels of health care and in different epidemiological settings, seasons and age groups.

Section I - Review on etiologies and management of febrile illness

Recommendation 1

Studies on etiologies of fevers

Emerging research findings

- Children <5 years:*
- 0-12% malaria, 40-80% ARI, 10-25% diarrhea
 - ARI mostly UARI and due to viruses (influenza)
 - the remaining children had unspecific fever:
 - typhoid low in Africa, high in Asia
 - urinary tract infection always low
 - occult bacteremia very low

- Adults >5 or 15 years:*
- driven by HIV (40% in one study), 4-32% malaria
 - Causes in malaria-neg. adults (with or without ARI/diarrhea):
 - OPD in Asia: Dengue, scrub typhus, JEV, leptospirosis
 - IPD in **Tanzania**: Chikungunya, leptospirosis, rickettsiosis, Q fever, brucellosis

→ Recommendations made on design for future studies

Section II - Available WHO guidelines and tools for the management of fevers

Recommendation 2

Malaria diagnosis and treatment should be deployed as part of promoting programmes for the integrated management of fevers, based on WHO algorithms available for different age groups and levels of care.

Section II - Available WHO guidelines and tools for the management of fevers

Recommendation 2

WHO algorithms for the integrated management of febrile illness

Available tools

- | | <i>Hospital</i> | <i>Health facility</i> | <i>Community (& informal private)</i> |
|-----------------|-----------------|------------------------|---|
| <i>Children</i> | Blue book | IMCI | iCCM |
| <i>Adults</i> | District manual | IMAI | ? |
- IMCI & IMAI should be more widely disseminated
 - Adherence to iCCM by community health workers is good
 - The algorithm for malaria diagnosis and treatment is well integrated in most guidelines, except IMAI for HF level
 - no more malaria management without IMCI/iCCM
 - Home Based Malaria (2002-05) should be archived

Section II - Available WHO guidelines and tools for the management of fevers

Recommendation 2

WHO algorithms for the integrated management of febrile illness

Need for development and update

- Guidelines for age-groups above 5 years old managed at community level
- Guidelines for children 5 to 10 years
- Continuous update based on evidence, in particular (for malaria):
 - Criteria for high and low malaria risk area
 - Malaria testing of anemic children in high malaria risk areas
 - Malaria testing before referral/pre-referral treatment
 - Time interval for considering a new malaria infection (presently >14 days)
- New strategies to improve adherence to IMCI by clinicians working at HF level

Section III - Agencies and NGOs experience with iCCM

Recommendation 3

Evidence from studies and lessons learned from implementation should be taken into account when planning scale-up of integrated Community Case Management (iCCM).

Section III - Agencies and NGOs experience with iCCM

Recommendation 3

Evidence from studies and lessons learned on iCCM

Evidence generated by operational research

- **Mortality:** ↓ when antimalarials introduced (ongoing studies for antibiotics)
- **Compliance to algorithm:** high for lab-tests (RDT), low for clinical-tests (RR)
- **Danger signs:** CHWs not good at picking them up
- **Referral:** not done (why?)
- **Utilisation of CHWs:** is increasing but still below expected incidence of diseases
- **Access to care:** not only distance to CHW, but also staff and medicine availability
- **Salaries:** help retention of CHWs
- **Costs:** much cheaper to manage severe pneumonia at community level

Section III - Agencies and NGOs experience with iCCM

Recommendation 3

Evidence from studies and lessons learned on iCCM

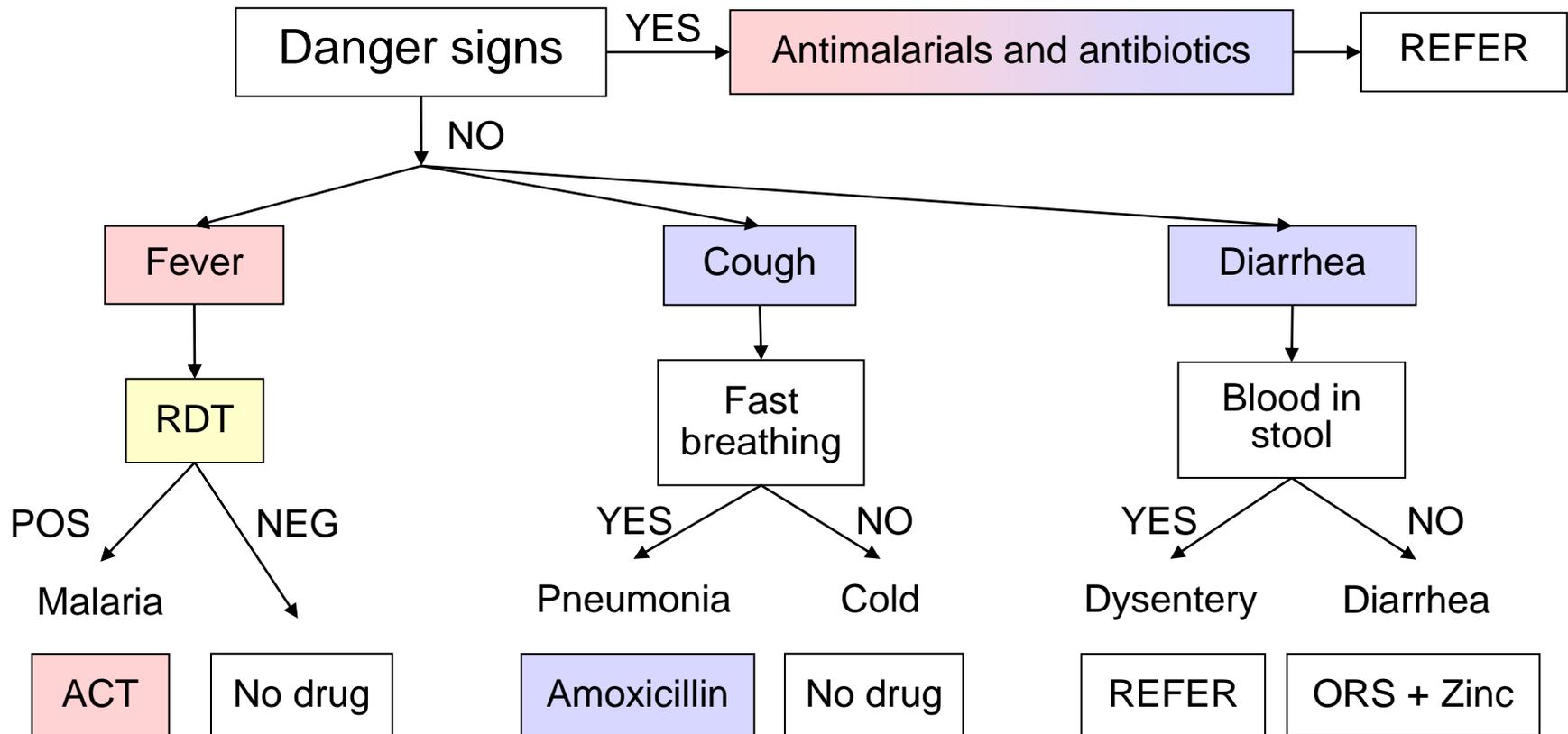
Lessons learned from implementation

- **Supervision of CHWs:** by a senior peer rather than a clinician of HF
- **Retention of CHWs:** find country specific solutions from the start
- **Repeated drug shortages:** not sustainable having iCCM parallel systems
- **Seeking behaviour:** communities need to know what care they can expect
- **Weak M&E:** use innovative technologies (e.g. phones)
- **Extension of CHW tasks:** Newborn and child care initiatives should be integrated with iCCM (what about children 5-15 years and adults?)

Section IV – Country experiences with community case management of fevers – Public sector

Recommendation 4

The core of the generic iCCM algorithm should not be modified when used in countries implementation programs.



Section IV – Country experiences with community case management of fevers – Public sector

Recommendation 4

The core of the generic iCCM algorithm should not be modified

Need more emphasis on the following

- No management of fever without management of ARI and diarrhea
- No systematic referral of malaria-negative children → assess other conditions
- No referral without pre-referral antibiotics (especially if malaria test is negative)
- No presumptive treatment of fever with antimalarials → always a diagnostic test
- No presumptive treatment of non-severe malaria-negative children with antibiotics
- No need to assess fast breathing in the absence of cough (overtreatment)

Section IV – Country experiences with community case management of fevers – Public sector

Recommendation 5

iCCM programs should be implemented together with strengthening quality of care at health facilities level, based on IMCI and IMAI for primary care and hospital levels.

Consequences of the absence of HF strengthening:

back referral of patients from health facilities to CHWs...

Section IV – Country experiences with community case management of fevers – Private sector

Recommendation 6

When subsidized malaria medicines and RDT are made available for the private sector, diagnosis and treatment for common non-malaria causes of fever should also be provided, based on WHO algorithms for iCCM.

Considerations supporting this recommendation

- Private sector is an important source of care in many (not all) settings
- Pneumonia kills even more children than malaria...
- In high endemic areas, a patient can have both malaria and another disease
- In low endemic areas, most patients have negative RDT → would need referral

But: case management is a service, not a commodity...

→ What is done for the public is also needed for the private sector

Section V – Research Agenda

Recommendation 7

Research looking at new strategies for effective diagnostic and treatment of febrile illness should be encouraged, using clinical outcomes* as primary study endpoints rather than laboratory results, in order to modify or expand the current WHO algorithms.

* a common definition needs to be found

Section V – Research Agenda

Recommendation 7

New strategies for effective diagnostic & treatment of febrile illness

Emerging research findings

- Withholding antimalarials in patients with a negative RDT is safe even in high endemic areas (several studies)
- Proportion of RDT negative patients treated with ACTs is decreasing over time
- IMCI leads to overtreatment with antibiotics (poor specificity of RR for pneumonia)
- In Pakistan, the clinical outcome of children with non-severe pneumonia as defined by WHO was not different when receiving amoxicillin or placebo (Hazir *et al*)
- Management of severe (but not very severe) pneumonia as defined by WHO is safe at community level (several studies) → update of IMCI ongoing
- Management of children according to iCCM is safe at community level (sev. studies)