WHO Guidelines for the management of febrile illnesses

CDDEP/ Institute of Medicine of the National Academies
Meeting on AMFm and the financing of febrile illness management
September 17-18 2012
The National Academies, 2101 Constitution Avenue, NW, Washington, DC 20037

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World Health Organization

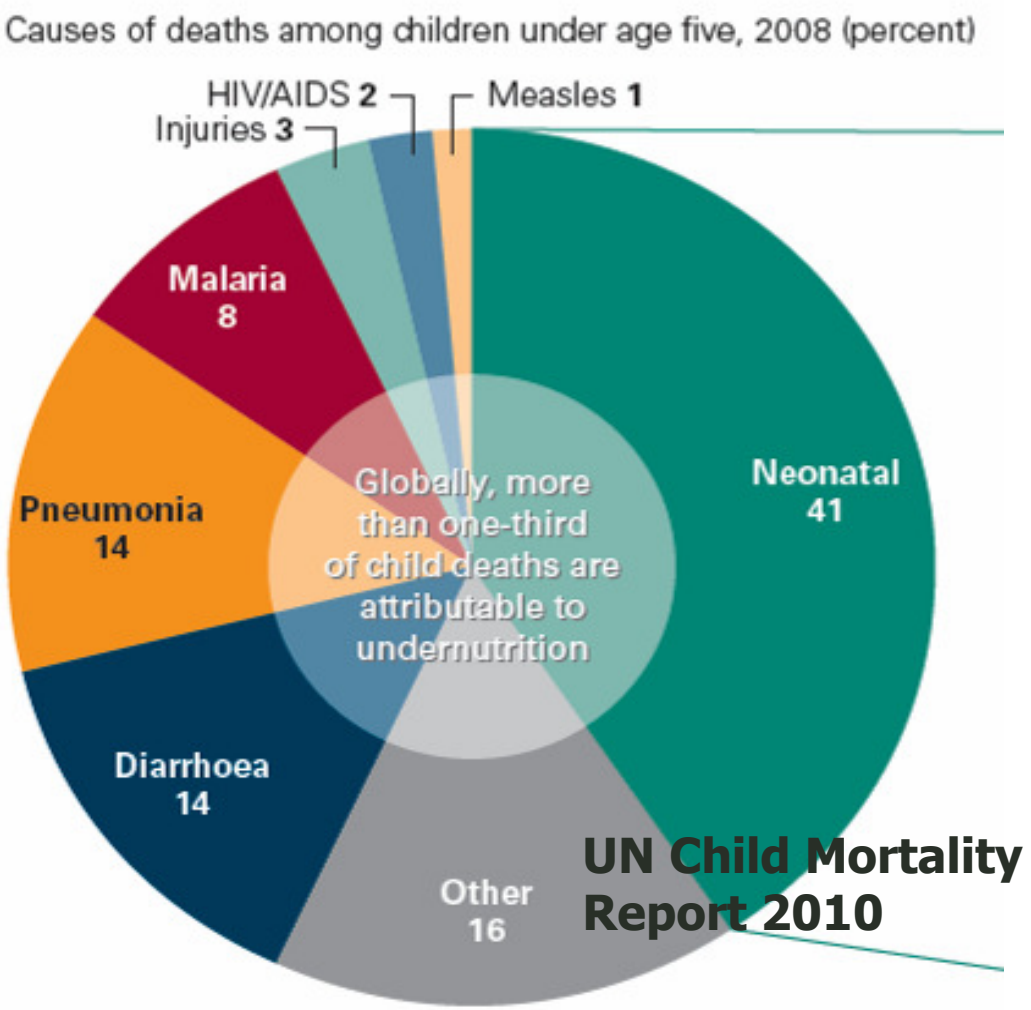
GLOBAL MALARIA PROGRAMME

OUTLINE

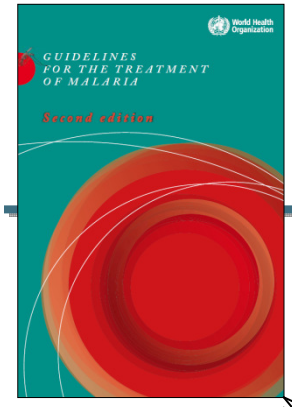
- Evolution of malaria policies: from home-based of malaria (HBM) to integrated community case management (iCCM)
- WHO Guidelines for managing febrile illnesses, including malaria
- Criteria for testing febrile patients for suspected malaria & use of diagnostic tests in different settings
- IMCI clinical algorithm for primary care and iCCM algorithm
- Rational of guidelines for the management of malaria and non-malaria fevers and impact of their use
- Upcoming WHO/TDR informal consultation on fever management at primare health care: a global review of evidence and practices
  (22-24 January 2013)

HMM → CCMm → *i*CCM: an evolving concept

- Malaria, pneumonia and diarrhea are the three most important causes of post-neonatal death in children under five
- Major overlap in the clinical presentation of malaria and pneumonia



WHO guidelines for managing febrile illness: malaria testing is recommended at all levels



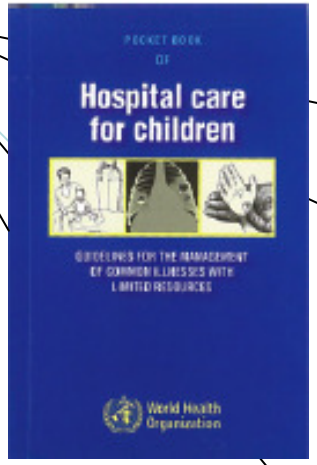
Hospital

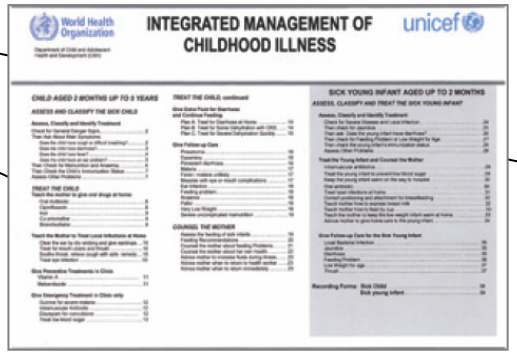
Primary care

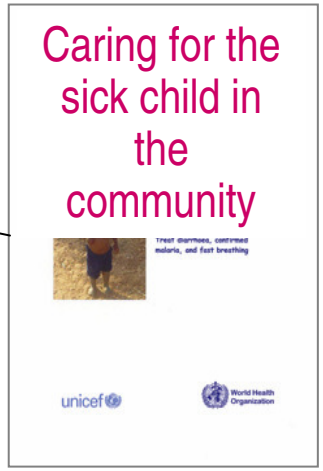
Community

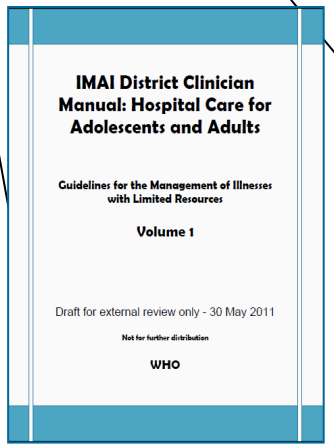
Children under 5 →

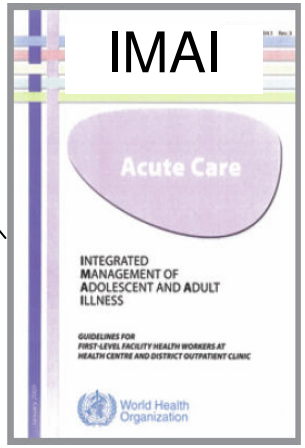
Adolescents and Adults →











World Health Organization

Global Malaria Programme

WHO Inter-Agency Manual for Universal Access to Diagnostic Testing of Malaria

Algorithms for malaria testing and treatment

1. Who should be tested for malaria? Criteria?
   - in highly endemic settings
   - in low endemic settings (threshold?)
2. Which test should be used?
   - new fever episode (*incl.* uncomplicated/severe)
   - persisting fever after antimalarial treatment

All suspected cases should be tested

Definition of suspected malaria varies with malaria transmission intensity

Suspected malaria case		
High malaria risk area		***Low malaria risk area***
History of fever *or* temp. ≥37.5°C	Palmar pallor in child *or* Hb <8 g/dl?	History of fever or temp. ≥37.5°C without an obvious cause of fever

Defining areas of high and low malaria risk

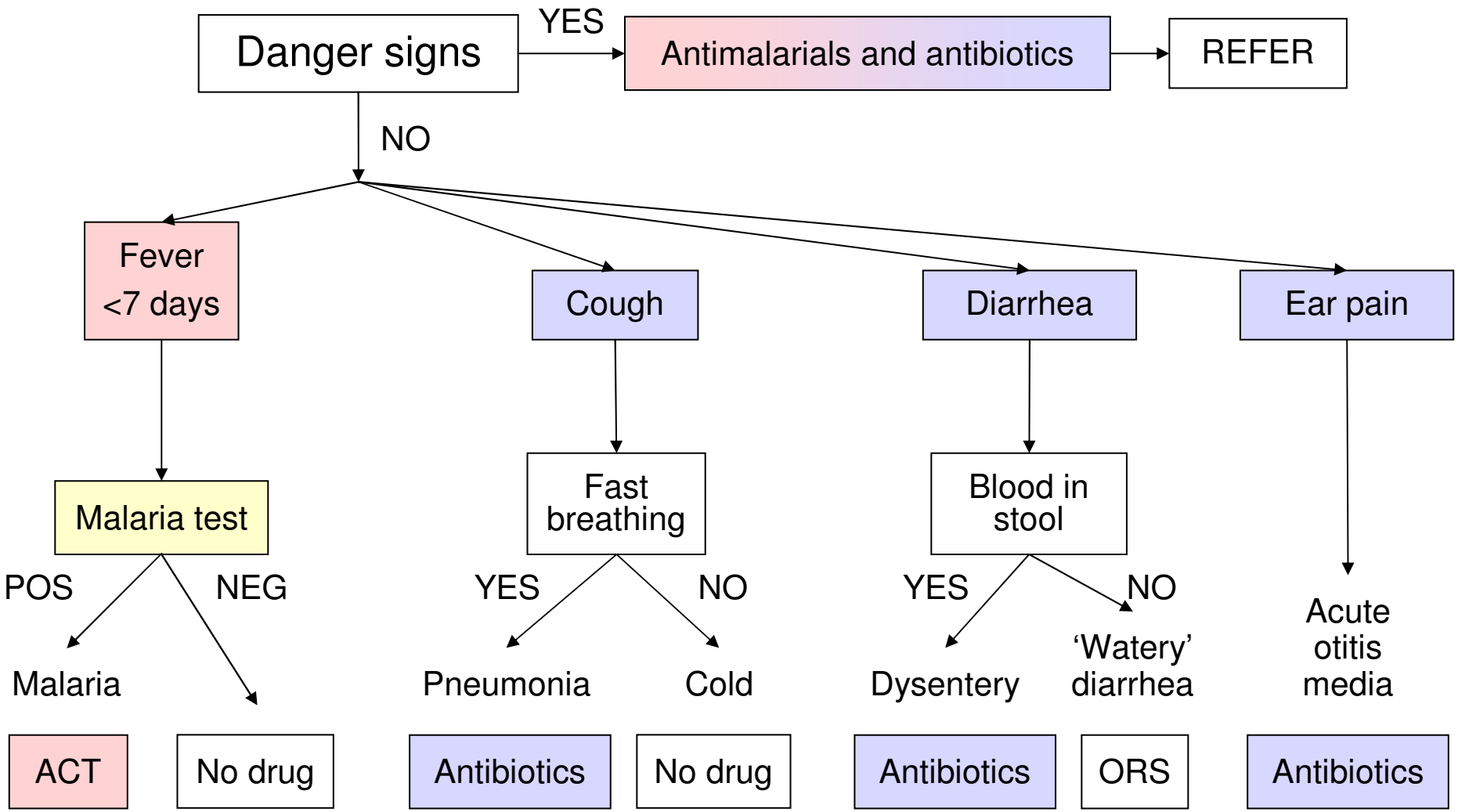
In IMCI, the threshold is 5% of febrile children attending a health facility with confirmed malaria.

In some countries, the positivity rate threshold is 1%.

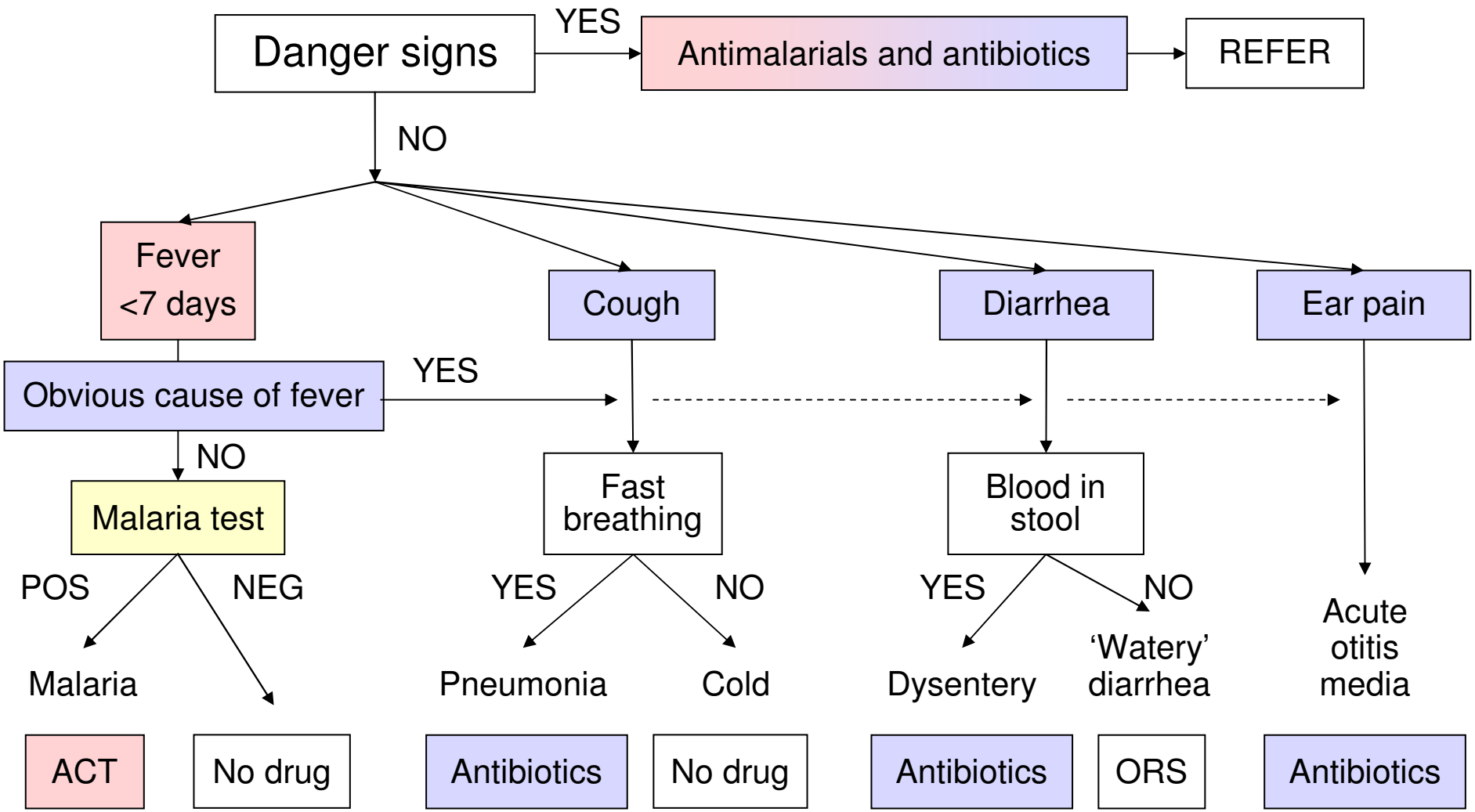
Countries might choose a different threshold, based on:

- the acceptable risk of missing a malaria case
- the level of investment in malaria testing

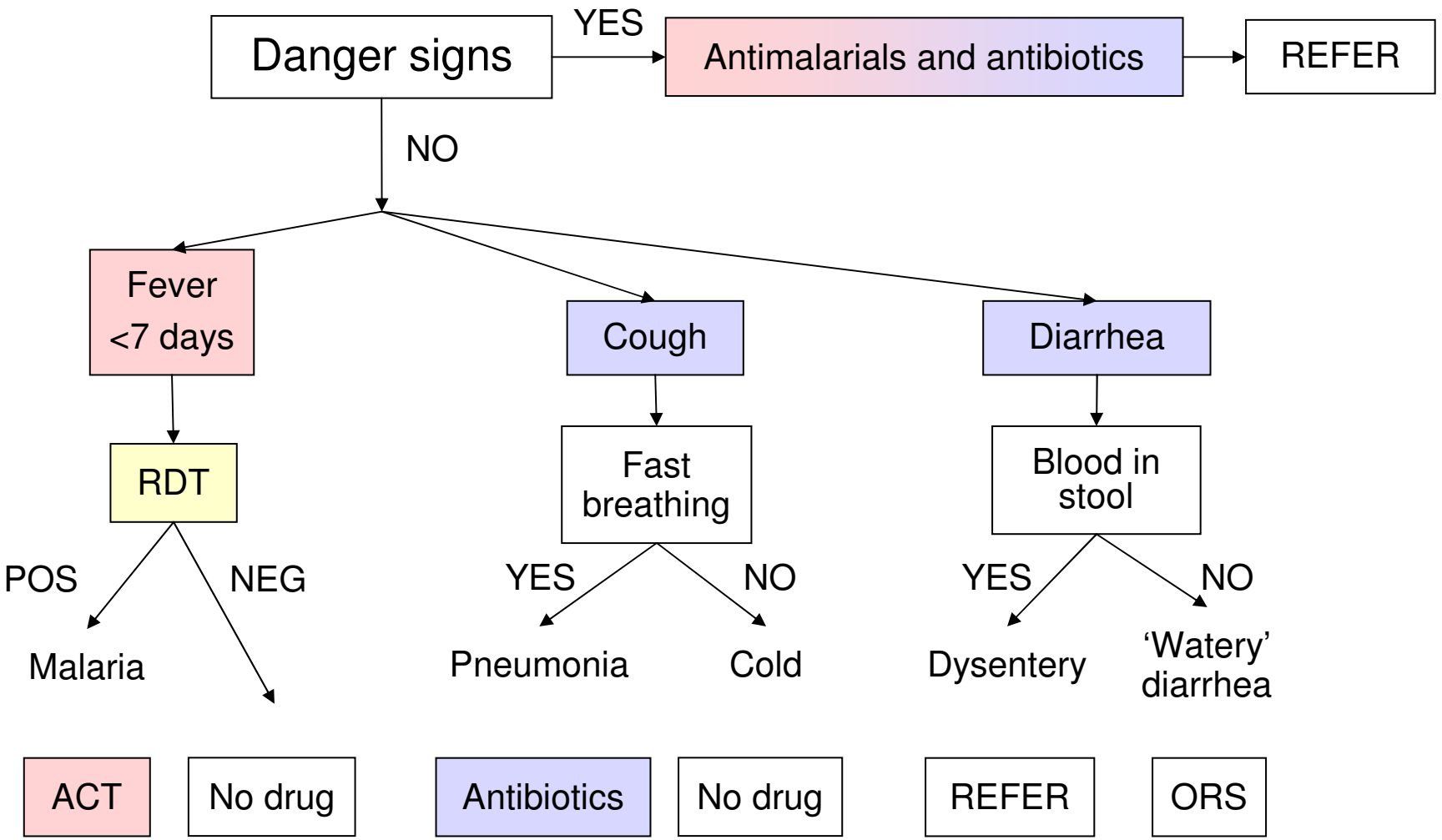
IMCI Guidelines: primary care for malaria high risk areas



IMCI Guidelines: primary care for malaria low risk areas

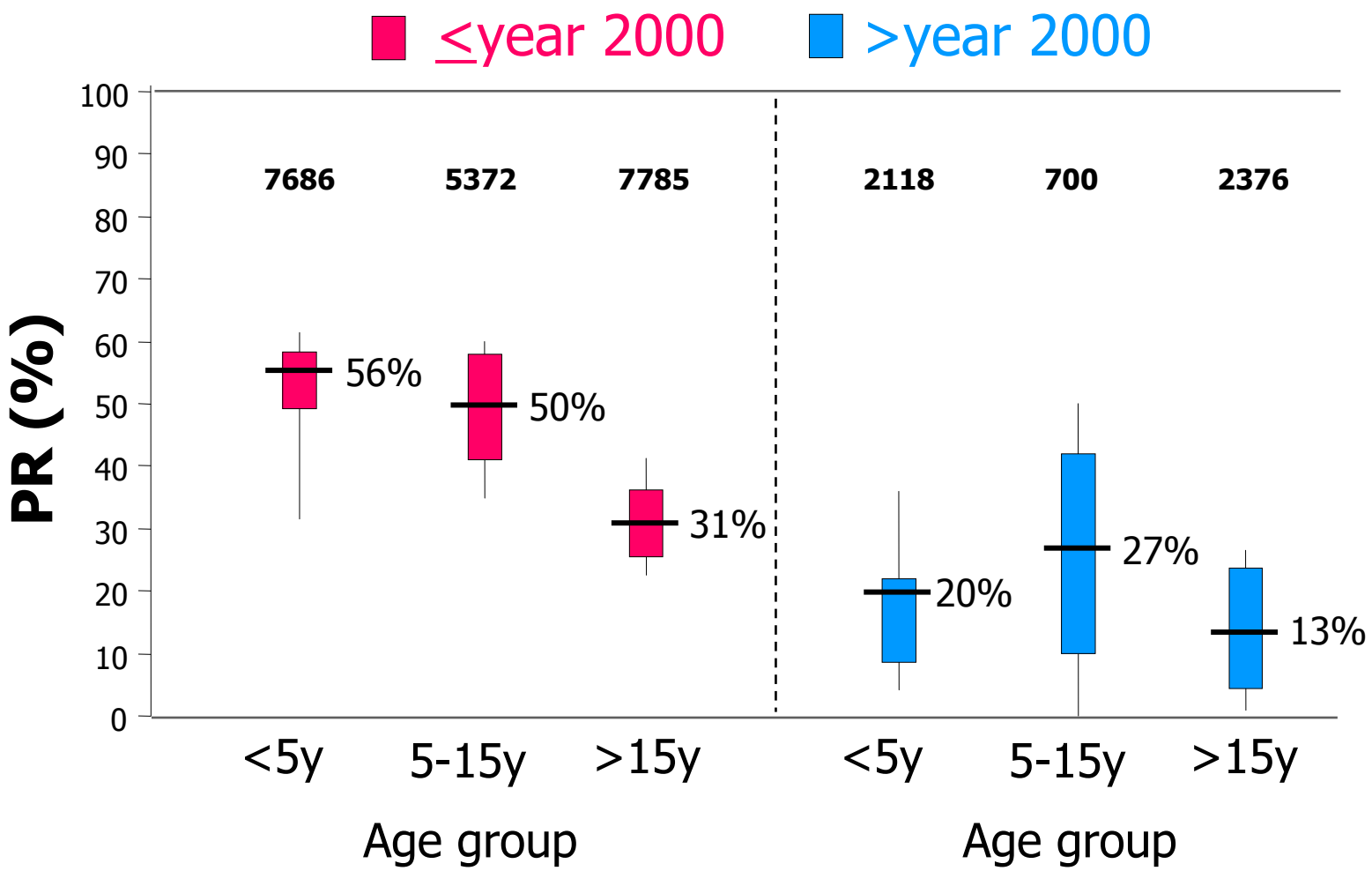


iCCM Guidelines (community level)



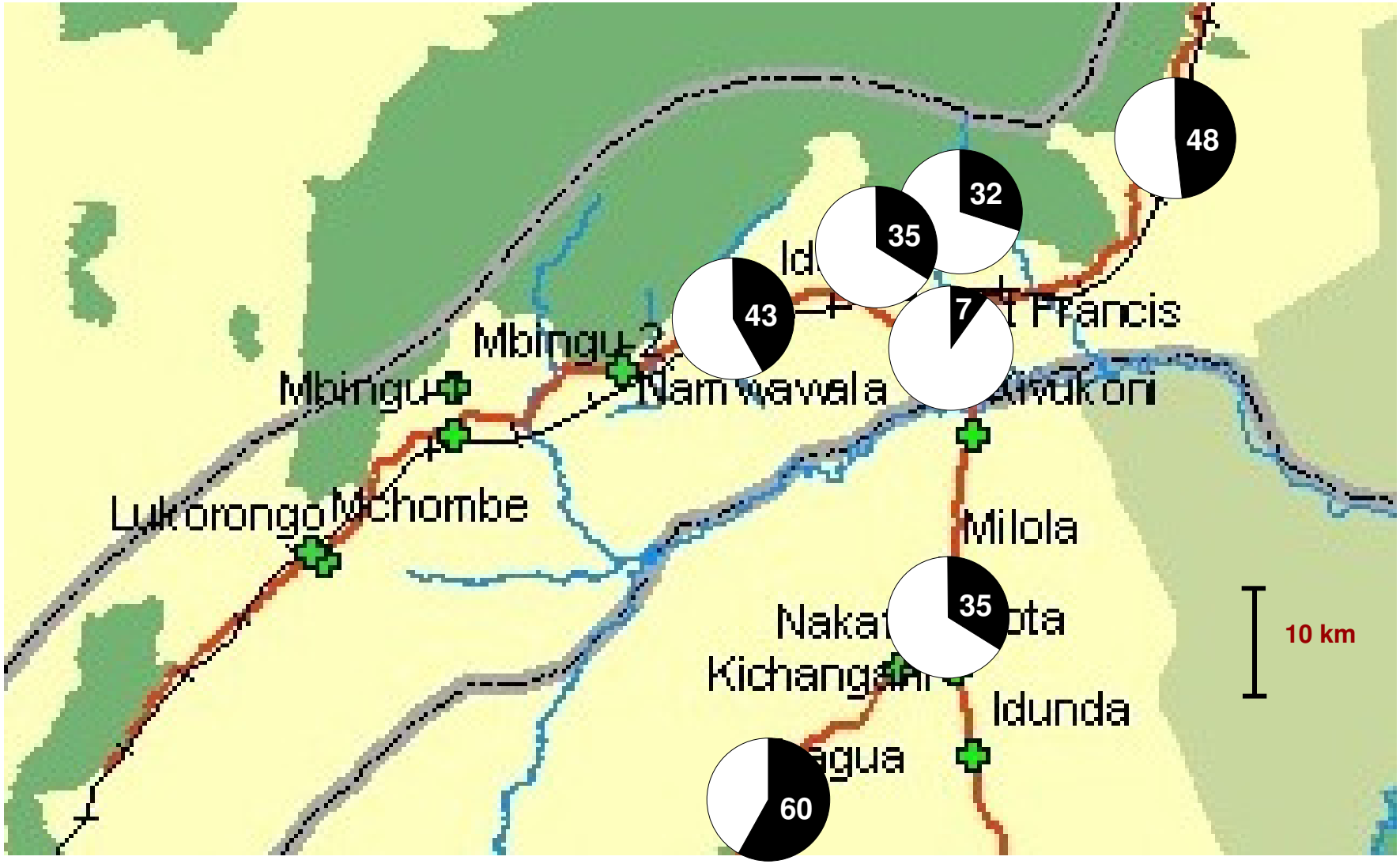
Malaria positivity rate in African health facilities

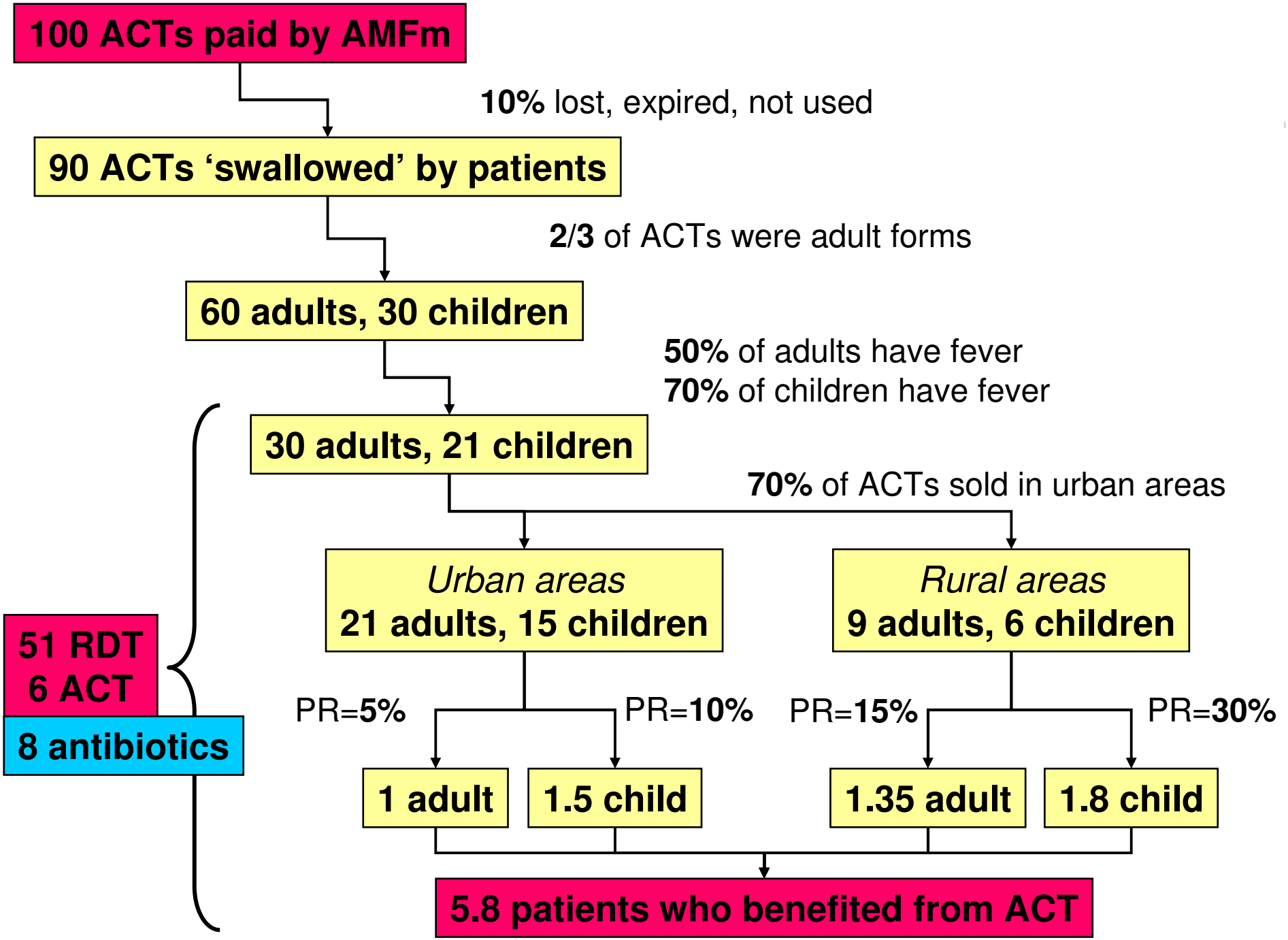
39 studies conducted between 1986 and 2007 in 16 African countries



D'Acremont *et al*, *Malaria J* 2010

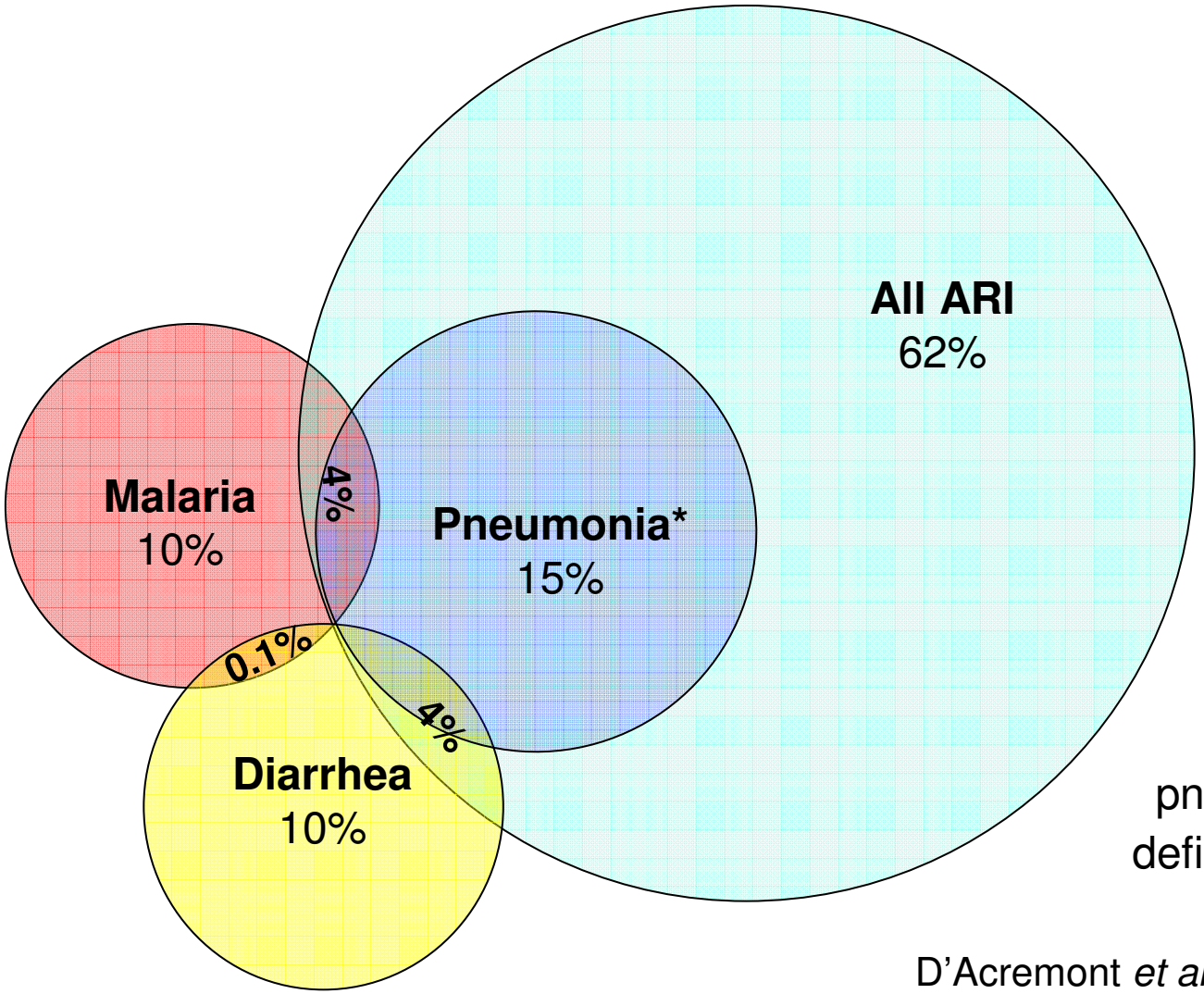
Eliciting microepidemiology of malaria using diagnosis




100 ACTs paid by AMFm
10% lost, expired, not used
90 ACTs 'swallowed' by patients
2/3 of ACTs were adult forms
60 adults, 30 children
50% of adults have fever
70% of children have fever
30 adults, 21 children
70% of ACTs sold in urban areas
Urban areas
21 adults, 15 children
Rural areas
9 adults, 6 children
51 RDT
6 ACT
8 antibiotics
PR=5%
PR=10%
PR=15%
PR=30%
1 adult
1.5 child
1.35 adult
1.8 child
5.8 patients who benefited from ACT

Causes of fever in 1005 children

Urban and rural Tanzania, 2008

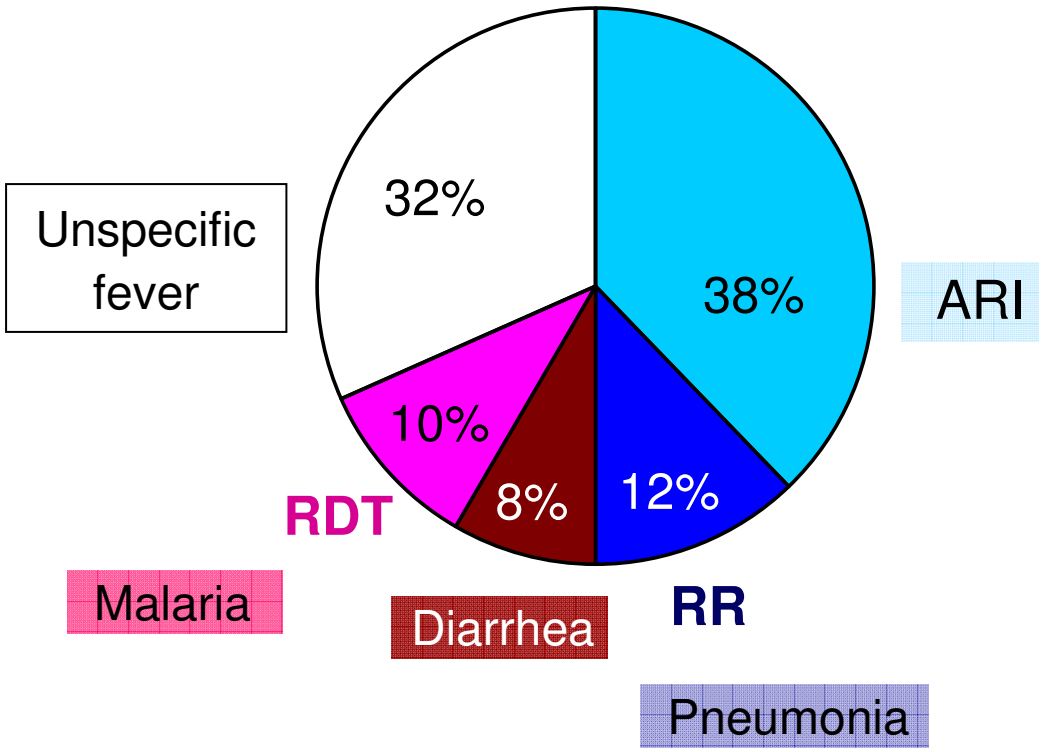


*Clinical pneumonia as defined by WHO

D'Acremont *et al*, ASTMH 2010

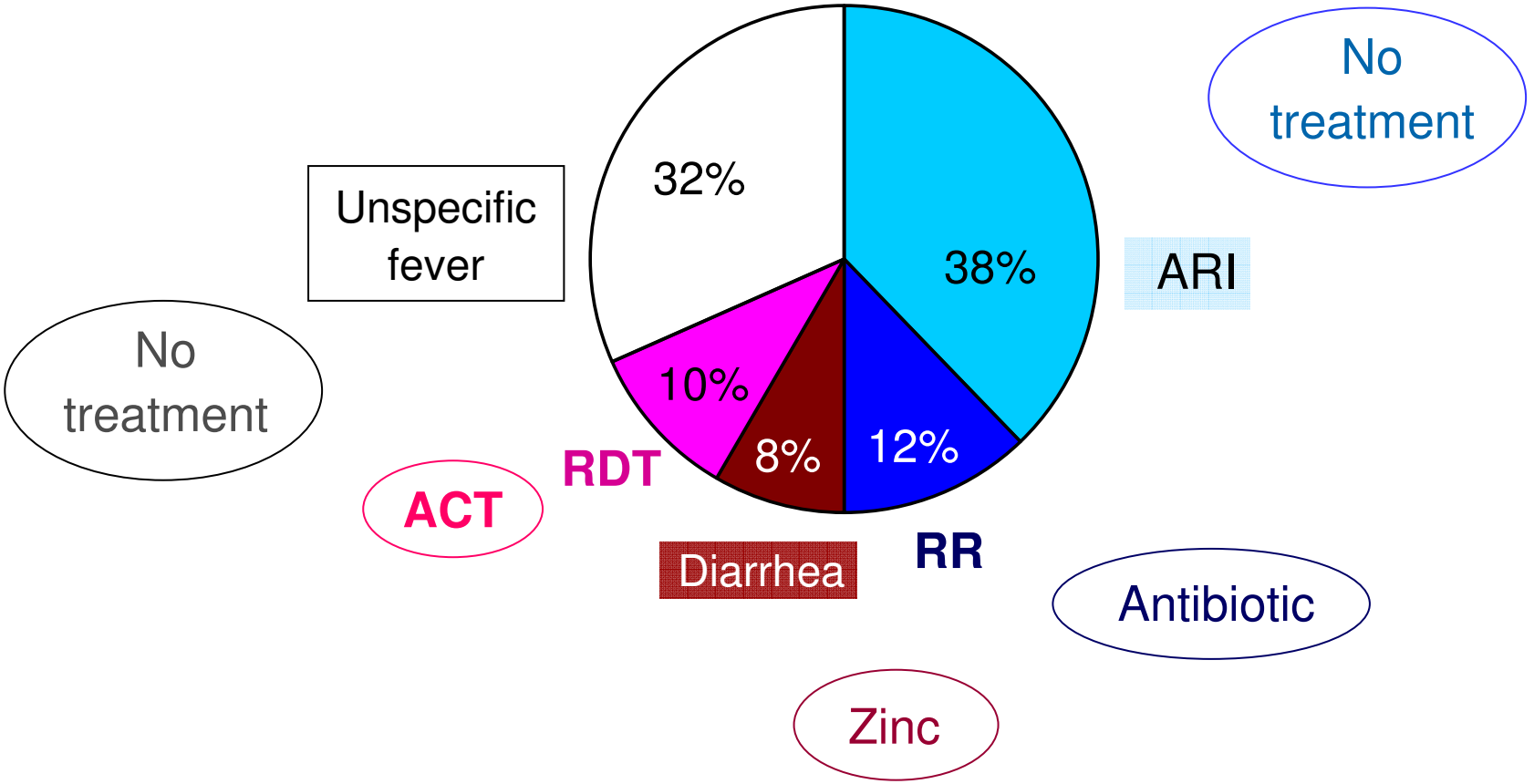
3 different febrile syndromes faced by the clinician

Proportions shown are from Tanzanian children underfive
→ will vary according to the local epidemiology



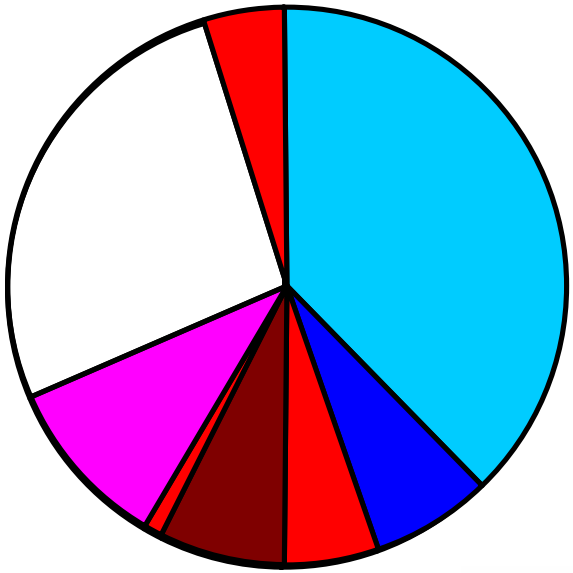
3 different febrile syndromes faced by the clinician

Treatment needed for most of the children
having mild disease



3 different febrile syndromes faced by the clinician

Treatment needed for the few children
having severe disease = **REFERRAL**



Severe sepsis
→ antibiotics

Unspecific fever

No treatment

ACT

Diarrhea

Dehydration
→ iv fluids

Zinc

Antibiotic

No treatment

ARI

Respiratory distress → Oxygen

Clinical outcome of children managed by iCCM

Fever persistence on day 3 and 7 after treatment onset

Cluster	Day 0	Day 3		Day 7	
Intervention clusters					
Burkina Faso	525 (436)	507	11 (2.2)	485	2 (0.4)
Ghana	584 (351)	578	10 (1.7)	561	6 (1.1)
Uganda	975 (563)	958	23 (2.4)	951	8 (0.8)
Total	2084	2043	44 (2.2)	1997	16 (0.8)
Control clusters					
Burkina Faso	576 (457)	563	21 (3.7)	527	5 (0.9)
Ghana	591 (372)	591	8 (1.4)	573	10 (1.7)
Uganda	965 (512)	959	37 (3.9)	918	9 (1.0)
Total	2132	2113	66 (3.1)	2018	24 (1.2)

iCCM

ACT +/- AB

Mukanga *et al*, *AJTMH* 2012

WHO Consultation on fever management at PHC: a global review of evidence and practices (22-24 January 2013)

Technical areas to be addressed

- Clear guidance for managing non-malaria febrile illnesses.
- Algorithms for the management of fever at community for children (above 5 years), adolescents and adults.
- Alignment of IMAI with new WHO malaria treatment guidelines
- Define lists of essential commodities, enabling policies and regulations on community-based management of febrile illness.
- Review best practices for use of ACTs and mRDTs at community and primary care levels, including the private sector.
- Promotion of programmatic tools to support community-based integrated case management interventions