



Malaria diagnosis and treatment:

A Starter Kit to develop interventions in endemic countries

The ACT Consortium developed, piloted, delivered and evaluated training resources in different countries and contexts. We have compiled them into a Starter Kit which we are now sharing to help guide your own work in malaria endemic countries.

If you wish to adapt these resources to your intervention and its context, or design your own tools, this document explains aspects of our design process for you to consider.

What is the ACT Consortium?

We are an international research collaboration, led by the London School of Hygiene & Tropical Medicine in the UK, with the aim to optimise malaria drug delivery.

Between 2007 and 2015, our researchers worked on 25 studies in 10 countries in Africa and Asia to answer key questions about the **access, targeting, safety and quality of artemisinin-based combination therapy (ACT)**, the recommended treatment for malaria.

For example, we asked: How can rapid diagnostic tests (RDTs) be put to best use? How safe are ACTs in vulnerable populations? What is the quality of those medicines? You can find a summary of our findings at www.actconsortium.org/findings.

Our research aimed to assist those responsible for making health policy decisions at global, national and district levels in maximising health investments in relation to ACTs and RDTs.

We wanted to **design and test interventions to support the use of ACTs and RDTs that would be cost effective, sustainable and feasible at scale.**



malaria rapid diagnostic tests

What is this Starter Kit?

The resources in this Starter Kit were produced by the ACT Consortium in order to help share important information about malaria diagnosis and treatment with both health workers and patients. All the resources have been developed, piloted, delivered and evaluated by our multidisciplinary teams as part of their research studies, including through 8 cluster randomised trials.

We are making these resources and the lessons learned in their development available in the hope that they can be of use to others working to control malaria.

Why is it needed?

There are currently limited resources available to help convey the need for appropriate diagnosis and treatment amongst both health workers and patients. As such, the resources in this Starter Kit can be used to help communicate the following set of broad messages:

1. **Not all fever is due to malaria**
2. **Blood-based diagnosis (microscopy and RDTs) can help confirm if someone has malaria**
3. **If someone has malaria, they should be treated with antimalarials, usually an ACT**
4. **If a malaria test is negative, other reasons for the illness should be considered.**

Who is it for?

The Starter Kit is intended for people who are responsible for developing and delivering **health education, communication or training about malaria diagnosis and treatment** in endemic countries.

It has been developed to help train and guide front line health workers who diagnose and treat malaria both in the public and private sectors. This includes doctors, nurses, drug shop vendors and community health workers, as well as the patients they interact with.

What does it include?

The Starter Kit has five resources which include **training manuals, job aids, patient leaflets and a card game**, which we designed to support effective malaria detection, case management and treatment within a range of health providers.

Our activities included facilitated learning, self-reflection tasks, participatory dramas, peer education, supervisory visits, tools for referral of patients or requisition of supplies, and distribution of posters and leaflets.

They all have the potential to be scaled up and/or applied in different contexts.

Photo showing one of the stages of development of the TACT patient leaflet (resource 5), with the artist drafting and amending pictures in real-time in line with suggestions from community members

The Starter Kit

RESOURCE 1: Health centre staff trainer and learner manuals (*PRIME study, Uganda*)

RESOURCE 2: Health worker training manuals and card game (*REACT study, Cameroon*)

RESOURCE 3: Drug shop vendor training manuals and job aids (*Uganda study*)

RESOURCE 4: Community Health Worker training and job aids (*Uganda study*)

RESOURCE 5: Health worker trainer and trainee manuals and patient leaflet (*TACT study, Tanzania*)

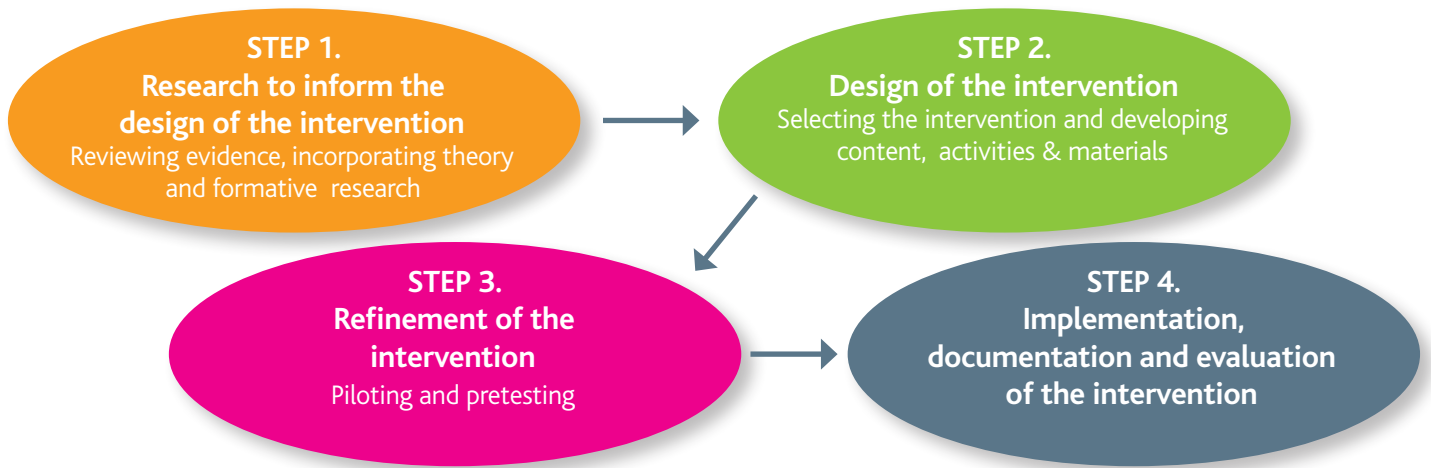
How was it developed?

The ACT Consortium projects invested in designing interventions carefully, with the key principles in mind that all materials should be based on evidence and the interventions should be feasible at scale.

We used published research as well as our own research to establish what might be an effective intervention in a given context. **We pretested intervention content, activities and materials and then adapted them.** Finally, we worked together with various stakeholders to establish their feasibility for future use.



Our process to design interventions was time consuming and costly, but we believe it strengthened the products. It followed four broad steps:

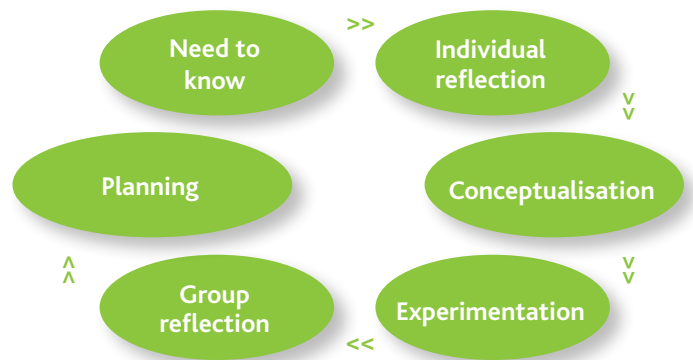


Example for step 1: Formative research

Formative research aims to understand an existing situation where the intervention will take place, including the problem that we are trying to tackle and the local context. We used qualitative research to understand the perceptions and experiences of care seekers and health workers in relation to malaria, its diagnosis and treatment.

We found that what we characterised as the **'overdiagnosis of malaria' was not seen in the same way by patients and health workers**, who recognised symptoms of malaria from experience, and were keen to make sure no cases of this potentially life-threatening but treatable disease were missed.

We learned that a shift to practice based on testing would require substantial changes in the way we seek and give health care. **Simply making new diagnostics and medicines available would not be enough** to ensure their use according to WHO guidelines.



Example for step 3: Piloting and pretesting

Our project teams developed materials and tested them several times with the people that were intended to use them, to **make sure they understood, accepted and considered the materials relevant**. This way we reduced the risk of misinterpretation, and developed interventions that were more suitable to the audience, for example in terms of group sizes and frequency of workshops.

Example for step 2: learning framework

In several projects we developed and used a learning process to facilitate group learning. This is an example of the way we applied evidence to the design of our interventions.

This learning process enabled participants to put principles into practice and discuss with peers, **allowing new knowledge and skills to be embedded into clinical practice**. It is based on adult learning evidence and has six steps.

Learn more about the way we designed interventions at www.actconsortium.org/complexinterventions

Example for step 4: evaluation

In the REACT study (resource 2) we gave training to health workers at a central location, provided them with training manuals and job aids and encouraged them to train other clinicians on return to their facilities.

This cascade training is typical of the setting and would demonstrate feasibility at scale. When evaluating the intervention, we therefore **documented who attended the training as well as any subsequent training events**. We also kept records of RDTs supplied to facilities, and used questionnaires to assess the satisfaction of clinicians and their understanding of the training materials.

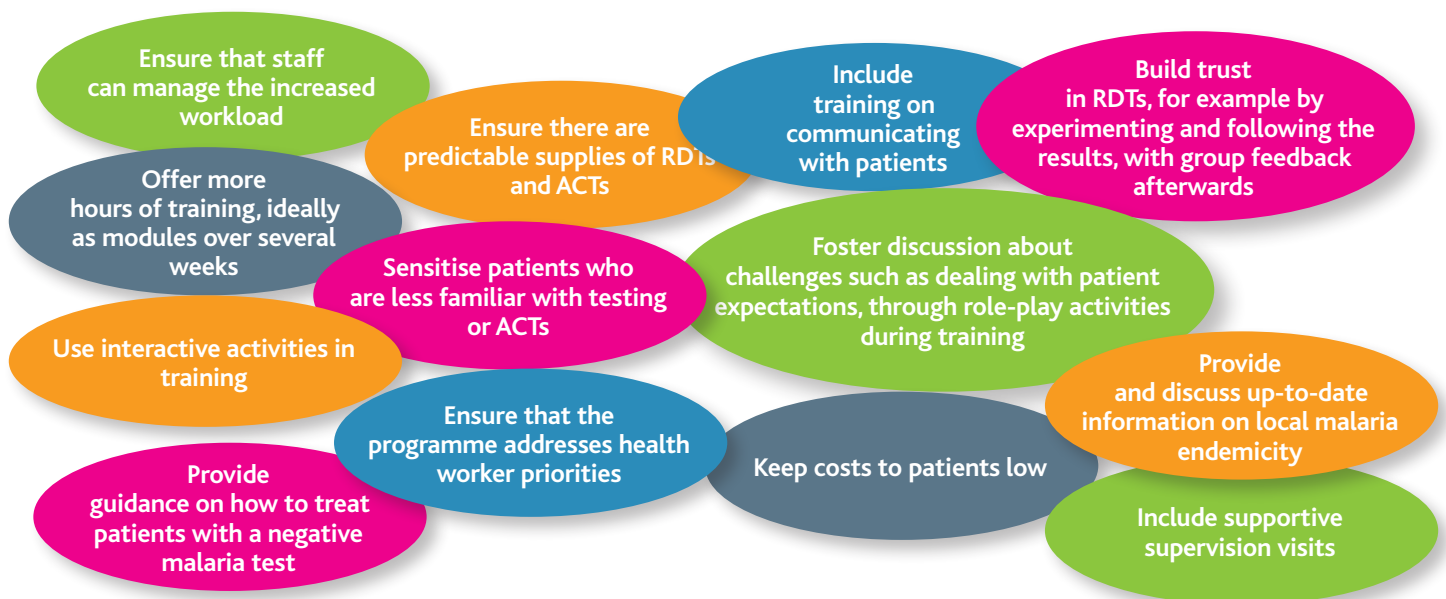


How can I adapt the Starter Kit to different settings?

The materials in this Starter Kit can be adapted for malaria programmes in different contexts. First, we recommend undertaking a needs assessment to identify what components and characteristics of interventions may be required.

Different elements of the Starter Kit interventions may then be assembled, adapted and augmented according to local needs (please consult each tool's usage and citation policy).

To help with decisions on what interventions might work best in different contexts, we looked at the effectiveness of our different interventions and identified some **key characteristics worth considering for successful RDT and ACT implementation**:



What else should I consider when using it?

We are making this Starter Kit available to provide the basis for interventions for RDT and ACT implementation. The materials may either be **used directly as they are or tailored to specific contexts (please consult each resource's usage policy)**. They can also inspire you to develop other similar communication tools.

As well as adapting the materials to the local context, we recommend that you **evaluate the effects (intended and unintended)** of your interventions so that they can be adapted over time. Please also **share with others**, so that we can continue to build a body of knowledge in how best to support patients and health workers in providing high quality health care in malaria endemic countries.

ACT Consortium Members

College of Medicine, University of Malawi, Malawi | College of Medicine, University of Nigeria, Nigeria | Ghana Health Service, Ghana | Georgia Institute of Technology, USA | Health Protection and Research Organisation, Afghanistan | Healthnet, Afghanistan | Ifakara Health Institute, Tanzania | Karolinska Institutet, Sweden | Kilimanjaro Christian Medical Centre, Tanzania | Kintampo Health Research Centre, Ghana | Liverpool School of Tropical Medicine, UK | London School of Hygiene & Tropical Medicine, UK | Makerere University, Uganda | Merlin, Afghanistan | National Malaria Control Programme, Cambodia | National Institute for Medical Research, Tanzania | National Malaria Control Programme, Tanzania | Ministry of Health, Uganda | University of California, USA | University of Cape Town, South Africa | University of Copenhagen, Denmark | University of Yaoundé, Cameroon | US Centers for Disease Control and Prevention, USA | Zanzibar Malaria Control Programme, Zanzibar

