What was the impact on health outcomes of children?
We assessed health outcomes of children in cross-sectional community surveys, and in a cohort of children under five. The final cross-sectional survey was conducted in January-April 2013, (approximately 18 months after we started the intervention). We assessed 8766 children from randomly selected households in the 20 clusters, including 4393 under-fives & 4393 aged 5-15 years.

The primary outcome of the PRIME study was the prevalence of anaemia (haemoglobin < 110 g/dL). We found no difference in prevalence of anaemia or parasitaemia between the intervention and standard care groups.

The PRIME intervention ‘didn’t work’. Why?
The pathway of change broke down at two points:
1) at the point of changing treatment seeking practices, and
2) at the point of improving fever case management.

In theory, introducing RDTs in health centres will reduce ‘over-prescription’ of AL, improving targeting of antimalarial treatment and fever case management, thus resulting in better treatment outcomes.

However, this theory is not applicable in high transmission settings such as Tororo, where weak health systems, poverty and malaria create a cycle of poor health care.

In summary....
The PRIME intervention was implemented successfully, although not all health workers received the training. The intervention appeared to improve malaria case management, communication between health workers and patients, and patient satisfaction with care. But these improvements were small, and we did not see improvements in health outcomes of community children. Broader health centre changes and additional malaria prevention measures will be required in this high malaria transmission setting.

The PRIME intervention had a small positive impact (shaded green) on proximal outcomes, including health worker behaviour and appropriate treatment of malaria. However, these positive effects did not extend to the community level, where no differences were seen in health indicators between the children from intervention and standard care communities (shaded pink).

What are the policy implications?
To improve quality of health care within the public sector, infrastructure and wider systems and political issues must be addressed. Currently deployed malaria control methods, including use of insecticide treated bednets (ITNs) and treatment with ACTs (including AL) are not adequate to control malaria in Tororo. Novel approaches, such as use of chemoprevention, may be required.

Effect of the intervention

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For full list of publications, training manuals and videos, visit www.actconsortium.org/PRIME and www.actconsortium.org/PROCESS.

References and Resources
How was the PRIME study done?
The PRIME study was designed to evaluate the impact of the intervention delivered at public health centres using a cluster-randomized design in Tororo district. Twenty lower-level health centres from 7 sub-counties were randomly assigned to the intervention or to standard care. The 10 health centres that were assigned to the intervention received the intervention package. Those assigned to standard care continued with their usual activities. Assignments were made randomly, like a lottery. The PRIME intervention took place from May 2011 to April 2013.

To evaluate the impact of the PRIME intervention, we conducted three cross-sectional community surveys, followed a cohort of children under five, and conducted patient exit interviews and monthly surveillance at the health centres.

What was the impact on health workers and health centres?

The PRIME study was designed to evaluate the impact of the intervention delivered at public health centres using a cluster-randomized design in Tororo district. Twenty lower-level health centres from 7 sub-counties were randomly assigned to the intervention or to standard care. The 10 health centres that were assigned to the intervention received the intervention package. Those assigned to standard care continued with their usual activities. Assignments were made randomly, like a lottery. The PRIME intervention took place from May 2011 to April 2013.

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