Faster, Better, Lower Cost

Using simplified pictorial tools and a modified training curriculum to improve the quality and reduce the cost of iCCM in the Democratic Republic of Congo

The Rapid Access Expansion (RAcE) Program

The International Rescue Committee (IRC) has been implementing the World Health Organization-supported Rapid Access Expansion (RAcE) program in the Tanganyika Province of the Democratic Republic of Congo since September 2013. The main objective of the program is to reduce under-five mortality by expanding integrated community case management (iCCM) through *relais communautaire* (community health workers). IRC conducted operational research to determine if simplified tools and an improved training curriculum focused on adult learning methodologies and practical exercises could result in faster, better, and lower-cost implementation of iCCM.

Research Methodology

A non-experimental, static group comparison with a non-equivalent control group was employed for the study. *Relais* from two health zones (Manono and Kabalo) out of the 11 health zones where the project is active were sampled and assigned to one of two arms of the study:

- **Arm 1** (Model 1 - control): current MOPH package of training and tools
- **Arm 2** (Model 2 - intervention): intervention package of improved training curriculum and simplified pictorial tools

Research Rationale

Relais communautaires are volunteers who provide free treatment in hard to reach communities for the three diseases that account for the largest number of deaths in children under five: diarrhea, pneumonia, and malaria. The current Ministry of Public Health package of tools in the DRC consists of seven tools that must be filled out by the *relais* who often have low-literacy. The tools are complicated and result in lengthy assessments of sick children and an increased workload for the *relais*. IRC developed simplified pictorial tools and an improved training package to determine whether a new package could result in the following:

- Improved quality of care;
- Decreased *relais* workload; and
- Reduced cost of iCCM implementation.

Three **outcomes** were used to assess the effectiveness of both packages:

- **Quality of care**: Correctness of assessment and adherence of *relais* to protocol in treating a sick child at the health center, as measured by direct observation
- **Workload**: Duration of each evaluation of a sick child including completion of tools
- **Cost analysis**: Costs program would incur to roll-out each package in one health zone in Tanganyika province with 100 active *relais* based on actual cost incurred by the program during the study

Key Findings

Faster

Relais using simplified tools spent less time on average per case.

Better

Children were three times more likely to receive correct treatment from *relais* in the intervention group.

Lower Cost

Cost-savings of $4,418 per 100 *relais* during year one of the project

Children were immediately re-examined by a trained clinician after the observation. The quality of care observations were conducted six months after *relais* were trained.

The IRC targeted having a sample size of 75 *relais* observed assessing a sick child between 2 and 59 months, for a total of 150 cases. To account for non-response of *relais* (those who might not be available at the time of assessment), the sample size was inflated to include 80 *relais* in each targeted health zone.

The table to the right illustrates the breakdown of the *relais* sampled across both arms. The odds of correct performance were calculated, controlling for characteristics of the *relais* (age, sex, education, and occupation), the child (age, condition, and complexity of the condition), the health zone, and the average number of supervisions per health area.

	Model 1 (control group)		Model 2 (intervention group)	
Health Zone	Health Centers	*Relais* Observed	Health Centers	*Relais* Observed
Kabalo	14	38	10	39
Manono	10	36	15	39
Total	24	74	25	78

KEY FINDINGS:

1. Children were three times more likely to receive correct treatment from *relais* in the intervention group.

2. *Relais* from the intervention group were five times more likely to correctly investigate all danger/alert signs.

3. *Relais* from the intervention group took less time to complete the observed case.

4. Model 2 results in a cost-savings of $4,418 per 100 *relais* supported during year one of a project.

- The costing model assumes 100 *relais* conducting iCCM in one health zone.

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