



OPERATIONS RESEARCH BRIEF December 2013

Testing an Integrated Care Group Model for Community-based Health Promotion in Burundi

Human resource constraints and lack service delivery mechanisms impede the intensive, interpersonal actions required for population-level behavior change. Sustainable, community-based strategies that strengthen the capacity of the Ministry of Health must be identified, evaluated, and scaled-up.

Care Group Volunteer, Fitina Honorate, conducts a home visit in Mugina Commune. Photo: A. Fox, Concern Worldwide

KEY FINDINGS

- There is sufficient evidence to conclude that the Integrated Care Group model is not inferior to the Traditional Care Group model.
- The integrated model demonstrated sufficiently similar practice and knowledge outcomes, as well as functionality and sustainability measures.
- There is a significant cost differential between the traditional and integrated models, with the traditional model costing \$0.90 more per beneficiary per year
- The Integrated Care Group model should be adopted and scaled-up as a lower cost yet equally efficacious social and behavior change intervention in Burundi and other resource poor settings

BACKGROUND

Burundi is one of the poorest countries in the world. Child mortality rates remain unacceptably high at 139 per 1,000 live births and the country is not on track to achieve Millennium Development Goal 4 of 61 per 1,000 by 2015.

As in most low income countries, children in Burundi die primarily from the cumulative effect of largely preventable diseases and undernutrition.

Within this context, Concern Worldwide is implementing a USAID Child Survival and Health Grants Program-funded initiative from 2008–2013, which targets 46,708 women of reproductive age and 60,353 children under five in Mabayi District, Cibitoke Province. The objectives

of the project are to improve household maternal and child health and nutrition practices, increase access to quality child health services, and improve community leadership in health. Concern's principal partner in project planning and implementation is the Ministry of Health at the national, provincial, and district levels, especially the members of the Mabayi District Health Team.

The gross difference in cost between the two Care Group models is approximately \$46,000; which, when implemented at scale, would result in significant savings.

INTERVENTION DESIGN AND IMPLEMENTATION

The Care Group model is an evidence-based delivery strategy for social and behavior change interventions that has contributed significantly to improved child health outcomes in a number of contexts.



Children in Bukinanyana Commune stand in the doorway of a Community Health Worker during a home visit. Photo: M. Christensen, Concern Worldwide, US

Community Health Workers have gained a higher status in the community as they engage in supervisory activities comparable to NGO staff.

However, due to the intensive management requirements of Care Group activities satisfied through full-time project staff, it may be difficult for the Ministry of Health to sustain Care Groups following the conclusion of the program. Concern designed the Integrated Care Group model to increase integration with the local Ministry of Health structure by task shifting Care Group facilitation and supervision duties from project staff to Ministry of Health structures.

In the Integrated Care Group model, Care Group Volunteers are trained and supervised by Community Health Workers, who are in turn trained and supported by *Titulaires* (the head nurse at the health facility). This adjusted implementation method is intended to increase the feasibility of scaling up a sustainable Care Group model by national Ministries of Health in under-resourced health system settings.

Concern Worldwide implemented the traditional and the integrated models in two clusters of Bukinanyana Commune. Care Groups were established in the same way in both study areas, using standard Care Group practices including community sensitization to Care Groups, census of all households with pregnant women and children

under five, and election of Care Group Volunteers based on census results. Based on formative research and the project's technical intervention areas, behavior change modules promoted evidence-based nutrition, malaria, diarrhea and pneumonia management behaviors. In both study areas, Care Group meetings took place twice per month, and Care Group Volunteers conducted household visits at least once per month, during which they provide targeted health promotion messages, screen for acute malnutrition, and collect vital events data.

In the Traditional Care Group study area, project animators supervise promoters, who in turn supervise Care Group Volunteers. Community Health Workers in the traditional area may also assist with Care Group Volunteer supervision by carrying out household visits to ensure that Care Group Volunteers have effectively delivered messages. In the integrated area, Community Health Workers supervise Care Group Volunteers by conducting follow-up household visits, reviewing Care Group Volunteer registers, and troubleshooting problems during Care Group meetings. Community Health Workers in both study areas are supervised by the health facility-based *Titulaire*, as dictated in the Community Health Policy.

METHODOLOGY

The Care Group models were assessed to determine whether the integrated model achieved the same levels of knowledge and practices of key child health and nutrition behaviors among caregivers of children 0–23 months as the traditional model (Hypothesis 1) and whether the integrated model achieved the same level of functionality and sustainability as the traditional model (Hypothesis 2).

The study was conducted in Bukinanyana Commune, one of three mountainous and rural communes in Mabayi Health District, Cibitoke Province, Burundi. The five Ministry of Health zones in Bukinanyana Commune were grouped into two clusters based on population size. Each cluster was then randomly assigned to either the intervention area (Integrated Care Groups) or comparison area (Traditional Care Groups).

Hypothesis 1 was assessed through 40 key child health and nutrition knowledge and practice indicators including diarrhea, malaria, pneumonia, and nutrition. Data was collected through baseline (October 2010) and endline (May 2013) surveys of caregivers of children 0–23 months of age, with non-inferiority statistical testing conducted at endline. Hypothesis 2 was assessed through monthly monitoring of five Care Group key operational indicators, such as Care Group meeting attendance, home visits conducted, and reporting in both traditional and integrated areas.

The qualitative portion of the study drew from the mid-term process evaluation, which was designed to document the successes, challenges and changes associated with implementation of both the Traditional and Integrated Care Group Models in a prospective manner. A total of 15 focus group discussions, five in-depth interviews, and 20 non-participant observations were completed.



Gloriose Kankindi, Community Mobilization Officer – Concern Worldwide Burundi, reviews a Community Health Worker's records. Photo: R. Sztopa, Concern Worldwide

FINDINGS TO DATE

Hypothesis I: Overall, there is strong evidence that the integrated model is not inferior to the traditional model. Thirty-six of the forty indicators (90 percent) were not inferior in the integrated area. The non-inferiority of the integrated model is particularly evident among the practice indicators. Only one indicator was inferior in the integrated area. Non-inferiority was more moderate among the knowledge indicators, primarily because of lower knowledge among mothers of food intake requirements for children.

Hypothesis II: Overall, all five Care Group operational indicators nearly met or surpassed project targets, and there was no significant difference in Care Group functionality between the two models. Care Group operations fluctuated over the life of the project, but the two models performed similarly. The sustainability measures demonstrate similar outcomes, with a somewhat better sustainability trend in the integrated model compared to the traditional model.

The mid-term process evaluation highlighted that Community Health Worker supervision by health facility staff was an ongoing challenge in both study areas. As a solution, Concern worked with the Titulaire to identify an alternate 'focal point' for all Care Group activities, usually a more junior nurse who had fewer time constraints. The process evaluation also found that the Community Health Workers have taken on a more active role in Care Group meeting facilitation and reporting in the traditional area than had originally been anticipated.

Concern did not discourage Community Health Workers from taking more of a leadership role in Care Group activities in the traditional area, and believe it is a sign of community approval of the structure of the integrated model. That said,

although promoters did maintain lead responsibility for all Care Group facilitation and supervision duties, greater Community Health Worker involvement in the traditional area does limit the differences between the two models as they were tested over the life of the study.

A cost analysis found that there is a significant cost differential between the traditional and integrated area, even when taking into account the variations in the number of Care Group Volunteers, Community Health Workers, and beneficiaries in each study area; with the traditional model costing \$0.90 more per beneficiary per year. The gross difference in cost between the two Care Group models is approximately \$46,000; which, when implemented at scale, would result in significant savings. An Integrated Care Group model implemented at scale could also lead to further savings, especially in terms of staffing and material development.



Concern Worldwide's Glorioso Kankindi, Community Mobilization Officer, and Jean-Bosco, Animator in Mugina Commune, participate in an Integrated Care Group meeting. Photo: A. Fox, Concern Worldwide

RECOMMENDATIONS AND USE OF FINDINGS

There is sufficient evidence to conclude that the Integrated Care Group model is not inferior to the Traditional Care Group model. The integrated model demonstrated sufficiently similar practice and knowledge outcomes, as well as functionality and sustainability measures.

This research has also reinforced the existing evidence that Care Groups are a highly effective methodology to address key child survival priorities. Care Group Volunteers are a valuable source of health education messages in their community. The Integrated Care Group model demonstrates how Care Group Volunteers provide a means to extend the reach of Community Health Worker to achieve high levels of behavior change at the individual and household levels. In addition and as similarly demonstrated in other Care Group projects, Care Group Volunteers are able to effectively collect and report on community health information system data, including vital events. The Integrated Care Group model demonstrates how such data may be integrated into national health information

systems through both Care Group Volunteers and Community Health Workers.

In addition to being a lower cost model, there are clear positive externalities to the integrated model compared to the traditional model. Community Health Workers train and supervise Care Group Volunteers in the integrated area. As such, Community Health Workers are simultaneously strengthening their own knowledge and skills, as well as their ability to deliver higher quality health services to their target households. Moreover, Community Health Workers have gained a higher status in the community as they engage in supervisory activities comparable to NGO staff.



Mothers gather outside a health facility after an under-five clinic day. Photo: M. Christensen, Concern Worldwide, US

Concern recommends that the integrated model be scaled-up in Burundi and that Care Group Volunteers be integrated as a formal component of the community health system to improve coverage of key health and nutrition interventions at the individual and household levels. Existing Community Health Worker performance-based financing policies could be revised to include key Care Group operational indicators to further incentivize and institutionalize the model. While NGOs will still have a role in the medium-term to build the capacity of the Ministry of Health at the district level to implement the integrated model, it is conceivable that the model could be scaled-up and institutionalized within the community health structures.

A final recommendation is to prioritize funding for future sustainability studies on this research. Concern recognizes that this study only provides

initial estimates of sustainability, and further research examining health and nutrition outcomes, as well as Care Group operational indicators, in both traditional and integrated study areas should be implemented within the next two years.

Throughout the operations research study, the Ministry of Health has demonstrated keen interest in the potential of the Integrated Care Group model. Ministry of Health representatives have praised the model, specifically the ability to extend coverage of key interventions to all eligible households, the strengthened linkages between the community and health facility levels, and the incorporation of community health information system data into national health information system. The official findings of this study were disseminated to the Ministry of Health, UNICEF, and key implementing partners in September 2013.



Care Group volunteers in Bukinanyana Commune join in song to open a Care Group meeting. Photo: A. Fox, Concern Worldwide



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