

Not for quotation or dissemination

Care Groups II: A Summary of the Maternal, Neonatal and Child Health and Nutrition Outcomes Achieved in High-Mortality, Resource-Constrained Settings

Henry Perry¹, Melanie Morrow², Thomas Davis³, Sarah Berger⁴,
Jennifer Weiss⁵, Mary DeCoster⁴, Jim Ricca⁶, and Pieter Ernst⁷

Corresponding author: Henry Perry, Room E8537, 615 North Wolfe Street, Baltimore, MD, 21205, USA (hperry2@jhu.edu)

¹ Department of International Health, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD

² ICF International (Maternal and Child Survival Project/USAID/Jhpiego), Washington, DC

³ Feed the Children, Oklahoma City, Oklahoma

⁴ Food for the Hungry, Washington, DC

⁵ Concern Worldwide/US, New York, NY

⁶ ICF International (Maternal and Child Survival Project/USAID/Jhpiego), Washington, DC

⁷ World Relief/Mozambique, Chokwe, Mozambique

Abstract

The Care Group approach, described in a previous paper in this journal, utilizes volunteers to visit their neighbors to convey health promotion messages. These are taught to the volunteers by a paid Promoter, who meets with 12 or so Care Group Volunteers usually every 2 weeks. Each Care Group Volunteer is responsible for sharing that message with 10-15 of her neighbors. The approach has been used by more than 23 organizations in more than 27 countries at present. This paper summarizes the available evidence regarding the effectiveness of the Care Group approach, drawing on articles published in the peer-reviewed literature as well as data from unpublished but publicly available project evaluations and summary analyses of these evaluations.

Care Groups are remarkably effective in increasing the population coverage of key child survival interventions. There is strong evidence that Care Groups can reduce childhood undernutrition and reduce the prevalence of diarrhea. Finally, there is evidence from multiple sources – from independent assessments of mortality impact, from vital events collected by Care Group Volunteers themselves, and from analyses using the Lives Saved Tool (LiST) – that Care Groups are effective in reducing under-5 mortality. Care Group projects costs in the range of \$3-7 per beneficiary per year. The cost per life save in in the range of \$441-\$3,773 and the cost per DALY averted is in the range of \$15-\$126.

The Care Group approach represents an important, effective and innovative low-cost approach to increasing the coverage of key child survival interventions in high-mortality, resource-constrained settings.

Introduction

Evidence-based interventions – those that have been shown to improve the health of resource-constrained populations under research conditions – provide the basis for much of global health programming.¹ Rigorous evaluation of field programs that provide multiple interventions together under more routine conditions, unfortunately, has not been given sufficient attention and has now become a top priority for global health.² Much of the existing evidence upon which programming is based has been obtained from testing specific interventions in highly controlled field settings – often referred to as efficacy studies. Assessing the effectiveness of approaches that integrate multiple interventions and applying them in less-rigorously controlled field settings constitutes a logical next step in building a strong evidence base in global health programming. Community-based approaches to improving child health are now recognized as essential for improving nutrition and reducing mortality.³ However, much of the evidence is based on efficacy studies of individual interventions rather than on testing of the delivery of multiple interventions in more typical field settings.^{4,5} In the previous article in the current issue of this journal, we described a new approach – Care Groups – to the community-based delivery of maternal and child health interventions.⁶

Care Groups provide a means to implement multiple interventions by promoting healthy behavior change at the household level using volunteers who visit their neighbors frequently and provide peer-to-peer counseling. The purpose of this present communication is to summarize the evidence regarding the effectiveness, cost, and cost-effectiveness of the Care Group approach to improving child survival, all of which has been generated in relative routine field conditions.

Methods

A review of the evaluations of Care Group child survival projects was undertaken. This included unpublished project evaluations, presentations about Care Group projects given at global health conferences, peer-review publications, and recent unpublished research on Care Group effectiveness that is in the process of being published. In addition, the findings from two Technical Advisory Group (TAG) meetings held in 2010 and 2014 were also reviewed. These TAG meetings provide the opportunity for those engaged with Care Group child survival project implementation to review the progress, achievements and limitations of the Care Group approach.

Initial evidence of effectiveness

Early evidence of effectiveness of the Care Group approach arose in the late 1990s and early 2000s from comparisons of baseline with end-of-project measures of population coverage of key interventions. The international NGO World Relief carried out an independent retrospective assessment of the mortality impact of its Care Group child survival project in

Mozambique. This project had been implemented in a population of 130,000 people living in rural villages of Chokwe District from 1999-2004. Independent interviewers with experience in collecting data for the Mozambique demographic and health survey were hired to obtain pregnancy histories from a representative sample of women in the project area. The independent mortality assessment demonstrated that the under-5 mortality rate had declined by 42%. These findings were supported by marked increases in population coverage of key maternal and child interventions, increases in health care utilization, as well as a 62% decline in under-5 mortality according to vital events registration data collected by the Care Group Volunteers themselves.⁷

World Relief conducted another Care Group project in Kampong Cham province in Cambodia from 2000-2004, and this showed a similar dramatic decline in under-5 mortality of 71% according to vital events data collected by the Care Group Volunteers themselves compared to an ongoing secular decline of 42% in the province during the same period.⁸ This was also accompanied by marked increases in population coverage of key maternal and child health interventions and in health care utilization.⁹

Early findings of Care Group effectiveness

World Relief later developed and implemented similarly successful Care Group projects in Rwanda and Malawi, which achieved high levels of coverage of key interventions. Other NGOs started to try the Care Group approach in other settings, most notably first by Food for the Hungry in the Sofala Province of Mozambique and Curamericas Global in Guatemala. Other international NGOs with funding from the United States Agency for International Development (USAID) Child Survival and Health Grants Program adopted the Care Group approach soon thereafter: American Red Cross in Cambodia, Plan International in Kenya, Salvation Army World Service Organization (SAWSO) in Zambia, Concern Worldwide in Burundi, and Medical Teams International (MTI) in Liberia. NGOs using this approach were achieving remarkable expansions of coverage. This became more apparent when outcomes were directly compared between USAID Child Survival and Health Grants Program-supported projects using the Care Group approach with other child survival projects supported by the same financing mechanism and undergoing similar approaches to evaluation).¹⁰ This was done by using an early version and subsequent versions of what today is known as the Lives Saved Tool (LiST)¹¹ to estimate mortality impact indirectly based on changes in population coverage of evidence-based interventions as shown in Figure 1.

Figure 1 about here

At that time, 13 Care Group projects had been implemented by seven different international NGOs, and the overall percentage reduction of under-5 mortality estimated using

LiST was 30% compared to 14% for the overall group of 21 child survival projects (including the Care Group projects) that had been implemented with support from USAID Child Survival and Health Grants Program and had been completed between July 2004 and June 2005.¹² In that analysis, the child survival project with the best performance, as measured by estimated mortality decline using LiST, was the World Relief/Mozambique Care Group child survival project previously mentioned (labelled in Figure 1 as WR/Moz (Vur II).

Food for the Hungry, another international NGO, implemented a Care Group child survival project funded by the USAID Child Survival and Health Grants Program in seven districts of Sofala Province in Mozambique between 2005 and 2010 in a total population of 1.1 million people. As shown in Table 1, the project achieved an annual decline in the percentage of undernourished children that was approximately four times greater than the underlying secular decline (2.2% versus 0.4-0.6%).¹³ The results were accompanied by major increases in the coverage of key child survival interventions related to nutrition (such as rates of exclusive breastfeeding during the first 6 months of life, frequent feeding after 6 months of age, provision of vitamin-A rich and oily foods after 6 months of age, feeding after childhood illness, and vitamin A supplementation) as well as by increased coverage of interventions to prevent and treat diarrhea (such as treatment of drinking water, hand washing, knowledge of how to prepare oral rehydration solution (ORS), and administration of ORS to children with diarrhea).

Table 1 about here

More recently, the Care Group approach was used in a randomized controlled trial to assess the effectiveness of a behavioral change communication (BCC) intervention on reducing diarrheal prevalence in a peri-urban urban setting on the outskirts of Cochabamba, Bolivia.¹⁴ Care Groups were randomly assigned to one of four interventions: (1) the utilization of a special water filter (Sawyer PointONE™) without BCC, (2) a special water filter with BCC, (3) BCC without the special water filter, and (4) a control arm in which Care Groups were used to promote an intervention unrelated to diarrhea prevention (weekly messages on life skills and attitudes such as household budgeting, valuing children and environmental stewardship). Over a 6-month period, the two-week prevalence of diarrhea remained in the range of 40-60% in the control arm while in both the Care Group BCC arm and in the Care Group BCC + water filter arm the prevalence of diarrhea declined to one-fourth (9-14%, depending on the arm) of baseline levels. The Care Group BCC intervention was as effective as the special water filter intervention alone and as the Care Group BCC + water filter intervention.

A recent analysis has compared the estimated mortality impact using LiST of 10 Care Group projects with seven non-Care Group projects implemented in the same countries. All of

these projects were funded by the USAID Child Survival and Health Grants Program and were carried out between 1998 and 2010. The Care Group projects demonstrated an average annual rate of reduction in under-5 mortality that was 1.5 times greater for the Care Group projects than for the non-Care Group projects (4.8% versus 3.1%).¹⁵ Overall, the Care Group projects yielded higher increases than the non-Care Group projects in population coverage of all the 17 indicators for high-impact interventions. The Care Group projects included in the analysis had more than twice the increase in population coverage compared to non-Care Group projects for antenatal care visits, tetanus toxoid vaccination, multiple micronutrient supplementation, complementary feeding, hand washing with soap, use of oral rehydration therapy for diarrhea, use of oral antibiotics for pneumonia, and malaria treatment.

These findings take on additional significance because the USAID Child Survival and Health Grants Program-funded child survival projects implemented by international NGOs have a documented track record of accelerating under-5 mortality reduction (as estimated by using LiST to model project-documented population coverage change and comparing these results to Demographic and Health Survey (DHS)-measured under-5 mortality declines for the country or region). A recent analysis¹⁶ of 12 such projects completed between 2006-7 in countries where there was a national DHS finished within 3 years of project initiation and also a DHS survey finished within 3 years of project completion demonstrated that the annual under-5 mortality decline as estimated by LiST (for USAID Child Survival and Health Grants Program-funded child survival projects, including both Care Group and non-Care Groups projects) was twice as great as the underlying secular trend in under-5 mortality decline (5.8% versus 2.5%) across a variety of settings. This analysis was done on a set of projects funded by the USAID Child Survival and Health Grants Program that were representative for that time period (and, in fact, included one Care Group project). The results can be thought of as the “typical results” of the projects funded through this mechanism.

Qualitative analyses were carried out at the time of end-of-project evaluations in the form of key informant interviews and focus group discussions with project staff. Care Group Volunteers and beneficiaries have uniformly demonstrated that Care Groups are an effective delivery mechanism for child survival interventions. Care Groups are also empowering to the Care Group Volunteers. Many of these Volunteers go on to leadership positions in their communities and beyond.

Finally, the great majority of Care Group projects that have been implemented so far have independently conducted end-of-project evaluations that are publicly available. A current list of Care Group projects that have been completed, and their final project evaluations are readily available.¹⁷ They all show marked increases in population coverage of key interventions and strongly positive assessments by project beneficiaries, community leaders, Care Group Volunteers, and project staff.

How much do Care Group projects cost and what is their cost-effectiveness?

The initial Care Group projects were mostly funded by the USAID Child Survival and Health Grants Program and their costs are known. The availability of LiST to estimate the number of lives saved according to the change in coverage of key child survival interventions makes it possible to compute a cost per life saved and a cost per disability-adjusted life year (DALY) averted. Table 2 provides this information for eight of the early Care Group projects completed in 2010 or before.

Table 2 about here

The average cost per beneficiary (mothers and children 0-59 months of age) per year is in the range of \$3-8. The cost per life saved (as estimated by LiST) is in the range of \$441-\$3,773, and the cost per DALY averted (again, using LiST and assuming that 30 DALYs were gained for each averted death of an under-5 child) is in the range of \$15-126. It should be noted that this cost per DALY gives a conservative estimate, as it does not include any measure of morbidity improvement.

Few studies of the cost-effectiveness of integrated community-based child survival projects and programs have been published, so comparing these findings with other approaches is a challenge. Table 3 compares cost-effectiveness data for Care Group child survival projects with unpublished data from a comprehensive primary health care program in Bolivia,¹⁸ a comprehensive primary health care and hospital program in Haiti,¹⁹ a hypothetical package of key community-based interventions,²⁰ and Participatory Learning and Action (PLA) groups.^{21,22} In terms of cost per life saved and cost per DALY averted, the cost-effectiveness of Care Group projects compares favorably with that of other approaches for which mortality impact and costs have been measured or estimated.

Table 3 about here

Limitations of the evidence

The evidence presented here has definite limitations. Some of the data are unpublished in the peer-reviewed literature. Nonetheless, the previously unpublished data that have been presented in this paper have been collected with a fidelity that makes them worthy of publication. The evaluations of USAID Child Survival and Health Grants Program child survival projects are widely known to be of high quality and carried out under guidelines established by USAID Child Survival and Health Grants Program, which use accepted scientific criteria for indicator definition and measurement of population coverage, and they base their estimates on

procedures for indicators measurement, data collection, and analysis established by the Demographic and Health Surveys.

There is surprisingly limited comparative data on the mortality impact and costs of integrated, community-based child survival programs. Thus, the evidence base for Care Group effectiveness, although arising from many sources and using many different criteria of effectiveness, is not as strong as it could be. This is in part because data are lacking in other quarters against which to benchmark these results. Nevertheless, the evidence is important and merits reporting in the peer-reviewed literature as a comparison for further analyses of existing data and for future studies of Care Group effectiveness, which are definitely warranted in our view.

How can we account for the effectiveness of Care Groups?

Are there specific aspects of the Care Group model that account for its effectiveness, or is it the net sum of the various elements of the Care Group model rather than any single element that makes Care Groups effective? This is a question that is not readily answered; no firm data exist to support specific hypotheses. Plausible reasons given by those with experience with Care Group implementation are the following:

- Identification of all target households and delivery of interventions to all households at their doorstep;
- Peer-support counseling and modeling of key behaviors by volunteer women selected by their peers (who are more likely to be “hubs” in their social networks), resulting in community-wide uptake of new behaviors and changes in community norms;
- Well-designed lessons provided in small “drips” along with visual aids such as flip charts to assist the low-literacy Care Group Volunteers in sharing key practices (or behaviors) with their neighbors;
- The iterative empowering nature of Care Groups, which meet every 2-4 weeks and support individual Care Group Volunteers to learn progressively how to effectively promote change with those in their catchment areas (and review deaths and what could be done to prevent future deaths);
- The social support the Care Group volunteers provide to each other that is motivating and provides positive social pressure to do things well; and,
- A combination of some or all of the above, or perhaps even a synergistic effect of some or all of the above.

Exploring the relative importance of these elements is basically “virgin territory” for research regarding how and why community-based programming is effective (or not). A call has recently gone out for a better understanding of the mechanisms that account for the effectiveness of participatory women’s groups.²³

How can the Care Group implementation delivery system be brought into the mainstream and incorporated into government health programs?

In spite of the impressive accumulated evidence regarding the effectiveness of Care Groups as a community-based intervention delivery system, the projects employing this system have all ended, unfortunately, once external donor support has ended. However, there is considerable anecdotal evidence as well as evidence from a follow-up survey in one project that Care Group Volunteers remain active for at least several years following the end of external funding. Nonetheless, there has not yet emerged a clear approach to implementing and sustaining the Care Group approach in Ministry of Health (MOH) delivery systems. This is because effective Care Group implementation requires a small number of well-trained and well-supervised facilitators who can work exclusively with Care Group Volunteers, and so far no MOH has been willing to dedicate its peripheral staff to carry out this task exclusively on a full-time basis. Before MOHs are willing to do this, the current evidence regarding Care Group effectiveness will have to be more compelling and better disseminated. Additional evidence will need to be generated as well. Operations research projects modelled after the Concern Worldwide/Burundi project,²⁴ described in the previous paper in this series,⁶ will be needed to document how the Care Group approach can be integrated sustainably into existing MOH structures in additional settings.

Next steps

The Care Group model has achieved an impressive record of success in terms of enthusiasm for the approach among implementers and beneficiaries as well as in terms of effectiveness (in expanding coverage of key child survival interventions, in mortality impact, and in cost-effectiveness). Unfortunately, the experiences and evidence have not yet been widely disseminated and are not well-known. In order to move toward “mainstreaming” of the Care Group approach, the current evidence of effectiveness needs to be better analyzed and reported in the peer-reviewed literature. Donor support will be required to support this work and to conduct more rigorous evaluations, possibly including additional randomized controlled trials. More rigorously evaluated experiences in integrating the Care Group model into MOH systems and in implementing the Care Group approach in urban slum settings are needed.

Conclusions

Care Groups are an important new cost-effective approach for expanding the coverage of key maternal and child interventions and for accelerating the reduction in under-5 mortality, child undernutrition, and potentially maternal mortality as well. The approach also has great potential for controlling HIV, tuberculosis and malaria. The experience with this approach is now extensive, and evidence of effectiveness is accumulating. Care Groups deserve broader implementation at scale, particularly within MOH health delivery systems.

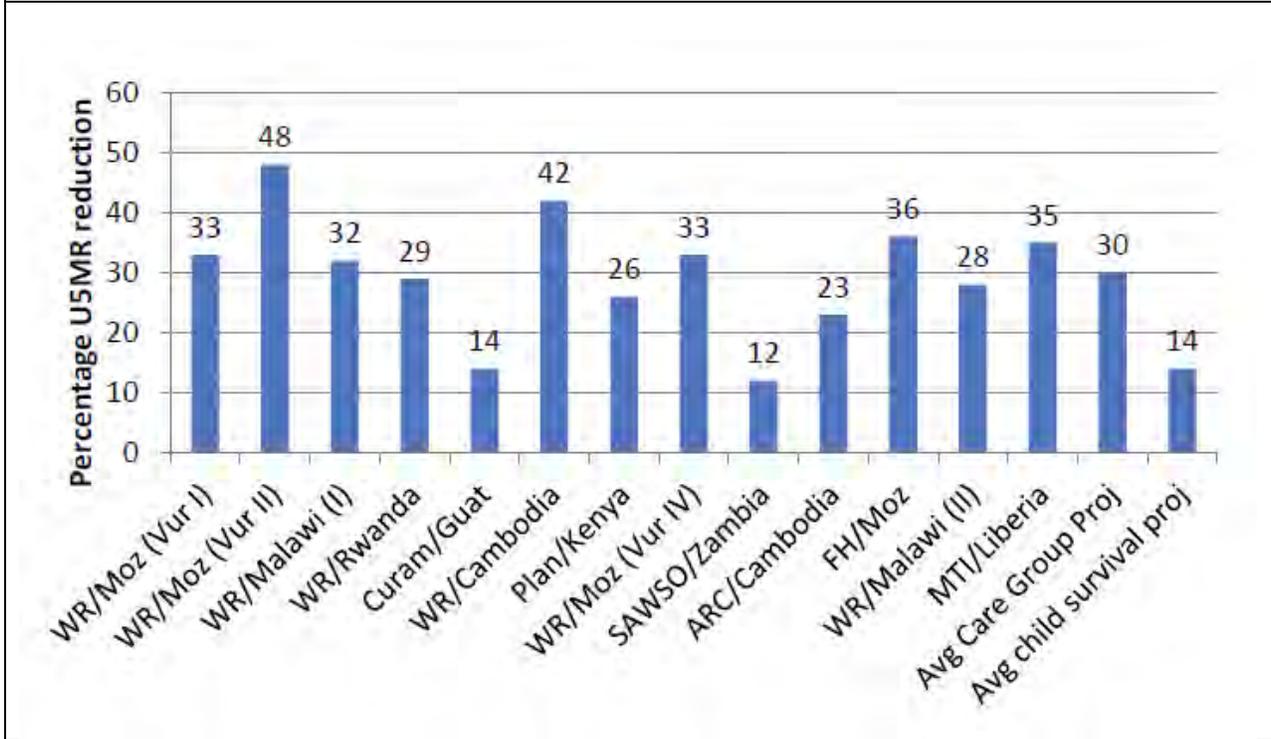
References

1. Bhutta ZA, Das JK, Rizvi A, et al. Evidence-based interventions for improvement of maternal and child nutrition: what can be done and at what cost? *Lancet* 2013; **382**(9890): 452-77.
2. Evaluation: the top priority for global health. *Lancet* 2010; **375**(9714): 526.
3. Bhutta ZA, Black RE. Global maternal, newborn, and child health--so near and yet so far. *N Engl J Med* 2013; **369**(23): 2226-35.
4. Perry H, Freeman P, Gupta S, Rassekh B. How Effective Is Community-based Primary Health Care in Improving the Health of Children? Summary Findings and Report to the Expert Review Panel. American Public Health Association; 2009.http://www.coregroup.org/storage/documents/finalcbphcreport_july2009.pdf and <http://aimdb.files.wordpress.com/2009/08/finalcbphcreporttoerp-7july2009.pdf>
5. Freeman P, Perry HB, Gupta SK, Rassekh B. Accelerating progress in achieving the millennium development goal for children through community-based approaches. *Glob Public Health* 2012; **7**(4): 400-19.
6. Perry H, Morrow M, Borger S, et al. Care Groups I: An Emerging Innovative Community-based Delivery Strategy for Improving Maternal, Neonatal and Child Health in High-mortality, Resource-constrained Settings. Submitted for review by the Bulletin of the World Health Organization; 2015.
7. Edward A, Ernst P, Taylor C, Becker S, Mazive E, Perry H. Examining the evidence of under-five mortality reduction in a community-based programme in Gaza, Mozambique. *Trans R Soc Trop Med Hyg* 2007; **101**(8): 814-22.
8. Perry H, Sivan O, Bowman G, et al. Averting childhood deaths in resource-constrained settings through engagement with the community: an example from Cambodia. In: Gofin J, Gofin R, eds. *Essentials of Community Health*. Sudbury, MA: Jones and Bartlett.; 2010: 169-74.
9. World Relief. "Light for Life" Child Survival Project, Kampong Cam Province (Cambodia): Final Evaluation (2003-2007). Baltimore, MD: World Relief, 2007
10. Getahun H, Davis T. 2012. Using Care Groups to Build Resilience in Food Security and Community Health Programs. Addis Abbaba, Ethiopia. 11-13 June 2013
11. Walker N, Tam Y, Friberg IK. Overview of the Lives Saved Tool (LiST). *BMC Public Health* 2013; **13 Suppl 3**: S1.
12. Ricca J. 2007. Child survival projects with highly effective community mobilization have high impact at low cost. Washington, DC. 11 January 2007
13. Davis T, Wetzel C, Hernandez Avilan E, et al. Reducing child global undernutrition at scale in Sofala Province, Mozambique, using Care Group Volunteers to communicate health messages to mothers. *Global Health: Science and Practice* 2013; **1**(1): 35-51.
14. Lindquist ED, George CM, Perin J, et al. A Cluster Randomized Controlled Trial to Reduce Childhood Diarrhea Using Hollow Fiber Water Filter and/or Hygiene-Sanitation Educational Interventions. *Am J Trop Med Hyg* 2014; **91**(1): 190-7.
15. George C, Vignola E, Ricca J, Perin J, Perry H. 2014. Lives Saved Tool (LiST) Analysis of Care Group versus non-Care Group Child Survival Projects. Washington, DC.
16. Ricca J, Kureshy N, Leban K, Prosnitz D, Ryan L. Community-based intervention packages facilitated by NGOs demonstrate plausible evidence for child mortality impact. *Health Policy Plan* 2013.
17. CORE Group, USAID, Relief W, Food for the Hungry. Care Group Results Reports. 2014. <http://www.caregroupinfo.org/>.
18. Perry HB. *The Census-Based, Impact-Oriented Approach and Its Application by Andean Rural Health Care in Bolivia, South America*. Lake Junaluska, NC: Andean Rural Health Care, 1993

19. Perry H, Northrup R, Bryant J, Berggren W, Berggren G. The cost-effectiveness of a long-term comprehensive primary health care program in reducing under-5 mortality: findings from rural Haiti 2010
20. Edejer TT, Aikins M, Black R, Wolfson L, Hutubessy R, Evans DB. Cost effectiveness analysis of strategies for child health in developing countries. *BMJ* 2005; **331**(7526): 1177.
21. Borghi J, Thapa B, Osrin D, et al. Economic assessment of a women's group intervention to improve birth outcomes in rural Nepal. *Lancet* 2005; **366**(9500): 1882-4.
22. Lewycka S, Mwansambo C, Rosato M, et al. Effect of women's groups and volunteer peer counselling on rates of mortality, morbidity, and health behaviours in mothers and children in rural Malawi (MaiMwana): a factorial, cluster-randomised controlled trial. *Lancet* 2013; **381**(9879): 1721-35.
23. Victora CG. Commentary: Participatory interventions reduce maternal and child mortality among the poorest, but how do they work? *Int J Epidemiol* 2013; **42**(2): 503-5.
24. Weiss J, Makonnen R, Sula D. Shifting management of a community volunteer system for improved health outcomes: Results from an operations research study in Burundi. *Biomedical Central Journal (undergoing peer review at present)* 2015.
25. Ricca J. 2008. Child Survival and Health Grants Program maternal, neonatal and child health projects consistently demonstrate high impact at low cost using community-focused approaches. Washington, DC.

Figures and Tables

Figure 1. The estimated decline in the under-5 mortality rate (U5MR) using the Lives Saved Tool (LiST) for the first 13 USAID Child Survival and Health Grants Program (CSHGP)-supported projects using the Care Group approach in 8 countries implemented by 7 NGOs and that for all USAID/CSHGP-supported projects, 1995-2010^{10, 25}



Note: Projects are listed in chronological order of initiation (from left to right)

WR/Moz (Vur I): World Relief Child Survival Project in Mozambique (*Vurhonga I*), 1995-1999

WR/Moz (Vur II): World Relief Child Survival Project in Mozambique (*Vurhonga II*), 1999-2003

WR/Malawi (I): World Relief Child Survival Project in Malawi (*Tiweko Tose*), 2000-2004

WR/Rwanda: World Relief Child Survival Project in Rwanda, 2001-2006

Curam/Guat: Curamericas Child Survival Project in Guatemala, 2002-2007

WR/Cambodia: World Relief Child Survival Project in Cambodia, 2003-2007

Plan/Kenya: Plan International Child Survival Project in Kenya, 2004-2009

WR/Moz (Vur IV): World Relief Child Survival Project in Mozambique (*Vurhonga IV*), 2004-2009

SAWSO/Zambia: Salvation Army World Service Organization Child Survival Project in Zambia, 2005-2010

ARC/Cambodia: American Red Cross Child Survival Project in Cambodia, 2005-2008

FH/Moz: Food for the Hungry Child Survival Project in Mozambique, 2005-2010

WR/Malawi (II): World Relief Child Survival Project in Malawi (*Tube Poka*), 2005-2009

MTI/Liberia: Medical Teams International Child Survival Project in Liberia, 2006-2010

Avg Care Group Proj: Average estimated under-5 mortality decline for all Care Group child survival projects shown in graph

Avg child survival project: Average estimated under-5 mortality decline for all child survival projects in the USAID Child Survival and Health Grants portfolio that had ended in 2008

Table 1. Average annual rate of decline in undernutrition in the Care Group Mozambique project areas compared with Mozambique nationwide, 2006-2010¹³

Location	Percentage of children <2 standard deviations below the standard median weight-for-age score		% difference	Number of years between endline and baseline	Average annual rate of decline
	Baseline (dates)	Endline (dates)			
Project areas	26.5% (2006)	16.7% (2010)	9.8%	4.4	2.2%
Nationwide	20.0% (2003)	14.9% (2011)	5.1%	8	0.6%

Table 2. Cost-Effectiveness of the Current Project with Other USAID-financed Child Survival Care Group and Other Projects

Child survival project	Estimated percentage reduction in under-5 mortality ^a	Number of beneficiaries ^b	Total project cost ^c	Average cost per beneficiary per year	Estimated number of lives saved	Cost per life saved	Cost per DALY averted
FH/ Mozambique (2005-2010)	30% overall (32% in Area A & and 26% in Area B)	219,617	\$3,024,166	\$2.78	6,848	\$441	\$14.72
World Relief Vurhonga IV	33%	101,757	\$2,000,000	\$6.56	1,217	\$1,643	\$54.77
World Relief/ Vurhonga II	48%	53,418	\$1,397,531	\$6.54	769	\$1,817	\$60.57
World Relief/ Vurhonga I	33%	57,277	\$1,811,895	\$7.91	819	\$2,212	\$27.30
World Relief/ Rwanda	29%	54,451	\$1,733,333	\$6.37	676	\$2,564	\$85.47
World Relief/ Malawi I	32%	68,917	\$1,333,335	\$4.84	557	\$2,394	\$79.80
World Relief/ Malawi II	28%	72,226	\$2,022,034	\$7.00	537	\$3,773	\$125.77
Plan/Kenya	26%	110,735	\$2,300,000	\$4.15	826	\$2,785	\$92.82
Average of 8 Care Group projects above	30%	92,300	\$1,956,016	\$5.77	1,531	\$2,204	\$67.65
Average of recent USAID-supported child survival projects ^d	14%						

^aBased on calculations using the LiST tool, uncorrected for underlying secular trends

^bNumber of women of reproductive age and children 0-59 months of age served by the project

^cUSAID expenses plus matching funds provided by the NGO

^dUSAID, CSHGP Portfolio Highlights: Grantees Save Lives, 2008

Source of USAID Child Survival and Health Grants Program PVO project data: Project Final Evaluations and personal communications with World Relief, Food for the Hungry and Plan International child survival staff

Table 3. A comparison of Care Group child survival project cost-effectiveness with that of other integrated, community-based approaches for which data are available		
Child survival project	Cost per life saved	Cost per DALY averted
Average of Care Group projects reported in Table 2	\$2,204	\$68
A census-based, impact-oriented child survival project in Bolivia ¹⁸	\$4,817	\$50
A comprehensive and integrated health service delivery system in Haiti ¹⁹	\$3,172	\$88
Estimated cost of a package of vitamin A and zinc supplementation, case management of pneumonia, measles immunization, and oral rehydration therapy ²⁰	Not available	\$100
Participatory Learning and Action (PLA) groups ^{21, 22}	Not available	\$33-211 (cost per year of life saved)