METHODOLOGY Open Access

[illegible]

Jim Ricca[1*], Debra Prosnitz[1], Henry Perry[2], Anbrasi Edward[2], Melanie Morrow[3], Pieter Ernst[4], Leo Ryan[1]

Abstract

[illegible] There is a growing body of evidence that integrated packages of community-based interventions, a form of programming often implemented by NGOs, can have substantial child mortality impact. More countries may be able to meet Millennium Development Goal (MDG) 4 targets by leveraging such programming. Analysis of the mortality effect of this type of programming is hampered by the cost and complexity of direct mortality measurement. The Lives Saved Tool (LiST) produces an estimate of mortality reduction by modelling the mortality effect of changes in population coverage of individual child health interventions. However, few studies to date have compared the LiST estimates of mortality reduction with those produced by direct measurement.

[illegible] Using results of a recent review of evidence for community-based child health programming, a search was conducted for NGO child health projects implementing community-based interventions that had independently verified child mortality reduction estimates, as well as population coverage data for modelling in LiST. One child survival project fit inclusion criteria. Subsequent searches of the USAID Development Experience Clearinghouse and Child Survival Grants databases and interviews of staff from NGOs identified no additional projects. Eight coverage indicators, covering all the project's technical interventions were modelled in LiST, along with indicator values for most other non-project interventions in LiST, mainly from DHS data from 1997 and 2003.

[illegible] The project studied was implemented by World Relief from 1999 to 2003 in Gaza Province, Mozambique. An independent evaluation collecting pregnancy history data estimated that under-five mortality declined 37% and infant mortality 48%. Using project-collected coverage data, LiST produced estimates of 39% and 34% decline, respectively.

[illegible] LiST gives reasonably accurate estimates of infant and child mortality decline in an area where a package of community-based interventions was implemented. This and other validation exercises support use of LiST as an aid for program planning to tailor packages of community-based interventions to the epidemiological context and for project evaluation. Such targeted planning and assessments will be useful to accelerate progress in reaching MDG4 targets.

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* Correspondence: jricca@mchip.net
[1] ICF Macro, 11785 Beltsville Drive, Calverton, MD 20705, USA
Full list of author information is available at the end of the article

Background

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Table 1 Key characteristics, strategies, interventions, and results of World Relief Mozambique Vurhonga II project (explained in detail in Edward, et. al. [7])

[illegible]

Community-based maternal child health project covering all 48 villages of Chokwe District (excluding Chokwe town), Gaza Province, Mozambique

[illegible]

- Funding from October 1999 – September 2003
- After initial planning and baseline studies, project implementation began March 2000
- Population surveys for coverage of key maternal child health services and behaviors in October 1999 (baseline) and July 2003 (endline)
- Additional evaluation studies conducted in May 2004: Retrospective complete pregnancy history survey, mortality results analyzed from March 1998 to February 2004, and reported in six separate 12 month periods

[illegible]

- Health related behavior change of mothers of children under five through 173 Care Groups (mothers' groups with 10-15 volunteers each) trained in monthly supervisory visits, whose members performed monthly visits to 8-10 households in immediate vicinity
- Train health workers and religious leaders in health counseling techniques and content
- Outreach and community-facility links through training of [illegible] (community outreach workers) in health posts and formation of village health committees
- Strengthen first level of facility-based health care through establishment of health posts in villages that lacked them and health worker training in IMCI
- Train traditional birth attendants and build small delivery rooms with cement floors in several villages for use by project-trained TBAs

[illegible]

- Nutrition promotion and community-based nutritional rehabilitation
- Promotion of improved care seeking for sick children
- Immunization
- AIDS prevention messaging
- Latrine construction
- TBAs: clean deliveries and essential obstetric and neonatal care (clean cord care, drying and wrapping newborn, skin-to-skin contact, immediate breastfeeding)
- Community case management of diarrhea and pneumonia
- Care of children with diarrhea: promotion of ORT and nutritional support

[illegible]

- Monthly home visits by Care Group (mothers' group) members, with 100% coverage of households with children under five throughout project period
- Village health committee coverage increased from 0 to 95%
- Outreach workers ([illegible]) increased in number from 3 to 32
- Increase in access to trained providers of care for sick children from 65% to 99%
- Health providers trained in IMCI increased from 0% to 100% in project area

[illegible]

- Oxfam assisted in distribution of ITNs to all women of fertile age and children under 5.
- NGO assistance to MOH – train [illegible] in community-based child health activities.
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Discussion

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Table 5 Sensitivity analysis results for LiST modelling

[illegible]	[illegible]	[illegible]
ITN coverage change raised 10%	Increase < 0.1%	Increase < 0.1%
ITN coverage change lowered 10%	Decrease < 0.1%	Decrease < 0.1%
ITN effect size raised 10%	Increase < 0.1%	Increase < 0.1%
ITN effect size lowered 10%	Decrease 0.6%	Decrease 1.0%
Baseline U5MR raised 10%	Increase 1.1%	Increase 0.6%
Baseline U5MR lowered 10%	Decrease 1.9%	Increase 0.6%
Proportion of diarrhea deaths raised 10%	Increase 1.3%	Increase 1.0%
Proportion of diarrhea deaths lowered 10%	Decrease 1.9%	Decrease 1.9%
All age-specific coverage changes among 24-59 month olds reduced to half that measured in the KPC surveys for 0-23 month olds	Decrease 4.8%	N/A

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Conclusions

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