



COMMUNITY HEALTH WORKERS (ROI)

Exemplars overview

Exemplars in Global Health (EGH) brings together experts, funders, and collaborators around the globe with the mission of identifying positive global health outliers, analyzing and understanding what makes these countries successful, and disseminating the core learnings so they can be replicated in comparable settings. EGH aims to help country-level decision-makers, global partners, and funders make strategic decisions, allocate resources, and craft evidence-based policies in consultation with both their global peers and technical advisors.

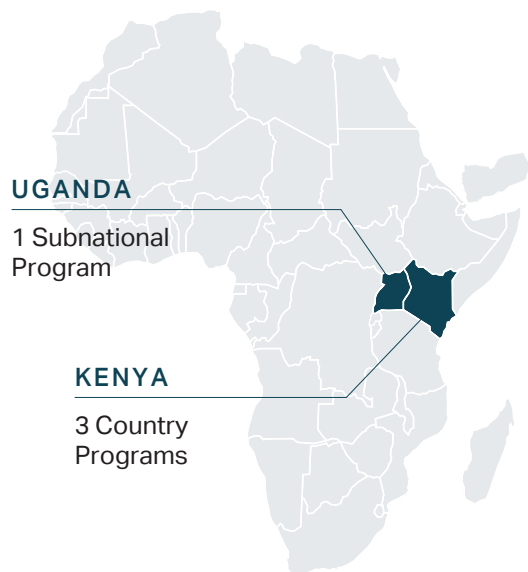
EGH is incubated at Gates Ventures, the private office of Mr. Bill Gates, in collaboration with the Bill & Melinda Gates Foundation.

Dalberg led the research efforts, with support on content and dissemination from Horace W. Goldsmith Foundation, Amref, and Financing Alliance for Health. The program was supported by a Technical and Impact Advisory Group with experts and funders in community health, including:

Angela Gichaga, Financing Alliance for Health; Anthony Gitau, J&J Foundation; Annie Haakenstad, Institute for Health Metrics and Evaluation; Anna Hakobyan, Children's Investment Fund Foundation; Nazo Kureshy, USAID; David Collins, Boston University; Dr. Meghan Bruce Kumar, London School of Health and Tropical Medicine; Dr. Salim Hussein, Ministry of Health Kenya; Jean Kagubare, Bill & Melinda Gates Foundation; Michael Matheke-Fischer, World Bank; Nick Oliphant, Global Fund to Fight AIDS, Tuberculosis, and Malaria

Programs analyzed in this study

The ROI study focused on 4 programs in 2 countries (Uganda and Kenya) based on data availability and feasibility



TOPIC OVERVIEW

CHWs extend the reach of primary health care (PHC) by delivering a comprehensive set of PHC services, including preventive and curative care and health education in homes, community institutions, and peripheral health posts. While there is strong evidence for the benefits of community health (CH) programs, few studies have analyzed the programmatic and contextual factors that shape the return on investment (ROI) of CH programs in routine settings. Understanding how to optimize the outcomes of CH programs is particularly important in the current context of constrained funding for health. This study analyzed the performance and costs of four CH programs to understand the key factors influencing their return on investment.

METHODOLOGY

Our analytical approach balanced rigor and pragmatism; we selected four programs based on data availability and quality, and which provided a variety of contexts from a disease burden, population density and rural-urban mix. We collected data on the programs' outputs and expenditures, their contextual and programmatic characteristics over time, and supplemented this with key informant interviews and focus group discussions.

We calculated ROI as the number of high-impact health touches (HIHTs) by CHWs per \$100 of spend. This metric is intentionally designed with the goal of having an easy-to-use methodology to develop insights on performance by comparing ROI over time and across programs.

Across four sub-national programs in two countries, we analyzed ROI in 6-month timeframes for each program (including at district and sub-county levels where available) from 2018 to the first half of 2021.

We then analyzed 18 drivers of ROI performance in a CH program by applying three basic methods: interrupted time series to measure ROIs before and after a change, descriptive point-in-time analysis to compare above- and below-median ROI programs, and regression analysis.

RESEARCH QUESTIONS

1. What was the investment and the return of the selected programs using the proposed methodology?
2. What contextual and programmatic factors explain the differences in ROI over time and across different programs/geographies?
3. What insights can this analysis provide to implementers, donors, and other stakeholders in the ecosystem?



KEY FINDINGS

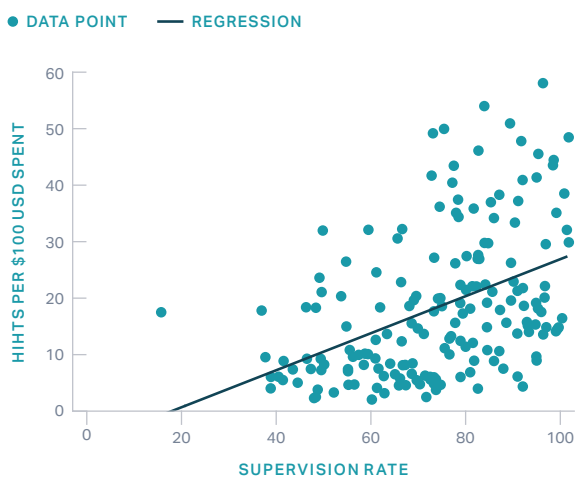
CH programs may be running below their full potential—greater impact is possible by optimizing existing programs.

- » *Significant improvement is achievable.* The highest-performing program in this study increased its ROI by ~4x over three years through well-designed and effective compensation, supervision, and target-setting.
- » *There was a ~10x difference in ROI across programs,* indicating that optimizing the performance of CHWs may be a cost-effective way to expand basic health services.
- » *Significant impact potential is “left on the table”* if the scope of CHW services is too narrow or funding is unreliable.

Community health workers, like any worker, perform best if offered the proper compensation, supervision, and tools to do their job—the quantitative results are aligned with WHO’s guidance on CH programs. Managers need to be intentional in designing programs based on contextual factors and principles for how to optimize performance.

- » *At minimum, CHWs need a regular, reliable stipend.* Beyond this, there is early indication that variable pay can also drive better results.
- » *Supervision must be consistent and structured carefully,* with the right ratio to maximize efficiency without compromising support.
- » *A reliable supply of commodities and effective use of digital tools* will also equip CHWs to improve their service delivery.

ROI vs. supervision rate



Regression analysis of ROI vs. supervision rate. Data includes subprogram level (for programs 1 and 4) and program level (programs 2 and 3) data. We defined supervision rate as the percentage of all CHWs who received a supportive supervision visit in the past one month divided by total CHWs.

What is not measured cannot be managed—most CHW programs have much to improve in the data they capture and measure.

- » *Many CHW programs lack the data infrastructure needed to fully understand the drivers of program performance,* meaning that implementers lack the regular feedback needed for improvement and optimization.
- » *There is a need to invest in improved data collection (e.g., through digital tools), strengthen collaborations to ease access to data, and increase the emphasis on quality data* for those already tracking CH service delivery.
- » Funders and implementers should invest in and build a *strong data ecosystem around CHW programs.*

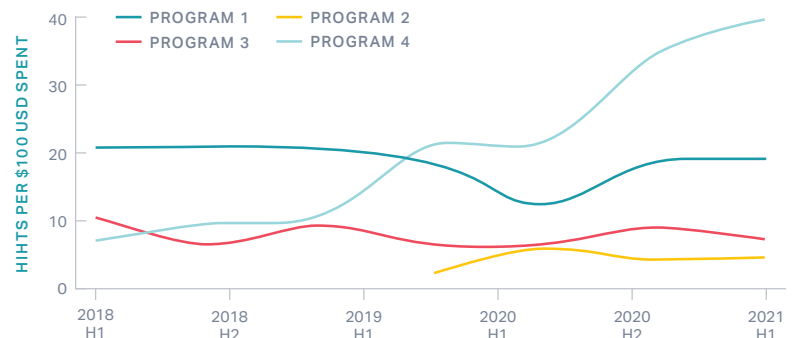
There is much more to research, test, and learn—funders and implementers can leverage the methodology used in this study to maximize and optimize the impact of existing and new CHW programs.

- » *The methodology and suggested minimum set of indicators* provides a valuable starting point for governments, funders, and implementers to measure ROI, as well as a framework for thinking about potential drivers of performance variation.

More CHW research can be found on the platform.

ROI of CH programs

2018-2021, 6-month intervals, ROI = HIHTs per 100 USD spent, data gaps for HIHTs have been estimated



**We have not factored in purchasing parity (PPP) in overall costs for each program. With the conversion to PPP, all programs would see ROI go down by a similar factor of ~2.5.*

Program 1 has sustained a steady ROI including bouncing back quickly after the pandemic during which both HIHTs and costs increased.

- » The program works with a pre-selected set of high-performing CHW’s, who receive a timely monthly stipend and have a reliable stock of commodities.

Program 2 has one of the lowest ROIs, with both low HIHTs and investment.

- » This is due to program implementation challenges (including limited program funding) coupled with a dispersed, nomadic population which makes it difficult to deliver cost-efficient HIHTs.

Program 3 shows a fluctuating ROI over the period, and HIHTs vary with costs/investments.

- » Program 3 mostly focuses on campaign type work; spikes in disease burden during rainy seasons lead to spikes in HIHTs delivered. Budget constraints have limited the ability and consistency to fully cover program costs.

Program 4 has the highest ROI, which has been increasing; there has been considerable growth in HIHTs, and costs are growing at a much slower rate.

- » Program 4 has implemented programmatic changes to improve the quantity of HIHTs delivered including doubling CHWs to deepen reach within current districts, introducing new services, covering full cost of commodities, better compensation, stretch performance targets.