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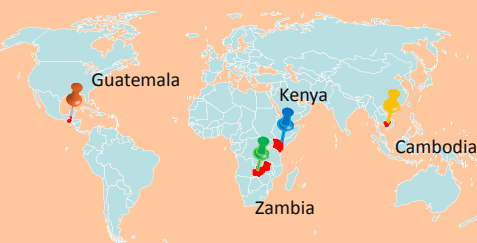
## Introduction

Community Health Workers (CHWs) represent a major driving force for delivering health services to remote communities and measuring the scale of this valuable input is a challenge particularly in those contexts where they fall outside the formal health system and their efforts are difficult to represent in monetary terms. World Vision is conducting cost-efficiency analysis (CEA) of its multi-country Child Health and Nutrition Impact Study (CHNIS) where volunteer CHWs play a key role in the delivering of Timed and targeted counseling intervention at household level. The CHNIS is a five-year research project (2012-2017) investigating the effects of WV's core health programs on maternal, neonatal and child health in four countries: Cambodia, Guatemala, Kenya and Zambia.



### Timed and targeting counselling

Deploys CHWs to target families at critical points during pregnancy and infancy for adoption of life-saving health practices and referral to health services for essential care.



CHNIS sites

## Methods

We monetized all CHW volunteer labor to ensure that unremunerated investments in programme delivery were included in CEA analysis. As a base monetary value we used the minimum wage per hour found in the local labor market in each country. Instead of using a direct wage replacement approach we pro-rated time inputs based on a model created to reflect differing levels of engagement during training and roll out of a structured intervention over approximately a 2-year period. The model was created based on key informant interviews in each country.

## Results

The average duration of a counseling session varied somewhat by country and considerably depending on the stage of pregnancy or childhood in response to the scope of content to be covered in that session (from 51 to 72 minutes). The estimated total cost of CHWs' contribution in four countries over the period of three years (2014 – 2016) ranges from USD 3,719 in Guatemala up to USD 115,226 in Kenya. Initial findings suggests that variation between countries could be mainly driven by number of CHWs deployed (e.g. 120 CHWs in Guatemala and 452 CHWs in Kenya) and number of visits and less dependent on minimum wage in the country and monetized value per counselling. Further analysis is required for shading lights on details of variations.



CHW counsels mother in Cambodia

### Estimated average time spent and value contributed by CHWs

	Cambodia	Kenya	Zambia	Guatemala
Average estimated time per counselling (min)	51	53	75	72
Estimated value per counselling (in USD)	\$0.74	\$0.98	\$0.55	\$1.30
Total estimated value of all CHWs over 3 years (in USD)	\$7,771	\$115,226	\$27,372	\$3,719

## Discussion

The approach to calculating these estimates allow World Vision to more clearly describe the social return on investment (SROI) of their programming. These initial findings shed light on economic value of volunteer CHWs' contribution to the implementation of a household-based counseling and behavior change program. These estimates will be used to further understand whether visit duration can potentially be reduced without compromising quality and likewise whether some level of time investment is critical to maintain.

Furthermore, these estimates will allow deeper understanding of the dependency of program implementation on voluntary contribution and potential costing implications were government partners to consider direct monetary support to formalize the program delivery using this cadre of CHW. In addition, results may inform a discussion as to whether investments in training and supporting volunteer CHWs is more efficient comparing with paid and trained workforce. Further analysis will allow us to understand CHWs workforce dynamics and provide insights on system design elements for proper CHW recruitment, training, motivation and retention.

## Conclusions

- It is feasible to produce reasonably accurate monetized estimates of the inputs provided by a volunteer labor force using insider familiarity of the structure of the intervention.
- The work of volunteer CHWs should be valued and monetized to better reflect a "community level contribution" leveraged from development work and enable improved workforce recruitment and planning.
- Economic valuation of volunteer CHWs time investments is only one part of a complex system and should be viewed within a holistic picture of the CHWs workforce environment.