Reducing inequities in maternal and child health in rural Guatemala through the CBIO+ Approach of Curamericas: 10. Summary, cost effectiveness, and policy implications

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Curamericas Global

HOPE THROUGH HEALTH

Presenter Disclosures

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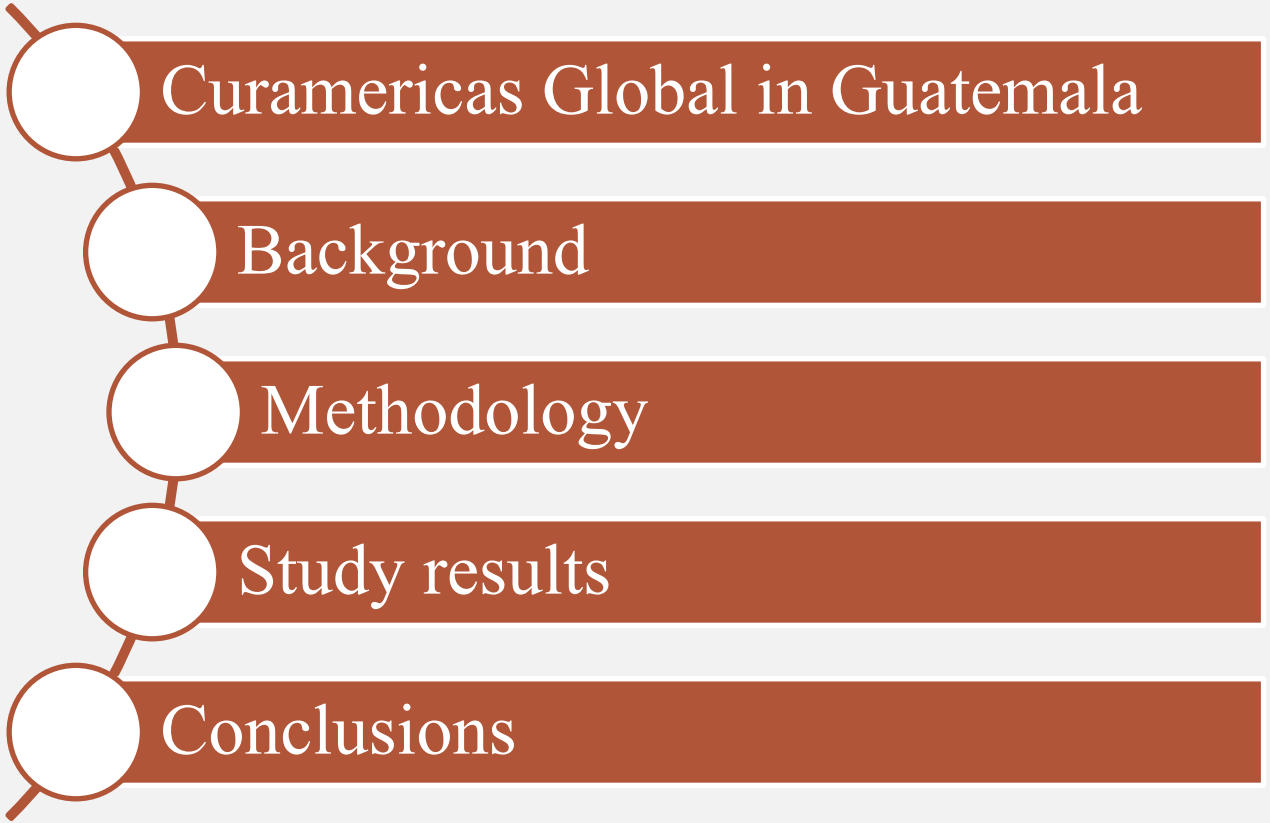
No relationships to disclose

Agenda


Curamericas Global in Guatemala
Background
Methodology
Study results
Conclusions

Curamericas Global and -Guatemala

- Local partner of international NGO, Curamericas Global
  - Founded by Dr. Henry Perry 40+ years ago under the name “Andean Rural Health Care” in Bolivia
- Curamericas-Guatemala started in 2002
  - Founded and directed by Dr. Mario Valdez
  - Expansion with US government and philanthropic support
  - Now supported by Guatemalan government
- Unique model for primary heath care:

  Census-Based, Impact Oriented (CBIO) + Care Groups + *Casas Maternas*

Dr. Henry Perry & Dr. Mario Valdez

Project Area

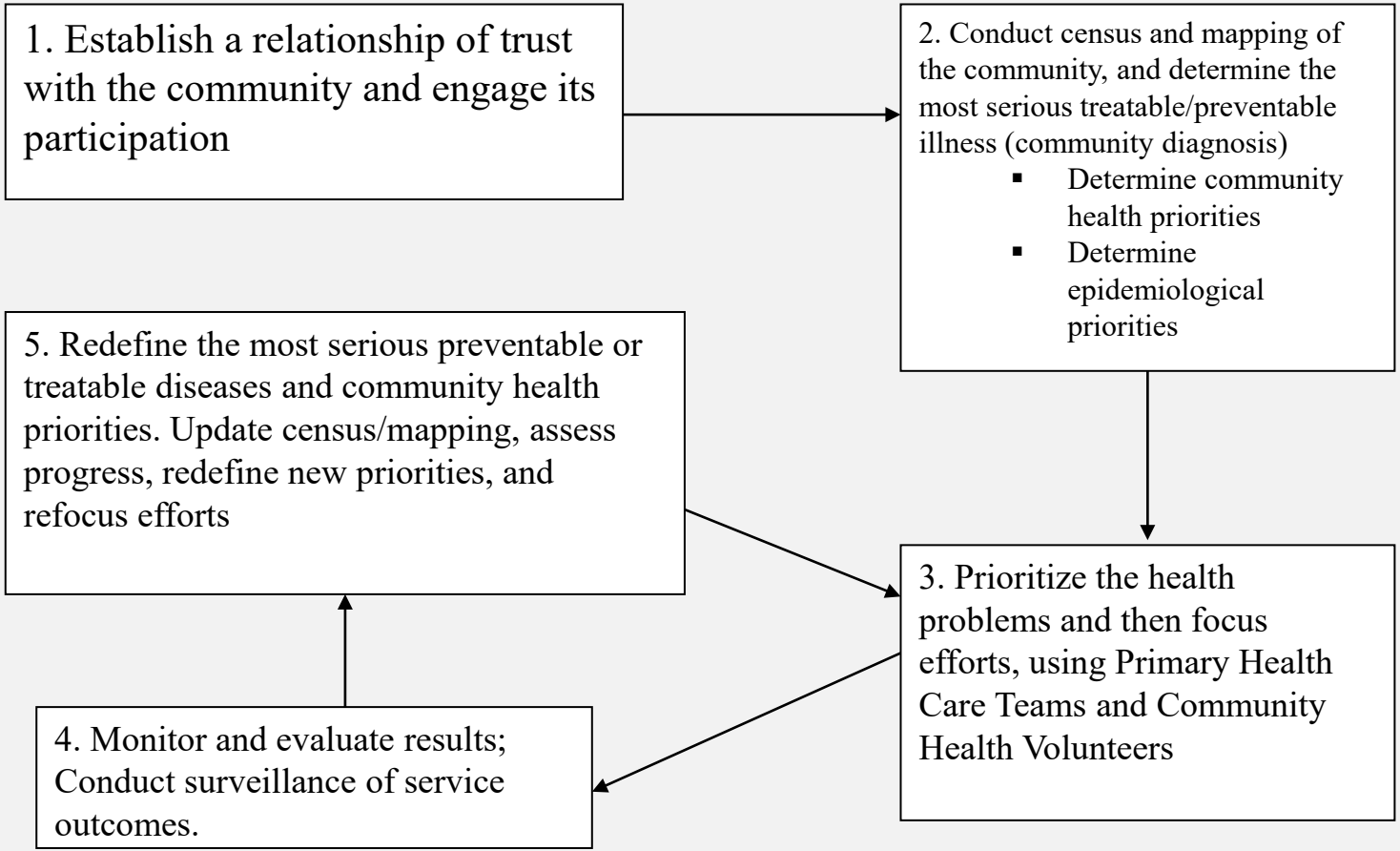
- Located in one of most isolated and impoverished areas of Guatemala
  - 36-year civil war → longstanding distrust of outsiders
- Population served
  - Primarily indigenous Mayan
  - Endemic poverty, insufficient education and health care
  - Maternal mortality of 681/100,000
  - 3rd highest under-5 mortality in western hemisphere
- Impact
  - Percentage of deliveries taking place at a facility doubled
  - 59% reduction in maternal mortality and zero maternal deaths at Casas Maternas
  - Reduced mortality in children 1-5 years old from 9 per 1000 to 2 per 1000 live births

The project area of Huehuetenango in the western highlands of Guatemala

CBIO – census-based impact-oriented

1. Conduct a census
2. Register all households
3. Identify Epidemiological priorities “Frequent, serious readily preventable or treatable conditions.
4. Identify health priorities of the community
5. Develop a plan
6. Assess over time if health has improved.

Key CBIO Steps



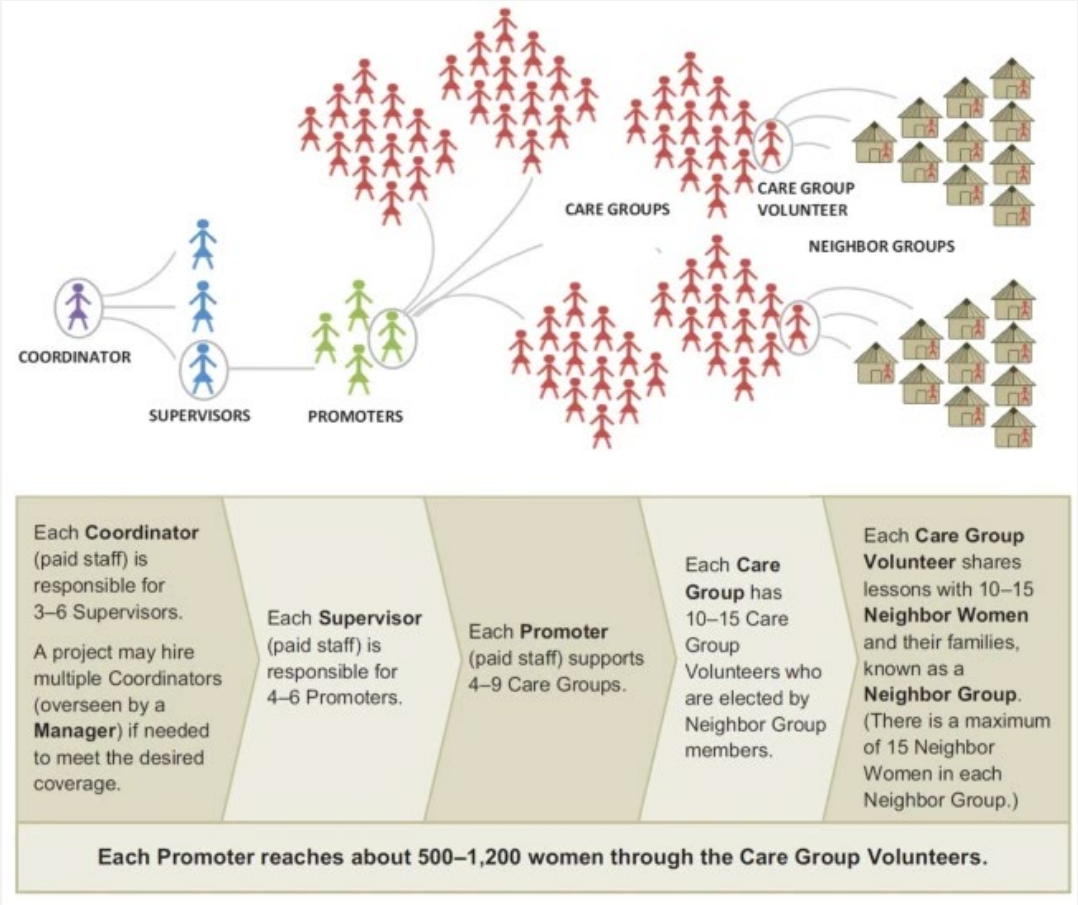

OUR COMMUNITY MAP
N
KEY
SCHOOL
CHURCH
FOOTBALL FIELD
PUMP
CLINIC
MARKET
CEMETARY
RIVER
ROAD

Care Group Approach

A cascading health promotion model based on

- **volunteerism**,
- **peer-to-peer** education,
- and equitable **universal coverage**

to all households with under-5 children



Perry et al., 2015

Casa Maternas Rurales

Casa delivery room

Casa exam room

Outside of the *Casa* in Calhuitz

- Built by community, staffed by auxiliary nurses with supervision of project staff, managed by community committees
- *Comadronas* accompany women for delivery - trained by the project to advise and monitor pregnant women, recognize danger signs, and bring them to the *Casa Materna*
- Ready local transport system for referral of complications

Methodology – A review and summary

- 9 papers were reviewed
- Hypotheses confirmed?
- The total field cost per capita
- Cost-effectiveness and lives saved

Results

Key findings

Paper 1 – this is the first example of three methodologies studied together – CBIO, Care Groups and Community Birthing Centers, known as CBIO+

Paper 2 – Implementation research consisted of multiple baseline and endline household surveys, individual and group interviews, focus group discussions and registration of vital events. There was a quasi-control area.

Paper 3 – Statistically significant improvements were observed in the coverage of 19+ evidence-based interventions. There was a three-fold (200%) increase for 7 of 24 indicators in Area A and for 5 of 24 indicators in Area B.

Key findings

Paper 4 – levels of stunting in under-2 children in Area A declined from 74.5 to 39.5% with endline levels considerably lower than for comparison areas outside of the project area.

Paper 5 – Maternal Mortality Ratio declined from 632 to 257 per 100,000 live births (*p=0.006)*. No decline in under-5 Mortality Ratio. Incomplete registration of deaths appears to have muted the mortality impact. An indirect estimate of mortality declines using the Lives Saved Tool (based on changes in population coverage of evidence-based interventions) suggests a net decline, independent of ongoing secular changes, of 12% for maternal mortality and 22% for under-5 mortality

Paper 6 – 5% of 1,378 women coming to a birthing center between 2009 and 2016 experienced a complication; 42% were managed successfully at the birthing center and 58% were referred to a higher-level facility. Only one maternal death occurred. Referrals were rejected initially by the patient or the family in approximately 15% of cases but eventually almost all accepted the recommendation. Birthing Center staff attributed their successful management of complications to intensive training, teamwork, and logistical support

Key findings

Paper 7 – Participation in the Care Group process was empowering for women. Increased respect and willingness/ability to make health-related decisions.

Paper 8 – Household surveys revealed statistically significant increases in women's active participation in community meetings and health-related decision making.

Paper 9 – Project staff members and government health workers were enthusiastic supporters of CBO+, especially in its approach to involving the community in program planning.

Lives Saved

A Care Group Volunteer leads Self-Help Group Members to separate healthy food from junk food

31 lives of children under 5 per year and two maternal lives per year.

2,146 years of life for each year of operation

Over 5 years of the project that's 155 children and 10 mothers

10,730 years of life saved.

Is it effective?

The per capita gross national income (GNI) for Guatemala in 2015 was $3,700.

Current recommendations are that an intervention is cost-effective if the cost per DALY averted is less than one-half of the per capita GNI for the country in which the intervention has been implemented

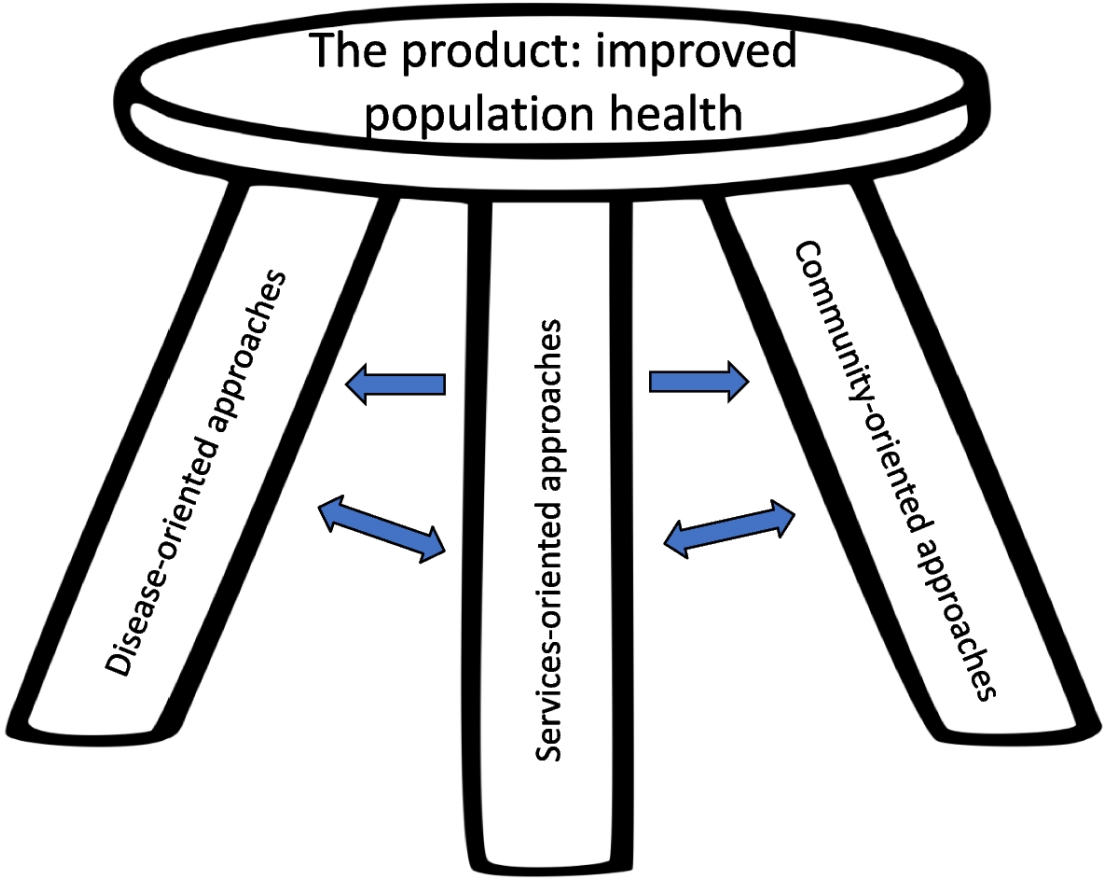
The estimated cost per DALY averted by the Project ($257) is only 7% of the per capita GNI for Guatemala.

Thus, according to these estimates, the Project is a highly cost-effective intervention

A Care Group volunteer leads Self-Help Group Members to separate healthy food from junk food

For a total cost of $14.05 per beneficiary per year, $5.80 per capita per year, and $257 per year of life saved and per DALY averted, the CBIO+ Approach is highly cost-effective purely on the basis of its reduction in maternal and child mortality without taking into account its other notable benefits for improved nutrition, women's empowerment, and enhanced social capital.

Conclusions


The product: improved population health
Disease-oriented approaches
Services-oriented approaches
Community-oriented approaches

CBIO+: Quo vadis?

Disparities persist.

Renewed interest in CHWs.

Evidence Matters.

For more information

Access the full article here

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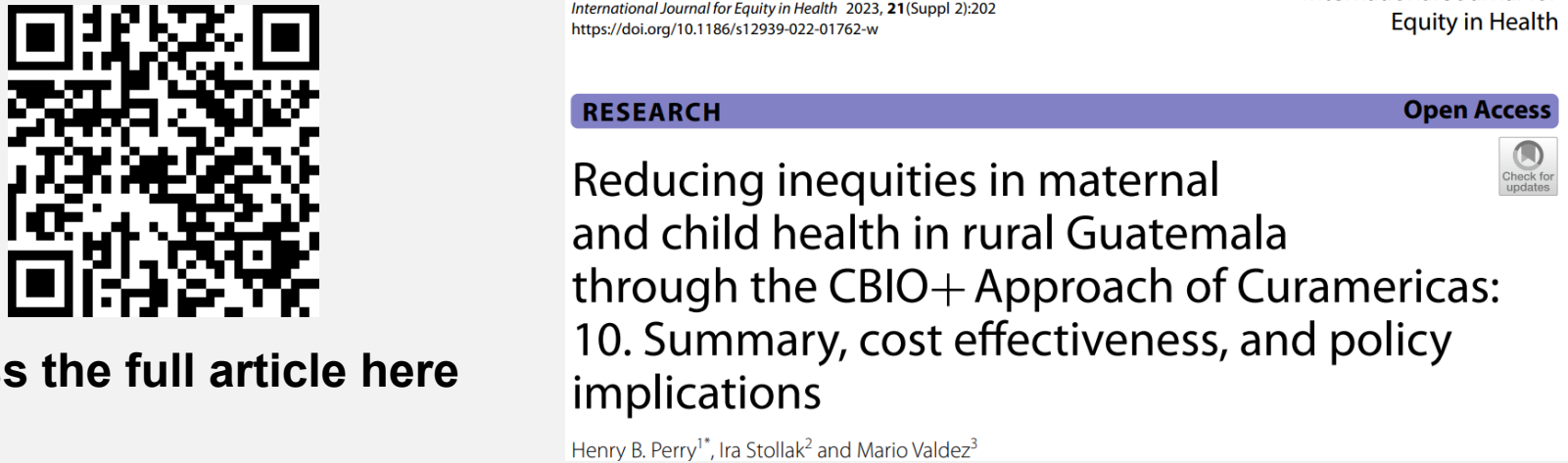

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Mentor of this study and photo credit: Ira Stollak