Eastern Cape Supervision Study

Implications for community health worker programs in South Africa

Professor Mark Tomlinson

Institute for Life Course Health Research, Department of Global Health, Stellenbosch University, South Africa;
Community health workers

1 million community health workers in sub-Saharan Africa by 2015

Prabhjot Singh, Jeffrey D Sachs

During the past 10 years, community health workers (CHWs) have emerged as a focal point of international discussions of primary health-care systems. Although lay community-based health workers have been active for at least 60 years, the Millennium Development Goals (MDGs) in 2000 prompted new discussion of how these workers can help to extend primary health care from facilities to communities. CHWs have since been part of an international attempt to revise primary health-care delivery in low-income settings, and CHW programmes have been changed accordingly. Instead of being regarded as unpaid, lightly trained members of the community who focus mainly on health education and provide basic treatment, CHWs are increasingly realised as a key part of the delivery of primary health care.

Before 2000, and in many places until today, CHWs in sub-Saharan Africa were mainly regarded as volunteers who provide a few simple services, mostly in community awareness and disease prevention. However, evidence supports an expanded role of CHWs in community-based case management, and several reviews and guidelines from WHO now recommend the expansion of CHW activities. In December, 2011, WHO released a 3-year study highlighting the importance of CHWs at the household level. The report builds on other synthesis studies finding that when deployed at scale, CHW activities can have a profound effect on achievement of MDGs 4, 5, and 6. The new integral role for CHWs may advance in diagnostic and treatment technology.
Philani – NGO since 1979 in Cape Town
Program components

• Selection – positive peer deviants

• Training

• Monitoring

• Ongoing feedback
N= 24 Communities
N= 1238 Mothers

Standard Care
12 Communities
594 Mothers

Home Visiting
12 Communities
644 Mothers

Baseline
Post Birth
6 Months
18 Months
36 Months
60 Months
96 Months

Follow-up: 96% - 83%

2009 to 2019
Results
6 months

• 50% more PMTCT tasks completed
• 3.6 times more likely to exclusively breastfeed at 6 months
• 3.1 times more likely to breastfeed more than 3 months
• 1.7 times more likely to have non-stunted children
• 1.25 times more likely to use condoms
HIV+ Philani mothers

• 1.6 times less likely to be stunted

• 2.3 times more likely to be free of birth complications

• 4.7 times more likely to have a father acknowledge baby
18 month results

• Infants 1.4 times more likely to be healthy weight for age

• Infants 1.13 times more likely to be health height for age
3 year results

• Maternal depression lower

• Child stunting lower  24% vs 18%

• Fewer hospitalizations  24% vs 32%

• Better child vocabulary
Home Visiting and Antenatal Depression Affect the Quality of Mother and Child Interactions in South Africa

Juan Chirundu, PhD, Mary Jane Rothman-Bosch, PhD, Alexandre K. Bradley, BA, Mark Tomlinson, PhD

Multiple Risk Factors During Pregnancy In South Africa: The Need for a Holistic Approach to Perinatal Care

Mary Njia, MSc, Kathleen O’Connor, MD, Alexia B. Bradley, RN, Mary Jane Rothman-Bosch, PhD, Robert E. Weiss, MD, and Mary Jane Rothman-Bosch

Thirty-Six-Month Outcomes of a Generalist Paraprofessional Perinatal Home Visiting Intervention in Rural South Africa on Maternal Health and Child Health and Development

Mary Tomlinson, MD, Mary Jane Rothman-Bosch, PhD, Kathleen O’Connor, RN, Alexia B. Bradley, and Mary Jane Rothman-Bosch

The impact of paraprofessional home visitors on infants’ growth and health at 18 months

Ingrid M. Le Roux, PhD, Mayu Jane Rothman-Bosch, PhD, Judith Stein, PhD, and Mark Tomlinson

A Cluster Randomised Controlled Effectiveness Trial Evaluating Perinatal Home Visiting among South African Mothers/Infants

Mary Jane Rothman-Bosch, PhD, Mark Tomlinson, PhD, Ingrid M. Le Roux, PhD, Alexia B. Bradley, RN, Kathleen O’Connor, MD, Robert E. Weiss, MD, and Mary Jane Rothman-Bosch

Alcohol Use, Partner Violence, and Depression - A Randomized Controlled Trial Among Urban African Mothers Over 3 Years

Ingrid M. Le Roux, PhD, Mary Jane Rothman-Bosch, PhD, and Mark Tomlinson, PhD

FocalPoint: Children and Youth Studies, 2014 Vol. 9, No. 4, 291-310 http://dx.doi.org/10.1080/19425536.2014.950874
Philani works
To evaluate if increased supervision and support of South African Government health workers’ home visits improves maternal and child outcomes: study protocol for a randomized control trial

Mary Jane Rotheram-Borus\textsuperscript{1*}, Karl Le Roux\textsuperscript{2}, Ingrid M. Le Roux\textsuperscript{3}, Joan Christodoulou\textsuperscript{1}, Christina Laurenzi\textsuperscript{4}, Nokwanele Mbewu\textsuperscript{3} and Mark Tomlinson\textsuperscript{4}
Fig 1. The flow of participants throughout the course of the trial. * Baby also died soon after birth. ** Though another died, follow-up of child with caregiver was still performed, therefore denominator was not affected.

https://doi.org/10.1371/journal.pmed.1004175.g001
Cluster Randomized Controlled Trial

- Cluster randomized controlled effectiveness trial

- Primary health clinics were randomized by clinic to receive from either:
  - (1) existing supervisors (Standard Care (SC); \(n = 4\) clinics, 23 CHWs, 392 mothers); or
  - (2) supervisors from a nongovernmental organization that provided enhanced monitoring and supervision (Accountable Care [AC]; \(n = 4\) clinic areas, 20 CHWs, 423 mothers).

- Assessments were conducted during pregnancy and at 3, 6, 15, and 24 months post-birth

- High retention rates (76% to 86%).
RESEARCH ARTICLE

The effect of supervision on community health workers’ effectiveness with households in rural South Africa: A cluster randomized controlled trial

Mary Jane Rotheram-Borus 1,*, Karl W. le Roux 2,3,4,5, Peter Norwood 1, Linnea Stansert Katzen 2, Andre Snyman 5, Ingrid le Roux 6, Elaine Dippenaar 5, Mark Tomlinson 2,7

1 Dept. of Psychiatry and Biobehavioral Sciences, Semel Institute, University of CA, Los Angeles, California, United States of America, 2 Institute for Life Course Health Research, Dept. of Global Health, Faculty of Medicine and Health Sciences, Stellenbosch University, Tygerberg, South Africa, 3 Dept. of Family Medicine, Walter Sisulu University, Mthatha, South Africa, 4 Primary Health Care Directorate, Old Main Building, Groote Schuur Hospital, Cape Town, South Africa, 5 Zithulele Training and Research Centre, Zithulele Hospital, Mqanduli District, Eastern Cape, South Africa, 6 Philani Maternal, Child Health and Nutrition Trust, Khayelitsha, Cape Town, South Africa, 7 School of Nursing and Midwifery, Queens University, Belfast, United Kingdom
Results

• Observed benefits were not statistically significant

• Only the antiretroviral (ARV) adherence effect met the significance threshold

• Major study limitation was utilizing existing CHWs and being limited to a sample of 8 clinics

• No major study-related adverse events
Conclusions

• Supervision and monitoring were insufficient to improve CHWs’ impact on maternal and child outcomes

• A key component of implementation at scale in the real world is the ability to hold CHWs accountable

• To successfully deploy CHWs procedures for selecting and recruiting CHWs may be critical
Conclusions

• The investment of 2 experienced supervisors and a car and driver for every 20 CHWs created a support structure that ensured that CHWs were performing regular household visits

• Still took 9 months to achieve optimal visiting

• Without this - CHWs not performing regular home visits

• In systems that are not working CHWs may not be worth the investment