

Home visiting programs for HIV-affected families: a comparison of service quality between volunteer-driven and paraprofessional models

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Home visiting is a popular component of programs for HIV-affected children in sub-Saharan Africa, but its implementation varies widely. While some home visitors are lay volunteers, other programs invest in more highly trained paraprofessional staff. This paper describes a study investigating whether additional investment in paraprofessional staffing translated into higher quality service delivery in one program context. Beneficiary children and caregivers at sites in KwaZulu-Natal, South Africa were interviewed after 2 years of program enrollment and asked to report about their experiences with home visiting. Analysis focused on intervention exposure, including visit intensity, duration and the kinds of emotional, informational and tangible support provided. Few beneficiaries reported receiving home visits in program models primarily driven by lay volunteers; when visits did occur, they were shorter and more infrequent. Paraprofessional-driven programs not only provided significantly more home visits, but also provided greater interaction with the child, communication on a larger variety of topics, and more tangible support to caregivers. These results suggest that programs that invest in compensation and extensive training for home visitors are better able to serve and retain beneficiaries, and they support a move toward establishing a professional workforce of home visitors to support vulnerable children and families in South Africa.

Keywords: orphans and vulnerable children; HIV and AIDS; South Africa; home visiting; evaluation; community-based care

Introduction

Program guidance for HIV-affected children emphasizes family-centered care and a range of services: economic strengthening, educational assistance, psychosocial support, health care, and protection (PEPFAR, 2012; United Nations Children's Fund, 2004). In sub-Saharan Africa, home visiting programs – in which care workers from the community deliver services during regular visits to the child's household – are one of the most commonly applied approaches (Schenk & Michaelis, 2010). A 2009 audit identified 1824 community-based care organizations providing home visiting and other services to vulnerable households in South Africa alone (Friedman, Mothibe, Ogunmefun, & Mbatha, 2010).

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The universal appeal of home visitation stems from the situation of services within the home, eliminating transportation and childcare costs for families with limited resources, while providing an opportunity to observe family behavior in an everyday environment (Azzi-Lessing, 2011). In line with an ecological approach (Bronfenbrenner, 1992), children's needs are addressed within the wider context of their relationships, family and community. Thus, programs emphasize parent-child relationships as mediators of children's outcomes, work to strengthen the family's ability to care for the child, and link beneficiaries to other resources in their community (Nievar, Van Egeren, & Pollard, 2010). Finally, as a method of service delivery rather than a model of care, home visiting allows for a flexible approach with personalized services (Russell, Britner, & Woolard, 2007). Beyond this broad framework, however, individual home visiting programs vary substantially in their outcomes, intensity and structure of visits; organizational structure; and the characteristics of their home visitors (Howard & Brooks-Gunn, 2009; Sweet & Appelbaum, 2004).

The home visitor is perhaps the most fundamental aspect of the model – and yet one element in which considerable diversity is evident. At one end of the continuum are low cost, volunteer-based programs; at the other end there are programs with highly trained, paraprofessional staff – but the latter carry a substantially higher price tag. Whether this investment translates into higher quality service delivery remains largely unanswered.

Selecting, training and utilizing members of the community as service providers addresses the need for decentralized efforts that are responsive to local needs (Lehmann & Sanders, 2007). Given resource constraints, volunteer-based efforts tend to be the foundation of many care programs (Akintola, 2011). However, there is a growing concern that reliance on inadequately trained and compensated volunteers results in poor program quality (Sherr & Zoll, 2011; Schenk & Michaelis, 2010; Lehmann & Sanders, 2007). A South African study found of nine community-based home visiting programs, none met the minimum performance criteria (Naidu, Aguilera, de Beer, Netshipale, & Harris, 2008). There is also another concern that a reliance on volunteers – who are often as under-resourced as the families they serve – is exploitive (Desmond, 2012). In response, many programs have created a paraprofessional workforce. It is largely presumed that paraprofessionals deliver a higher standard of care: training imparts a specialized skill set and the possibility of professional development; stable employment promotes retention, service continuity, and accountability (Hermann et al., 2009; Mwai et al., 2013). However, there remains a paucity of evidence that investment in paraprofessional services results in measurably higher quality service delivery. Relying on data gathered directly from beneficiaries of home visiting programs 2 years post-enrollment, this study aims to respond to this gap.

Methods

Program models

Home visiting has long been a feature of programs for orphaned and vulnerable children, especially with the shift in policy away from institutionalized care. Such programs adopt a family-centered approach which ensures that children remain in their communities and live with their families, while channeling much needed support to their households (United Nations Children's Fund [UNICEF]). Programs vary widely: many rely on a volunteer workforce and provide little to no training; others invest considerably in capacity-building and employment benefits. We describe four service sets in rural

KwaZulu-Natal, where estimates suggest that nearly 40% of antenatal clinic attendees are living with HIV (Anderson & Phillips, 2006), and approximately 20% of children are orphans (Shisana et al., 2005). Each program reported similar eligibility criteria, targeting orphans and children affected by illness (see Table 1). Programs differed on a number of other aspects, including whether they relied on volunteer-driven or paraprofessional home visiting as part of a broad program of support for families in need. Further information on staffing is provided below: additional information on programs' organizational structure and service delivery is given in Table 1. However, we note that this table cannot capture the wide variation between local organizations implementing a given program model.

Paraprofessional models: Isibindi and Heartbeat

The Isibindi program was initiated in 2005 by the National Association of Child Care Workers (NACCW). NACCW partners with local organizations using a "social franchise" model, training child and youth care workers (CYCWs) to conduct home visits and run safe parks and community gardens. At the time of the study, Isibindi was active in at least 65 sites across 8 provinces, and NACCW estimated that over 11,000 CYCWs had undergone training in the past decade (AIDSTAR-Two, 2013). The selection process is competitive; only half of applicants who complete training will be offered a CYCW position. CYCWs are full-time employees who undergo a regimen of nationally accredited training during their first 2 to 3 years of employment. They receive a stipend of R1000 (110 USD) per month alongside incentives such as Isibindi t-shirts and hats. NACCW also provides bicycles for work use to CYCWs at 17 Isibindi sites.

The Heartbeat Centre for Community Development (Heartbeat) has since 2000 implemented integrated programming addressing children's rights, empowerment, education, and access to material resources. In addition to conducting home visits, care workers staff After School Centres, offer support groups, and implement ChildCare Forums. At the end of 2010, the program included 15 sites in 7 provinces. Heartbeat care workers receive stipends of approximately 1250 Rand (140 USD) each month. There are no minimum educational or experience qualifications, but workers receive 2 weeks of training.

Volunteer-driven models: Tswelopele and CINDI

In addition to its direct-run program, Heartbeat leads a training and mentorship initiative called "Tswelopele", which fosters the replication of the Heartbeat model through partnerships with community-based organizations (CBOs). Heartbeat began mentoring organizations through the Tswelopele program in 2004, and by late 2010 was working with 24 partners in 4 provinces. While Heartbeat promotes the program as practiced by Heartbeat, Tswelopele partners vary in terms of resources and most run volunteer-driven programs with few, if any, paid staff.

CINDI, the Children in Distress Network, also operates using a partnership model, providing networking and capacity-building opportunities to its organizational affiliates. Services provided to beneficiary families during home visits and in other program settings may vary substantially by partner, and the experience level and qualifications of home visitors also vary. The CINDI partners in this study largely operate volunteer-driven programs, with minimal compensation and training for home visitors. CINDI does not ask partners to adhere to program implementation standards, instead offering networking and organizational development to accommodate all interested groups.

Table 1. Key program characteristics by model.

	Volunteer-driven Models			Paraprofessional Models	
	CINDI	Tswelopele	Heartbeat	Isibindi	
Organizational structure					
External funding	Limited to none	Limited	Yes	Yes	
Central management	No	No	Yes	Yes	
Office staff	Varies	Varies	Paid staff	Paid staff	
Home visitor characteristics					
Prerequisites	None	None	No minimum educational qualifications Must demonstrate basic literacy and English skills	Grade 10–12 qualification Basic English skills	
Training	Limited to none	Limited to none	80 hours of training over a two-week period	400 hours of on-the-job training over a two to three year period; accredited through the National Qualifications Frameworks	
Compensation	Limited to none	Limited to none	R 1250 (approx. USD140) per month	R 1000+ (approx. USD110) per month	
Intended services					
Schedule of home visits	Varies by CBO, but typically weekly visits	Weekly or monthly visits depending on the level of need in the household	Weekly or monthly visits depending on the level of need in adult households; 3 times a week for child-headed households	8–10 times a month	

(Continued)

Table 1. (Continued).

	Volunteer-driven Models		Paraprofessional Models	
	CINDI	Tswelopele	Heartbeat	Isibindi
Services delivered during home visits	Varies by CBO, but can include: Assistance obtaining IDs and school fee waivers Psychosocial support Health and hygiene counseling Medical adherence monitoring Homework assistance Referrals to local medical and social services Limited; very few sites offer:	Assistance with grant applications and school fee waivers Psychosocial support Help with day-to-day chores Limited health and hygiene counseling Homework assistance Referrals to local medical and social services Limited; some sites offer:	Assistance with grant applications and school fee waivers Psychosocial support Help with day-to-day chores Limited health and hygiene counseling Homework assistance Referrals to local medical and social services	Assistance with grant applications and school fee waivers Counseling and conflict mediation Health education, including HIV prevention and first aid Referrals and accompaniment to local medical and social services
Other services provided	After school centers Support groups Educational workshops Primary guardian is terminally ill Child-headed household Orphaned	After school centers Support groups Childcare forums Primary guardian is terminally ill Child-headed household Live in relative headed households	After school centers Support groups Educational workshops Childcare forums Primary guardian is terminally ill Child-headed household Live in relative headed households	Many services offered, including: Safe parks Community gardens Income generation projects Guardian or child is infected by HIV/AIDS Child-headed household Orphaned due to HIV/AIDS
Beneficiary eligibility				

Study design and analyses

Information from beneficiary children ages 10–17 and their primary caregivers were collected in two survey rounds: at baseline in April–May 2010, around the time of program enrollment, and at follow-up 2 years later. At baseline, 81% of the newly enrolled households participated, 11% could not be located, 7% were not home after three attempts, and 1% refused to participate. We obtained data on intervention exposure at follow-up from 80% of children who had been interviewed at baseline and their current caregiver, for a total of 1487 children and 1068 caregivers; the study included up to two age-eligible children for each caregiver in participating households. Face-to-face interviews were conducted in respondents' homes in isiZulu. Further details about the panel study can be found elsewhere (Thurman, Kidman, & Taylor, 2014).

This analysis concentrates solely on data concerning intervention exposure, including the frequency and duration of the visit as well as the types of support provided. Bivariate statistical tests (*t*-tests and chi-squared) were used to identify differences in the home visiting services provided through volunteer-driven versus paraprofessional models. Differences in socio-demographic composition reflect targeting criteria set by the volunteer and paraprofessional programs, and are not adjusted for in analyses of home visiting services. Ethical approval for the study was granted by the Tulane University Institutional Review Board in the United States and the Human Science Research Council in South Africa.

Results

Program beneficiaries

Baseline data indicate that the programs' beneficiary populations were demographically similar (see Table 2). Just over half the sample was female and the mean age of participants was 13.6 years. Nearly two-fifths of children were living with a chronically ill caregiver. Eighty-six percent of beneficiaries had been orphaned and two-thirds were living in households without either parent. Beneficiaries in paraprofessional model programs were significantly more likely to be double orphans (67% versus 37%). Their caregivers were overwhelmingly female, few were married, and a third had no formal education. Finally, approximately 80% of children lived in households with less than 1000 Rand a month in income, excluding grants.

Home visiting services

Only half of children and caregivers surveyed reported ever receiving a home visit, and less than one-third recalled having contact with a home visitor in the second year after enrollment (Table 3). Exposure varied substantially between program models: 75% of caregivers enrolled in paraprofessional programs reported having ever had a home visit versus only 34% in the volunteer-driven models. Just 58% of caregivers enrolled in paraprofessional staffed programs and 14% of those in volunteer-driven ones continued to receive visits into the second year. Among them, the reported frequency and duration of home visits were both significantly greater among paraprofessional program enrollees (see Table 3), with over 40% reporting that the home visitor came at least weekly and/or stayed over an hour.

Caregivers who reported receiving a home visit in the last 12 months were also asked what types of tangible support they had been given by home visitors or others affiliated

Table 2. Demographic characteristics of children and caregivers at enrollment, by program model.

	Total sample (<i>n</i> = 1487) (%)	Volunteer-driven models (<i>n</i> = 894) (%)	Paraprofessional models (<i>n</i> = 593) (%)	Group difference (χ^2 or <i>t</i> -statistic)
Child characteristics				
Female	52	51	53	0.20
Age (mean years)	13.60	13.61	13.60	0.18
Chronically ill caregiver	37	38	37	0.15
Orphan status				178.46***
Maternal orphan	11	10	14	
Paternal orphan	26	33	16	
Double orphan	49	37	67	
Foster child (no parent at home)	65	54	83	126.32***
Child-headed household	1	–	2	15.01***
Caregiver characteristics				
Female	93	92	95	5.98*
Age (mean years)	48.64	46.78	51.37	4.99***
Married	19	21	17	2.71
No education	32	30	34	1.94
Relationship to child				
Parent	28	29	13	112.65***
Grandparent/aunt/uncle	58	49	72	78.51***
Sibling	11	9	13	3.95*
Other	3	3	2	1.44
Household characteristics				
Monthly household income under 1000 Rand	81	82	79	2.36

Notes: * $p \leq 0.05$, *** $p \leq 0.001$ for comparing volunteer-driven and paraprofessional models; *t*-tests are used for continuous outcomes and chi-square tests for categorical outcomes.

with the program organization (Table 4). Assistance related to social grants was more common in the paraprofessional model programs: 18% of caregivers reported receiving assistance obtaining the documents necessary to apply for grants and 28% reported help applying for a grant or pension. In volunteer-driven models this was 7% and 13%, respectively. Among those families receiving home visits, there were no differences by program model in food parcel provision or help with school-related expenses.

Beneficiaries visited in the last 12 months were also asked about the kinds of information or emotional support offered during home visits. Children enrolled in the paraprofessional programs were significantly more likely to report that the home visitor spent time talking with them on some or all visits (84% versus 62%; $p < 0.001$) and covered a larger range of topics (4.2 versus 3.3 topics, $p < 0.001$). The most frequently discussed topic was the child’s plans for the future (85%); this topic was the only one more commonly reported among children in the paraprofessional group (88% versus 72%; $p < 0.001$). A majority of children also reported discussing their physical health (75%), strategies to reduce HIV risk (75%), feelings or emotions (71%), caring for the sick (71%), and dealing with family conflicts (56%) with the care worker some or all of the time (Table 5).

Similarly, home visitors in paraprofessional model programs communicated with the caregiver on a greater variety of topics during some or all visits (5.2 versus 4.3

Table 3. Child and caregiver-reported home visits, frequency and duration, by program model.

	Total sample (%)	Volunteer-driven models (%)	Paraprofessional models (%)	Group difference (χ^2 statistic)
Child-reported home visiting				
Home visit				
Ever	46	26	76	359.94***
In past year	29	9	59	439.38***
Visit frequency†				
At least once a week	37	20	41	18.55***
Once every 2 weeks	26	23	26	
About once a month	31	44	28	
Less than once a month	7	13	5	
Caregiver-reported home visiting				
Home visit				
Ever	51	34	75	176.22***
In past year	32	14	58	74.59***
Visit frequency†				
At least once a week	29	18	32	21.61***
Once every two weeks	28	21	31	
About once a month	31	37	29	
Less than once a month	12	24	8	
Visit duration†				
Less than 30 min	31	46	26	12.60**
30–59 min	27	22	29	
An hour or more	42	32	46	

Notes: ** $p \leq 0.01$, *** $p \leq 0.001$ for comparing volunteer-driven and paraprofessional models.

†among respondents reporting home visits in the past year

Table 4. Type of tangible assistance provided by the home visitor or anyone from the affiliated organization among caregivers reporting ever receiving a home visit, by program model.

Tangible assistance	Total sample (%)	Volunteer-driven models (%)	Paraprofessional models (%)	Group difference (χ^2 statistic)
Help obtaining documents	14	7	18	13.12***
Help applying for grants	22	13	28	17.29***
Help with school expenses	16	14	17	0.82
Provision of food parcel in the past year†	38	37	39	0.08

Notes: *** $p \leq 0.001$ for comparing volunteer-driven and paraprofessional models.

†among respondents reporting home visits in the past year.

topics, $p = 0.02$). Fifty-three percent of caregivers reported discussing their feelings or emotions with the care worker some or all of the time (Table 5). Care workers also commonly discussed how to care for oneself or others when someone is sick (reported by 66% of caregivers), how to reduce HIV risk (62%), how to manage money (48%), and how to apply for grants or pensions (42%). Home visitors in paraprofessional model programs were also more likely than those in volunteer-driven programs to talk with caregivers about effective ways to communicate with children (75% compared to 56%; $p = 0.001$).

Table 5. Topics discussed by the home visitor during some or all visits, among child and caregiver beneficiaries reporting a home visit in the last year.

Topic	Children (%)	Caregivers (%)
Plans for the future	85	52
Physical health	75	59
Reducing HIV risk	75	62
Feelings or emotions	71	53
Caring for the sick	71	66
Family conflicts	56	50
Communicating with children	NA	71
Managing money	NA	48
Grant application	NA	42

Discussion

Few beneficiaries were actually visited in models primarily driven by lay volunteers; when visits did occur they were infrequent and relatively brief. Programs that invest more in compensation and extensive training for home visitors were better able to serve beneficiaries, but still fell markedly short of universal coverage. Home visitors in the paraprofessional models interacted more with the children they visited, communicated on a larger variety of topics, and provided a greater amount of tangible support.

The gap in service delivery reported here is not unique; a Zambian study found that only about half of enrollees in a program for HIV-affected families reported receiving program services (Scott et al., 2011). Research on programs in East Africa similarly reported that home visiting was not occurring at the frequency or scale envisioned, despite the use of compensated home visitors (Nyangara, Thurman, Hutchinson, & Obiero, 2009). Further, much donor emphasis has been placed on counting children served, without adequate attention to the structure or content of the services (Bryant et al., 2012). The validity of these basic counts has also been questioned (Bryant et al., 2012); the discrepancy between program-reported enrollment and beneficiary-reported home visits in this study further suggests that these counts may be unreliable.

This study raises important questions about how such large gaps in service delivery arise, including within paraprofessional models that have established protocols and quality standards. Visitation may be lower than expected because staffing is insufficient to meet demand (Subbarao & Coury, 2004). One paraprofessional model program included in the current study had an intended ratio of one home visitor to ten households, yet a case study demonstrated that the program actually operated with one home visitor for every twenty six households. To meet the frequency of visits required by the organization's protocol, each home visitor would have had to make over 100 visits a month (du Plessis, Bean, Schoeman, & Botha, 2011).

Other factors may be equally important in predicting the intensity, duration, and quality of visits. Long distances and rough terrain may make visitation even more difficult; a lack of affordable transportation likely compounds such barriers (Thurman, Kidman, Taylor, & Chiroro, 2013). Moreover, establishing a trusting relationship with the family can be a lengthy and delicate process, and may not be successful for reasons both on the part of the home visitor and the family. Families may reconsider their participation after initial enrollment, may turn away home visitors who show up with an empty hand, or

may reject those who they perceive as interfering with their caretaking of children (Zercher & Spiker, 2005). Service delivery is also tailored to the needs of each individual family, which may explain some of the variation in visit frequency and topic discussion. As needs are met – for example, by successfully linking a family to social grants – regular visits may be appropriately curtailed. Our study only asked beneficiaries for detailed descriptions of the visits occurring in the past year; this may have obscured the intensity and quality of services delivered within the first year of enrollment. A detailed investigation of the above factors is beyond the scope of the present study. In the future, additional research including qualitative information gathered from both home visitors and beneficiaries could improve our understanding and inform strategies to ensure adequate visit frequency and quality.

This paper presents a description of home visiting services delivered by volunteer and paraprofessional models in South Africa – an area which to date we have not seen covered in the literature. While this information will help programs and donors better monitor their activities, there are also important limitations. Foremost, this was not a randomized trial. Each program had similar eligibility criteria, but we did not collect systematic data on how potential beneficiaries were recruited or who ultimately chose to enroll. In addition, the programs operated in different communities; as such, beneficiaries may have been differentially exposed to other care and support programming. Thus, there may be unobserved but important differences in the populations served by the volunteer and paraprofessional models that contribute to the differences in home visiting rates. For example, beneficiaries in the paraprofessional group demonstrated slightly greater disadvantage (more likely to be double orphans, more likely to be living in child-headed households), which may have warranted a more intensive visitation schedule. Furthermore, the researchers did not randomize volunteer versus paraprofessional staffing. Thus, there was variation both between and with the two program models in organizational capacity, services offered, and adherence to model recommendations. Both the non-randomized design and the variation in program organization limit our ability to draw conclusions about the differential impact of volunteer versus paraprofessional staffing.

There are also important limitations with respect to the measures applied. While this study collected the most comprehensive data on home visiting service quality in South Africa published to date, it may not have adequately captured information on the first year of services offered to families enrolled in the programs (as referenced above). It also relied on self-report by beneficiaries and was unable to validate beneficiary reports against program records, though we note that caregiver and child reports were largely consistent. Finally, this study was conducted in largely rural communities in KwaZulu-Natal, South Africa; results for programs situated in other areas may differ.

Overall, this study suggests that greater investment in home visitors is likely to translate into better service delivery, and offers support for building a professional workforce of home visitors to support HIV-affected families. In resource limited settings, there may be a perceived trade-off between investment in paraprofessional services and the number of children that can be reached in volunteer-based programs. However, our results show this to be a false dichotomy; in fact, few children are being serviced in programs that rely on volunteers, and the services provided may be of lower quality. Further research using more rigorous designs is needed to inform this debate. In the meantime, the South African government has already committed to a national scale-up of NACCW's Isibindi model, one of the paraprofessional programs included in this study (AIDSTAR-Two, 2013). Faithful replication of the model will hinge on adequate resources and quality-control mechanisms.

To encourage home visitors to adopt and adhere to quality standards, new monitoring systems and incentives may also be required. For example, program staff from one mentorship program in Rwanda conducted quarterly visits to each household in order to monitor the relationship between volunteer home visitors and children (Brown et al., 2007). Greater attention should be paid to the structure and content of home visiting, setting realistic targets and ensuring fidelity to the model. Further research could also help establish optimal care worker ratios (Naidu et al., 2008) and “dose” standards (Paulsell, Del Grosso, & Supplee, 2014), especially in light of evidence suggesting that beneficiaries with the highest exposure to home visiting are the most likely to show improvement (Azzi-Lessing, 2011; Howard & Brooks-Gunn, 2009; Nievar et al., 2010; Powell & Grantham-McGregor, 1989). Finally, rigorous evaluation efforts will be pivotal to assessing these programs’ progress toward their ultimate goals: improving children’s health and well-being through strategic, effective, family-centered support.

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