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Dina Pimenova April 23, 2019

The Viability of a Partnership between Traditional Health Practitioners and the South African Healthcare System: A Qualitative Systematic Review

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Abstract

The Viability of a Partnership between Traditional Health Practitioners and the South African Healthcare System: A Qualitative Systematic Review

By Dina Pimenova

Background: The Traditional Health Practitioner (THP) Act of 2007 helped institutionalize Traditional African Medicine (TAM) in South Africa, where THPs are held in high esteem in local communities and deliver care to patients in a culturally familiar setting. Yet, collaborative efforts between THPs and the biomedical (BM) healthcare system have often been hindered by power structures at play, particularly in the context of the HIV/AIDS epidemic.

Objective: This Qualitative Systematic Review (QSR) aimed to describe the characteristics and outcomes of HIV/AIDS care collaborations between South African THPs and the BM healthcare system and determine the feasibility of a partnership.

Methods: A QSR was conducted to identify, collate, and evaluate published and gray literature on HIV/AIDS-related South African THP/BM collaborations from 1983-2018. Using a modified PRISMA statement and adapted Cochrane protocol guidelines, a six-domain search strategy was applied to search Africa-Wide Information, Anthropology Plus, EMBASE, Global Health (CAB Direct), JSTOR, PubMed databases.

Results: This review features 12 documents including assessments, reports, and research studies on THP/BM collaborations 1995-2018. The 12 documents showed a range of information on community engagement, financial support, PI familiarity with socio-cultural context, monitoring and evaluation plans, and stakeholder relationship dynamics.

Conclusion: PI familiarity with the socio-cultural context of initiatives was mostly unaddressed. Some encouraging collaboration outcomes were found, yet further research is needed on relationship dynamics between stakeholders at all stages of the process. A surprising number of documents did not describe a methodology incorporating meaningful participatory community engagement. The literature consistently supports that THP involvement in the healthcare system is vital to curb the HIV epidemic in South Africa; a strategy of meaningful participation needs to extend to all stakeholders. We suggest consideration of CBPAR approaches to research and healthcare interventions for a viable partnership between THPs and the South African healthcare system.

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Chapter 1: Introduction

In the country of South Africa, both Traditional African Medicine (TAM) and Biomedicine (BM) carry significant importance (Hammond-Tooke, 1994; Dong et al 2007; Shiza & Charema, 2011; Moshabela 2016), and their concurrent use has been documented in the context of HIV care and treatment (Appelbaum et al. 2015; Nlooto & Naidoo, 2016; Zuma et al., 2016; Sibanda et al., 2017;). For at least thirty years, many have proposed some form of integration of the two healthcare systems for HIV, given the magnitude of the epidemic in South Africa (the largest in the world, with an estimated 7.2 million people living with HIV (PLWH) in 2017 (UNAIDS 2018)) and the constraints and challenges of the South African healthcare system. In light of these circumstances, assessing the viability of the collaboration between these two sectors is an important step to address the South African HIV epidemic effectively.

TAM practices are known to have been part of indigenous South African culture and society at least as early as the time of initial contacts with Western Europeans (Digby, 2006; Flint & Parle, 2008), and most likely for centuries prior (Abdullahi, 2011; Romero-Daza, 2002; Anquandah, 1997:290). The World Health Organization (WHO) notes that Traditional Medicine (TM) is the "the sum total of the knowledge, skill, and practices based on the theories, beliefs, and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health as well as in the prevention, diagnosis, improvement or treatment of physical and mental illness" (WHO, 2013). This definition contrasts with the WHO description of Complementary Medicine (CM) and Alternative Medicine (AM), which underscores a practice outside of the dominant culture. The WHO defines CM/AM as "a broad set of health care practices that are not part of that country's own tradition or conventional medicine [and that] are not fully integrated into the dominant health-care system (WHO, 2013)." Despite this distinction, these terms, along with

ethnomedicine, folk medicine, faith healing, and holistic medicine, among others, are commonly used interchangeably with TM.

Historically, TAM in South Africa has had a complicated relationship with the well-established BM healthcare system (Hammond-Tooke, 1994) and legislative authorities (Hassim et al., 2007; Flint, 2008). Furthermore, it has been invalidated by the hegemonic powers as a strategy for control that originated during colonial times (Flint & Parle, 2008). While the healing traditions of ancient cultures have influenced modern medicine, the oppressive forces of colonialism, cultural imperialism, and later apartheid constrained the advancement of indigenous medical wisdom and tradition in South Africa and other African countries (Hassim et al. 2007). The competitive nature of the relationship between TAM and BM (Nemutandani et al. 2018), "influenced the ways in which biomedical and African healers came to conceive themselves and largely limited healers' legal status under white rule" (Flint, 2008). Such constraints can be illustrated by events dating back to the 1860s in the territory of the former Zulu Kingdom when white legislators criminalized all categories of Traditional Health Practitioners (THPs) (Flint, 2008). Although the 1891 Natal Native Code decision to license African midwives and inyangas (THP category specializing in herbalism) helped to legitimize TAM and lead many THPs to begin experimenting with medicines outside of their tradition, it was received with a backlash from white biomedical providers and government officials, uneasy with the idea of a hybridization of the healthcare system (Flint, 2008). In 1895, the Witchcraft Suppression Act (Ilbert, 1895) was adopted across the Cape Colony, imposing a penalty on whomever:

> *(a) Imputes to any person the use of non-natural means in causing any disease in any person or animal, or in causing any injury to any person or property, i.e. names or indicates any other person as being a wizard or witch;*

(b) Having so named or indicated any person, is proved to be by habit or repute as witch doctor or witch finder;

(c) Employs or solicits any witch doctor or witch finder to name or indicate any person as wizard or witch;

(d) Professes a knowledge of so-called witchcraft, or of the use of charms and divinations, or undertakes to advise any person applying to him how to bewitch or injure any other person or their property, including animals;

(e) On the advice of a witch doctor or witch finder, or in the exercise of any pretended knowledge or witchcraft, or of the use of charms, uses or causes to be put into operation such means or processes as he may have been advised, or may believe to be calculated to injury person or property.

By writing this anti-witchcraft Act into legislation, governing bodies took a step away from earlier assimilation ideals. Effectively recognizing witchcraft as a phenomenon, this act was ultimately a form of acceptance of legal pluralism (Digby, 2006), furthering the divide between TAM and biomedical care. Under apartheid, the Medical Association of South Africa made a declaration in 1953 that reinforced constraints on TAM. It classified that all alternative therapies as illegal and unscientific, prohibiting any collaboration between biomedical and THPs. Later, the Witchcraft Suppression Act of 1957 and subsequent Witchcraft Suppression Amendment Act of 1970 prohibited diviner THPs from practicing their work (Hassim, 2007). Eight years later in 1978, the Alma Ata Declaration of the WHO captured a pivotal moment for TM worldwide, as it recognized the critical role THPs play in primary health care (UNICEF et al., 1978).

While the Alma-Ata Declaration re-introduced TM to the world stage in a new light, it did not have a significant impact on South African public policy until almost three decades later. In 2007, the Traditional Health Practitioners Act was enacted to:

1. *Establish the Interim THP Council of South Africa;*
2. *Provide for the registration, training, and practices of THPs in the Republic; and*
3. *Serve and protect the interests of members of the public who use the services of THPs.*

The Interim THP Council of South Africa was inaugurated in early 2013 and became active the following year, having extensive oversight in setting THP practice standards (Street, 2016). The same year, the WHO Traditional Medicine Strategy for 2014-2023 was published with the aim to support Member States in "harnessing the potential contribution of TM to health, wellness and people-centered health care [and in] promoting the safe and effective use of TM products, practitioners and practice into health systems, where appropriate" (WHO, 2013). In this document, the WHO explicitly requests that Member States rise to the challenge of strengthening quality assurance, safety, proper use, and efficacy of TM through regulation of products, practices, and THPs themselves, by way of education, training, skill, development, services, and therapies. In 2015, the South African Government Gazette published the THP Practitioners Regulations, which were vague and prompted interested persons to weigh in and submit any substantiated comments on the proposed regulations (Motsoaledi 2015; Street 2016; Street et al., 2018).

The efforts made in the last decade alone present a unique opportunity to address the relationship between the traditional and biomedical healthcare systems in South Africa, especially in the context of HIV/AIDS. Because THPs live in the communities to which they provide care, their reach goes beyond that of the biomedical healthcare system which is restricted by a limited distribution of clinics and hospitals. THPs are therefore excellently positioned for providing HIV

care, adherence counseling, and general patient education. While part of the body of literature reports on the negative role THPs may play in the care of PLWH, there is also growing evidence that it is, in fact, possible and mutually beneficial to build collaborations between TAM and the BM systems (James, et al., 2018; Street et al., 2018;Leclerc-Madlala et al., 2016; Moshabela et al., 2016; Wreford, 2005). Despite often prejudiced portrayals of THPs throughout history as maleficent and incompetent, they have been working in parallel with biomedical health care providers, providing education and care to patients throughout the HIV/AIDS epidemic in South Africa and remain an integral source of support and authority for PLWH.

In anthropology, cosmology is defined as a set of ideas about the universe as an ordered system and the place of humans in the universe. TAM and BM differ in their respective cosmologies. Thus, to attempt to make a comparison between the two, and to try to assess TAM using a biomedical approach would not be a worthwhile exercise (Hammond-Tooke, 1989; Oloyede 2010). That, however, does not mean that the two cannot co-exist and work together. Ultimately, an alliance between the traditional healing paradigm and the biomedical paradigm can only occur if prioritization of the patient population's well-being supersedes the power struggle between authoritative figures and institutions (Moshabela et al. 2016).

Our research question and study objectives revolve around the efforts to create a collaborative relationship between TAM and BM systems. Numerous attempts at partnership have been made since the beginning of the HIV/AIDS epidemic in the early 1980s, but they have been hindered by the power structures at play. To address this, we ask the following:

1. **What are the characteristics and outcomes of collaborative efforts between THPs and the BM System of care in South Africa in addressing the HIV/AIDS epidemic?**
2. **How feasible is the partnership between TAM and BM in this context?**

A systematic review of the literature is a first step in addressing these questions from a Western scientific perspective. This qualitative systematic review of the literature aims to:

1. Describe outcomes of collaborations between THPs and Western healthcare providers in research and in program implementation;
2. Identify key factors associated with outcomes of the collaborations; and,
3. Identify some of the crucial elements for successful collaborations between South Africa's healthcare system and THPs.

Chapter 2: Background

Multiple types of reviews evaluating existing literature and interventions involving the collaborations between TAM and BM in the context of HIV healthcare have been published in both scholarly journals and the Cochrane Database of Systematic Reviews[1]. Literature reviews are also found in multilateral and non-governmental reports such as one published in the United Nations Programme on HIV and AIDS (UNAIDS) "Best Practice Collection" and another in the South African Health Systems Trust (HST)[2] 2017 Annual Review on the topic. The reviews looking at the collaboration in HIV healthcare between TAM and BM found in our search of the literature span approximately twenty years, beginning in 1997 and ending in 2018. As seen in Table 1, the reviews have been categorized by time period in relation to important shifts in public policy: before the THP Act of 2007, after the THP Act of 2007, and after the introduction of the 2015 regulations to the THP Act in the South African Government Gazette. The chronological

[1] *Cochrane Database of Systematic Reviews (CDSR) is the leading journal and database for systematic reviews in health care.*

[2] *South African Health Systems Trust (HST) is a not-for-profit organization established in 1992 to support the transformation of the health system in the newly established democratic South Africa. Subscribing to a primary health care approach, HST actively supports current and future development of a comprehensive health system, through strategies designed to promote equity and efficiency in health and health care delivery in southern Africa.*

segmentation is important to note as the policy shifts may have played a role in the outcomes addressed in these literature reviews.

Table 1: Existing Literature Reviews

No.	Before the THP Act of 2007	Geographic Setting
1	King, R., & Homsy, J. (1997). Involving traditional healers in AIDS education and counselling in sub-Saharan Africa: a review. AIDS, 11 Suppl A, S217-225.	Botswana, Central African Republic, Malawi, Mozambique, South Africa, Uganda, and Zambia
2	King, R (2000) Collaboration with traditional healers in HIV/AIDS prevention and care in sub-Saharan Africa: a literature review, Geneva, Switzerland. UNAIDS Best Practice Collection, Key Documents.	Botswana, Central African Republic, Guinea, Malawi, Mozambique, South Africa, Uganda, United Republic of Tanzania, and Zambia
3	Wreford, J. (2005). 'Sincedisa – We Can Help!' A Literature Review of Current Practice Involving Traditional African Healers in Biomedical HIV/AIDS Interventions in South Africa AU - Wreford, Jo. Social Dynamics, 31(2), 90-117. doi:10.1080/02533950508628709	South Africa
	After the THP Act of 2007	
4	Sorsdahl, K., Ipser, J. C., & Stein, D. J. (2009). Interventions for educating traditional healers about STD and HIV medicine. Cochrane Database Syst Rev (4), CD007190. doi: 10.1002/14651858.CD007190.pub2	South Africa
	After THP Act Regulations of 2015	
5	Leclerc-Madlala, S., Green, E., & Hallin, M. (2016). Traditional healers and the "Fast-Track" HIV response: is success possible without them? Afr J AIDS Res, 15(2), 185-193. doi:10.2989/16085906.2016.1204329	Lesotho, Mozambique, South Africa, Tanzania, and Uganda
6	Moshabela, M., Zuma, T., & Gaede, B. (2016). Bridging the gap between biomedical and traditional health practitioners in South Africa. South African Health Review, 2016(1), 83-92.	South Africa
7	James, P. B., Wardle, J., Steel, A., & Adams, J. (2018). Traditional, complementary and alternative medicine use in Sub-Saharan Africa: a systematic review. BMJ Glob Health, 3(5), e000895. doi:10.1136/bmjgh-2018-000895	Ghana, Nigeria, South Africa, and Uganda
8	Street, R. A., Smith, M., Moshabela, M., Shezi, B., Webster, C., & Falkenberg, T. (2018). Traditional health practitioners and sustainable development: a case study in South Africa. Public Health, 165, 1-5. doi: 10.1016/j.puhe.2018.07.021	South Africa

1. The first of these reviews, "Involving Traditional Healers in AIDS Education and Counselling in Sub-Saharan Africa: A Review," sponsored by the international non-profit organization Médecins Sans Frontières (MSF), was published in 1997, ten years before the THP

Act of 2007. This publication addressed documented collaborations between THPs and numerous non-governmental organizations (NGOs), national programs, international development agencies, educational institutions, and ministries of health from 1987 to 1996. The authors described the outcomes and challenges of collaborations that address THP perceptions on sexually transmitted diseases (STDs) including HIV/AIDS and training THPs as HIV/AIDS counselors and community educators in Zambia, Uganda, Botswana, Malawi, Mozambique, South Africa, and the Central African Republic. Although the authors did not describe their literature review methodology, they provided a summary of documented collaborations organizing the information by (1) project, (2) initiating/supporting party, (3) status (ongoing, terminated, completed, N/A), and (4) achievements/findings. Of these collaborations, only two were initiated in South Africa in 1992; which the authors listed as an ongoing program supported by the AIDS Control and Prevention Project (AIDSCAP)[3] and the South African Ministry of Health. Through one of these collaborations, 28 THPs trained 630 THPs on basic AIDS facts. The second collaboration identified by the MSF report was a pilot survey of THPs assessing "their potential for AIDS prevention and care," (King & Homsy 1997), which found THPs to be highly knowledgeable about HIV/AIDS. The MSF report raised the issue of an unequal distribution of power and influence in the previous attempts at partnership between THPs and the BM system: there remains an "imbalance inherent in the colonial heritage of public health in Africa; collaborations are almost always initiated and terminated by the western sector because that is where the funds are" (King

[3] *Between 1991 and 1997, AIDSCAP was the largest single international HIV prevention initiative, managing and supporting more than 800 HIV/AIDS and STI prevention programs in 50 countries through funding from the United States Agency for International Development (UNAIDS).*

& Homsy 1997). The authors also added, “Of concern is the failure of many projects to provide systematic follow-up to healers after their initial training. Such follow-up is essential to support healers in dealing with unfamiliar issues such as condom use and death and dying.” The authors of the MSF review concluded that THPs must not be left out of the battle against HIV/AIDS and that their recognition and respect is essential for long-term collaborations to be adequately planned, funded, and evaluated. Otherwise, “the social, behavioral and cultural factors that allowed the AIDS pandemic to flourish [in Africa] will never be eliminated, even in the idealistic situation where an effective drug or vaccine reaches the majority the African people” (King & Homsy 1997).

2. Published in 2000 in the UNAIDS Best Practice Collection, “Collaboration with Traditional Healers in HIV/AIDS Prevention and Care in Sub-Saharan Africa: a Literature Review” (King, 2000) aimed to give a brief update on AIDS and TAM and to review collaborative HIV prevention initiatives involving THPs and BMPs. In this review, King selected eight projects that most closely met the UNAIDS Best Practice criteria (effectiveness, efficiency, relevance, ethical soundness, and sustainability) (UNAIDS, 1991, Summary Booklet of Best Practices), One of these programs was implemented in South Africa (Green et al., 1995) and it is also described in the previous review (King & Homsy 1997).

In assessing the Green et al project, King outlines the following as indicators based on the afore mentioned UNAIDS Best Practice criteria:

Effectiveness: (1) THP knowledge about AIDS and STDs, (2) Client/community AIDS knowledge, (3) THP coverage, (4) THP skills in AIDS counseling and community education, (5) THP skills in training fellow THPs, (6) Client/community risk behavior, (7) THP risk behavior, (8) Condom promotion/distribution, (9) PLWH support, (10) Collaboration between TAM and BM, and (11) Challenges in overall health impact in the communities surrounding THPs.

Ethical soundness: (1) approval by scientific and ethical committees, (2) equity of participation, (3) informed consent, (4) patient confidentiality, (5) safeguards of THPs' proprietary rights to their treatments, (6) harm from THP treatments, and (7) feedback of results.

Efficiency: (1) monitoring and evaluation, (2) cost-benefit measures, (3) numbers of THPs reached, numbers of clients/community members reached, (4) use of resources, (5) flexibility to changing circumstances, and (6) financial control.

Sustainability: (1) sustainability of results, (2) funding, (3) capacity-building, (4) local ownership, and (5) links with local health or community systems.

Lastly, *relevance*: (1) needs assessment, (2) HIV/AIDS context, (3) relevance to National AIDS Program priorities, and (4) political context.

King also described additional important criteria for collaborative projects: (1) Selection of 'genuine' or 'authentic' THPs as recommended by the community, (2) Critical consideration of recommendations made by THP associations, (3) Collaboration with the ministry under which THP activities fall, (4) Patient attendance, and (5) Time investment.

The author also identified several lessons learned, particularly on *THP training methods* (with THPs being given the utmost respect), *collaboration* (involving great effort on both sides of the collaborative relationship), as well as *project design and implementation* (securing funding for long-term monitoring, evaluation, and follow-up). The recommendations for further research and action included more systematic evaluation of collaborations, in addition to further research into the relationship between the TAM and BM healthcare systems, THP approach to care and their integration of BM concepts into their counseling strategies. Lastly, the author urges collaborative projects to learn from each other (King, 2000).

3. The 2005 review, "Interventions for Education Traditional Healers about STD and HIV Medicine" (Wreford, 2005) looked at both peer-reviewed and gray literature[4] and offers a comprehensive analysis of the roles assigned to THPs in biomedical HIV/AIDS interventions in South Africa as well as outlines the limitations of previous initiatives involving collaborations with THPs. The review does not describe its methodology and it is structured as follows: (1) overview of social and political background of collaborative efforts; (2) exploration of some early examples of efforts at BM/TAM cooperation in Africa; and (3) an examination of examples of cooperation between THPs and BM professionals in Southern Africa, specifically referencing South African models in the context of STDs and HIV/AIDS.

Wreford's review identifies the following two lessons drawn from previous collaborations: *encouraging reciprocity between TAM and BM and promoting earlier education and exposure to polytheistic health systems for BM sector*. Lastly, the author outlines a model in which TAM practices are incorporated into biomedical treatment interventions, with trained THPs and BM providers working side-by-side (Wreford 2005). In conclusion, the author recommends that biomedical interventions "acknowledge the reality of traditional healing and engage with its complexity," which can, in turn, lead to fruitful collaborations between the two healthcare systems in the future (Wreford, 2005).

4. The only systematic review explicitly using the Cochrane protocol, entitled, "The Challenges of Involving Traditional Healers in HIV/AIDS Care," was published in 2009 by Sorsdahl et al. and following the THP Act of 2007. This paper focused on evaluating the effectiveness of programs educating THPs about STD and HIV medicine (Sorsdahl et al. 2009). The authors searched the Cochrane Register of Controlled Trials, PubMed, EMBASE, Gateway,

[4] *Gray literature* includes non-formally published scholarly or substantive information (often found on the internet and in specialized resources; often not formally peer-reviewed.

and AIDSearch for publications from 1980 to 2008. Authors also searched the reference lists of the retrieved articles, located conference proceedings of international conferences related to AIDS studies and contacted key personnel and organizations working with HIV/AIDS intervention programs in low-income countries. Among these search results, only two studies which took place before the THP Act of 2007 (Peltzer 2006; Poudyal 2003) met the inclusion criteria of having assessed the effectiveness of interventions through comparison with control groups which received no education intervention (Sorsdahl et al. 2009). Assessed independently by two reviewers, these two studies both indicated that a training workshop increased THPs' knowledge about HIV/AIDS. The authors of this review acknowledge that methodological heterogeneity, small samples, and risk of biased results limit the conclusions that could be drawn from these studies. Lastly, the authors argue for the creation of a forum to facilitate input from all stakeholders involved for interventions to be genuinely collaborative and successful (Sorsdahl et al. 2009).

5. Since 2016, four literature reviews have been published addressing collaborative efforts between THPs and the BM healthcare system. Of those, two were scoping reviews, which are broadly defined as reviews that help identify research gaps, summarize research findings, and inform systematic reviews (Armstrong 2011). One of the scoping reviews was published in the HST 2017 Annual Review, "Bridging the Gap Between Biomedical and Traditional Health Practitioners in South Africa" (Moshabela et al. 2016) and provides an overall outlook on TAM practice in South Africa after the THP Act of 2007. Although their methodology is not described in great details, authors describe reporting on findings from both peer-reviewed and gray literature related to THPs from 2004 and up to 2015, indicating that they reviewed research evidence on the THP role in the South African healthcare system as well as opinion and commentary pieces, discussions, policy reviews, case studies, and media stories published since 2004. The authors

argued that merging BM and TAM to create a complementary system of plural healthcare will offer patients a holistic approach to care needs (Moshabela et al. 2016).

6. The second scoping review, "Traditional Healers and the "Fast-Track" HIV Response: Is Success Possible Without Them?" (Leclerc-Madlala 2016), was published in the *African Journal of AIDS Research* and addressed the plans to increase antiretroviral treatment (ART) coverage in order to attain viral suppression among PLWH, and whether successful interventions require THPs. This review aimed to identify the various ways in which THPs have collaborated with the biomedical sector in the context of HIV/AIDs in sub-Saharan Africa. The authors conducted a search for terms traditional healer, traditional medical practitioner, collaboration, integration, Africa, and HIV and AIDS, from 1985-2015 in the following databases: MEDLINE, Academic Search Premier, PubMed, African Journals Online, Global Health, CENTRAL, SocIndex, and Google Scholar. Authors also reviewed gray literature such as program evaluations, reports, and toolkits. From the review, the authors highlighted collaborations that exhibited a higher level of meaningful community engagement from Tanzania, Uganda, Lesotho, Mozambique, and South Africa. Only one of these collaborations took place in South Africa. The authors state that before THPs can be linked to any healthcare system, all stakeholders involved must be willing and involved in open communication to address barriers (social, cultural, and logistical) to collaboration. Only once that has been established, the following steps must be taken towards building a collaborative system: (1) undertake a rapid assessment of all health-seeking ecosystem in all HIV clinic catchment areas, (2) assess training needs of THPs and develop plans for required training, (3) explore avenues for communicating with THPs, perhaps through national and regional associations of THPs as well as through any previous collaboration, (4) solicit buy-in for collaboration from members of both sectors, among patients, and from the community, (5)

provide needed training (which can and should to some extent be bidirectional), (6) set clear tasks and expectations, and (7), start with local initiatives, scale up once assessments and evaluations show positive impact of local programs (Leclerc-Madlala 2016). Authors conclude that Tanga AIDS Working Group (TAWG) in Tanzania, Traditional and Modern Health Practitioners Together Against AIDS (THETA) in Uganda, Rural Health Initiative (RHI) in Lesotho), Gabinete de Estudos de Medicina Tradicional Program (GEMT) in Mozambique, and Integration of TB Education and Care for HIV/AIDS (ITEACH) in South Africa have shown the kind of steps that need to be taken to achieve success in the accelerated HIV response post-2015; however, failure to collaborate with THPs will significantly delay any progress in achieving epidemic control in the future (Leclerc-Madlala 2016).

7. A full systematic review, "Traditional, Complementary and Alternative Medicine [TCAM] Use in Sub-Saharan Africa: A Systematic Review" (James et al, 2018) looked at the literature documenting TCAM use in Ghana, Nigeria, South Africa, and Uganda published between 2006 and 2017 (James et al. 2018). In response to high utilization of TCAM across sub-Saharan Africa and to help policymakers, researchers, and BM healthcare providers to make informed decisions, the authors reported on the prevalence of TCAM users as well as "the drivers and barriers that facilitate and limit the use of TCAM," (James et al.) This review covered multiple diseases which are addressed by TCAM providers in sub-Saharan Africa, including sexual health conditions, hypertension, diabetes, cancer, asthma, HIV/AIDS, malaria, febrile illness, mental and neurological disorders (epilepsy and mental health disorders), musculoskeletal conditions, diarrhea, eye diseases, surgical care, and others (infantile colic, tuberculosis, oral health, and mycetoma). Twenty-four papers were found to specifically report on TCAM product and practitioner use among patients with HIV/AIDS in Sub-Saharan Africa. Of these papers, only two

studies were conducted using a large sample of patients, with one being product-based (conducted in Uganda) and the other one practitioner-based (conducted in Mozambique). The authors did not report on any studies involving TCAM use in the context of HIV/AIDS in South Africa. They do, however, conclude that stakeholders involved in healthcare in sub-Saharan Africa must be considerate of the role that TCAM plays in the healthcare delivery system, encouraging further research to address gaps in current scholarship (James, et al. 2018).

8. Lastly, the 2018 rapid structured literature review[5], "Traditional Health Practitioners and Sustainable Development: A Case Study in South Africa," (Street et. al 2018) was aimed to highlight legal and regulatory advances relating to THPs in South Africa over the last ten years and to discuss the implications of translation of health policies into guidelines for sustainable public health practice (Street et. al 2018). Authors report that they identified relevant studies through a search of peer-reviewed and gray literature. PubMed, Science Direct, and Web of Science were searched for titles relating to policy and regulation and the role of THPs as a human health service delivery resource. The authors discuss how the HIV epidemic revealed the importance of sociocultural aspects of health and the limitations of BM interventions, in which THPs were often turned into agents of BM healthcare and disrespected in their practices (Street et al. 2018). In the context of the vague 2015 regulations and the ultimate goal of promoting comprehensive and collaborative patient care, "…collaboration with THPs needs to have guiding principles that serve to respect and protect their practices…" (Street et al. 2018). The authors conclude that without proper regulations to truly stipulate the provision of the THP Act of 2007, the Act does not create a productive environment for THPs in the South African healthcare system.

[5] Rapid reviews are carried out to meet pressing policy demands or to lay the ground for a more comprehensive, systematic review (Boaz et al. 1999)

Although seven of the eight published reviews cover significantly the topic of HIV/AIDS as well as the existing attempts at collaboration between THPs and their biomedical counterparts (King & Homs, 1997; King 2000; Wreford, 2005; Sorsdahl et. al, 2009; Leclerc-Madlala et. al, 2016; Moshabela et. al, 2016, Street, et. al, 2018), there were important gaps in addressing in more detail the nature, process, and outcomes of the relationships between stakeholders (community, funders, project leadership, THPs, BMPs, government actors/policymakers) in the context of HIV healthcare interventions/collaboration involving TAM and BM. More specifically, none of these reviews addressed in detail the following:

1. Nature of community engagement
2. The funding source of intervention/program/study
3. PI/Project leader familiarity with context/sociocultural background
4. The existence of an evaluation plan for the initiative, especially after the THP Act of 2007
5. Relationship dynamics between the target community, THPs, biomedical practitioners (clinic staff/doctors/nurses/counselors), government actors/policy makers, and academic researchers.

In an effort to address factors 1-5 above, we conducted a qualitative systematic literature review to determine the viability of collaboration between THPs and the South African biomedical healthcare system, as well as to identify possible lessons learned to effectively and sustainably approach these collaborations.

Chapter 3: Methods

A Qualitative Systematic Review (QSR) is a type of systematic literature review which is used to uncover new understandings and build theory, bringing together research on a topic,

systematically searching for research evidence from primary qualitative studies and drawing on the findings together (Seers, 2015). This QSR was conducted in order to identify, collate, and evaluate peer-reviewed and gray literature from primary sources that detail collaborative efforts between THPs and the biomedical South African healthcare system using a modified PRISMA (Preferred Reporting Items for Systematic reviews and Meta-Analyses) Statement (Moher et. al, 2009a) and adapted guidelines of the Cochrane protocol as described by the Cochrane Public Health Group (CPHG, 2011). In this review, we did not do a statistical analysis of the results of relevant studies.

Criteria for considering documents for this review

Types of publications

This review included a variety of documents reporting on the process and outcomes of collaborations between the THPs and the biomedical healthcare system for the prevention and treatment of HIV/AIDS in South Africa. These documents included:

1. Peer reviewed articles (qualitative, quantitative, mixed-method, clinical case studies, etc.)
2. Government issues (e.g. South African Department of Health)
3. Multilateral or non-governmental (e.g. UNAIDS) reports
4. Public written statements (e.g. commentary or letter to the editor)
5. Book chapters/books
6. News articles.

Place, Population, and Temporal Range

The review was geographically limited to collaborations/interventions that have taken place within the Republic of South Africa. Populations of all socio-economic backgrounds were included in this review. However, due to the fact that we were looking specifically at collaborations with TAM, the population group primarily involved in this review is black South Africans, who are the large majority of TAM users. The search was done for literature published in the English language between the years 1983 and 2018.

Types of interventions/collaborations

Documents included in this review were limited to the ones describing collaborations between THPs and the allopathic South African healthcare system in the context of HIV prevention and treatment.

Types of descriptive outcomes

This review defined the following intervention/collaboration outcomes:

- Description of meaningful and participatory community engagement
- Description of funding source of intervention/collaboration
- Existence of an evaluation plan for the initiative, given that the literature suggests a lack of program/intervention evaluation
- PI/Project leader familiarity with context/sociocultural background
- Description of relationship dynamics between the target community, THPs, biomedical practitioners (clinic staff/doctors/nurses/counselors), government actors/policymakers, and independent researchers (Figure1)

Figure 1: Stakeholder Relationship Model

Search Methods

Seven databases were selected on the basis of those most commonly accessed by sociocultural and medical anthropologists as well as global public health experts: PubMed, EMBASE, CABI Global Health, Africa-Wide Information, JSTOR, Anthropology Plus, and Anthrosource. These databases contained journals with high Institute for Scientific Information (ISI) impact citation indices and broad linkages with other high-profile databases. Keywords determined by six domains were searched in the full text of the documents.

Domains:

1. Spatial/Cultural
2. Disease
3. Non-Western Medicine
4. Western Medicine
5. Strategy

6. Outcomes

The keywords in these search categories were then used with the Boolean operator 'and'. Keywords within the categories were used with the Boolean operator 'or'. Keyword combinations were adjusted for the different databases based on search capacity for each database.

Table 2: Online Databases Search

1. PubMed	*Searched on March 23, 2019 using the search strategy documented in Appendix A*
2. Africa-Wide Information	*Searched on March 30, 2019 using the search strategy documented in Appendix A*
3. EMBASE	*Searched on March 31, 2019 using the search strategy documented in Appendix A*
4. Global Health (CAB Direct)	*Searched on April 1, 2019 using the search strategy documented in Appendix A*
5. JSTOR	*Searched on April 1, 2019 using the search strategy documented in Appendix B*
6. Anthropology Plus	*Searched on April 1, 2019 using the search strategy documented in Appendix B*
7. Anthrosource	*Searched on April 1, 2019 with numerous combinations of the six domains, however searches did not return any results.*

Bibliographies of reviews published on the collaborations between THPs and the BM healthcare system were searched for additional publications, provided that they met the eligibility criteria. The review also included documents identified through personal communication with researchers familiar with the topic.

Data Collection and Analysis

Selection of studies

A search strategy was developed by Dina Pimenova (MPH Candidate) and reviewed by Claudia Ordóñez (Thesis Chair - Anthropologist) and Vincent Marconi (Thesis Committee Member – M.D.). The search strategy was used to search and review documents by Dina Pimenova and Claudia Ordóñez, and Vincent Marconi was available to resolve study eligibility disputes. A record was kept of all reasons for which studies were excluded from the review and a PRISMA flowchart was completed. Zotero reference management software was used for data collection and management purposes.

Data extraction and management

A *Document Eligibility Screener Form* (Appendix C) and a *Data Extraction Form* (Appendix D) were created by adapting the Cochrane protocol as described by the Cochrane Public health Group (CPHG, 2011) and using Google Forms.

Document Eligibility Screener Form

The Document Eligibility Screener was utilized by the MPH candidate (Extractor). The results deemed eligible or in question by Extractor were reviewed by the Thesis Chair (Reviewer 1). The other thesis committee member (MD) was designated as Reviewer 2 to resolve possible eligibility disputes. See Appendix C.

Source IDs were created for each retrieved document by combining the sequential number, surname of first author OR name of organization, and year of publication (e.g., 001Rogers2018).

The Document Eligibility form consisted of three sections:

1. General Information
2. Eligibility Check-list
3. Summary of Assessment for Inclusion.

General Information Section included (1) Source ID, (2) Database in which the document was located, (3) Document Title, (4) Name of first author/organization, (5) Year Published, (6) Publication type.

The Eligibility Check-list, consisted of five yes or no questions:

1. Is the document published in English?
2. Is the document published between 1983 and 2018?
3. Did the intervention/project (academic or government research)/collaboration take place in South Africa?

4. Is the involvement of TAM in HIV/AIDS prevention, treatment, and/or care mentioned?

The fifth question in this section asked for a decision for inclusion or exclusion of the document in the review with options 'Yes', 'Maybe', and 'No'. If the decision was 'Yes' or 'Maybe', the Extractor provided a link to the document

The Summary of Assessment for Inclusion confirmed if the document was screened by the Extractor, the name of the extractor, and the date of the screening. The following question asked if the screening decision was reviewed by Reviewer 1, the name of Reviewer 1, the date of the review, and if differences (if any) were resolved. If differences were unresolved, Reviewer 2 would access the form and complete the section by checking if a revision was completed by Reviewer 2, the name of Reviewer 2, and the date of the review.

All entered results were exported to a Google Sheets document, which was coded to include a link for access to edit the responses by Extractor and Reviewers as needed (Buchman, 2018). This code is included in Appendix E.

Data Extraction Form

In the event that a document was deemed eligible by the authors for the review, it was then assessed using the Data Extraction Form (see Appendix D), which consisted of five sections as follows

1. Extraction Process Card
2. General Information
3. Methods and Other Details
4. Descriptive Outcomes
5. Descriptive Outcomes continued – Description of Relationship Dynamics

The Extraction Process Card included the document Source ID, Date of Assessment by Extractor (required), Date of Assessment by Reviewer 1 (required), Date of Assessment by Reviewer 2 (not required), as well as a link to the document.

General Information included (1) document title, (2) name of first author/organization, (3) year published, (4) databases in which the document was located, (5) publication type, (6) possible conflicts of interest, and (7) reviewer comments.

Methods and Other Details included the following, accompanied by page/figure number: (1) the main objective of the undertaking, (2) type of approach, (3) type of study (if study), (4) description of social context/setting, (4) target population, (5) participant recruitment, (6) sampling techniques, (7) duration of intervention/project study, and (8) reviewer comments.

Descriptive Outcomes included the following, accompanied by citation from text and page/figure number(s): (1) description of meaningful and participatory community engagement, (2) description of funding source (including role of funders), (3) existence of an evaluation plan for the intervention/project/study (including the HIV treatment cascade and care continuum step and process metrics addressed in the evaluation), (4) description of PI/project leader familiarity with the socio-cultural context (if not in text, number of publications the PI/project leader has on the subject).

Descriptive Outcomes continued – Description of Relationship Dynamics, accompanied by citation and page/figure number(s), included the descriptions of relationship dynamics between: (1) Target Community(TC) and THPs, (2) TC and BMPs , (3) TC and government actors/policy makers, (4) TC and Academic Investigators(AI), (4) TC and AI (5) THPs and BMPs, (6) THPs and government actors/policy makers, (7) THPs and AI, (8) BMPs and government actors/policy makers, (9) BMPs and AI, (10) government actors/policy makers and AI.

Chapter 4: Results

Documents Reviewed

A total of eleven documents returned from the database search were deemed to contain eligible information within the parameters of this QSR. Three of the documents retrieved were literature reviews (King & Homsy, 1997; King, 2000; Sorsdahl et al., 2009) already addressed in Chapter 2: Background. One document was a program implementation report (Dong et al., 2007), one a project implementation report (Gqaleni et al., 2010), and the remaining five were research studies: one employing a quasi-experimental design (Peltzer et al., 2006), and eight employing qualitative research designs (Mills, 2005; Shuster et al., 2008; Zimba & Tanga, 2014; Appelbaum Belisle et al., 2015; Moshabela et al., 2016; Ngunyulu et al., 2017; Zuma et al., 2017; Nemutandani et al.; 2018).

Table 3: Eligible Documents Retrieved from Database Search

Short Reference Name	Document Title	Type of Approach	Database(s)
King & Homsy 1997	Involving traditional healers in AIDS education and counseling in sub-Saharan Africa: a review	Literature Review	Africa-Wide Information, PubMed
King, 2000	"Collaborations with traditional healers in HIV/AIDS prevention and care in sub-Saharan Africa"	Literature Review	Africa-Wide Information
Mills, 2005	"HIV Illness Meanings and Collaborative Healing Strategies in South Africa"	Qualitative Research Study	Africa-Wide Information
Dong et al., 2007	Challenges to the Success of HIV and Tuberculosis Care and Treatment in the Public Health Sector in South Africa	Program Implementation Report	EMBASE
Sorsdahl et al., 2009	Interventions for educating traditional healers about STD and HIV medicine (Review)	Systematic Literature Review	EMBASE
Gqaleni et al., 2011	"Biomedical and Traditional Healing Collaboration on HIV and AIDS in KwaZulu-Natal, South Africa"	Project Implementation Report	EMBASE
Zimba & Tanga, 2014	Challenges Faced by Traditional Healers When Treating People Living with HIV and AIDS: The Case of	Qualitative Research Study	Global Health (CAB Direct)

	Intsika Municipality, Eastern Cape Province of South Africa		
Moshabela et al., 2016	"It is better to die": experiences of traditional health practitioners within the HIV treatment as prevention trial communities in rural South Africa (ANRS 12249 TasP trial)	Qualitative Research Study	Africa-Wide Information, EMBASE, PubMed
Ngunyulu et al., 2017	"Collaborative HIV care in primary health care: nurses' views"	Qualitative Research Study	EMBASE, PubMed
Zuma et al., 2017	"Traditional health practitioners' management of HIV/AIDS in rural South Africa in the era of widespread antiretroviral therapy"	Qualitative Research Study	Africa-Wide Information, EMBASE, Global Health (CAB Direct), PubMed
Nemutandani et al., 2018	"Decolonising the mindsets, attitudes and practices of the allopathic and indigenous health practitioners in postcolonial society: An exploratory approach in the management of patients"	Qualitative Research Study	EMBASE, PubMed

The bibliographies of the three reviews were searched for eligible documents and yielded two additional documents: a program impact assessment (Green et. al 1995) and quasi-experimental research study (Peltzer et. al 2006). Two more documents were identified through personal communications with researchers familiar with the topic, both qualitative research studies (Shuster et al., 2008; Applebaum et al., 2015):

Table 4: Additional Eligible Documents

Short Reference Name	Document Title	Type of Approach
Green et al., 1995	The Experience of an AIDS Prevention Program Focused on South African Traditional Healers	Program Impact Assessment
Peltzer et al., 2006	A Controlled Study of an HIV/AIDS/STI/TB Intervention with Traditional Healers in KwaZulu-Natal, South Africa	Quasi-Experimental Research Study
Shuster et al., 2009	The Cultural and Community-Level Acceptance of Antiretroviral Therapy (ART) Among Traditional Healers in Eastern Cape, South Africa	Qualitative Research Study
Appelbaum Belisle et al., 2015	Concurrent use of traditional medicine and ART: Perspectives of patients, providers and traditional healers in Durban, South Africa	Qualitative Research Study

Documents Evaluated

Removing the secondary sources from Table 3 and consolidating Tables 3 and 4, twelve documents were selected for evaluation.

Table 5: Documents Selected for Evaluation

1	Green, E. C., Zokwe, B., & Dupree, J. D. (1995). The experience of an AIDS prevention program focused on South African traditional healers. *Social Science & Medicine (1982)*, *40*(4), 503–515.
2	Mills, E. (2005). HIV Illness Meanings and Collaborative Healing Strategies in South Africa. *Social Dynamics*, *31*(2), 126–160. https://doi.org/10.1080/02533950508628711
3	Peltzer, K., Mngqundaniso, N., & Petros, G. (2006). HIV/AIDS/STI/TB knowledge, beliefs and practices of traditional healers in KwaZulu-Natal, South Africa. *AIDS Care*, *18*(6), 608–613. https://doi.org/10.1080/09540120500294206
4	Dong, K., Thabethe, Z., Hurtado, R., Sibaya, T., Dlwati, H., Walker, B., & Wilson, D. (2007). Challenges to the success of HIV and tuberculosis care and treatment in the public health sector in South Africa. *J Infect Dis, 196 Suppl 3*, S491-496. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/18181699. doi:10.1086/521111
5	Shuster, J. M., Sterk, C. E., Frew, P. M., & del Rio, C. (2009). The cultural and community-level acceptance of antiretroviral therapy (ART) among traditional healers in Eastern Cape, South Africa. *Journal of Community Health*, *34*(1), 16–22. https://doi.org/10.1007/s10900-008-9121-9
6	Gqaleni, N., Hlongwane, T., Khondo, C., Mbatha, M., Mhlongo, S., Ngcobo, N., … Street, R. A. (2011). Biomedical and traditional healing collaboration on HIV and AIDS in KwaZulu-Natal, South Africa. *Universitas Forum*, *2*(2). Retrieved from http://universitasforum.org/index.php/ojs/article/view/62
7	Zimba, Z., & Tanga, P. T. (2014). Challenges Faced by Traditional Healers When Treating People Living with HIV and AIDS: The Case of Intsika Municipality, Eastern Cape Province of South Africa. *Studies on Ethno-Medicine*, *8*(3), 269–275. https://doi.org/10.1080/09735070.2014.11917643
8	Appelbaum Belisle, H., Hennink, M., Ordóñez, C. E., John, S., Ngubane-Joye, E., Hampton, J., … Marconi, V. C. (2015). Concurrent use of traditional medicine and ART: Perspectives of patients, providers and traditional healers in Durban, South Africa. *Global Public Health*, *10*(1), 71–87. https://doi.org/10.1080/17441692.2014.967709
9	Moshabela, M., Zuma, T., Orne-Gliemann, J., Iwuji, C., Larmarange, J., & McGrath, N. (2016). "It is better to die": experiences of traditional health practitioners within the HIV treatment as prevention trial communities in rural South Africa (ANRS 12249 TasP trial). *AIDS Care, 28 Suppl 3*, 24-32. doi:10.1080/09540121.2016.1181296
10	Ngunyulu, R. N., Peu, M. D., Mulaudzi, F. M., Mataboge, M. L. S., & Phiri, S. S. (2017). Collaborative HIV care in primary health care: nurses' views. *Int Nurs Rev, 64*(4), 561-567. doi:10.1111/inr.12359
11	Zuma, T., Wight, D., Rochat, T., & Moshabela, M. (2017). Traditional health practitioners' management of HIV/AIDS in rural South Africa in the era of widespread antiretroviral therapy. *Glob Health Action, 10*(1), 1352210. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/28771116. doi:10.1080/16549716.2017.1352210
12	Nemutandani, S. M., Hendricks, S. J., & Mulaudzi, M. F. (2018). Decolonising the mindsets, attitudes and practices of the allopathic and indigenous health practitioners in postcolonial society: An exploratory

1. The oldest document reviewed was published in 1995, "The experience of an AIDS prevention program focused on South African Traditional Healers" (Green et al., 1995). This was an impact assessment for a national HIV/STD prevention program focused on THPs in South Africa in late 1992. The goal of this paper was to outline the features of an HIV/AIDS prevention program and to provide details of a preliminary internal evaluation based on research that took placed seven months after the initiation of the collaboration. An initial group of 28 THPs ("first generation") were trained in Tsitsikama and later in Emaweni. These THPs in turn trained a second generation of THPs who attended workshops in the Western Cape, Eastern Cape, Transkei, Qwa-Qwa, KaNkwane, Rustenburg-Boputhatswana, Nkowanknowa Township, Vosloorus, Koinonia (Natal), and the Johannesburg area[6]. For the impact assessment itself, the authors asked first generation THP trainees to invite second generation THPs whom they had trained.

The authors conducted individual, formal, one-on-one interviews, held informal group discussions and conducted home visits to second generation THPs where they had informal discussions and made direct observations. The authors report that according to the assessment, the second generation of THP trainees appeared to have been trained as well as the first generation. In conclusion, the authors recommend that collaborations should be built without formal involvement of national healer associations, but instead with *impandes*, which are existing indigenous, associations of THPs that have existed in South Africa for many generations (Green et. al 1995). In other words, the collaborations should be developed at the local level, by local stakeholders.

2. The 2005 "HIV Illness Meanings and Collaborative Healing Strategies in South Africa," (Mills, 2005) is a qualitative research study addressing multiple illness meanings and treatment strategies employed by PLWH and THPs living in the city of Cape Town, South Africa, honing in

[6] Some of these regions have been renamed after apartheid era.

on the differences between the psychosocial aspects of illness and the biological disorder of disease. The author first presents a case study on the experience of an HIV-positive woman as she explores her healthcare options, followed by an analysis of interviews with THPs regarding their views on HIV treatment and AIDS-related illnesses among their clients. Lastly, the author discusses TAM in the context of South Africa's National Healthcare System (NHS) to suggest potential benefits and limitations for collaborations between the traditional and biomedical paradigms. The author highlighted themes of nuanced understanding of HIV among patients and THPs, in addition to distrust of the government in regard to potential collaborations between TAM and BM. While THPs advocated for collaboration between themselves and biomedical practitioners, the biomedical practitioners were viewed with distrust. The author recommends that, "South Africa's legal and political rhetoric, which recognizes the importance of incorporating traditional healers in the public health sector, be matched with a greater degree of empirical research into the practicalities and limitations of collaboration between traditional and biomedical healing practices" (Mills, 2005). Lastly, the author notes that following these recommendations will facilitate transformation in the South African healthcare system and promote the interconnection between the healthcare systems deeply involved in caring for PLWH in South Africa.

3. The following year, Peltzer et. al published "A Controlled Study of an HIV/AIDS/STI/TB Intervention with Traditional Healers in KwaZulu-Natal, South Africa" (Peltzer et al., 2006) in which they report one of the first controlled studies of an HIV/AIDS, STI and tuberculosis (TB) intervention for THPs in South Africa. The researchers used a quasi-experimental design for the study, through which 233 THPs were assessed in four communities within the KwaZulu-Natal Province, receiving either an experimental intervention or no intervention (control group). The

intervention group received training in HIV/AIDS, STI, and TB prevention and follow-up. Researchers found that at seven to nine months post-intervention, the exposed group exhibited a significantly higher level of knowledge and utilization of HIV and STI management strategies (conducting risk behavior assessments, counseling, condom distribution, community HIV/AIDS and STI education, and record keeping). A semi-structured questionnaire was developed from previous studies and with assistance from THPs who were not included in the final sample. These THPs assisted with documenting multiple topics from the training, in addition to attitudes towards biomedical health practitioners and referral pattern. Although it was found that THPs were highly prepared to work with and refer patients to biomedical providers, referral rates did not increase after the training. The authors of the study concluded that THPs improved their knowledge of and retained learned information on HIV/AIDS, STI, and TB 7-9 months after the training, in addition to reducing their HIV risk practices and playing an important role in providing culturally appropriate role in providing health education and prevention services in their community.

4. In 2007, Dong, et. al published a program implementation reported called "Challenges to the success of HIV and tuberculosis care and treatment in the public health sector in South Africa" (Dong et al. 2007), describing the experience of the Integration of TB in Education and Care for HIV/AIDS (ITEACH) Program, which was launched in 2005, at Edendale Hospital in KZN. The goal of the ITEACH Program is to identify the barriers to effective treatment and develop interventions to enable expansion of access to antiretroviral therapy (ART), and to improve ART and TB treatment outcomes within uMgungundlovu district, KZN. This program implementation report discusses the challenges to delivery of care by HIV and TB treatment programs, in addition to identifying opportunities to improve outcomes for ART and TB treatment in response to the outcomes of the ART scale-up in the context of TB/HIV co-epidemics.

The authors report multiple barriers to TB/HIV Care and treatment including separation of THPs from the larger healthcare system. “Although national guidelines endorse incorporation of traditional healers into the government ART rollout, Edendale was not unique in lacking a formal role for traditional healers in the ART and TB programs…This separation contributed to a common belief that patients must choose between ART and traditional cultural practices” (Dong et al., 2007). The authors recommend the incorporation of THPs and community support to improve patient outcomes and report that, at the time of the publication, ITEACH was finalizing a THP HIV/TB training program aimed at formalizing their role in providing patient education, treatment support, and referrals for testing, in addition to managing HIV-associated opportunistic infections and drug-related adverse effects (Dong et al., 2007).

5. In 2009, Shuster et al. published “The Cultural and Community-Level Acceptance of Antiretroviral Therapy (ART) Among Traditional Healers in Eastern Cape, South Africa” (Shuster et al, 2009) reporting on a qualitative research project that was conducted among 25 THPs between June and August of 2006. The purpose of this formative study was to identify motivational factors that are likely to promote a deeper acceptance and support for ART. This was accomplished by conducting open-ended, face-to-face interviews with THPs, employing grounded-theory methodology. The research team identified motivational factors including cultural consistencies between TAM and BM, education, and the legal and financial incentives to collaborate with BM. The authors conclude that through the incorporation of the aforementioned motivational factors in HIV/AIDS treatment programs in South Africa, ART provision in resource-poor settings can be strengthened (Shuster et al., 2009).

6. In 2010, Gqaleni et. al reported on a project also implemented in KZN and dealing with the establishment of a strategic collaboration between THPs and public health clinics in the fight

against HIV/AIDS, focusing on prevention and referral for voluntary counseling and testing (VCT) and palliative care, as described in the publication entitled "Biomedical and traditional healing collaboration on HIV/AIDS in KwaZulu-Natal, South Africa" (Gqaleni et al., 2010). The authors report that the project was able to bring together researchers, THPs, traditional leadership, as well as national and provincial government. It is important to note that THPs were involved in the project design from the very beginning and remained implementers of the program while the team from the University of KwaZulu-Natal (UKZN) collected data for monitoring and evaluation purposes. Authors also report that the project was able to establish relationships with clinics to which THPs could refer their patients. They emphasized that a THP-to-clinic referral system is a milestone in the South African national healthcare system (Gqaleni et al., 2010). Additionally, not only did the project "manage to train up to 1199 THPs but also managed to integrate the virology and germ theory within the traditional healing context while ensuring enhanced traditional healing knowledge without compromising their way of practice" (Gqaleni, et. al 2010). The authors conclude that the development and empowerment of THPs to play a meaningful role in the provision of healthcare is of national strategic importance, and that the project successfully demonstrates that collaboration between THPs and the BM sector is possible.

7. In 2014, Zimba et al., published, "Challenges faced by traditional healers when treating people living with HIV and AIDS: the case of Intsika Municipality, Eastern Cape Province of South Africa," a qualitative study describing THPs' experiences treating PLWH and the processes through which THPs provide care for them in Tsengiwe and Tsomo villages. The authors conducted in-depth interviews (IDIs) and focus group discussions (FGDs) through which they found that THPs play a significant role in their communities; however, their efforts, particularly around the care and treatment of PLWH, have been undermined by their current legal status, and

as a result, their effectiveness as care providers has not been able to reach its full potential. The authors report that THPs are discriminated against by biomedical practitioners (nurses and doctors) because they are not educated, accredited, or integrated into the Department of Health (DOH). It is recommended that the DOH must establish a strong relationship with THPs to ensure that they can complement and strengthen the healthcare services in South Africa. Lastly, the authors recommend that the Eastern Cape DOH provides training to THPs in the Intsika municipality on STD prevention and care and promote a partnership between THPs and the clinics.

8. The following year, Appelbaum Belisle et al. (2015) published, "Concurrent use of traditional medicine and ART: Perspectives of patients, providers and traditional healers in Durban, South Africa," reporting on a cross-sectional, qualitative study that examined the perceptions of concurrent use of TAM and ART among (1) patients receiving ART, (2) BM providers (doctors, nurses, and HIV counselors), and (3) local THPs. Their qualitative methodology employed IDIs with patients and BM providers and FGDs with THPs (for a total of 26 participants between July and October of 2011) as techniques for data gathering. The authors implemented a thematic analysis that integrated data-driven, inductive code development with deductive, predetermined codes. The article's discussion section states, "TAM for patients on ART was not 'either-or', as was evident from the concurrent but complementary role of TAM for patients using both," and argues that "…safety during concurrent ART and TAM practices, rather than changes in ART adherence patterns, becomes the primary issue to address," (Appelbaum Belisle et al., 2015). Additionally, the study found that THPs and BM providers supported the idea of collaboration to learn about each other's healing practices. However, the study also found that THPs "…were skeptical of allopathic medical providers' ability to accept their healing practices without judging [THPs'] training or education." The authors emphasize that "…traditional healers

and patients noted the critical role of TAM and [THPs] for psychosocial and spiritual counseling or communicating with ancestors…" and conclude that the collaboration between THPs and BM could, "…provide a substantial benefit and augment the standard of care in the setting of critical allopathic medical personnel shortages, with [THPs] serving as integrated providers of HIV testing in the field, linkage to treatment (i.e. ART), patient navigation and adherence counseling" (Appelbaum et al., 2015).

9. A year after the introduction of THP Practitioner Regulations in 2015, Moshabela et al., published a qualitative study entitled, "'It is better to die': experiences of traditional health practitioners within the HIV treatment as prevention trial communities in rural South Africa (ANRS 12249 TasP trial)" (Moshabela et al., 2016) which aimed to understand the social, economic, and contextual factors that affected individuals, households, communities, and health systems after the implementation of the *ANRS 12249 Treatment-as-Prevention (TASP) Cluster Randomized Trial* in northern KZN. The authors conducted focus group discussions with THPs (who were not directly involved in the trial), combined with community walks and photo-voice techniques over a period of 18 months. Moshabela et al. used thematic analysis to generate themes with emphasis on descriptive, interpretive, and explanatory analyses. The article reports that home-based testing services were perceived as relatively successful in increasing access to HIV testing, while THPs reported a major gap in linkage with HIV clinics, finding that going to the clinics, their patients and they themselves face stigma and discrimination. THPs also described difficulties channeling patients with HIV referrals to clinics. The authors conclude that the acceptability of the TasP test-and-treat approach by THPs would be extremely beneficial not only for the intervention, but also for the strengthening of ties with communities in order to combat stigma, provide HIV care to patients, and facilitate quality partnerships with THPs. Lastly, the authors recommend

further research to assess the feasibility of THP partnerships in the context of the TasP research agenda and in HIV stigma reduction interventions overall.

10. The same research team from study #9 published a related study to their first TasP trial article the following year, using the same data. In 2017 Zuma et al. published "Traditional health practitioners' management of HIV/AIDS in rural South Africa in the era of widespread antiretroviral therapy" (Zuma, et al., 2017). The study concluded the following: (1) THPs perceived HIV/AIDS as incurable and complicated, not treatable by TAM; (2) THP decision making in managing illness in PLHIV was complex, and THPs employed both ancestral communication and HIV-related knowledge, without procedure standardization; (3) THPs assessed and managed illness among PLWH based on THP training in HIV/AIDS, THP type, and knowledge of and experience in TAM. The authors concluded that THPs' approaches to illness in PLWH appear to be shifting due to exposure and access to HIV/AIDS-related information. Authors also noted the importance of patient HIV status disclosure to a THP, given that "disclosure of HIV status determined which traditional medicines could be prescribed or prepared and which traditional rituals could be performed," as well as linkage to HIV testing and treatment, making THPs potentially indispensable in facilitating the success of ART for PLWH when HIV status is known (Zuma et al., 2017).

11. That same year, Ngunyulu et. al published, "Collaborative HIV care in primary health care: nurses' views" (Ngunyulu et al., 2017) a qualitative study using a "descriptive design" to explore and describe the views of nurses regarding collaborative HIV care in primary healthcare services in the City of Tshwane, Metropolitan Municipality, Gauteng Province, South Africa. The authors conducted IDIs to collect data, from which they developed two categories: (1) the views of nurses and (2) health system challenges regarding collaborative HIV care. The authors' findings reveal

inadequate collaborative HIV care between nurses and THPs, and they conclude that it is vital that policymakers consider the importance of collaborative HIV care in strengthening the referral and follow-up systems for PLWHA and improving quality of care. Lastly, the authors note implications for nursing and health policy: "Training and involvement of traditional health practitioners in the nursing and health policy should be considered to enhance and build a trustworthy working relationship between the nurses and the traditional health practitioners in HIV care" (Ngunyulu, et. al 2017).

12. The last document in this review was published in 2018 by Nemutandani et al, and titled "Decolonising the mindsets, attitudes and practices of the allopathic and indigenous health practitioners in postcolonial society: An exploratory approach in the management of patients" (Nemutandani et al., 2018). It is a qualitative study that explores a collaboration model between THPs and biomedical care providers in the management of PLWH in postcolonial South Africa. The authors conducted combined and separate focus group discussions with each category of co-researchers: community members, biomedical practitioners, and THPs, applying the cyclical method of the decolonization process. The authors identified collaboration strategies for decolonization in the context of managing HIV. Although the TAM and BM systems render services to the same HIV communities, there is a lack of communication between the systems, creating confusion. The authors noted the need to change the mindsets, attitudes, and practices among both sets of practitioners, acknowledging that "neither health system is better than the other, but the two should be complementary, recognizing that the culture and beliefs of patients influence their health-seeking behavior" (Nemutandani et al., 2018). The authors state that the co-researchers were committed to working together to fight against the HIV/AIDS epidemic and developed a model that addresses the challenges of the following: patients' secrecy, treatment overdose and the

abandonment of antiretroviral treatment. The authors concluded that "Through the application of a decolonisation process, their mindsets, attitudes and practices towards each other were changed, enabling the joint development of a custom model for collaboration between allopathic health practitioners and indigenous health practitioners in the management of patients living with HIV and AIDS" (Nemutandani et. al 2018).

Descriptive Outcomes: Key Collaboration Factors

Funding

Ten of the twelve documents reported receiving financial support. Both documents which did not provide information on financial support were research studies (Mills 2005; Zimba & Tanga, 2014). Financial support came from educational institutions, foundations, government agencies, and private philanthropies based in Germany, France, South Africa, the United Kingdom, and the United States. Nine of the documents reported receiving some funding from the United States and three received funding from South Africa (Green et al. 1995; Peltzer et al. 2006; Dong et al, 2007; Shuster et al. 2008; Gqaleni et al. 2018; Appelbaum et al. 2015; Moshabela et al. 2016; Zuma et al. 2017). Only two studies were fully funded by South African sources (Ngunyulu et al. 2017; Nemutandani et al. 2018). Of the documents that were not research studies, the program impact assessment received financial support from USAID (Green et al., 1995), the program implementation report received financial support from an unidentified U.S. private philanthropic organization (Dong et al. 2007), and the project implementation report received financial support from PEPFAR (Gqaleni et al. 2010). (See Appendix F)

Project/Program Evaluation

One of the documents reviewed described a project monitoring and evaluation plan (Gqaleni, et. al 2010). However, the majority of documents reviewed were qualitative research studies, which themselves either served as instruments for contextualizing data, or as exploratory research. One document served as an internal evaluation (Green et al. 1995). Need for monitoring and evaluation of collaborations was echoed in numerous documents.

Community Engagement

None of the documents reported methodologies explicitly describing community engagement in the research, project, or program development. However, qualitative research methods employed by Shuster at al. (2009), Zimba & Tanga (2014), Appelbaum Belisle et al. (2015), Moshabela et al. (2016), Zuma et al. (2017), and Nemutandani et al. (2018) all point to an attempt to better understand the community and stakeholder perspectives.

> *The qualitative research method was used in the study. The method was used to try to describe and interpret the traditional healers' feelings and experiences in human terms, rather than through quantification and measurement.* (Zimba & Tanga, 2014)

> *A qualitative, descriptive research design was used to describe nurses' views regarding collaborative HIV care. An inductive approach was used during data collection and content analysis.* (Ngunyulu et al., 2017)

Additionally, some documents reported collaboration with local researchers, serving as both gate keepers and co-investigators.

> *The gatekeeper was a community member and traditional healer who knew several of the participant traditional healers personally. She was also part of the research team* (Appelbaum et al., 2015).

> *Four THPs were identified and recruited through purposive sampling with the help of community liaisons, and a snowballing technique was used to recruit and enroll five further THPs.* (Zuma et al., 2017)

Nemutandani et al. (2018) go a step further, and include their participants (THPs, BMs, HIV/AIDS patients, and traditional leaders) as co-researchers:

> *We conducted six combined focus group discussions and four separate group discussions with each category of co-researchers.* (Nemutandani et al., 2018)

Stakeholder Relationship Dynamics

One of the descriptive outcomes that was critical to assess in this review was the description of stakeholder relationship dynamics, as shown in Figure 1 (p. 25). While all documents addressed at least one of the relationships between the (1) Target Community (TC), (2) THPs, (3) BMPs, (4) Government Actors/Policymakers, and (5) Academic Investigators, none of them discussed all ten possible combinations of relationships of this model.

Table 6: Stakeholder Relationship Dynamics Described

	TC/THP	TC/BMP	TC/GOV	TC/AI	THP/BMP	THP/AI	THP/GOV	BMP/GOV	BMP/AI	AI/GOV	Total
Green et al. 1995	X	X			X		X			X	5
Mills, 2005	X	X	X			X	X				5
Peltzer et al., 2006	X				X	X			X		4
Dong et al, 2007	X	X	X (in context of TB)		X			X (in context of TB)			5
Shuster et al., 2008	X				X	X	X				4
Gqaleni et al., 2010	X				X	X	X				4
Zimba & Tanga, 2014	X						X				2
Appelbaum Belisle et al., 2015	X	X			X	X					4
Moshabela et al., 2016	X	X				X	X				4
Ngunyulu et al., 2017	X	X			X			X			4
Zuma et al. 2017	X	X			X						3
Nemutandani et al. 2018					X						1

TC – Target Community; THP – Traditional Health Practitioner; BMP – Biomedical Practitioner; AI – Academic Investigators; GOV – Government Actors/Policymakers

The most commonly described relationships included those between:

1. TC and THPs

[THP] advises clients who she thinks may be HIV-positive to go for an HIV test. She claims that it is important for her to know what stage her client is in order to ascertain the strength of the client's body. This in tum affects the kind of treatment that she administers to her HIV-positive clients (Mills, 2005).

Traditional healers expressed a central role for themselves in the provision of care for PLHIV--to give and restore patients' hope for life. No traditional healers believed they could 'cure' HIV; rather, the predominant feeling among traditional healers was that 'you will help [a patient with symptoms of HIV], but you are not going to cure him completely.' (Appelbaum Belisle et al. 2015)

Eighteen traditional healers responded that they do not have a certain procedure when treating their clients, but they commonly throw bones to examine their client's sickness. The participants, further, reported that they treat their patients who are living with HIV and AIDS by giving them treatment and refer them to clinic where it is appropriate. (Zimba & Tanga 2014)

2. TC and BMPs

Aside from her realisation that ARVs were necessary to improve her health, Nana was influenced by her HIV-positive brother's positive experience of taking ARVs after he had been seriously ill with AIDS-related illnesses. A third reason, according to Nana, was that she felt sure that she was going to die, and after trying a range of non-allopathic treatments, she felt that she might as well try taking ARVs (Mills, 2005).

This collaborative effort between THPs and medical staff at clinics and hospitals was not easy in the beginning because the two systems frowned upon each other. But through workshops the two systems got to learn about each other" practices and a better understanding was eventually established. (Gqaleni et al., 2010)

Some nurses are concerned about the clients who consult THPs first and subsequently decide to go to the clinics only when there were complications. They were of the opinion that the THPs contributed to the delay of the clients visiting the clinics earlier for early initiation of ARV treatment. (Ngunyulu et al. 2017)

3. THPs and BMPs

Almost all traditional healers indicated at baseline (98% in the experimental and 99% in the control group) and at follow-up (99% in the experimental and 100% in control group) that they were prepared to work with biomedical health practitioners. Likewise most traditional healers at baseline (88% in the experimental and 89% in the control group) and at follow-up (90% and 90% respectively) felt confident to work with biomedical health practitioners, and most at baseline (96% in the experimental and 85% in the control group) and at follow-up

(98% and 86% respectively) were likely to refer or recommend a patient to a biomedical health practitioner in the future. (Peltzer et al., 2006)

These negative experiences contributed to the discomfort felt by some of the THPs in using clinics, and their failure to return to clinics for follow-up. Since THPs were also members of the community, they expressed shared lived experiences with their clients. THPs also reported examples of clients who avoided their local clinics, largely due to fear of being recognised by other community members. (Moshabela et al. 2016)

'AHPs should first acknowledge that we are there and accept us. Patients have the rights to consult both sides depending on their beliefs. We must first agree that we each have role to play in patients' health, and both sides are competent. Unless you accept that, collaboration will not be possible.' (M6, AHP, CFGD4) (Nemutandani et al. 2018)

4. THPs and Government Actors/Policymakers

"I think besides using traditional medicines, I believe that there is a medical cure for AIDS but the government does not want to give it. What I am trying to say is our government docs not care about black people" (Interview with Magagula, 2005) (Mills, 2005).

The active participation by 40 THPs as consultants on the project and the collaboration with government ensured a good working relationship with all stakeholders. (Galeni et al., 2010)

THPs further played an active role in linking their clients to care services, by using referral cards designed by the Department of Health. However, the success of this approach was limited, and many of the clients they referred did not present at health facilities, for which THPs expressed frustration. (Moshabela et al., 2016)

Chapter 5: Discussion

This QSR assessed twelve documents, all describing various attempts at forming a collaborative relationship between THPs and BMPs in the context of the HIV epidemic in South Africa. It is evident that the collaboration is viewed as necessary to not only address the HIV epidemic, but to create a more holistic approach to patient care overall. Research studies, programs, and projects aimed at attaining a working partnership between the TAM and BM systems have done considerable work in multiple South African regions as shown in this review (Western Cape,

KZN, Eastern Cape, Gauteng, and Limpopo Provinces). Research and programmatic undertakings addressed in this review were primarily centered around THP perceptions and knowledge, with a smaller number of documents addressing the BM sector's lack of want for a partnership. Additionally, this review addressed multiple descriptive outcomes and key factors that may be associated with successful collaborations between THPs and BMPs. Although the documents reviewed describe some encouraging outcomes of collaborations between THPs/BMPs, the heterogeneity of identified literature and heavily exploratory nature of most initiatives described in the documents made it difficult to identify and evaluate the factors that contribute to the success of such collaborations. Thus, we have outlined what we are able to identify as some important components to be addressed in initiatives involving the bridging of the THP and BMPs' work, but also bridging the efforts of all stakeholders involved.

PI/Project leader familiarity with socio-cultural context

One of the themes that was of interest to the authors was the principal investigator's (PI) or project/program leader's familiarity with the socio-cultural context of the research, program, or project setting. The reviewed documents provided minimal information on this subject. Dong et al. (2007) reported on the background makeup of the ITEACH program team:

> *The team consisted of 1 physician trained in the United States and living full time in KZN with all other ITEACH staff being South African and fluent in the most common local languages—Zulu, Xhosa, and Sesotho. Most of the ITEACH team resides in the surrounding townships, which helped to address local challenges and establish support interventions relevant to the community. Core ITEACH staff had previously worked with the South African DOH at both the national and provincial levels during the drafting of the 2003 Operational Plan for Comprehensive HIV and AIDS Care, Management, and Treatment.* (Dong et al., 2007)

Similarly, Appelbaum Belisle et al. (2015) described their approach to minimizing cultural biases and describing the researchers' background.

> *Members of this study team have been involved with clinical care, research and policy decisions affecting individuals living with HIV in this region for decades, thereby observing over time the unfavorable effects of this debate…To ensure objectivity and cultural sensitivity, the researchers who conducted interviews and focus groups with McCord patients and TAM practitioners were of Zulu background and not affiliated with McCord…All research instruments were translated into isiZulu by a local translator and back-translated into English by local research assistants to check the accuracy in the meaning of the translations*

We acknowledge the possibility that publication word-count limitation prevented the authors of these documents from including such descriptions. Although author institutional affiliations were included in each of the documents and potential conflicts of interest were reported, reporting on the he PI/project leader's familiarity and relationship with the target community and other stakeholders is important to better establish credibility for their work and explain potential biases in their interpretations. Given that funding and research institutions involved in the undertakings that these documents described were predominantly Western, reporting on funding and institutional affiliation is particularly important when describing collaborations between groups of people when there exists one group with the author may associate more closely.

Community Engagement and CBPAR

Community-Based Participatory Action Research (CBPAR) is a collaborative approach to research, involving all stakeholders throughout the research development, implementation, analysis, and dissemination process (Minkler & Wallerstein, 2003). The CBPAR framework aims to address what the community itself deems to be important, relevant, and practical (Minkler & Wallerstein, 2003). Though the primary relationship in question is that of the collaboration between THPs and BMPs, we must remember that this relationship does not exist in a vacuum. Ultimately, it is the patients who are the recipients of the care provided by the plural healthcare

system, making them a vital stakeholder. The government actors and policymakers, by default, making decisions that affect the community, THPs, and BMPs must also be engaged. Lastly, the academic investigators need to acknowledge their presence in the equation, stepping back to listen, learn, and lift the voices and concerns of those who are affected by the research, programs, and projects. None of the documents reviewed reported using a CBPAR framework and did not explicitly report engaging stakeholders before or during the study/project/program implementation, apart from the project implemented by Galeni et al (2010, which described THP engagement in the project implementation). Colonialism's vestigial inequality continues to impede an equitable distribution of power among stakeholders in the community. Although we see some studies initiated by South African institutions in regard to collaborations between THPs and the larger healthcare system, it may take a long time for the community itself to become the initiating/leading party in research and program development and implementation.

Conclusions and Recommendations

Though the documents described some promising perspectives on THP/BMP collaborations, further research is needed to address the relationship dynamics between all stakeholders involved in the research study, program, and project development processes. While the literature has supported that THP involvement in the broader healthcare system is vital to curb the HIV epidemic in South Africa, this strategy must also extend to the rest of the parties invested. With appropriate funding and time investment, we recommend that researchers and program developers employ a CBPAR approach, as it would be ideal for developing a better understanding of what a viable partnership between THPs and the broader South African healthcare system can look like in the future. Furthermore, we believe that investigators and program/project developers

should strive for even greater transparency in discussing their background, affiliation, and ultimately position in relation to the socio-cultural context of the undertaking.

We also encourage investigators to address the potential intersectionality of the stakeholders' identities, as individuals can experience multiple identities. For example, Moshabela et al. (2016) interviewed a THP who described her experience trying to get an HIV test at the clinic. Similarly, Appelbaum Belisle et al. (2015) described a co-investigator sharing the THP identity with the target population of the research study. As human interactions can be complex and multi-layered, addressing collaborations between multiple stakeholders is important and must be explored further. Acknowledging these complexities, can facilitate a better understanding of these relationships and help develop interventions that not only have community buy-in, but are sustainable, with THPs and BMPs working together in a true partnership.

Limitations

This QSR was conducted as an MPH thesis project. There were time constraints associated with the development of the search strategy and the execution of the document search. Only one of the team members searched and screened for eligible documents. In a more rigorous approach to a systematic review, two individuals would search, screen independently, and only then compare results.

Additionally, the MPH Candidate is of mixed-race and is a white-presenting female affiliated with a U.S.-based graduate school program and does not have extensive experience living in South Africa. She has, however, completed a ten-week Global Field Experience graduate practicum during the summer of 2018, which entailed the initial steps in the development of a stub-study for "A Community-based HIV Testing Strategy using Traditional Health Practitioners

(THPs) to expand testing access, improve linkage to care and diagnose acute HIV infection" implemented in KZN. Though the experience was valuable in the development and contextualization of the findings described in this QSR, more extensive field experience and on-the-ground access to stakeholders would have likely enriched this QSR.

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Zuma, T., Wight, D., Rochat, T., & Moshabela, M. (2017). Traditional health practitioners' management of HIV/AIDS in rural South Africa in the era of widespread antiretroviral therapy. *Glob Health Action, 10*(1), 1352210. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/28771116. doi:10.1080/16549716.2017.1352210

Appendix

Appendix A: Search Strategy for PubMed, EMBASE, Africa-Wide Information, and Global Health (CAB Direct)

Search Term Combinations by Domain of Interest	Search Terms
Spatial/Cultural Domain #1	"South Africa" OR "South African"
Illness Domain #2	Human Immunodeficiency Virus OR AIDS
Non-Western Rx Domain #3	Traditional Medicine OR Traditional African Medicine OR African Traditional Medicine OR Traditional Health OR Traditional Healing OR Traditional Healer OR Traditional Health Practitioner OR Complementary Medicine OR Complementary Health OR Alternative Medicine OR Alternative Health OR Healer OR Healing OR Indigenous Medicine OR Indigenous Health OR Indigenous Knowledge OR Integrative Health OR Integrative Medicine OR Sangoma* OR iSangoma OR Inyanga* OR Umthandazi OR Muthi OR Muti
Western Rx Domain #4	Biomedicine OR Biomedical OR Bio-medicine OR Bio-medical OR Allopathic OR Conventional Medicine OR Healthcare System OR Health Care System OR Ministry of Health OR Department of Health
Strategy Domain #5	Collaboration OR Integration OR Intervention OR Partnership OR Relationship OR Community Engagement OR Process
Outcomes Domain #6	Outcomes OR Lessons Learned OR Challenges OR Limitations OR Barriers OR Success
Combinations	
PubMed, EMBASE, and Africa-Wide Information	("South Africa" OR "South African") AND (Human Immunodeficiency Virus OR AIDS) AND (Traditional Medicine OR Traditional African Medicine OR African Traditional Medicine OR Traditional Health OR Traditional Healing OR Traditional Healer OR Traditional Health Practitioner OR Complementary Medicine OR Complementary Health OR Alternative Medicine OR Alternative Health OR Healer OR Healing OR Indigenous Medicine OR Indigenous Health OR Indigenous Knowledge OR Integrative Health OR Integrative Medicine OR Sangoma* OR iSangoma OR Inyanga* OR Umthandazi OR Muthi OR Muti) AND (Biomedicine OR Biomedical OR Bio-medicine OR Bio-medical OR Allopathic OR Conventional Medicine OR Healthcare System OR Health Care System OR Ministry of Health OR Department of Health) AND (Collaboration OR Integration OR Intervention OR Partnership OR Relationship OR Community Engagement OR Process) AND (Outcomes OR Lessons Learned OR Challenges OR Limitations OR Barriers OR Success)
Global Health (CAB Direct)	("South Africa" OR "South African") AND (Human Immunodeficiency Virus OR AIDS) AND ("Traditional Medicine" OR "Traditional African Medicine" OR "African Traditional Medicine" OR "Traditional Health" OR "Traditional Healing" OR "Traditional Healer" OR "Traditional Health Practitioner" OR "Complementary Medicine" OR "Complementary Health" OR "Alternative Medicine" OR "Alternative

	Health" OR Healer OR Healing OR "Indigenous Medicine" OR "Indigenous Health" OR "Indigenous Knowledge" OR "Integrative Health" OR "Integrative Medicine" OR Sangoma OR iSangoma OR Inyanga OR Umthandazi OR Muthi OR Muti) AND (Biomedicine OR Biomedical OR Bio-medicine OR Bio-medical OR Allopathic OR "Conventional Medicine" OR "Healthcare System" OR "Health Care System" OR "Ministry of Health" OR "Department of Health") AND (Collaboration OR Integration OR Intervention OR Partnership OR Relationship OR "Community Engagement" OR Process) AND (Outcomes OR "Lessons Learned" OR Challenges OR Limitations OR Barriers OR Success)

Appendix B: Search Strategy for JSTOR and Anthropology Plus

Search Term Combinations by Domain of Interest	**Search Terms**
Spatial/Cultural Domain #1	"South Africa"
Illness Domain #2	Human Immunodeficiency Virus
Non-Western Rx Domain #3	"Traditional Medicine" OR "Traditional Health"
Western Rx Domain #4	Biomedical
Strategy Domain #5	Collaboration
Outcomes Domain #6	Outcomes
Combination	
"South Africa" AND Human Immunodeficiency Virus AND ("Traditional Medicine" OR "Traditional Health") AND Biomedical AND Collaboration AND Outcomes	

Appendix C: Document Eligibility Screener Form

General Information

* Required

1. **Source ID** *

_____

2. **Database** *
Check all that apply.

- [ ] Africa-Wide Information
- [ ] Anthropology Plus
- [ ] EMBASE
- [ ] Global Health (CAB Direct)
- [ ] JSTOR
- [ ] PubMed
- [ ] Other: _____

3. **Document Title** *

_____

4. **Name of First Author/Organization** *

_____

5. **Year Published** *

_____

6. **Publication Type** *
Mark only one oval.

- ◯ Peer-reviewed research (qual, quant, mixed-method, clinical case study, systematic review) article
- ◯ Government issued report/document (eg. South African DoH)
- ◯ Multi-lateral or non-governmental report (e.g. UNAIDS)
- ◯ Public written statement (e.g.letter to the editor)
- ◯ News Article
- ◯ Book Chapter/Book
- ◯ Other: _____

Eligibility Check-list

7. **Is the document is published in English?** *
   Mark only one oval.
   - ◯ Yes
   - ◯ No
   - ◯ Other: _____

8. **Is the document published between 1983 and 2018?** *
   Mark only one oval.
   - ◯ Yes
   - ◯ No
   - ◯ Other: _____

9. **Did the intervention/project (academic or gov research)/collaboration take place in South Africa?** *
   Mark only one oval.
   - ◯ Yes
   - ◯ No
   - ◯ Other: _____

10. **Is the involvement of Traditional Medicine (TM) in HIV/AIDS prevention, treatment, and/or care mentioned?** *
    Mark only one oval.
    - ◯ Yes
    - ◯ No
    - ◯ Other: _____

11. **Decision to Include in review** *
    Mark only one oval.
    - ◯ Yes
    - ◯ Maybe
    - ◯ No

12. **Document Link (if 'Yes' or 'Maybe')**

    _____

Summary of Assessment for Inclusion

13. **Was the document screened by Extractor?** *
Mark only one oval.

- ◯ Yes
- ◯ No

14. **Name of Extractor** *

_____

15. **Date of Screening** *

_____
Example: December 15, 2012

16. **Was the screening decision reviewed by Reviewer 1?**
Mark only one oval.

- ◯ Yes
- ◯ No
- ◯ Other: _____

17. **Name of Reviewer 1**

_____

18. **Date of Review 1**

_____
Example: December 15, 2012

19. **Were differences (if any) resolved?**
Mark only one oval.

- ◯ Yes
- ◯ No
- ◯ Other: _____

20. **Revision completed by Reviewer 2**
Mark only one oval.

- ◯ Yes
- ◯ No
- ◯ Other: _____

21. **Name of Reviewer 2**

_____

22. **Date of Review 2**

Example: December 15, 2012

23. **Notes**

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Appendix D: Document Extraction Form

Extraction Process Card

Viability of the Partnership between Traditional Health Practitioners (THPs) and the South African Healthcare System

* Required

1. **Source ID** *

2. **Date of Assessment by Extractor (required)** *

   Example: December 15, 2012

3. **Date of Assessment by Reviewer 1 (required)**

   Example: December 15, 2012

4. **Date of Assessment by Reviewer 2 (not required)**

   Example: December 15, 2012

5. **Document Link**

General Information

6. **Document Title** *

7. **Name of First Author/Organization** *

8. **Year Published** *

9. **Document located in the following database(s)** *
Check all that apply.

- [ ] PubMed
- [ ] EMBASE
- [ ] CABI Global Health
- [ ] Africa-Wide Information
- [ ] Not applicable

10. **Publication Type** *
Mark only one oval.

- ◯ Peer-reviewed research article (qual, quant, mixed-method, clinical case study, systematic review, etc.)
- ◯ Government issued report/document (eg. South African DoH)
- ◯ Multilateral or non-governmental report (e.g. UNAIDS)
- ◯ Public written statement (e.g. commentary, letter to the editor)
- ◯ Book chapter/book
- ◯ News Article
- ◯ Other: _____

11. **Possible Conflicts of Interest** *
Mark only one oval.

- ◯ Authors declare no competing interests.
- ◯ Not Reported
- ◯ Not Applicable
- ◯ Other: _____

12. **Reviewer Comments**

_____

_____

_____

_____

_____

Methods and Other Details

13. **Main objective of the undertaking** *

_____

14. **Page/Figure Number**

_____

15. **Type of Approach** *
Check all that apply.

- [ ] Project Implementation Report
- [ ] Program Implementation Report
- [ ] Program Impact Assessment
- [ ] Research Study
- [ ] Other: _____

16. **Type of Study (if study)** *
Mark only one oval.

- ◯ Qualitative
- ◯ Quantitative
- ◯ Mixed-method
- ◯ Not applicable

17. **Type of Qualitative Study (check all that apply)** *
Check all that apply.

- [ ] Ethnography
- [ ] Narrative
- [ ] Phenomenological
- [ ] Grounded Theory
- [ ] Case Study
- [ ] Not applicable
- [ ] Other: _____

18. **Type of Quantitative Study (check all that apply)** *
Check all that apply.

- [ ] Randomized Control Trial
- [ ] Cohort Study
- [ ] Case-control Study
- [ ] Cross-sectional study
- [ ] Not applicable
- [ ] Other: _____

19. **Page/Figure Number**

_____

20. **Description of Social Context/Setting**

_____

21. **Page/Figure Number**

_____

22. **Participant Characteristics** *
Check all that apply.

- [ ] Traditional Health Practitioners (THPs)
- [ ] Community Health Workers (CHWs)
- [ ] Nurses
- [ ] Patients
- [ ] Doctors
- [ ] HIV negative
- [ ] HIV positive, not in care/linked to care
- [ ] HIV positive, in care/on treatment
- [ ] Not reported
- [ ] Other: _____

23. **Are participants likely to be representative of the target population?** *
Mark only one oval.

- ◯ Yes
- ◯ Not reported
- ◯ Not applicable
- ◯ Other: _____

24. **Where were participants recruited from? How were potential participants approached?**
Mark only one oval.

- ◯ Not reported
- ◯ Not applicable
- ◯ Other: _____

25. **Page/Figure Number**

_____

26. **Sampling Technique(s)** *
Check all that apply.

- [ ] Simple Random Sampling
- [ ] Systematic Sampling
- [ ] Stratified Sampling
- [ ] Clustered Sampling
- [ ] Convenience Sampling
- [ ] Quota Sampling
- [ ] Judgement (or Purposive) Sampling
- [ ] Snowball Sampling
- [ ] Not applicable
- [ ] Other: _____

27. **Page/Figure Number**

_____

28. **Duration of study/project** *
Mark only one oval.

- ◯ Not reported
- ◯ Not applicable
- ◯ Other: _____

29. **Start date**

_____
Example: December 15, 2012

30. **End date**

_____
Example: December 15, 2012

31. **Reviewer Comments**

_____
_____
_____
_____
_____

Descriptive Outcomes

32. **Description of meaningful and participatory community engagement**
Mark only one oval.

- ◯ Yes
- ◯ No
- ◯ Other: _____

33. **Citation from text**

_____

_____

_____

_____

_____

34. **Page/Figure Number(s)**

_____

35. **Description of funding source (including role of funders)**
Mark only one oval.

- ◯ Yes
- ◯ No
- ◯ Other: _____

36. **Citation from text**

_____

_____

_____

_____

_____

37. **Page/Figure Number(s)**

_____

38. **Existence of an evaluation plan for the intervention/project/study**
Mark only one oval.

- ◯ Yes
- ◯ No
- ◯ Other: _____

39. **Citation from text**

_____

_____

_____

_____

_____

40. **Page/Figure Number(s)**

_____

41. **The HIV treatment cascade and care continuum step addressed in evaluation**
Check all that apply.

- [ ] Diagnosis
- [ ] Linkage to Care
- [ ] Retention
- [ ] ART Adherence
- [ ] Viral Suppression
- [ ] Other: _____

42. **Process Metrics addressed in evaluation**
Check all that apply.

- [ ] Feasibility
- [ ] Acceptability
- [ ] Uptake
- [ ] Throughout
- [ ] Patient experience
- [ ] Other: _____

43. **Description PI/Project leader familiarity with socio-cultural context**
Mark only one oval.

- ◯ Yes
- ◯ No
- ◯ Other: _____

44. **Citation from text**

45. **Page/Figure Numbe(s)**

46. **If not in text, number of publications on the subject**

47. **Reviewer Comments**

Descriptive Outcomes continued - Description of relationship dynamics between:

48. **TC and THPs**
Check all that apply.

- [ ] Yes
- [ ] No
- [ ] Other: _____

49. **Citation from text**

50. **Page/Figure Number**

_____

51. **TC and BMPs**
Check all that apply.

- [ ] Yes
- [ ] No
- [ ] Other: _____

52. **Citation from text**

_____

_____

_____

_____

_____

53. **Page/Figure Number**

_____

54. **TC and Government Actors/Policymakers**
Check all that apply.

- [ ] Yes
- [ ] No
- [ ] Other: _____

55. **Citation from text**

_____

_____

_____

_____

_____

56. **Page/Figure Number**

_____

57. **TC and Academic Investigators** *
Check all that apply.

- [ ] Yes
- [ ] No
- [ ] Other: _____

58. **Citation from text**

_____

_____

_____

_____

_____

59. **Page/Figure Number**

_____

60. **THPs and BMPs**
Check all that apply.

- [ ] Yes
- [ ] No
- [ ] Other: _____

61. **Citation from text**

_____

_____

_____

_____

_____

62. **Page/Figure Number**

_____

63. **THPs and Government Actors/Policymakers**
Check all that apply.

- [ ] Yes
- [ ] No
- [ ] Other: _____

64. **Citation from text**

65. **Page/Figure Number**

66. **THPs and Academic Investigators**
Check all that apply.

- [ ] Yes
- [ ] No
- [ ] Other: _____

67. **Citation from text**

68. **Page/Figure Number**

69. **BMPs and Government Actors/Policymakers**
Check all that apply.

- [ ] Yes
- [ ] No
- [ ] Other: _____

70. **Citation from text**

71. **Page/Figure Number**

72. **BMPs and Academic Investigators** *
Check all that apply.
- [ ] Yes
- [ ] No
- [ ] Other:

73. **Citation from text**

74. **Page/Figure Number**

75. **Reviewer Comments**

76. **Government Actors/Policymakers and Academic Investigators**
Check all that apply.

- [ ] Yes
- [ ] No
- [ ] Other: _____

77. **Citation from text**

_____

_____

_____

_____

_____

78. **Page/Figure Number**

_____

79. **Reviewer Comments**

_____

_____

_____

_____

_____

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Appendix E: Documents Reviewed

Short Reference Name	South African Region	Title of Document	Participant Characteristics	Aims and Objectives	Approach/Methods	Conclusions and Recommendations
Green et al. 1995	Western Cape Eastern Cape Transkei Qwa-Qwa KaNkwane Rustenburg-Bophuthatswana Nkowanknowa Vosloorus Koinonia (Natal) Johannesburg area	"The experience of an AIDS prevention program focused on South African Traditional Healers"	THPs	To outline the features of an HIV/AIDS prevention program and to provide details of a preliminary internal evaluation based on research that took placed seven months after the initiation of the collaboration.	**Program Impact Assessment:** Individual, formal, one-on-one interviews, informal group discussions, home visits, informal discussions, and direct observations.	Collaborations should be built without formal collaboration with national healer associations, but instead with impandes, which are existing indigenous, associations of THPs that have existed in South Africa for many generations.
Mills 2005	Western Cape Province	"HIV Illness Meanings and Collaborative Healing Strategies in South Africa"	TC and THPs	To address multiple illness meanings and treatment strategies employed by PLWH and THPs living in the city of Cape Town	**Qualitative Research Study:** Case study and interviews	South Africa's legal and political rhetoric, recognizing the importance of incorporating THPs in the public health sector, must be matched with a greater degree of empirical research into the practicalities and limitations of collaboration between TAM and BM practices.
Peltzer et al. 2006	KwaZulu-Natal Province	"A Controlled Study of an HIV/AIDS/ STI/TB Intervention with Traditional Healers in KwaZulu-Natal, South Africa"	THPs	To test whether the standard training increases knowledge, reduces risk practices, improve STI and HIV management strategies, and increases referrals to medical care among traditional healers in KZN	**Controlled study, using a quasi-experimental design:** Intervention group received training in HIV/AIDS, STI, and TB prevention over 3.5 days as well as a supervisory follow-up visit.	At 7–9 months follow-up intervention effects were significant for HIV knowledge and HIV and STI management strategies including conducting risk behavior assessments and counseling, condom distribution, community HIV/AIDS and STI education, and record keeping. The study found a high level of preparedness among traditional healers to work with and refer patients to biomedical health practitioners, yet no higher levels of referral to biomedical practitioners were found after the training.
Dong et al. 2007	KwaZulu-Natal Province	"Challenges to the success of HIV and tuberculosis care and treatment in the public health sector in South Africa"	TC, THPs, BMPs	To describe the experience of the ITEACH Program, launched in 2005at Edendale Hospital in KZN. The goal of the ITEACH Program is to identify the barriers to effective treatment and develop interventions to enable expansion of access to antiretroviral therapy (ART), and to improve ART and TB treatment outcomes within uMgungundlovu district.	**Program Implementation Report**	Incorporation of THPs and community support is necessary to improve patient outcomes. At the time of the publication, ITEACH was finalizing an HIV/TB training program for THPs, aiming to formalize their role in providing patient education, treatment support, and referrals for testing, in addition to managing HIV-associated opportunistic infections and drug-related adverse effects.
Shuster et al. 2008	Eastern Cape Province	"The Cultural and Community-Level Acceptance of Antiretroviral Therapy (ART) Among Traditional Healers in Eastern Cape, South Africa"	THPs	To identify motivational factors that are likely to promote a deeper acceptance and support for ART	**Qualitative Research Study:** Open-ended, face-to-face interviews with THPs, employing grounded-theory methodology	Through the incorporation of the aforementioned motivational factors in HIV/AIDS treatment programs in South Africa, ART provision in resource-poor settings can be strengthened
Gqaleni et al. 2010	KwaZulu-Natal Province	Biomedical and traditional healing collaboration on HIV/AIDS in KwaZulu-Natal, South Africa"	THPs	To establish a strategic collaboration between THPs and public health clinics in the fight against HIV/AIDS, focusing on prevention and referral for voluntary counseling and testing (VCT) and palliative care	**Project Implementation Report:** Gathering of stakeholders, THP training, M&E	The development and empowerment of THPs to play a meaningful role in the provision of healthcare is of national strategic importance, and that the project successfully demonstrates that collaboration between THPs and the BM sector is possible.
Zimba & Tanga 2014	Eastern Cape Province	"Challenges faced by traditional healers when treating people living with HIV and AIDS: the case of Intsika Municipality, Eastern Cape Province of South Africa."	THPs	To describe THPs' experiences treating PLWH and the processes through which THPs provide care for them in Tsengiwe and Tsomo villages.	**Qualitative Research Study:** In-depth interviews and focus group discussions	THPs play a significant role in their communities; however, their efforts, particularly around the care and treatment of PLWH, have been undermined by their current legal status, and as a result, their effectiveness as care providers has not been able to reach its full potential. DOH must establish a strong relationship with THPs to ensure that they can complement and strengthen the healthcare services in South Africa.
Appelbaum Belisle et al. 2015	KwaZulu-Natal Province	"Concurrent use of traditional medicine and ART: Perspectives of patients, providers and traditional healers in Durban, South Africa	TC, THPs, BMPs	To examine the perceptions of concurrent use of TAM and ART among (1) patients receiving ART, (2) BM providers (doctors, nurses, and HIV counselors), and (3) local THPs	**Qualitative Research Study:** In-depth interviews and focus group discussions	Collaboration between THPs and BM could, provide a substantial benefit and augment the standard of care in the setting of critical BMP shortages, with THPs serving as integrated providers of HIV testing in the field, linkage to ART, patient navigation, and adherence counseling.

Short Reference Name	South African Region	Title of Document	Participant Characteristics	Aims and Objectives	Approach/Methods	Conclusions and Recommendations
Moshabela et al. 2016	KwaZulu-Natal Province	"'It is better to die': experiences of traditional health practitioners within the HIV treatment as prevention trial communities in rural South Africa (ANRS 12249 TasP trial)"	THPs	To understand the social, economic, and contextual factors that affected individuals, households, communities, and health systems after the implementation of the *ANRS 12249 Treatment-as-Prevention (TASP) Cluster Randomized Trial* in northern KZN	**Qualitative Research Study:**focus group discussions, community walks, and photo-voice	Acceptability of the TasP test-and-treat approach by THPs would be extremely beneficial not only for the intervention, but also for the strengthening of ties with communities to combat stigma and provide overall HIV care for patients, as well as to and facilitate quality partnerships with THPs. Further research is needed to assess the feasibility of THP partnerships in the context of the TasP research agenda and in HIV stigma reduction interventions overall.
Zuma et al. 2017	KwaZulu-Natal Province	"Traditional health practitioners' management of HIV/AIDS in rural South Africa in the era of widespread antiretroviral therapy"	THPs	To document and identify treatment approaches of THPs to the management of illness among PLWH in the current era of widespread access to ART	**Qualitative Research Study:**focus group discussions, community walks, and photo-voice	THPs' approaches to illness in PLWH appear to be shifting due to exposure and access to HIV/AIDS-related information. It is important for patients to disclose their HIV status disclosure to THPs, as "disclosure of HIV status determined which traditional medicines could be prescribed or prepared and which traditional rituals could be performed," as if the patient needs linkage to HIV testing and treatment, making THPs potentially indispensable in facilitating the success of ART for PLWH when HIV status is known.
Ngunyulu et al. 2017	Gauteng Province	"Collaborative HIV care in primary health care: nurses' views"	BMPs	To explore and describe the views of nurses regarding collaborative HIV care in primary healthcare services in the City of Tshwane	**Qualitative Research Study:** In-depth interviews	It is vital that policymakers consider the importance of collaborative HIV care to improve the quality of care by strengthening the referral system and follow-up for PLWH. Training and involvement of THPs in the nursing and health policy should be considered to enhance and build a trustworthy working relationship between the nurses and the THPs in HIV care
Nemutandani et al. 2018	Limpopo Province	Decolonizing the mindsets, attitudes and practices of the allopathic and indigenous health practitioners in postcolonial society: An exploratory approach in the management of patients	Community Members, THPs, BMPs	To explore a collaboration model between THPs and BMPs in the care management of PLWH in postcolonial South Africa	**Qualitative Research Study:** combined and separate focus group discussions	Although the TAM and BM systems render services to the same HIV communities, there is a lack of communication between the systems, creating confusion. Through the application of a decolonization process, mindsets, attitudes and practices towards each other can change to facilitate collaboration BMPs and THPs in the health management of PLWH

Appendix F: Descriptive Outcomes

Short Reference Name	Community Engagement	Funding Description	Evaluation Plan	PI familiarity with context	Description of Stakeholder Relationship Dynamics (10)
Green et al. 1995	N/A	**USA**: USAID	Document serves as an internal evaluation	Team acknowledged mid-study pitfalls of having needed better context.	**(1) TC/THP** **(2) TC/BM** (3) TC/GOV, (4) TC/AI, **(5) THP/BM,** (6) THP/AI, **(7) THP/GOV** (8) BM/GOV, (9) BM/AI, **(10) AI/GOV**
Mills 2005	N/A	N/A	N/A	N/A	**(1) TC/THP** **(2) TC/BM** **(3) TC/GOV** (4) TC/AI (5) THP/BM **(6) THP/AI** **(7) THP/GOV** (8) BM/GOV (9) BM/AI (10) AI/GOV
Peltzer et al. 2006	Community meeting, recruitment, community engagement not thoroughly described.	**USA & South Africa:** Bristol-Myers Squibb Foundation (Secure the Future Programme) and the Human Sciences Research Council, South Africa.	N/A	Interviews were administered by two Zulu researchers, one THP and one professional nurse trained in administration.	**(1) TC/THP** (2) TC/BM (3) TC/GOV (4) TC/AI **(5) THP/BM** **(6) THP/AI** (7) THP/GOV (8) BM/GOV **(9) BM/AI** (10) AI/GOV
Dong et al. 2007	Yes (but not in detail)	**USA:** Private philanthropy	This document included an evaluation of training in patient ART adherence, the hospital-based ART clinic, inpatient medical wards, DOTS services, and links between the HIV and TB programs and TM and community-based treatment service.	Team consisted of 1 physician trained in the United States and living full time in KZN with all other ITEACH staff being South African and fluent in the most common local languages—Zulu, Xhosa, and Sesotho. Most of the ITEACH team resides in the surrounding townships, which helped to address local challenges and establish support interventions relevant to the community. Core ITEACH staff had previously worked with the South African DOH at both the national and provincial levels during the draft- ing of the 2003 Operational Plan for Comprehensive HIV and AIDS Care, Management, and Treatment.	**(1) TC/THP** **(2) TC/BM** **(3) TC/GOV** *(in context of TB/DOT)* (4) TC/AI **(5) THP/BM** (6) THP/AI (7) THP/GOV **(8) BM/GOV** *(in context of TB/DOT)* (9) BM/AI (10) AI/GOV
Shuster et al. 2008	This research in itself was formative and qualitative in nature.	**USA:** RSPH fellowship grant, Emory Center for AIDS Research (P30 AI050409), and the Emory HIV/AIDS Clinical Trials Unit (U01 AIo69418)	N/A	Limitations for this study included potential reflexive bias, as the primary interviewer was a white male representing Africare South Africa. This alliance bears significance as the non-governmental organization is viewed in the com-munity as a Western institution that potentially offers employment opportunities and gifts to members of the community for various HIV/AIDS-related events.	**(1) TC/THP** (2) TC/BM (3) TC/GOV (4) TC/AI **(5) THP/BM** **(6) THP/AI** **(7) THP/GOV** (8) BM/GOV (9) BM/AI (10) AI/GOV
Gqaleni et al. 2010	Yes. THPs themselves drove the implementation process. The active participation by 40 THPs as consultants on the project and the collaboration with government ensured a good working relationship with all stakeholders.	**USA:** PEPFAR	For the purpose of M&E of the project, THPs were obliged to record the interactions with their patients. The biomedical and traditional healing collaboration on HIV and AIDS projects underwent a tough but very useful strategic review by Strategic Evaluation, Advisory and Development Consulting (SEAD). SEAD team of evaluators concluded that the project performed well in a sector that has been neglected. The operating environment was challenging but the program worked hard to achieve its outputs.	The project-writing process was preceded by extensive external consultations and involved 3 KZN districts namely eThekwini, Umgungundlovu and Ilembe. The project proposal development took place over a six-month period following the signing of the memorandum of understanding (MOU) between the University of KwaZulu-Natal (UKZN) and THP organizations. After workshops on proposal writing, a small team was mandated to finalize the detailed proposal for submission to CDC. This core implementation team formed the UKZN THP Project Executive Committee.	**(1) TC/THP** (2) TC/BM (3) TC/GOV (4) TC/AI **(5) THP/BM** **(6) THP/AI** **(7) THP/GOV** (8) BM/GOV (9) BM/AI (10) AI/GOV
Zimba & Tanga 2014	N/A	N/A	N/A	N/A	**(1) TC/THP** (2) TC/BM (3) TC/GOV (4) TC/AI (5) THP/BM (6) THP/AI **(7) THP/GOV** (8) BM/GOV (9) BM/AI (10) AI/GOV

Short Reference Name	Community Engagement	Funding Description	Evaluation Plan	PI familiarity with context	Description of Stakeholder Relationship Dynamics (10)
Appelbaum Belisle et al. 2015	Qual methods. "The gatekeeper was a community member and traditional healer who knew several of the participant traditional healers personally. She was also part of the research team."	**USA:** Emory University Center for AIDS Research (CFAR) [P30 AI050409], Emory School of Medicine Division of Infectious Diseases NIH [R01 – AI098558], CDC Cooperative Agreement [U62/ CCU123541-01], and the Elizabeth Glaser Pediatric AIDS Foundation as part of Project HEART.	N/A	Members of this study team have been involved with clinical care, research and policy decisions affecting individuals living with HIV in this region for decades, thereby observing over time the unfavorable effects of this debate.	**(1) TC/THP** **(2) TC/BM** (3) TC/GOV (4) TC/AI **(5) THP/BM** **(6) THP/AI** (7) THP/GOV (8) BM/GOV (9) BM/AI (10) AI/GOV
Moshabela et al. 2016	Qual - methods used to get to know the community, work with community liaisons	**Germany, France, USA, U.K. :** The French National Agency for Aids and Viral Hepatitis Research (ANRS), International Initiative for Impact Evaluation, Inc. (3ie) with support from the Bill & Melinda Gates Foundation, the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), Merck & Co. Inc and Gilead Sciences provided the Atripla® drug supply. The Africa Centre for Population Health receives core funding from the Wellcome Trust	N/A	Not reported, however author has multiple publications on the subject.	**(1) TC/THP** **(2) TC/BM** (3) TC/GOV (4) TC/AI (5) THP/BM **(6) THP/AI** **(7) THP/GOV** (8) BM/GOV (9) BM/AI (10) AI/GOV
Ngunyulu et al. 2017	Not reported for before study. The study findings were discussed with the participants for their inputs, accuracy and interpretations to ensure member checking.	**South Africa:** University-based Nursing Education in South Africa (UNEDSA) Project. UNEDSA Grant number: 09ESA00003.	N/A	Not reported, however all research team members are associated with the Department of Nursing Sciences in at University of Pretoria.	**(1) TC/THP** **(2) TC/BM** (3) TC/GOV (4) TC/AI **(5) THP/BM** (6) THP/AI (7) THP/GOV **(8) BM/GOV** (9) BM/AI (10) AI/GOV
Zuma et al. 2017	Qual - methods used to get to know the community, work with community liaisons	**Germany, France, South Africa, USA, U.K. :** Medical Research Council of South Africa in terms of the National Health Scholars Programme (funds provided for this purpose by the Public Health Enhancement Fund), Wellcome Trust, the French National Agency for AIDS and Viral Hepatitis Research (ANRS), Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) (under the grants ANRS 12249 and GIZ N°81151938), ANRS, and the International Initiative for Impact Evaluation; a grantee of the Bill and Melinda Gates Foundation. The trial is conducted with the support of Merck & Co. Inc and Gilead Sciences that provided the Atripla® drug supply. The AHRI receives core funding from the Wellcome Trust, which provides the platform for the population- and clinic-based research.	N/A	Not reported, however research team has multiple publications on the subject.	**(1) TC/THP** **(2) TC/BM** (3) TC/GOV (4) TC/AI **(5) THP/BM** (6) THP/AI (7) THP/GOV (8) BM/GOV (9) BM/AI (10) AI/GOV
Nemutandani et al. 2018	Engagagemnet in action	**South Africa:** South African Medical Research Council (SAMRC), Deputy VC Research Office, University of Pretoria, and the National Health Scholarship Programme (NHSP) for providing financial support.	N/A	N/A	(1) TC/THP (2) TC/BM (3) TC/GOV (4) TC/AI **(5) THP/BM** (6) THP/AI (7) THP/GOV (8) BM/GOV (9) BM/AI (10) AI/GOV

Appendix G: Google Forms Script

```
function assignEditUrls() {
var form = FormApp.openById('Your form key goes here');
var sheet = SpreadsheetApp.getActiveSpreadsheet().getSheetByName('Your responses Google Sheet
name goes here - The tab name, not the file name');
var data = sheet.getDataRange().getValues();
var urlCol = Column number where URLs get entered goes here;
var responses = form.getResponses();
var timestamps = [], urls = [], resultUrls = [];
for (var i = 0; i < responses.length; i++) {
timestamps.push(responses[i].getTimestamp().setMilliseconds(0));
urls.push(responses[i].getEditResponseUrl());
}
for (var j = 1; j < data.length; j++) {
resultUrls.push([data[j][0]?urls[timestamps.indexOf(data[j][0].setMilliseconds(0))]:""]);
}
sheet.getRange(2, urlCol, resultUrls.length).setValues(resultUrls);
}
```

https://digitalegghead.com/index.php/2018/03/06/edit-google-form-responses/

Appendix H: PRISMA Flow Chart