"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)

Article (Published Version)

Moshabela, Mosa, Zuma, Thembelihle, Orne-Gliemann, Joanna, Iwuji, Collins, Larmarange, Joseph and McGrath, Nuala (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 (sup3). pp. 24-32. ISSN 0954-0121

This version is available from Sussex Research Online: http://sro.sussex.ac.uk/id/eprint/91265/

This document is made available in accordance with publisher policies and may differ from the published version or from the version of record. If you wish to cite this item you are advised to consult the publisher's version. Please see the URL above for details on accessing the published version.

Copyright and reuse:
Sussex Research Online is a digital repository of the research output of the University.

Copyright and all moral rights to the version of the paper presented here belong to the individual author(s) and/or other copyright owners. To the extent reasonable and practicable, the material made available in SRO has been checked for eligibility before being made available.

Copies of full text items generally can be reproduced, displayed or performed and given to third parties in any format or medium for personal research or study, educational, or not-for-profit purposes without prior permission or charge, provided that the authors, title and full bibliographic details are credited, a hyperlink and/or URL is given for the original metadata page and the content is not changed in any way.

http://sro.sussex.ac.uk
“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)

Mosa Moshabela, Thembelihle Zuma, Joanna Orne-Gliemann, Collins Iwuji, Joseph Larmarange, Nuala McGrath & on behalf of the ANRS 12249 TasP Study Group

To cite this article: Mosa Moshabela, Thembelihle Zuma, Joanna Orne-Gliemann, Collins Iwuji, Joseph Larmarange, Nuala McGrath & on behalf of the ANRS 12249 TasP Study Group (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:sup3, 24-32, DOI: 10.1080/09540121.2016.1181296

To link to this article: https://doi.org/10.1080/09540121.2016.1181296

© 2016 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group

Published online: 15 Jul 2016.

Submit your article to this journal

Article views: 993

View related articles

View Crossmark data

Citing articles: 17 View citing articles
“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)

Mosa Moshabela, Thembelihle Zuma, Joanna Orne-Gliemann, Collins Iwuji, Joseph Larmarange, Nuala McGrath and on behalf of the ANRS 12249 TasP Study Group

ABSTRACT
The ANRS 12249 Treatment-as-Prevention (TasP) cluster-randomized trial in rural South Africa uses a “test and treat” approach. Home-based testing services and antiretroviral treatment initiation satellite clinics were implemented in every cluster as part of the trial. A social science research agenda was nested within TasP with the aim of understanding the social, economic and contextual factors that affect individuals, households, communities and health systems with respect to TasP. Considering the rural nature of the trial setting, we sought to understand community perceptions and experiences of the TasP Trial interventions as seen through the eyes of traditional health practitioners (THPs). A qualitative study design was adopted using four repeat focus group discussions conducted with nine THPs, combined with community walks and photo-voice techniques, over a period of 18 months. A descriptive, interpretive and explanatory approach to analysis was adopted. Findings indicate that THPs engaged with the home-based testing services and HIV clinics established for TasP. Specifically, home-based testing services were perceived as relatively successful in increasing access to HIV testing. A major gap observed by THPs was linkage to HIV clinics. Most of their clients, and some of the THPs themselves, found it difficult to use HIV clinics due to fear of labelling, stigma and discrimination, and the ensuing personal implications of unsolicited disclosure. On the one hand, a growing number of patients diagnosed with HIV have found sanctuary with THPs as alternatives to clinics. On the other hand, THPs in turn have been struggling to channel patients suspected of HIV into clinics through referrals. Therefore, acceptability of the TasP test and treat approach by THPs is a major boost to the intervention, but further success can be achieved through strengthened ties with communities to combat stigma and effectively link patients into HIV care, including partnerships with THPs themselves.

ARTICLE HISTORY
Received 1 February 2016
Accepted 30 March 2016

KEYWORDS
HIV testing; antiretroviral treatment; treatment-as-prevention; traditional healers; HIV stigma; South Africa

Introduction
The ANRS 12249 Treatment-as-Prevention (TasP) Trial in rural KwaZulu-Natal, South Africa is evaluating a universal “test and treat” strategy for the prevention of HIV transmission (Iwuji et al., 2013; Orne-Gliemann et al., 2015). Home-based HIV counselling and testing is offered repeatedly to all members within the defined geographic area of trial communities. In the intervention arm, antiretroviral treatment (ART) is offered to all HIV positive individuals through designated TasP trial clinics regardless of their CD4 count, whilst in the control arm, treatment is offered according to South African national ART guidelines. Whilst the primary outcome of the TasP Trial is to reduce HIV incidence at population level, secondary outcomes include community perceptions and experiences of the universal test and treat approach (Iwuji et al., 2013; Orne-Gliemann et al., 2015). TasP remains a relatively new innovation as a public health intervention at population level, and yet offers much promise for the control of the HIV epidemic. Therefore, TasP is a challenge not only for scientists, policy-makers and healthcare
Indeed, TasP, through its test and treat approach, is expected to cause major shifts and changes in the way communities perceive and experience the surveillance, monitoring, and control of the HIV epidemic (Orne-Gliemann et al., 2015). Since TasP is implemented as a community-level intervention, a better understanding of community-level factors likely to influence the test and treat approach will be fundamental to the social science research agenda. A recent critical review by Underwood, Hendrickson, Van Lith, Kunda, and Mallalieu (2014) indicated that social support networks, cultural and gender norms, and stigma and discrimination were the most important community-level factors associated with the HIV treatment cascade (Underwood et al., 2014). Currently, we know little about such community-level social factors that may influence the success or failure of the universal test and treat approach within TasP. Perspectives of local community members, including traditional health practitioners (THPs), will be fundamental in shaping our understandings of social factors affecting individuals, families, and communities. In this study, we report on the local THPs perceptions and experiences of the TasP test and treat approach, a subset of the ANRS 12249 TasP Trial social science research agenda already reported by Orne-Gliemann et al. (2015).

THPs are legally recognised through the South African Traditional Health Practitioners Act of 2007, and include diviners, herbalists, traditional surgeons and traditional birth attendants (Peltzer, 2009). Although spiritual and faith healers, often associated with church, religious and prophetic forms of healing, were not included in this Act, they are arguably as prevalent and important as other forms of THPs (Gqaleni, Moodley, Kruger, Ntuli, & McLeod, 2007). However, the World Health Organisation (WHO) does recognise religious healing, and defines a THP as a “a person who is recognised by the community where he or she lives as someone competent to provide health care by using plant, animal and mineral substances and other methods based on social, cultural and religious practices” (WHO, 1978, p. 9). In South Africa, THPs are considered influential figures of authority in South Africa, and initiatives are currently underway to formally recognise them as health service providers by the Department of Health. However, regulatory councils for THPs and their traditional medicines have yet to be established (van Niekerk, 2012). The use of THPs by people living with HIV has been reported to delay access to HIV testing and treatment in rural areas (Audet et al., 2014; Moshabela, Pronyk, Williams, Schneider, & Lurie, 2011). A recent community-level survey in South Africa, at a study site adjacent to the ANRS 12249 Trial, demonstrated that 20% of people taking ART also use traditional healers (Pantelic et al., 2015). Appelbaum-Belisle et al. (2015) found that people living with HIV use ART and THPs for different reasons, indicating a complementary form of utilisation behaviour. As a result, engaging THPs through HIV education and referrals is an approach recommended as a possible solution in helping to link people living with HIV to care, as was demonstrated in Mozambique (Audet et al., 2013). However, there still exist negative and conflicted attitudes between biomedical health workers and THPs. Mutual understanding and trust will need to be achieved for effective collaboration to ensue (Van Rooyen, Pretorius, Tembani, & Ten Ham, 2015). According to a review by Hanson, Zembe, and Ekström (2015), it will become increasingly important to actively engage communities, and THPs as community members, in the control of the HIV epidemic, and begin to promote community-driven interventions (Hanson et al., 2015).

Methods

Study setting

Hlabisa health sub-district is one of the five sub-districts in the rural district of Umkhanyakude in northern KwaZulu-Natal, South Africa. Approximately 77% of the sub-district is classified as rural, and 92% of the 228,000 inhabitants speak Zulu as a first language (Solarsh, Benzler, Hosegood, Tanser, & Vanneste, 2002). The rural population lives in scattered homesteads. HIV prevalence in 2011 in the Hlabisa sub-district was 29% among adults (Zaidi, Grapsa, Tanser, Newell, & Bärnighausen, 2013). Healthcare services are provided through 1 central community hospital and 17 fixed primary healthcare clinics. Hlabisa hosts the Wellcome Trust-funded Africa Centre for Population Health. The Africa Centre carries out socio-demographic, HIV and TB surveillance in a geographically defined area covering about 40% of the population in the sub-district (Tanser et al., 2008). The Africa Centre also hosts the ANRS 12249 TasP Trial, which is implemented outside of the Africa Centre demographic surveillance area. The trial area contains 8 of the 17 fixed primary healthcare clinics in the Hlabisa sub-district.

Study population

Four THPs were purposively sampled for maximum variation in socio-demographic factors through the community engagement unit of the Africa Centre and ANRS 12249 TasP Trial Group. A snowballing technique was...
used to identify other THPs through home visits. THPs were included if 16 years or older, resident in one of the four TasP Trial clusters, able to communicate in isiZulu, able to provide informed consent, willing to participate actively in discussions, willing to have discussions recorded, willing to attend repeat interviews, willing to provide their contact details and able to commit time required for the research activities. A total of nine THPs were included, seven females (all above 40 years of age) and two males (both below 35 years of age). In South Africa, most THPs are female and diviners/faith healers, whereas males function more as herbalists.

**Data collection**

The first phase of the TasP trial started in March 2012, and ended in March 2014. Focus group discussions (FGDs) were conducted with THPs, so as to explore their collective and consensus perceptions and experiences as a body of practitioners, and repeated four times over a period of 18 months between 2013 and 2014. All THPs attended the first and second meetings, with one dropout in meeting three and two dropouts in the fourth meeting. Venues for the FGDs, allowing privacy, were identified by a local community leader. FGDs were conducted in isiZulu, audio-recorded with consent from participants, and field notes were captured. The duration of FGDs ranged from 60 to 120 minutes. Data were collected on healthcare services and their utilisation within study communities, understanding of TasP approach, local practices to support HIV testing and early ART initiation, and lastly, barriers and facilitators to HIV testing, early ART initiation and adherence. FGDs were transcribed and translated from isiZulu to English. Repeat group discussions were supplemented with observations through community walks (Chambers, 1994) and the Photo-voice technique (Wang & Burris, 1997) on barriers and facilitators.

**Data analysis**

Thematic analysis was used to generate themes with emphasis on descriptive, interpretive and explanatory analyses. Data sources were combined and coded for experiences and perceptions relevant to the testing, linkage, treatment, adherence and retention components of TasP. Two researchers (TZ and MM) coded the data using open coding within data sources, and compared codes between data sources using axial coding and coders through peer-auditing procedures. Relations between codes were compared and categories were generated. Data sources were revisited and explored further to identify contradictory statements and new codes, followed by revision of codes, categories and themes. Observation and visual data were used as supplementary sources to produce textual data, and also used in generating supportive and contradictory codes and revision of categories.

**Ethical considerations**

The Biomedical Research Ethics Committee (BREC) of the University of KwaZulu-Natal approved the trial (BCF104/11) and the social science programme (BE090/12). The trial was approved by the Department of Health in KwaZulu Natal, and the Medicines Control Council of South Africa. Participation was voluntary, and all participants granted both verbal and written informed consent. Participants could withdraw at any point during the study, and their confidentiality was ensured. All recordings were stored in a password-protected electronic file.

**Results**

THPs participating in the study constituted diviners, faith healers and herbalists. Diviners and herbalists provided healing through ancestral messengers, whereas faith healers were often active church members and leaders who provided spiritual healing through prayer and God-sent messengers.

**Home testing opportunity**

The availability of home testing for HIV was reported as a critical component of the TasP “Test and Treat” Campaign, and THPs encouraged each other to make use of the service themselves, as well as for their families, neighbours and clients.

One day, two “TasP” fieldworkers went past my home and a colleague of mine told me how helpful they are in testing and giving you results. I then jumped on the opportunity and asked them to test me. They did the HIV test and I was negative. (THP, P7, Diviner, Female, 61)

THPs also identified and reported missed opportunities for HIV testing in the homes, mostly among young people. However, given their power of influence in households and communities, they were able to mobilise people during rounds of home testing, approximately every three months.

The problem that I have is that the kids at home don’t want to check and they even hide when they see people coming to do tests. I need to go after them and encourage them to test otherwise they don’t want to… (THP, P6, Diviner, Female, 60)
Finding sanctuary in healing

When HIV was diagnosed, many clients to THPs saw the diagnosis as a form of punishment, and would thus consult THPs in search of reasons for God or their ancestors to subject them to such suffering. THPs who practised as prophets and faith healers reported that their clients sought solace for their diagnosis in the comfort of the church or other forms of spiritual healing. In addition, there is an expectation that church-linked healers should not publically reveal confessions or secrets they know of their members.

… they join the church so they can hide among church members because the rule is that church secrets are not supposed to be spoken outside the church … (THP, P1, Faith Healer, Female, 52)

Furthermore, clients who are aware of their HIV status also go to THPs claiming that witchcraft is the cause of their illness. As a result, clients would expect THPs to consult with the spirits in search of answers, and they confess their HIV diagnosis to THPs to seek their counsel, further explained through the photo.

When someone is ill from this (HIV) they run to us (traditional healers) … we have a very big challenge. They come to us and say that Makhosi I dreamt at night that someone was giving me idliso (“bewitching” by food) … [While] he knows that the illness is eating him away. (THP, P5, Diviner, Female, 60)

Failure in linkage to care

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.

My patients take the card but throw it away when they leave my home. I always see the cards lying around in the veld, and see that they did not go to the clinic like I had asked them to [group laughs]. (THP, P5, Diviner, Female, 60)

When linkage to care was achieved, some of the participants reported negative experiences with health workers in the HIV clinics, who at times passed judgement based on their knowledge of participants’ life circumstances.

I will make myself as an example when I got sick and went to the clinic, I asked to check my HIV status and they said “where will you be getting HIV since your husband passed away some time ago?” … (THP, P7, Diviner, Female, 61)

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.

… some people even change clinics. They don’t use the local clinic [A] that is closer to their homes. They prefer going to town to use [Clinic B]. Others go to [Clinic C], they are from [Village A]. They do not want to be seen by other people who are from the same community. (THP, P9, Diviner, Female, 53)

Fear of stigmatisation

Participants in this study highlighted the fear of experiencing shameful feelings generally associated with the unintended revelation of HIV status by using HIV-specific clinic facilities, wherein THPs or their clients may be recognised by other community members. The fear of being “the talk” of the community was so intense that even some of the THPs themselves did not want to be associated with the HIV diagnosis. Regardless of such fears, THPs did recognise the importance of seeking health care and receiving treatment.

People in general, including myself, once we know that we are infected, it is difficult to take a decision to go to the clinic because we think it will cause an embarrassment but the clinic is actually very important. (THP, P7, Diviner, Female, 61)

There was a further complication for THPs themselves, in that they are seen as “powerful” and in some ways, “invincible”, and thus succumbing to HIV themselves reduces the perception of “divine power” associated with THPs. For those who refuse either to test for HIV or to reveal their diagnosis, they feel “it is better to die” than to test and treat HIV. Put differently, these THPs adopted the view that it is “better to die with dignity, than live with shame”, even though the perception of dignity was based on non-disclosure.

What I mean to say is that even us (THPs), we don’t want to be known when we become HIV positive because of the stigma attached to being a traditional healer and the expectation that we cannot contract this virus, whereas in actual fact this virus does not discriminate, whether you are a traditional healer, a priest or whoever you are … (THP, P7, Diviner, Female, 61)

THPs also recognised that other figures of “divinity”, as well as health workers, have also been infected with HIV. THPs participating in this study felt that there was no need for THPs to feel shame when infected with HIV, and those who received HIV education resolved that education was necessary to help steer those misinformed THPs away from misconceptions, such as [THP, P2,
Herbalist, Female, 49], whose views were openly challenged by the group members.

Clients who found sanctuary in the church and among THPs included those who refused to test, disclose or link to care due to fear of stigma and discrimination. The key to overcoming this barrier was reported as not simply provision of HIV information, but effective partnerships with HIV organisations to change attitudes and render services accessible to the community.

**Discussion**

The experiences of THPs suggest that the HIV home testing component of the ANRS 12249 TasP has been largely successful, and its implementation has influenced community perceptions of HIV testing, as informed by THPs. However, gaps in the linkage to care component were reported by THPs, which will inadvertently bear implications for the ART initiation component of the universal test-and-treat approach. According to the THPs, fear of stigma and discrimination, through unsolicited disclosure to fellow community members by merely attending HIV clinics, as well as the stigmatising practices of health workers, was the most important community-level driver of poor linkage to care. THPs, including both traditional and faith healers, were consulted by community members vulnerable to stigma as providers of sanctuary and solace away from the experiences of discrimination in the community. The need for sanctuary will persist for as long as stigma and discrimination continue to persist. THPs were willing to form partnerships with HIV treatment organisations, including those providing TasP, in order to strengthen linkage to care for those in need of testing as well as those known to be living with HIV and in need of treatment. Furthermore, participants did not address the TasP trial components of early ART initiation, adherence or retention in any direct terms. Further research will be necessary to investigate THPs’ understandings of the specific notion of early treatment initiation, a core component in TasP.

Efforts to combat stigma and discrimination likely form a good basis to forge stronger ties between THPs and the TasP intervention, in line with the proposal by Hanson et al. (2015) to involve communities. Recently, Vermund (2014) eloquently argued that with the advent of TasP, never has the need for stigma reduction been more urgent. In addition to concerns regarding stigma and discrimination, Young, Flowers, & McDaid, 2014 demonstrated that poor HIV literacy can be a barrier to the acceptability of TasP (Young et al., 2014). In this study, THPs who were considered misinformed about HIV often refused to test, disclose or treat HIV, a pattern likely to represent views of their clients. HIV knowledge varies in surveys of THPs, ranging from 38% (Walwyn & Maikhailo, 2010) to 60% (George, Chitindingu, & Gow, 2013). In their survey of THPs treating HIV patients, George et al. (2013) showed better study outcomes among HIV-trained THPs than their untrained counterparts.

According to Campbell, Skovdal, and Gibbs (2011), there remains a need to create social spaces to provide education and tackle HIV-related stigma, including in churches. While some churches may hold contradictory views to some interventions for HIV, such as condoms, other church spaces hold promise in challenging stigmatising ideas and practices. The same can be said about homes and spaces of THPs in general. This approach is further supported by the literature on social capital and HIV (Campbell, Williams, & Gilgen, 2002), whereby THPs and the social spaces, including churches, can be accessed to build social support networks (Reis, Galvao, & Gir, 2013). These networks have been identified as one of three main determinants of success in HIV care, besides transport and stigma (Underwood et al., 2014). However, the focus of these social spaces needs to remain the fight against HIV stigma, which is a social process contingent on social context, and therefore necessitates contextually relevant interventions to create acceptance of people living with HIV, as well as acceptability of practices of HIV testing and ART (Earnshaw & Chaudoir, 2009; Florom-Smith & De Santis, 2012; Sengupta, Banks, Jonas, Miles, & Smith, 2011).

In conclusion, acceptability of the TasP test-and-treat approach by THPs could be a major boost to the intervention, and further success can be achieved through strengthened ties with communities, including THPs themselves. Further research is necessary to assess the feasibility of THP partnerships within the TasP research agenda, as well as within broader HIV stigma reduction interventions. These partnerships could include HIV education for THPs, and empowering them as HIV educators. THPs could also be offered materials and education to test their clients for HIV, refer those who are diagnosed with HIV, and act as advocates for linkage to care and early ART initiation. Better designed evaluation studies that adopt suitable HIV stigma frameworks to the context of the TasP intervention will be needed, as well as participatory action research approaches involving community members and THPs, including traditional birth attendants who exists on a large scale in other parts of sub-Saharan Africa. THPs can play a more exemplary role in their communities by openly testing for HIV and encouraging others to test, including their fellow THPs, family members and clients. In light of the findings of this study, it remains clear that THPs are well positioned to strengthen both HIV testing as
well as linkage to care for their clients. THPs can help create social spaces within religious and traditional health practices for the purposes of combatting HIV-related stigma and discrimination. Furthermore, THPs could act as bridges in building social support networks in the community, and potentially use these social networks to strengthen community participation in the efforts to eliminate HIV within local communities.

Acknowledgements

The authors wish to thank the Department of Health of South Africa for their support of this study, the community of Hlabisa sub-district for hosting our research and all participants who contributed to the study.

Funding

The French National Agency for Aids and Viral Hepatitis Research (ANRS) is the sponsor and co-founder of the trial. Research discussed in this publication has been co-funded by the International Initiative for Impact Evaluation, Inc. (3ie) with support from the Bill & Melinda Gates Foundation. The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) has co-funded the trial. The trial is conducted with the support of Merck & Co. Inc and Gilead Sciences that provided the Atripla® drug supply. The Africa Centre for Population Health receives core funding from the Wellcome Trust, which provides the platform for the population- and clinic-based research at the Centre.

Disclosure statement

C.I. has received honoraria for services rendered to Gilead Sciences. No other potential conflict of interest was reported by the authors.

ORCID details

Mosa Moshabela http://orcid.org/0000-0002-9438-7095

References

Appelbaum-Belisle, H., Hennink, M., Ordoñez, 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.

Audet, C. M., Blevins, M., Rosenberg, C., Farnsworth, S., Salato, J., Fernandez, J., & Vermund, S. H. (2014). Symptomatic HIV-positive persons in rural Mozambique who first consult a traditional healer have delays in HIV testing: a cross-sectional study. JAIDS Journal of Acquired Immune Deficiency Syndromes, 66(4), e80–e86.

Audet, C. M., Salato, J., Blevins, M., Amsalem, D., Vermund, S. H., & Gaspar, F. (2013). Educational intervention increased referrals to allopathic care by traditional healers in three high HIV-prevalence rural districts in Mozambique. PloS One, 8(8), e70326.

Campbell, C., Skovdal, M., & Gibbs, A. (2011). Creating social spaces to tackle AIDS-related stigma: reviewing the role of church groups in sub-Saharan Africa. AIDS and Behavior, 15(6), 1204–1219.

Campbell, C., Williams, B., & Gilgen, D. (2002). Is social capital a useful conceptual tool for exploring community level influences on HIV infection? An exploratory case study from South Africa. AIDS Care, 14(1), 41–54.

Chambers, R. (1994). The origins and practice of participatory rural appraisal. World Development, 22(7), 953–969.

Earnshaw, V. A., & Chaudoir, S. R. (2009). From conceptualizing to measuring HIV stigma: a review of HIV stigma mechanism measures. AIDS and Behavior, 13 (6), 1160–1177.

Florom-Smith, A. L., & De Santis, J. P. (2012). Exploring the concept of HIV-related stigma. Nursing Forum, 47 (3), 153–165.

George, G., Chitindingu, E., & Gow, J. (2013). Evaluating traditional healers knowledge and practices related to HIV testing and treatment in South Africa. BMC International Health and Human Rights, 13(1), 45–51. doi:10.1186/1472-698X-13-45

Geqaleni, N., Moodley, I., Kruger, H., Ntuli, A., & McLeod, H. (2007). Traditional and complementary medicine: Health care delivery. In S. Harrison, R. Bhana, & A. Ntuli (Eds.), South African health review (pp. 175–188). Durban: Health Systems Trust.

Hanson, S., Zembe, Y., & Ekström, A. M. (2015). Vital need to engage the community in HIV control in South Africa. Global Health Action, 8, doi:10.3402/gha.v8.27450

Iwuji, C. C., Orne-Gliemann, J., Tanser, F., Boyer, S., Lessells, R. J., Lert, F., … Bazin12, B. (2013). Study protocol. Open Access.

Moshabela, M., Pronyk, P., Williams, N., Schneider, H., & Lurie, M. (2011). Patterns and implications of medical pluralism among HIV/AIDS patients in rural South Africa. AIDS and Behavior, 15(4), 842–852.

van Nierkerk, J. d. V. (2012). Traditional healers formalised? SAMJ: South African Medical Journal, 102(3), iv–iv.

Orne-Gliemann, J., Larmarange, J., Boyer, S., Iwuji, C., Mcgrath, N., Bärnighausen, T., … Rochat, T. (2015). Addressing social issues in a universal HIV test and treat intervention trial (ANRS 12249 TasP) in South Africa: Methods for appraisal. BMC Public Health, 15(1), 209–219. doi:10.1186/s12889-015-1344-y

Pantelic, M., Cluver, L., Boyes, M., Toska, E., Kuo, C., & Moshabela, M. (2015). Medical pluralism predicts non-ART use among parents in need of ART: a community survey in KwaZulu-Natal, South Africa. AIDS and Behavior, 19 (1), 137–144.

Peltzer, K. (2009). Traditional health practitioners in South Africa. The Lancet, 374(9694), 956–957.

Reis, R. K., Galvao, M. T. G., & Gir, E. (2013). Challenges to an effective response for addressing stigma and discrimination related to HIV: From denial of rights to construction of support networks. Journal of the International AIDS Society, 16(1). doi:10.7448/IAS.16.1.18931
Sengupta, S., Banks, B., Jonas, D., Miles, M. S., & Smith, G. C. (2011). HIV interventions to reduce HIV/AIDS stigma: a systematic review. *AIDS and Behavior, 15*(6), 1075–1087.

Solarsh, G., Benzler, J., Hosegood, V., Tanser, F., & Vanneste, A. (2002). *Habisa DSS, South Africa. Population, health, and survival at INDEPTH sites*. Ottawa: International Development Research Centre, 213–220.

Tanser, F., Hosegood, V., Bärnighausen, T., Herbst, K., Nyirenda, M., Muhwava, W., … Newell, M.-L. (2008). Cohort profile: Africa centre demographic information system (ACDIS) and population-based HIV survey. *International Journal of Epidemiology, 37*(5), 956–962.

Underwood, C., Hendrickson, Z., Van Lith, L. M., Kunda, J. E. L., & Mallalieu, E. C. (2014). Role of community-level factors across the treatment cascade: A critical review. *JAIDS Journal of Acquired Immune Deficiency Syndromes, 66*, S311–S318.

Van Rooyen, D., Pretorius, B., Tembani, N. M., & Ten Ham, W. (2015). Allopathic and traditional health practitioners’ collaboration. *Curationis, 38*(2), 1–10.

Vermund, S. H. (2014). Global HIV epidemiology: A guide for strategies in prevention and care. *Current HIV/AIDS Reports, 11*(2), 93–98.

Walwyn, D., & Maithshofo, B. (2010). The role of South African traditional health practitioners in the treatment of HIV/AIDS: a study of their practices and use of herbal medicines. *Southern African Journal of HIV Medicine, 11*(2), 11–17.

Wang, C., & Burris, M. A. (1997). Photovoice: Concept, methodology, and use for participatory needs assessment. *Health Education & Behavior, 24*(3), 369–387.

Young, I., Flowers, P., & McDaid, L. M. (2014). Barriers to uptake and use of pre-exposure prophylaxis (PrEP) among communities most affected by HIV in the UK: findings from a qualitative study in Scotland. *BMJ open, 4*(11), e005717.

Zaidi, J., Grapsa, E., Tanser, F., Newell, M.-L., & Bärnighausen, T. (2013). Dramatic increases in HIV prevalence after scale-up of antiretroviral treatment: A longitudinal population-based HIV surveillance study in rural kwazulu-natal. *AIDS (London, England), 27*(14), 2301–2305. doi:10.1097/QAD.0b013e328362e832

World Health Organization. (1978). The promotion and development of traditional medicine: report of a WHO meeting [held in Geneva from 28 November to 2 December 1977]. Geneva: Author.

**Appendix:**

**Table A1.** Composition of the ANRS 12249 TasP Study Group (as of January 2016).

| Name                  | Role                               | Affiliation                                                                 |
|-----------------------|------------------------------------|-----------------------------------------------------------------------------|
| **Investigators**      |                                    |                                                                             |
| François Dabis        | Co-PI (France)                     | • Univ. Bordeaux, ISPED, Centre Inserm U1219 Bordeaux Population Health, Bordeaux, France |
|                       |                                    | • INSERM, ISPED, Centre Inserm U1219 Bordeaux Population Health, Bordeaux, France |
| **Coordinators**      |                                    |                                                                             |
| Marie-Louise Newell   | Co-PI (United Kingdom)             | • Africa Centre for Population Health, University of KwaZulu-Natal, South Africa |
|                       |                                    | • Faculty of Medical Sciences, University College London, United Kingdom (UK) |
| Joanna Orne-Gliemann  | Trial Coordinator (France)         | • Univ. Bordeaux, ISPED, Centre Inserm U1219 Bordeaux Population Health, Bordeaux, France |
|                       |                                    | • INSERM, ISPED, Centre Inserm U1219 Bordeaux Population Health, Bordeaux, France |
| **Study team**        |                                    |                                                                             |
| Till Bärnighausen     | Health Economics                   | • Africa Centre for Population Health, University of KwaZulu-Natal, South Africa |
|                       |                                    | • Dept of Global Health & Population, Harvard School of Public Health, Harvard Univ., Boston, USA |
| Eric Balestre         | Epidemiology and Biostatistics     | • Univ. Bordeaux, ISPED, Centre Inserm U1219 Bordeaux Population Health, Bordeaux, France |
|                       |                                    | • INSERM, ISPED, Centre Inserm U1219 Bordeaux Population Health, Bordeaux, France |
| Sylvie Boyer          | Health Economics                   | • INSERM, UMR912 (SESTIM), Marseille, France                                |
|                       |                                    | • Aix Marseille Université, UMR 5912, IRD, Marseille, France                 |
|                       |                                    | • ORS PACA, Observatoire Régional de la Santé Provence-Alpes-Côte d’Azur, Marseille, France |
| **Investigators**      |                                    |                                                                             |
| Alexandra Calmy       | Adult Medicine                     | • Service des maladies infectieuses, Hôpital Universitaire de Genève, Genève, Switzerland |
| Vincent Calvez         | Virology                           | • Department of virology, Hôpital Pitié-Salpêtrière, Paris, France          |

(Continued)
### Table A1. Continued.

| Name                      | Role                        | Affiliation                                                                 |
|---------------------------|-----------------------------|----------------------------------------------------------------------------|
| Rosemary Dray-Spira       | Social Sciences             | INSERM U1018, CESP, Epidemiology of Occupational and Social Determinants of Health, Villejuif, France |
|                           |                             | University of Versailles Saint-Quentin, UMRS 1018, Villejuif, France        |
| KOBUS HERBST              | Data Management             | Africa Centre for Population Health, University of KwaZulu-Natal, South Africa |
| John Imrie                | Social Sciences             | Africa Centre for Population Health, University of KwaZulu-Natal, South Africa |
|                           |                             | Centre for Sexual Health and HIV Research, Research Department of Infection and Population, Faculty of Population Health Sciences, University College London, London, UK |
| Joseph Larmorange         | Social Sciences             | Centre Population & Développement (Ceped UMR 196 UPD IRD), Institut de Recherche pour le Développement, Paris, France |
|                           |                             | Africa Centre for Population Health, University of KwaZulu-Natal, South Africa |
| France Lert               | Social Sciences             | INSERM U1018, CESP, Epidemiology of Occupational and Social Determinants of Health, Villejuif, France |
|                           |                             | University of Versailles Saint-Quentin, UMRS 1018, Villejuif, France        |
| Thembisa Makowa           | Field Operations            | Africa Centre for Population Health, University of KwaZulu-Natal, South Africa |
| Anne-Geneviève Marcelin   | Virology                    | Department of virology, Hôpital Pitié-Salpêtrière, Paris, France           |
| Nuala McGrath             | Epidemiology/Social Sciences| Faculty of Medicine and Faculty of Human, Social and Mathematical Sciences, University of Southampton, UK |
|                           |                             | Africa Centre for Population Health, University of KwaZulu-Natal, South Africa |
|                           |                             | Research Department of Infection and Population Health, University College London, UK |
| Nonhlanhla Okesola        | Nurse Manager               | Africa Centre for Population Health, University of KwaZulu-Natal, South Africa |

### Table A1. Continued.

| Name                | Role                        | Affiliation                                                                 |
|---------------------|-----------------------------|----------------------------------------------------------------------------|
| Tulio de Oliveira   | Bioinformatics              | Africa Centre for Population Health, University of KwaZulu-Natal, South Africa |
| Melanie Plazy       | Epidemiology/Social Sciences| Univ. Bordeaux, ISPED, Centre Inserm U1219 Bordeaux Population Health, Bordeaux, France |
| Camelia Protopopescu| Statistics/Economist        | INSERM, UMR912 (SESSTIM), Marseille, France                                |
|                     |                             | Aix Marseille Université, UMR_5912, IDR, Marseille, France                  |
|                     |                             | ORS PACA, Observatoire Régional de la Santé Provence-Alpes-Côte d'Azur, Marseille, France |
| Luis Sagaon-Teyssier| Health Economics            | INSERM, UMR912 (SESSTIM), Marseille, France                                |
|                     |                             | Aix Marseille Université, UMR_5912, IDR, Marseille, France                  |
|                     |                             | ORS PACA, Observatoire Régional de la Santé Provence-Alpes-Côte d'Azur, Marseille, France |
| Bruno Spire         | Health Economics            | INSERM, UMR912 (SESSTIM), 13006, Marseille, France                         |
|                     |                             | Aix Marseille Université, UMR_5912, IDR, Marseille, France                  |
|                     |                             | ORS PACA, Observatoire Régional de la Santé Provence-Alpes-Côte d'Azur, Marseille, France |
| Frank Tanser        | Epidemiology and Biostatistics| Africa Centre for Population Health, University of KwaZulu-Natal, South Africa |
| Rodolphe Thiébaut   | Epidemiology and Biostatistics| Univ. Bordeaux, ISPED, Centre Inserm U1219 Bordeaux Population Health, Bordeaux, France |
|                     |                             | INSERM, ISPED, Centre Inserm U1219 Bordeaux Population Health, Bordeaux, France |
| Thembelile Zuma     | Psychology/Social Sciences  | Africa Centre for Population Health, University of KwaZulu-Natal, South Africa |

### Scientific advisory board

- Chair: Bernard Hirschel (Switzerland)
- International experts: Xavier Anglaret (Ivory Coast), Hoosen Coovadia (South Africa), Alpha Diallo
(France), Bruno Giradeau (France), Jean-Michel Molina (France), Lynn Morris (South Africa), François Venter (South Africa), Sibongile Zungu (South Africa)

Community representatives: Eric Fleutelot (France), Eric Goemaere (South Africa), Calice Talom (Cameroon)

Sponsor representatives (ANRS): Brigitte Bazin, Claire Rekacewicz

Pharmaceutical company representatives: Golriz Pahlavan-Grumel (MSD), Alice Jacob (Gilead)

Data safety and monitoring board

Chair: Patrick Yeni (France)

Members: Sinead Delany-Moretlwe (South Africa), Nathan Ford (South Africa), Catherine Hankins (Netherlands), Helen Weiss (UK)