

Linking Telehealth and Traditional Healers in South Africa

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Abstract

Abstract: This paper presents a preliminary qualitative analysis to assess the viability of a wireless cell phone based system that would serve to enhance communication between traditional healers and western-oriented healthcare providers (doctors, nurses) in South Africa. We conducted 15 semi-structured interviews with various types of traditional healers (diviners, spiritualists, herbalists) in Cape Town to assess their characteristics, treatment practices and attitudes towards using technology to store and share patient and treatment information with other traditional healers, healer associations and western oriented health providers. The interviews reveal several interesting characteristics and attitudes of the traditional healers. Based on our interviews we believe that any technology-based information sharing system would require a major change in relationships between traditional healers and western oriented healthcare providers.

Keywords: Telehealth, traditional healers, mobile technologies for development.

Introduction

This research investigates the viability of a mobile communication system to stimulate the sharing among traditional healers (TH) and between TH and western-oriented healthcare providers (WOHP) of patient treatment information in South Africa (SA). Currently, communication, mobile or otherwise, between TH and WOHP is virtually absent due to a deep sense of mutual mistrust arising partly from cultural differences as well as differences in treatment methods and materials. The South African government has shown an increasing interest in integrating these widely different healthcare practices as a means of improving the overall quality of healthcare in the nation. In order to successfully introduce any technology, one first needs to understand the nature of current relationships between TH and WOHP, their current medical treatment practices, as well as their attitudes towards technology adoption, and the likely impact that using mobile communication may have on integrating healthcare.

In the current paper we report on a modest first step to "test the waters" to find out basic attitudes and characteristics of one target group of stakeholders: TH who are active in the Khayelitsha township in Cape Town and in other areas around Cape Town. We therefore conducted 15 semi-structured interviews with a variety of different types of TH as well as one person in a leadership position at a major TH Association in the Cape Town area, asking them about their background, treatment practices, information gathering, storage and sharing practices and relationships with both WOHP and different types of TH.

Research Problem

Traditional healing forms an important part of the healthcare landscape in SA. It is estimated that as many as 60 to 80% of South Africans make use of TH. A good number of patients transfer between

WOHP and TH - sometimes for the same ailment. This practice poses challenges in continuity as well as potential conflicts in treatments for the transferring patients: how does a health practitioner (i.e., a WOHP or TH) know the diagnosis and treatment that has already been administered to the transferring patient? Despite efforts by the government, national and international organizations towards integration, the two streams still operate independently of each other. Currently, there is little communication and sharing of information among TH and between TH and WOHP. This situation is not ideal for healthcare provision since it results in lack of continuity in patient treatment. Hence, there is need for solutions that would facilitate the sharing of information among and between these groups of health practitioners.

Based on existing literature (Momo 2005), we suggest that mobile technology might be an appropriate platform for information sharing and mutual trust-building. Research has shown fast rate of penetration and high level of adoption for mobile technology in developing countries, even in cases where literacy levels are low (Sinha, 2005). However, since we are dealing with a specialized population and a specialized application of the technology, it is imperative to investigate factors which would affect adoption and use of such technology. Our research will focus on the role of social and cultural factors in the attitudes towards mobile technology in the context of healthcare information storage and communication.

Our overriding research questions are the following.

- (1) Once linked with other medical services stakeholders via modern telecommunications, how could traditional healers be impacted by power dynamics between healers and other caregivers in a South African society where a significant proportion of the population receives care from healers?
- (2) How does the use of this technology encourage the development of trust between the different stakeholders – healers, doctors, nurses, Non-Governmental Organizations (NGOs) and other administrators?
- (3) Given that trust development follows from healthy, somewhat balanced power dynamics, are there any prospective interdependencies between the patterns in which trust and power develop over time through the introduction of a collaborative technology intended to build virtual teams for AIDS relief?
- (4) To what extent do traditional healers accept cell phone technology and personal computers as a viable means of communicating and archiving relevant healthcare information?

Background

Traditional Healers

Traditional healers use methods of diagnosis based on communication with other spiritual beings, usually ancestors. The conventional term used is *sangoma* or *isangoma* stemming from the Zulu language (Wreford, 2005). However, some practitioners wish to underplay its connotation with witchcraft and prefer the term traditional (health) healer, emphasizing the healing and medicinal aspects of their practices. Generally, a client comes to see the traditional healer who uses various divinational techniques to ask ancestors for help in diagnosing the causes of the illnesses. Often these are related to wrong-doings by the client or can be curses and bewitchments placed on the clients, if not outright suspected poisonings. Prescribed healing remedies vary from healer to healer but usually involve herbal-based remedies and appeasements to the ancestors (Wreford, 2005; Natrass, 2006)

Relations between traditional healers and the classic western medical community are very strained. Many, if not a majority, of western medical practitioners do not believe in the actual therapeutic value of most remedies prescribed by traditional healers and believe that, in general, the latter's lack of physiological knowledge causes them to do more harm than good to most patients. It is also true that there are a number of malpractitioners if not charletans among the traditional healers who abuse the ignorance or superstitions of their patients. However, some western practitioners do acknowledge that there may be

psychological value and benefits conferred by traditional healing methods. In addition, a number of traditionally prescribed herbal treatments have demonstrated beneficial physiological effects on a number of specific diseases – sometimes leading to the development of proprietary medication by western drug companies. The distrust is mutual, because traditional healers also tend to be reluctant if not antagonistic to western medicine. Some of this stems back to South Africa's apartheid days where western (white) doctors were suspected of purposely poisoning black patients. A more frequently cited fear is the accusation that western medicine aims to exploit the indigenous knowledge of traditional healers by 'stealing' their secret herbal cures and developing costly, proprietary medicine out of them. Finally, traditional healers accuse western medical practitioners of ignoring the spiritual side their patients (Bolognesi, 2006). Taking into account the history and status of current western medicine, it is clear that these 'accusations' are not entirely unfounded. The debate in South Africa has not been helped by the strong view promoted "vigorously" by prominent members of the South African government (president Thabo Mbeki and health minister Manto Tashabalala-Msimang) that natural remedies can treat AIDS (Bolognesi, 2006, p.627)

The total number of traditional healers in Khayelitsha is unknown, though they are known to be "scattered all over the location" (Ndingaye, 2005). Very little research has been done to study the extent to which healers are being still used by the urban population in South Africa. Fortunately, a recent survey questioned 570 people living in Khayelitsha whether they had consulted a 'sangoma' the last time they were 'very sick'. Six percent of the respondents (i.e. 35 out of 570) said yes with more than half reporting visiting more than one sangoma (Natrass, 2006). However, it is safe to assume this underestimated the actual proportion of the population consulting traditional healers.

King (2000) notes that, across the whole of Africa, there are more traditional healers than doctors, and estimates a ratio of as high as 100 to 1. Traditional healers are able to provide more personalized health care. In addition, they are enthusiastic about collaborating with biomedical health providers, all of which make them viable part of the overall health care structure. Therefore, traditional healers, which can be classified as herbalists, spiritualists, or both, can play an important role in caring for HIV positive patients. King (2000) observes that, contrary to what some might say, traditional healers are often opinion leaders in their communities and are respected healthcare providers. These healers also have greater credibility than village health workers. In 1992, a project was initiated to train 27,000 traditional healers about AIDS prevention and care in South Africa. The program started out by training 30 healers as trainers, who would then each train a group of 30 healers, who would then repeat the phase. Post-training reports show that most of the healers had successfully retained basic information on HIV prevention. A small percentage of the trainers reported treating AIDS and show positive attitudes towards patients with AIDS.

One key factor in successfully training healers, according to King (2000) is using fellow-healers to train others because healers are more receptive towards learning new information from their peers. Another motivator is providing healers with access to hospitals, which empowers them and enhances their intention to collaborate with biomedical health providers.

There are still some issues that need more attention. For example, there is currently no ethical standard for appropriate professional conduct for the traditional healers. Also, there is no standard as to the "authenticity" of the healers. Nevertheless, King argues that the collaboration between traditional healers and biomedical health providers provide valuable benefits and the collaboration is indeed possible.

While WHO collaboration efforts to integrate traditional medicine into the HIV prevention and care program began in the early 1990s, there appear to be some unaddressed issues that need more attention (King 2006). For example, traditionally, African healers are considered as quacks by the biomedical health-care providers, whilst these traditional healers consider themselves to be health-care providers and expect to be treated with respect. The attitude of superiority from both sides undermines trust, which negatively influences the overall collaboration effort. Another gap between the two health-care systems is secrecy. "Secrecy often is an intrinsic aspect of African traditional medicine that traditional healers will not sacrifice easily. Western-trained doctors do not understand or accept this secrecy, and often

characterize this aspect of traditional medicine as lacking scientific rigor, and even as evidence of its deceitful nature (King, 2006, p. 13).” Another issue is how to determine the authenticity of the traditional healers. King suggests that the healers have to be recognized by the community and local authorities as a traditional healer. Furthermore, the healers have to have a clinic and have regular patient attendance. The healers also need to know how to prepare herbal remedies. This latter requirement is intriguing because it implies that spiritualists/diviners who are not herbalists are not considered to be traditional healers using King’s criteria.

Consistent with the results from the interviews reported in this research, King found traditional healers to be very interested in collaborating with biomedical health-care providers. Some suggested ways to enhance traditional healers’ enthusiasm and commitment are involving them in initial meetings and the planning processes, enhancing traditional healers’ credibility and visibility, and encouraging traditional healers to refer their patients with complications to biomedical health-care providers.

In terms of information sharing between the traditional healers and the biomedical healthcare providers, King (2006) suggests the following: 1) the information has to be up-to-date; 2) the information has to be accessible by using appropriate language and methods of communication; and 3) the information should be interesting and user-friendly, which may involve the uses of pictures, drawing, or videos. Our long term research goal of creating a mobile telecommunications-based IS would fulfill all three requirements.

Richter (2003) defines traditional medicine as including “diverse health practices, approaches, knowledge and beliefs incorporating plants, animal and/or mineral based medicines, spiritual therapies, manual techniques and exercises applied singularly or in combination to maintain well-being, as well as to treat, diagnose or prevent illness” (p. 2). People who provide traditional medicine are traditional healers and they can be categorized into two groups: spiritualists (or diviners) and herbalists. The diviner provides diagnoses through spiritual means whereas the herbalist applies appropriate remedies. The major difference between the traditional medicine and the western medicine is that the western medicine looks at physical symptoms to treat illness, whereas traditional medicine looks at spiritual causes to cure an illness. Richter (2003) remarks that there are very few government attempts at regulating traditional healers, except for the ‘Traditional Health Practitioners Bill’ of 2003. Although the proposed Bill sets out the procedures for the registration of traditional health practitioners, it does not provide details on what the requirements are for a person to become a traditional health practitioner.

Richter posits that “... if traditional healers believe that diseases are caused by witchcraft, there is not much you can do with them, from a biomedical perspective. They belong, as one doctor who worked in a district hospital in Africa put it, to a ‘system that is irreconcilable with our own.’ But if traditional healers do not ascribe to sorcery – even if they think illnesses are caused by tiny insects, by imbalances in semi-mystical forces of heat, by interferences with the body’s ‘internal snake’ whatever – then you can work with that.” Finally, he argues that collaboration is possible, but there are some standards that need to be implemented for both the western and the traditional medicines, such as: 1) everyone has the right to human dignity (no unethical or inappropriate treatments); 2) everyone has the right to privacy (not to disclose patients’ medical information); 3) everyone has the right to equality and non-discrimination (traditional healers should not discriminate against the western medicine); and 4) everyone has the right to access health care services (whether it is traditional or biomedical).

Mshiu et al. (1990) used interviews with TH to study the knowledge and attitudes of TH towards modern medical practice in specific regions in Tanzania. All of the healers interviewed considered themselves as professionals in the healing profession. Most of the healers (75%) acquired their skills primarily through apprenticeship, while 11.1% of them said that they acquired the skills through spirit possession. The authors found that most of the healers surveyed entered the profession through spirit possession and were considered to have higher status than other healers. A small percentage of the individuals (9.9%) said that they learned the skills through observing other healers. A total of 332 traditional healers and 310 traditional birth attendants were interviewed. Most of the healers believed that “it would be in the best interests of patients if traditional healers and modern doctors referred to each other patients with problem conditions which they cannot treat” (p. 31). However, they did not believe

that patients should consult modern doctors before coming to them. In general, the healers were in favor of collaborating with modern doctors and acknowledged that their healing system has limitations. The results from the study also suggest that the healers do not see themselves as being in competition with biomedical doctors. In fact, the two systems complemented one another. Nevertheless, when it comes to collaboration, the authors suggested that only those healers who deal with health problems should be involved because “this would narrow down the frame of reference for dialogue between the collaborators to the specifics of diseases; their cause, symptomatology, natural history, diagnosis, prevent and therapy” (p. 37).

Research Model

The technology acceptance model (TAM) (Davis 1989; Davis et al. 1989) attempts to explain and predict the determinants of individual behavior toward a technology, manifest through utilization of the technology. It is based on user perceptions of the technology. It equates the success of the technology to actual utilization of it. It was developed from the social psychology theory of reasoned action (Ajzen and Fishbein 1980). According to TAM, beliefs about using the target applications influence usage intentions and behavior via their effect on a potential user's attitude. TAM further suggests that two specific behavioral beliefs, perceived ease of use and perceived usefulness, determine an individual's behavioral intention to use an information technology. (Adams et al. 1992; Davis 1989; Davis et al. 1989; Hendrickson et al. 1993; Segars and Grover 1993; Subramanian 1994; Szajna 1994, 1996; Venkatesh and Davis 2000; Venkatesh et al. 2003). In our opinion, precursors to technology acceptance that shape perceived ease of use and usefulness revolve around two major socio-cultural constructs, power and trust, that will be explicated as the basis of the current study.

Power in Healer-Doctor Relationships

Doctors often consider themselves as more powerful than other caregivers including nurses and technicians in hospital settings. The question we are asking here is to what extent are healers a powerless group in relationship with the medical complex in South Africa or conversely, outside hospital settings do healers hold more power in various manifestations?

Cameron, Sallot, and Curtin (1997) suggested that the bases of power explained by French and Raven could help to explain professional interactions, providing a better understanding for both academics and practitioners. Adapted to the present project, some important questions based on Cameron's typology can be offered: 1) Do doctors hold coercive (define in parenthesis) power?; 2) Does the health system confer reward (define) power on Western medical professionals at the expense of healers or vice versa?; 3) Do doctors hold and use legitimate (define) power by virtue of their positions?; 4) What about certain healers? How fragile or robust is expert (define) power in fields such as herbal medicine in community settings? Adapting Cameron, Sallot, and Curtin (1997) the bases of power explained by French and Raven could help to explain healer-doctor interactions, providing a better understanding through coorientational analysis for both academics and practitioners. Some important questions based on the typology include: 1) Do doctors or healers hold coercive power in the healthcare setting? (e.g., freezing out USAID support from remote regions, pressuring the South African Health Ministry regarding reimbursement, or encouraging patient refusal of anti-retroviral treatments); 2) Does stature in the culture or an exclusive authorization to practice confer reward power?; 3) Do doctors or healers (or both) hold and use legitimate power by virtue of their positions?; 4) What about certain practices? How fragile or robust is expert power in fields such as traditional or biomedical healing?

Trust Development

A large and expanding body of literature demonstrates the importance of trust in facilitating cooperation (Krackhardt and Stern 1988; Mayer, Davis and Schoorman 1995), a more productive free flow of information (Hart and Saunders 1997; Nelson and Coopriider 1996), communication (Dore 1983; Griffin 1967; Williamson 1975), leadership (Atwater 1988), and collective learning, knowledge sharing, and creative problem solving (Argyris 1999; Reina and Reina 1999; Senge 1990).

Interestingly, Twomey (1975) explicitly links power and trust. He defines power as “a function of dependency and availability of alternatives,” and the two sub-components are hypothesized to have differentiated effects on conflict resolution. The difference between the two is that power derived from dependency is accepted willingly by the respondents, whereas power derived from availability of alternatives based on threat. Twomey (1975) hypothesizes that the greater the availability of alternatives for the low power party, the less favorable will be the conflict resolution. Based on 102 survey responses received, he found that availability of alternatives has a negative influence on integrative conflict resolution. In other words, the use of coercive power is not effective.

Nolan et al. (2007) propose that before making a decision to trust others, each individual will evaluate each of six trust elements (risk, benefit, utility value, interest, effort and power) and that people are likely to engage in collaborative behaviors only if a “balance” is achieved. For example, if benefit outweighs effort, then people are more likely to engage in a collaboration effort. Brockner et al. (1997) posited that perceived favorability of the outcomes associated with important decisions made by authorities will moderate the relationship between trust and support for organizational authorities. Interestingly, the authors expect that it is when the outcomes are not favorable that the relationship will hold. If the relationship is favorable, then trust is not needed. Doney et al. (1998) offers interesting insights into the influence that national culture has on trust development, while McCoy et al. (2007) found that one needs to be cautious when applying the Technology Acceptance Model (TAM) across cultures, and that the model tends to break down for people that score low on uncertainty avoidance, high on power distance, high on masculinity and high on collectivism. Examples of countries with people that tend to satisfy these conditions include Hong Kong, Panama and Japan.

Research Design and Methodology

Since we are dealing with a phenomenon for which little literature exists, we are grounding our research program in rich field description through semi-structured in-depth interviews (using three different interviewers, one of them a member of the research team) with different TH stakeholders. A future study will proceed to conduct similar interviews with WOHP but with questions customized to this stakeholder group.

Based on the initial research questions and the literature survey above, the following specific propositions were explored.

- (1) **TH education level** will influence TH information sharing (lower levels of TH education implying lower willingness to share information with WOHP);
- (2) The type of **power** that the government exerts on TH will influence TH motivation to share information (such that the more government punishments or rewards, the more extrinsic the motivation; and the more information is provided about the benefits of sharing the information, the more intrinsic the motivation);
- (3) Coercive **power** from the government can lead TH to share more information with WOHP (threats of punishment or actual punishment);
- (4) Legitimate **power** from the government or the TH Association can enhance information sharing (with WOHP);

- (5)Referent WOHP **power** can lead TH to share more information with WOHP (but the effect may be moderated by trust - high trust leading to more information sharing);
- (6)Reward **power** from the government can lead TH to share more information (promising rewards);
- (7)TH fear of losing expert **power** will prevent them from sharing information with WOHP (but the effect may be moderated by trust or patients’ willingness to share medical information);
- (8)TH **motivation** will influence their information sharing with WOHP (such that the more intrinsic the motivation, the more consistently TH will share medical information);
- (9)Both extrinsic and intrinsic **motivation** will lead to more information sharing (but the effect of intrinsic motivation on information sharing will be longer-term than extrinsic motivation);
- (10) The **type of TH** (herbalist, spiritualist, divine) will influence information sharing (such that herbalists are more likely to share medical information with WOHP than spiritual healers);
- (11) The **type of patient problem** (medical vs. non-medical) will influence TH information sharing with WOHP (such that TH are more likely to share medical related information than non-medical related information);
- (12) **Trust** will influence information sharing (such that low trust between TH and WOHP will imply less information sharing);
- (13) TH are more likely to share information when they perceive high **technological usefulness or technological ease of use**.

Our research framework can be summarized graphically in Figure 1 below.

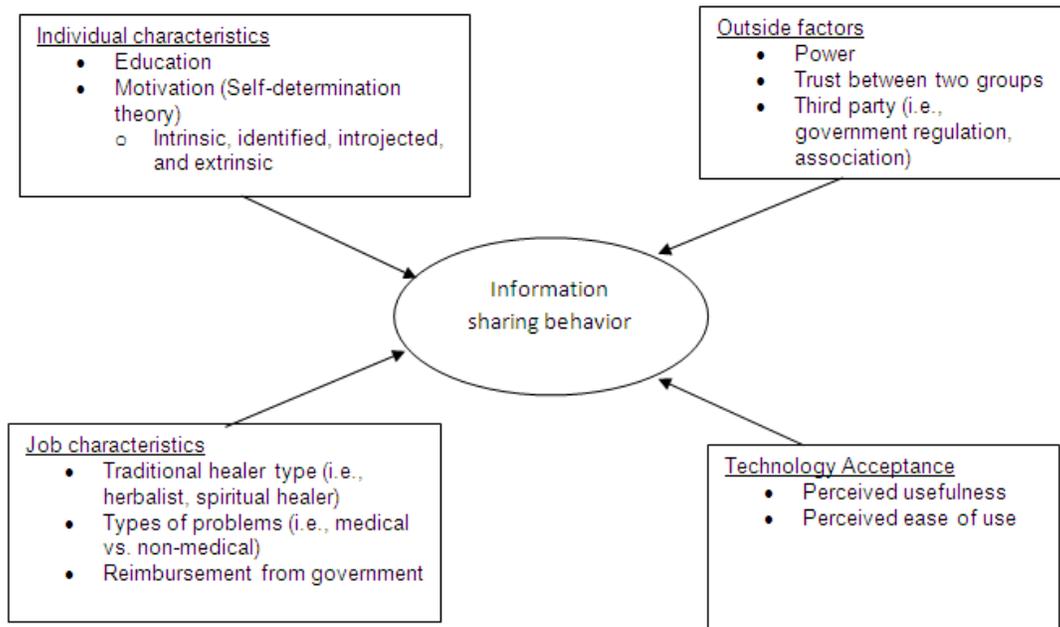


Figure 1: Summary of Research Model

Provisional Findings Related to the Propositions

- (1) TH **education level** will influence TH information sharing (with lower levels of TH education implying lower willingness to share information with WOHP).

We have found some support for this proposition – the herbalist TH in our sample tend to have a better formal training and education. These same TH tended to be more supportive of the idea of using technology to communicate – several of them already used cell phones and a computer. Herbalist TH were generally also more open than diviner and spiritualist TH to communicating with Western style health workers.

(2) The type of **power** that the government exerts on TH will influence TH motivation to share information (such that the more government punishments or rewards, the more extrinsic the motivation; and the more information is provided about the benefits of sharing the information, the more intrinsic the motivation).

This proposition is hypothetical, as the SA government currently plays little or no role. However, this may change in the future. Some new rules are under consideration that may allow reimbursement of TH treatment under certain conditions. If such rules would be implemented, then this might open the door to not only improved relations between government and TH, but also between TH and WOHP, as the former would achieve more legitimacy and it may possibly become legal for WOHP to refer patients to TH under certain conditions. As reimbursement for TH treatment would likely require some type of formal documentation of treatment and diagnosis, the TH would find themselves legitimized, plus would make it easier to share information with WOHP. Some of these conclusions were confirmed by the representative of a TH organization – one of the primary goals of this organization is to have a framework and organizational structure in place to take advantage of these anticipated developments in the SA healthcare system.

There is currently little formal government control in terms of the quality and effectiveness of TH treatment and practices. This is evidenced, amongst others, by the fact that most of the TH interviewed by us are foreign, and some reside in SA illegally. Also, many are not members of any TH organization and do not have certificates supporting their expertise and education in TH practices. In some cases, the attitude of the local population towards the TH is not positive (see, e.g., Siqu 2008), but no formal action against alleged malpractice by TH has been forthcoming.

(3) Coercive **power** from the government can lead TH to share more information with WOHP (threats of punishment or actual punishment).

Although still a hypothetical, several TH alluded to the fact that they would more readily refer patients to WOHP if required by the government.

(4) Legitimate **power** from the government or the TH Association can enhance information sharing (with WOHP).

This type of power appears to correspond with the goals of the TH association of which we interviewed a representative.

(5) Referent WOHP **power** can lead TH to share more information with WOHP (but the effect may be moderated by trust – high trust leading to more information sharing).

The interviews clearly showed that WOHP may well have some referent power over herbalist TH; however this is not evident for "pure" diviners and spiritualists.

(6) Reward **power** from the government can lead TH to share more information (promising rewards);

Several TH indicated that reimbursement by the government would be an incentive to share information.

(7) TH fear of losing expert **power** will prevent them from sharing information with WOHP (but the effect may be moderated by trust or patients' willingness to share medical information).

TH fear the loss of the competitive advantage that they derive from their secret treatment methods, which would clearly represent an impediment to information sharing by TH.

(8) TH **motivation** will influence their information sharing with WOHP (such that the more intrinsic the motivation, the more consistently TH will share medical information).

We do not think that there was much evidence one way or the other about TH intrinsic motivation in our interviews. Perhaps intrinsic motivation by TH would be enhanced if the system would afford them increased respect by WOHP, for instance by enhancing the possibility for WOHP to refer patients to TH.

(9) Both extrinsic and intrinsic **motivation** will lead to more information sharing (but the effect of intrinsic motivation on information sharing will be longer-term than extrinsic motivation).

Extrinsic motivation in the form of reimbursement or legal measures is likely to enhance information sharing. Additional indirect evidence for this is the fact that most TH would only agree to the research interviews when promised remuneration.

(10) The **type of TH** (herbalist, spiritualist, divine) will influence information sharing (such that herbalists are more likely to share medical information with WOHP than spiritual healers).

This appears to be supported, in part because the herbalists tend to be more educated, but also because their practices correspond more closely with (are more similar to) WOHP.

(11) The **type of patient problem** (medical vs. non-medical) will influence TH information sharing with WOHP (such that TH are more likely to share medical related information than non-medical related information).

We believe that this may be the case, as TH realize well that most WOHP do not understand or appreciate the spiritual dimension of their treatment; at the same time information about herbal treatments by TH may be more easily accepted and respected by WOHP.

(12) **Trust** will influence information sharing (such that low trust between TH and WOHP will imply less information sharing).

Currently, the trust level between TH and WOHP is low, particularly among diviner and spiritualist TH.

(13) TH are more likely to share information when they perceive a high degree of **usefulness and ease of use**.

As per the interviews, some of the TH are reluctant to use any kind of technology – some state that the ancestors do not allow it; another claims that the use of cell phones interferes with the communication with the ancestors, but that his son is allowed and able to use cell phones on his behalf. The use of cell phones or other technology (e.g., PC) to store patient information is absent to date. Some TH use paper files on their patients. There is currently much mistrust of WOHP among TH and there is minimal exchange of information – this of course includes information shared using cell phones.

Conclusions

About half of the TH do keep formal patient records. Patient referral and transfer, as well as the willingness to share information remain tricky issues, and are especially problematic between different categories of TH. Especially the diviners/spiritualists appear to be unwilling to share information and in fact suspicious of any type of formal information keeping. Not surprisingly, all TH expressed distrust of the WOHP though many herbalist TH left the door open to future collaboration, given some incentives

(by government) and/or respect (from WOHP). The attitude of herbalist TH towards serious health problems, and in particular HIV/AIDS treatment, was realistic and focused on complementary treatments to improve patients' strength and apparent health.

Many TH already make use of mobile technologies. In fact, a number of TH already use personal computers in their practices. Thus the barrier to technology adoption may be less than initially expected, at least among some groups of TH. Individual characteristics such as education and motivation, outside factors such as power, trust and third parties, job characteristics and technology acceptance as determined by perceived usefulness and ease of use seem to predict information sharing.

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Appendix: Sample Characteristics and Findings

General Sample Characteristics

Fifteen interviews with TH were conducted; one of the interviewees both played a leadership role in a TH association in the Cape Town area and was a TH herself. Three of the interviews were quite brief, with reluctant participation by the TH. As the interviews with these TH did not yield answers to most of the questions, these TH were not included in frequency counts unless the issue at hand was addressed in the interview. Three of the TH were diviners, three were herbalists, two were spiritualists, one combines TH and Western medicine, one is a nurse-midwife with herbal, some spiritual and Western style medical practice; the remaining TH practice a combination of herbalist, spiritualist and diviner – usually some combination that includes the use of herbs. Two-thirds of the TH were male, one-third female (including the representative of a TH association, and the nurse-midwife). Although most of the TH practiced and lived in the Khayelitsa township; other work locations included Bellville, Mowbray, Claremont and Wynberg.

To our surprise, at least half of the TH were foreign nationals. The legality of their residence in South Africa may be questioned and could be a factor in explaining some of their reticence in participating in research and, more importantly, future integration in a wider IS. Their countries of origin included Kenya, Tanzania, Uganda, Zambia and Zanzibar. Foreign TH often import herbal medicines and use traditional treatment methods from their native country. Some combine treatments used in their country of origin with SA practices. The number of TH practicing from their homes was about equal to the number practicing in a separate location (clinic). Many of the TH practiced part time only – with Fridays and weekends as the most popular work time. The number of patients treated varied widely – from 0 or 1 per day to 15 on Fridays and 20-25 during the weekend. Half of the TH had an assistant or secretary to help out in the office; one had occasional help from the church; while two TH worked in the office with another TH.

Many TH are open for business during the evenings – this is related to the fact (mentioned by two TH) that many patients prefer to remain anonymous. Some are not allowed to visit TH due to religious reasons; others are embarrassed or ashamed of visiting a TH, so they prefer to visit TH outside of their social circle. This surprised us, as the image that we had of TH was of a village elder who knew the family history, medical as well as non-medical, of everyone in the community. As a result, we had (erroneously) assumed that there was a high level of trust and respect between TH and patient – however this proved not to be the case, at least not for our sample. However, we might have had entirely different sample characteristics if we had focused on a rural area. Thus, it should be kept in mind that our study needs to be interpreted accordingly – and that a generalization of our findings may be tenuous.

About two-thirds of the TH interviewed indicated that they belonged to a TH association. However, some of the foreign TH belonged only to an association in their country of origin; some of the SA TH belonged to associations active in other parts of the country (e.g., Johannesburg). Moreover, while some of the local TH associations did require substantial training and regularly checked on the practices of the TH, other associations had liberal membership and certificate policies, with little or no training required. Several of the TH mentioned that they had applied for association membership, but that their admission process was delayed for various reasons. It appears that association membership provides several potential benefits, including networking, information sharing with other TH, and, in one case, permission to visit restricted nature areas on the Cape Peninsula, presumably to gather herbs. One association collaborated with a Chinese group in the Cape Town area, presumably on the herbal side.

Some Methodological Issues and Observations

In the course of conducting the interviews, we discovered a lot of blind spots and potential qualitative and conceptual misperceptions if not missed perceptions. Setting up and conducting interviews took a lot longer and significantly more effort than expected. In many cases, multiple visits were needed before

an interview was granted. In at least half of the cases, there was initial reluctance to talk openly with the interviewer and suspicion about the interviewer's motivation and intention. In a number of cases, this may have been due to the fact that the TH was a foreigner without formal legal status in SA; also, questions about TH spiritual treatments were often greeted with suspicion. In other words, the level of trust between interviewer and TH was often low, particularly at the initial stages of the interview. As pointed out by one of the reviewers, the distrust that exists between TH and WOHP was also a factor confronting the researchers when communicating with the TH, although to a lesser extent. In three of the cases, the reluctance by the TH to talk to us essentially shortened the interview to the point of being of limited interpretive value. The remaining twelve interviews, however, were comprehensive and of good quality.

The structure of the interviews makes it difficult to extract information we want to code. The questionnaire that we started out with initially proved to be too structured for our purposes, therefore most of the interviews was conducted in a free-format, with leading questions related to the questionnaire, customized as called for given the direction the interview took. This led us to the observation that a loose structure is advisable, followed by later use of a checklist. If you structure it too much upfront, you may not broach insightful information. If too unstructured, you have gaps in coverage of the information you need to obtain from the TH. Finally, it is important to note that reimbursement is an effective motivating factor: without reimbursement TH would not even consider their participation.

Patient Information and Referral

At least seven of the TH indicated that they stored the patient information in their heads – and that they recalled this information from memory as needed, aided by the ancestors and sometimes the bones. One asks the patient to remind him. One other TH writes only name and phone number in a book – this TH also claims that he can diagnose a patient's problems from a photo, by looking at the patient's forehead. One of these TH uses written notes only as these relate to payment for services rendered. The TH who do not keep written records all claim that the ancestors and their religious beliefs do not allow written records. The remaining eight TH keep written records of both patient personal contact information and the patient's medical condition and treatment. Almost all TH record this information on paper in a book, for future reference and follow-up. Several TH also use this information for billing and payment purposes, while one TH keeps information about patient treatment for legal purposes, although he did remark that he is technically not allowed by the ancestors to keep written records, but had received the ancestors' OK anyway. One TH treats his written patient records particularly confidential – even his secretary is not allowed to access the records.

Patient Referral and Transfer

When asked if the TH asks the patient if he/she has visited another TH or a doctor for the same ailment previously, about two-thirds indicate that they indeed seek this information. Some use this information to improve their treatment of the patient; others immediately refer a seriously ill patient to the hospital if they have not yet sought treatment from a WOHP. Among those who do not ask the patient for a prior medical history, several TH who depend on the spirits note that there is no need for that information, as the ancestors already know what is wrong with the patient. One of the TH recommends that the patient stops all previous treatments immediately; others encourage HIV/AIDS patient to always continue ARV treatment. Several of the herbalists will refer a patient to a spiritualist for additional treatment, if the patient insists.

The question as to whether TH refer patients to others (other TH or WOHP) yielded mixed responses. It appears that the referral between TH and WOHP is asymmetric – most TH do refer patients who clearly have a physical ailment to the hospital (particularly if the TH does not think he/she has access to the right medicines or treatment); however, the reverse is not the case. One TH commented that it is actually illegal for a WOHP to refer to a TH, but that a law is currently under consideration that would make such

referrals possible – which would obviously greatly improve the relationship between TH and WOHP, and the stature of TH practice. Currently, many of the TH feel disrespected and mistrusted by WOHP. Several comment that the mistrust may be justified in some cases, but that there also exist TH with legitimate and valuable treatment methods. Whereas WOHP whose patients transfer to TH are urged to continue their medical treatment (e.g., ARV in the case of HIV/AIDS), they usually urge referrals from the TH to stop the TH treatment (including herbal).

Interestingly, there appears to be some rivalry and tension between the different types of TH – for instance, some divines will only refer to WOHP (if necessary) and other diviners, but not to spiritualists or herbalists; others will refer to herbalists only if they are also diviners, others will refer only to specific colleague TH. Most diviners are convinced of the potential benefit of herbal treatment in some cases, but this sense is not uniform – some are adamantly against herbalist treatment. Some TH do not refer to other TH at all.

In all, the majority of TH does refer to WOHP and herbalist TH as needed; some herbalist TH are reluctant to refer to diviners and spiritualists, and vice versa. WOHP rarely refer to TH (not allowed by law), but it appears that a number of patients informally switch from WOHP to TH – although it is not clear if the WOHP's advise plays a role.

Sharing Information

While most TH do share information with WOHP, several of the diviners do not. Reasons given for not sharing information between TH include the rivalry of some with dominating ethnic groups, such as Xhosa (the claim is that their methods are different and they will not listen anyway); the potential loss of a secret formula or treatment; and opening oneself up to ridicule and possibly legal action. Due to a perceived lack of respect and trust on the part of WOHP, TH tend to be reluctant to share information with hospitals and doctors, but most of them will come around in the case of an emergency or real health need. Some comment that prior to sharing information with WOHP, they will consult with several TH colleagues. A red thread through the TH comments (herbalists, diviners and spiritualists alike) was that they felt treated by WOHP as third class citizens. Several TH indicated that they shared information among themselves about general treatment methods, particularly within the framework of the TH associations.

Treatment of HIV/AIDS

When asked the question if they treated HIV/AIDS, several TH commented that the problem was that some patients do not reveal that they have this disease. According to two TH, some patients know that they have HIV/AIDS but are afraid to tell, others are simply afraid to be tested. Several diviner and spiritual TH claim that the ancestors reveal the nature of the patient's ailment, including infection with the AIDS virus. More than half of the TH indicated that they treated some patients for HIV/AIDS. The number of such patients varied from 3 or 4 to “many”. Almost all herbalist TH stated that their herbal treatments cannot cure HIV/AIDS, but make the patient stronger and look healthier. In other words, they consider herbal treatment as a valuable supplement to ARV treatment from the WOHP. Four or five of the TH, all diviners or spiritualists, attributed HIV/AIDS to evil spirits.

Perceived Patient Attitude towards Sharing Information

When asked whether their patients would care about the TH sharing patient information with other parties (such as other TH and WOHP, most felt that this was inappropriate unless the patient granted permission to do so. Two TH noted that some patients time their visits at night, so that they can remain anonymous (for religious reasons or out of shame) – and these patients would not like to see information about their visit, let alone their problems, shared among TH and WOHP.

Use of Technology

Most of the TH owned and used cell phones, privately and professionally to communicate with their patients. A notable exception was one diviner who claims that the ancestors use his ears and prohibit him from using a phone. This TH asks relatives to use the phone on her behalf. In contrast, another TH remarks that the use of technology, including a cell phone with built-in camera, would make the ancestors happy, because it would show that he is a hard working individual. A third TH observed that the ancestors would allow the use of technology (such as computers) because technology comes from the ancestors.

Whereas the use of cell phones by TH is virtually universal, less than half own a computer. Moreover, most of the phones do not have a built-in digital camera. The purpose of a camera in the context of our research would be to include pictures of the patient in the patient record, to show how the treatment progresses and how the patient's health develops over time. For instance, pictures could clearly document how a wound heals over time.

Computers can be used to store the patient's personal, medical and treatment information that is otherwise kept in hard copy books. One TH indicated that he would also use the computer to surf the web in order to do research on various herbal treatments. About a third of the TH owned a computer (sometimes the computer appeared to be quite old), but another third was open to the idea of using a computer to replace hard copy record keeping in books. Besides the financial aspects, barriers to the use of computers included training issues and patient privacy/confidentiality concerns. One TH kept the computer at home, out of the view of his patients, as some patients might be intimidated with the idea that patient information would be stored there. This TH entered the patient information into the computer at night, after work. As one might expect, those who indicated that the ancestors did not allow for hard copy records (diviners, spiritualists) were negative about using a computer.

Overall, the herbalist and mixed (herbalist and either diviner or spiritualist) TH were quite positive about the storage of patient information on a personal computer. However, questions were raised about sharing information with WOHP, and sometimes even with other TH. Concerns raised included privacy concerns, rivalry and jealousy, loss of control and power, and a general reluctance to share information with WOHP. The latter reluctance was rooted in the TH insecurity with WOHP (feeling treated with disrespect), and in one case a fear that proprietary treatment information might be taken by others. Under current laws and relationships, it appears that computer file sharing between TH and WOHP would be a hard sell indeed.

Role of the Government and Associations

Several TH commented that, if government passed laws to require the sharing of patient information with other TH and WOHP, they would be willing to comply (even sharing with doctors). Another commented that a reimbursement scheme, whereby TH receive compensation for referrals and treatment under certain conditions, could improve the relationship between TH and WOHP. This TH noted that TH associations can play a significant role in the process of bringing the various different stakeholders (i.e. the different TH groups, various ethnic groups, as well as WOHP) in the health care arena together. The TH who is also a representative of a TH association expressed the hope that a law to legitimize certain TH practices which is currently under consideration in SA, may facilitate collaboration between these groups.

It appears to us that technology has a great potential in terms of facilitate understanding and communication between the different stakeholders, ultimately improving mutual respect and knowledge about each other's health practices.