

What is already known on this topic

Zambia was the first African country to change its antimalarial treatment policy to artemisinin based combination therapy (artemether-lumefantrine)

Changing clinical practice to support the change presents challenges

What this study adds

Most Zambian clinicians prescribe sulfadoxine-pyrimethamine rather than artemether-lumefantrine for children with uncomplicated malaria

Interventions such as in-service training did not seem to influence the choice of artemether-lumefantrine

Ethical approval: This study was approved by the Boston University institutional review board (2003-412B) and research ethics committee of the University of Zambia (federal wide assurance No IRB00001131).

- 1 National Malaria Control Centre. *National malaria situation analysis 2000*. www.cboh.gov.zm/documents/Copy%20of%20Final%20Malaria%20SA%20Document%202000.pdf (accessed 1 Aug 2005).
- 2 Hamer DH, MacLeod W, Addo-Yobo E, Duggan CP, Estrella B, Fawzi WW, et al. Age, temperature, and parasite density predict chloroquine treatment failure in children with uncomplicated falciparum malaria. *Trans R Soc Trop Med Hyg* 2003;97:422-8.
- 3 Bijl HM, Kager J, Koetsier DW, van der Werf TS. Chloroquine-and sulfadoxine-pyrimethamine-resistant falciparum malaria in vivo—a pilot study in rural Zambia. *Trop Med Int Health* 2000;5:692-5.
- 4 Chanda P, Sikaala CH, Kapelwa W, Moonga H, Njunju E, MacDonald M, et al. Decreasing efficacy of sulphadoxine-pyrimethamine (SP) in Zambian children. Proceedings of the 53rd annual meeting of the American Society of Tropical Medicine and Hygiene, Miami, USA. *Am J Trop Med Hyg* 2004;71(4) suppl:abstract 708.
- 5 Central Board of Health. *Guidelines for the diagnosis and treatment of malaria in Zambia*. A Production of the RBM Partnership in Zambia. Lusaka, Zambia: CBoH, 2003.
- 6 Horton NJ, Lipsitz SR. Review of software to fit generalized estimating equation regression models. *Am Stat* 1999;53:160-9.
- 7 Naimoli J. *Theoretical and empirical advances in research on the implementation of an integrated approach to managing childhood illness in outpatient facilities in developing countries*. [Doctoral dissertation.] Cambridge, MA: Harvard School of Public Health, 2001.
- 8 Rowe AK, Hamel MJ, Flanders WD, Doutizanga R, Ndoyo J, Deming MS. Predictors of correct treatment of children with fever seen at outpatient health facilities in the Central African Republic. *Am J Epidemiol* 2000;151:1029-35.
- 9 Rowe AK, Onikpo F, Lama M, Deming MS. Risk and protective factors for two types of error in the treatment of children with fever at outpatient health facilities in Benin. *Int J Epidemiol* 2003;32:296-303.
- 10 Zurovac D, Rowe AK, Ochola SA, Noor AM, Midia B, English M, et al. Predictors of the quality of health worker treatment practices for uncomplicated malaria at government health facilities in Kenya. *Int J Epidemiol* 2004;33:1080-91.
- 11 World Health Organization. *Interventions and strategies to improve the use of antimicrobials in developing countries*. WHO/CDS/CSR/DRS/2001.9. Geneva: WHO, 2001.
- 12 Rowe AK, Lama M, Onikpo F, Deming MS. Health worker perceptions of how being observed influences their practices during consultations with ill children. *Trop Doct* 2002;32:166-7.

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Healer shopping in Africa: new evidence from rural-urban qualitative study of Ghanaian diabetes experiences

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Abstract

Objectives To provide counterevidence to existing literature on healer shopping in Africa through a systematic analysis of illness practices by Ghanaians with diabetes; to outline approaches towards improving patient centred health care and policy development regarding diabetes in Ghana.

Design Longitudinal qualitative study with individual interviews, group interviews, and ethnographies.

Settings Two urban towns (Accra, Tema) and two rural towns (Nkoranza and Kintampo) in Ghana.

Participants 26 urban people and 41 rural people with diabetes with diverse profiles (sex, age, education, socioeconomic status, diabetes status).

Results Six focus groups, 20 interviews, and three ethnographical studies were conducted to explore experiences and illness practices. Analysis identified four kinds of illness practice: biomedical

management, spiritual action, cure seeking (passive and active), and medical inaction. Most participants privileged biomedicine over other health systems and emphasised biomedical management as ideal self care practice. However, the psychosocial impact of diabetes and the high cost of biomedical care drove cure seeking and medical inaction. Cure seeking constituted healer shopping between biomedicine, ethnomedicine, and faith healing; medical inaction constituted passive disengagement from medical management and active engagement with faith healing. Crucially, although spiritual causal theories of diabetes existed, they were secondary to dietary, lifestyle, and physiological theories and did not

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constitute the primary motivation for cure seeking. Cure seeking within unregulated ethnomedical systems and non-pharmacological faith healing systems exacerbated the complications of diabetes.

Conclusions To minimise inappropriate healer shopping and maximise committed biomedical and regulated ethnomedical management for Ghanaians with diabetes, the greatest challenges lie in providing affordable pharmaceutical drugs, standardised ethnomedical drugs, recommended foods, and psychosocial support. For health systems, the greatest challenges lie in correcting structural deficiencies that impinge on biomedical practices, regulating ethnomedical diabetes treatment, and foregrounding faith healer practices within diabetes policy discussions.

Introduction

Healer shopping, a term derived from doctor shopping, has been defined as “the use of a second healer without referral from the first for a single episode of illness.”¹ Studies suggest that healer shopping within ethnomedical systems is the primary and dominant response for chronically ill people in Africa.^{2–4} This practice is driven by widespread spiritual causal theories of chronic illness, the need for cures, and the endorsement of ethnomedical professionals—in particular traditional religious healers—as experts in treating and curing spiritually caused conditions. Because biomedicine cannot attend to the spiritual underpinnings of chronic conditions, people are unlikely to choose biomedicine in the first instance, may be non-compliant, or may abandon biomedicine. These culturally driven practices are deemed to present the greatest threat to self care and biomedical goals.

Counterevidence exists on general illness practices. Researchers note that healer shopping choices do not depend exclusively on (cultural and other) theories of illness causation, or commitment to particular health systems on the basis of distinct areas of medical expertise, but also, crucially, on the severity and timeframe of the illness and the cost, availability, and accessibility of pluralistic medical services.^{5–7} A systematic analysis of these economic, structural, and psychosocial dimensions for chronic illness practices is yet to be conducted. Given that most African health systems are economically constrained by the double burden of disease and possess few resources for chronic illness care,⁸ and ethnomedical and alternative healing systems constitute primary health care for most African populations,⁹ such an analysis can provide useful empirical information for the development of practical and cost effective interventions for chronic illness. The aim of this study was to critically examine illness practices and suggest approaches towards improving patient centred

Key areas explored in individual interviews, group interviews, and ethnographies

- Biographical and demographic data
- Knowledge of general health and illness categories, chronic illness, and diabetes
- Knowledge and use of pluralistic medical systems
- Diabetes experiences: impact of diabetes on everyday experiences and social and medical relationships
- Illness practices: the influence of knowledge, experience, relationships, and material resources on illness practices

health care and policy development within the context of diabetes in Ghana.

Diabetes is a major cause of adult disability and death in Ghana.^{10–11} Recent studies and policy discussions strongly attribute the burden of diabetes to deficiencies in health systems, which include high medical costs, unavailability of drugs, and poorly staffed and financed diabetes services and poor patient practices, chiefly biomedical non-compliance and healer shopping for ethnomedical treatments.^{10–12} Researchers attribute poor patient practices to problematic cultural beliefs (such as spiritual causal theories) and poor knowledge of the clinical complexities of diabetes.

Methods

Most work on diabetes has been done in southern urban settings, although prevalence is documented in other parts of the country.^{10–11} I recruited participants from two urban towns, Accra and Tema, and two rural farming towns, Kintampo and Nkoranza, located in the country’s middle belt, to redress the demographic imbalance.

Data collection and analysis were part of a larger theory driven multi-method longitudinal study, reported elsewhere, that focused on people with diabetes, lay healthy people, and health professionals working within biomedical, ethnomedical, and faith healing systems.^{13–14} The theoretical framework—social representations theory—emphasises that everyday social knowledge, interaction, and practice are shaped by “competing versions of reality.”^{15–16} Criteria for sampling and analysis therefore underscored the diversity and complexity of illness experiences and practices; I paid systematic attention to sex, age, and educational and socioeconomic differences, as well as differences in diabetes status and illness trajectory.

Data collection

I used three methods to gather data: individual interviews, group interviews, and ethnographies (table 1). Six focus groups were carried out with 44 rural and urban people to gather accounts and meanings of shared experience. Table 2 shows the demographics of the people who took part in individual or group interviews. I also did six month ethnographies with three people with diabetes and significant others in their life worlds. These constituted multiple interviews (at least three) with each primary interviewee, observation of participants, and reflexive field notes, during monthly home visits.

Table 1 Participant distribution and data collection method

Method	Urban (Accra, Tema)	Rural (Nkoranza, Kintampo)
Individual interviews	11 (8 men, 3 women)	12 (4 men, 8 women)
Group interviews	2 (7 men, 8 women)	4 (15 men, 14 women)
Ethnographies	1 man (with 2 primary and 3 secondary care givers)	2 women (with 3 primary and 3 secondary care givers)

Initial interview guides were informed by key empirical and policy themes within local and regional discussions on diabetes, as well as health psychology perspectives on chronic illness. I further refined the guides after interviews with 11 Ghanaian healthcare and policy experts. Guides for rural interviews, conducted in the local Akan language, Bono; two urban interviews conducted in the Akan languages Fanti and Twi; and one urban focus group discussion, conducted partially in Ga language, were further refined to reflect culturally appropriate meanings, after consultation with local field and translation experts. Group discussions lasted from an hour to two hours. One rural group discussion lasted six hours over a three day period. Individual interviews lasted between 40 and 90 minutes. Permission was sought and granted to record all interviews and discussions. All participants were remunerated for participation. English interviews were transcribed verbatim.

Analysis

I used the qualitative analysis package Atlas-ti to code all transcripts. Coding aimed to capture the range of views on the empirical categories of health, chronic illness and diabetes knowledge, knowledge and use of pluralistic medical systems, diabetes experiences, and illness practices (box). Informed by social representations theory, I paid attention to consensus, conflict, and absences across group and individual narratives.

With individual interview transcripts, I contextualised consensus, conflict, and absence within a singular unfolding narrative. I used a two stage process for focus group transcripts: firstly, I identified broad areas of group consensus, conflict, and absences; secondly, I followed through individual narratives systematically, where appropriate, to examine the progression and nature of interpersonal consensus, conflict, or changes in views within the group context. For each ethnography, I cross referenced individual transcripts, observa-

tion material, and field notes to identify consensus and divergences within a family unit. This systematic process facilitated the identification of converging and diverging discourses, motivations, relations, and practices between and within groups (such as urban and rural groups, people with type 1 *v* type 2 diabetes).

Results

Analysis identified four kinds of illness practice adopted by participants: biomedical management, spiritual action, cure seeking, and medical inaction. Results are presented under these core themes.

Biomedical management

Most participants sought biomedical care in the first instance and endorsed biomedical management as ideal self care practice. This stemmed from two factors. Firstly, biomedical, ethnomedical, and faith healing systems were subjected to public critique in terms of technical or practical knowledge of health problems, technological expertise, accessibility, and ethics; all three had strengths and weaknesses across these criteria, depending on the health problem. Chronic illnesses belonged to the category of complex contemporary illnesses; here, doctors were endorsed as diagnostic and pharmacological experts, and biomedical knowledge systems and practices were privileged over ethnomedical and faith healing systems, both described as diagnostically and pharmacologically inept and lacking professional ethics.

Secondly, biomedical explanations of and solutions to causes of diabetes were publicly legitimised. Diabetes was attributed to an array of interchangeable causes: high sugar diets, heredity, physiological imbalance, toxic foods, and spiritual disruption. High sugar diets and physiological imbalance were deemed primary causes, for which biomedicine offered the most successful solutions. Although the level of sophistication of biomedical explanations of diabetes increased with education, both uneducated and educated participants held sufficient biomedical knowledge on diabetes to prioritise drug and dietary management over alternative medical and self care practices.

Some participants remained committed to biomedical management. This group had three distinct or interlinked experiences: people who had lived with diabetes in the long term; people who had experienced few or no life disruptions from diabetes; and people who lived with other serious conditions, such as hypertension and prostate cancer. Practical daily routines were geared towards controlling symptoms through drug and dietary management and routine lifestyle change (drinking less, taking up exercise).

However, for most participants, biomedical management was undermined by two key factors. Firstly, daily drug and dietary management routines imposed a considerable psychosocial burden on all participants. Secondly, the high cost of biomedical drugs and recommended foods undermined the commitment of low income and financially destitute groups to long term engagement in biomedical care. For example, rural participants paid 60 000-90 000 cedi (£6-9; \$11-16.5; €8.8-13.2 at the time of the study) for a monthly supply of insulin. This constituted 60% of the monthly income of those on a minimum daily wage of 5000 cedi (£0.50).

Table 2 Participant demographics: people with diabetes

	Total No	Urban-rural distribution	
		Urban (n=26)	Rural (n=41)
Age (years)			
21-40	9	2 men, 1 woman	4 men, 2 women
41-60	33	6 men, 6 women	6 men, 15 women
61-80	24	7 men, 4 women	8 men, 5 women
>80	1	None	1 man
Education			
None	21	1 man	6 men, 14 women
Primary	12	3 women	4 men, 5 women
Secondary	20	5 men, 5 women	7 men, 3 women
University/ postgraduate	14	9 men, 3 women	2 men
Socioeconomic status			
Unemployed	5	1 woman	4 women
Retired	17	6 men, 2 women	7 men, 2 women
Low income	35	4 men, 3 women	12 men, 16 women
Middle income	4	1 man, 2 women	None
High income	7	4 men, 3 women	None
Diabetes status			
Type 1	18	5 men, 3 women	4 men, 6 women
Type 2	49	10 men, 8 women	15 men, 16 women
Chronic illness status			
Hypertension, prostate cancer, asthma	20	8 men, 5 women	4 men, 16 women

Spiritual action

There were two dimensions to spiritual action. Within rural communities, diabetes was partially attributed to two spiritual causes: witchcraft (malevolent action caused by “witches”—people possessing mystical powers used to harmful ends) and sorcery (malevolent action caused by ordinary people through knowledge and use of spells or rituals). For some, these constituted primary theories and demanded traditional religious intervention. For instance, five participants sought traditional religious healing initially because the suddenness and mysteriousness of their symptoms were attributed to witchcraft. Consultation was short lived, and all turned to biomedical intervention as their physical health deteriorated. For most, spiritual causal theories were secondary to biological, lifestyle, and heredity theories and were drawn on only if a discrepancy existed between their pre-diagnosis knowledge of diabetes and their subjective experiences. Crucially, this group made a distinction between legitimate and illegitimate spiritual action: the first occurred within the Christian sphere and the second in the traditional religious sphere. This distinction resonated with broader rural and urban discussions of general illness practices.

The second kind of spiritual action, Christian prayer, was more widespread and had a consensual motivational basis. Most rural and urban participants were practising Christians, who stressed that as everyday experiences and practices required spiritual mediation—prayer and Christian communion—diabetes treatment required spiritual mediation. Spiritual intervention offered by faith healers was rejected because of empirical failures of faith healing. People who had sought faith healing in the past drew attention to faith healers’ inability to diagnose and their emphasis on fasting as a primary healing technique. Several participants attributed past complications to ineffectual faith healing practices.

Cure seeking—passive and active

Although participants understood and stressed that diabetes was incurable, many hoped for a cure. Discourses on “hope for a cure” centred predominantly on a collective need for relief from the physical and psychological burden of drug and dietary management and was synonymous with hope for future biomedical breakthroughs. This need shaped passive cure seeking, which constituted intermittent healer shopping, particularly during acute illness phases. Socioeconomic status and geographical location shaped distinct healer shopping choices. Wealthy urban people were more likely to doctor shop. When they healer shopped for ethnomedical treatment, a persistent preference was for scientifically approved ethnomedical drugs. Low income urban and rural groups, with fewer material resources and restricted access to biomedical services and regulated ethnomedical services, healer shopped within mainly unregulated ethnomedical services; some augmented ethnomedical care with biomedical dietary advice. Most participants reported negative experiences from unregulated ethnomedical treatments. Problems included unspecified dosages, unclear information about drug action, and side effects of drugs. By contrast, wealthy urban groups endorsed the pharmacological benefits of scientifically approved ethno-

medical drugs. Although participants remained highly critical of unregulated ethnomedicine, few had recourse to desired alternatives.

A minority of participants believed that diabetes could be cured; this group constituted mainly rural, and low income, people recently diagnosed with diabetes or experiencing acute physical disruption. Their belief was fuelled by unwavering faith in God’s ability to heal all health problems. This group engaged in active cure seeking, which constituted persistent and committed healer shopping between ethnomedical and faith healing systems. Some combined ethnomedical drug treatment with biomedical dietary management.

Medical inaction

Medical inaction constituted passive withdrawal from drug and dietary management. This, according to the narratives of low income groups, was underpinned by chronic suffering characterised by severe financial difficulties, escalating complications, and a lack of family and social support. During fieldwork, five rural and urban participants were medically inactive. They made frequent references to depression and suicidal thoughts. They all emphasised that death was a desirable alternative to chronic suffering. Participants in Nkoranza received psychosocial support from their self help group, but this did not address the critical financial support needed for diabetes management.

Although this group had passively disengaged from medical care, they were spiritually active. They engaged in constant prayer, simultaneously seeking death as an end to chronic suffering and a miracle (such as a change in socioeconomic circumstances, a benefactor) to have their health restored. Additionally, and despite awareness of the shortcomings of faith healers, this group relied on faith healing.

Discussion

Healer shopping for ethnomedical treatment is viewed as a dominant practice among people with chronic illnesses in Africa and has been attributed to widespread spiritual causal theories of chronic illness, the need for cures, and the endorsement of ethnomedical professionals as spiritual experts. Similar assumptions underpin diabetes research in Ghana: poor practices by patients are attributed to spiritual causal theories and poor knowledge of the clinical complexities of diabetes. This study identified four kinds of illness practice adopted by Ghanaians with diabetes, which offered greater insight into the sociocultural, psychosocial, and structural dimensions of medical care and self care. The discussion will focus firstly on how these findings challenge dominant claims made in current regional and local literature and will then move on to implications for research and policy on diabetes in Ghana.

Healer shopping: three findings on choices and motivation

Firstly, healer shopping for ethnomedical treatment was not the primary choice for most participants. Biomedical management was a preferred persistent choice. However, the high cost of biomedical care, coupled with the psychosocial burden of diabetes, set most people on a passive cure seeking course; a minority either actively sought cures or became medically

inactive. Crucially, as the processes of cure seeking and medical inaction showed, healer shopping did not occur only within ethnomedical systems but across biomedical, ethnomedical, and faith healing systems. Different choices depended on people's socioeconomic status and access to these pluralistic services, as well as on whether participants hoped for a biomedical breakthrough or believed in a (Christian) spiritual cure for diabetes.

Secondly, the findings challenged the claim that healer shopping was underpinned by problematic spiritual causal beliefs, the endorsement of traditional religious healers as spiritual experts, and the need for a cure. The motivations underpinning healer shopping drew on but transcended culture; the need for affordable and effective pharmacological treatment and relief from the physical and psychosocial burden of diabetes shaped medical care and self care. Spiritual causal theories held cultural legitimacy within the Ghanaian public sphere, but their structure and functions were complex. Two spiritual causal theories of diabetes—witchcraft and sorcery—emerged as primary or secondary theories for a minority of rural participants. As primary theories, witchcraft and sorcery took precedence over biological and lifestyle theories. As secondary theories, they were subordinate to alternative theories but assumed importance when the onset of diabetes seemed to have no biological or lifestyle basis. More importantly, spiritual causal theories did not shape illness practices as predictably as is reported in the literature. People who accessed traditional religious healing abandoned this for biomedical treatment as their physical health deteriorated. Others attributed their diabetes to spiritual causes but did not seek spiritual treatment. Evangelical Christianity has assumed increasing relevance as a mediator of solutions to everyday problems, including those of health and disease, in Ghana.¹⁷ Within this context, Christian faith healers wield legitimate and greater therapeutic power over traditional religious healers. Most participants distinguished between legitimate spiritual action, occurring within the Christian sphere, and illegitimate spiritual action within the traditional religious sphere; they were more likely—in the event of extreme physical and economic disruption—to seek faith healing rather than traditional religious healing.

Finally, biomedical knowledge and technical expertise on diabetes were privileged over ethnomedical and faith healing versions. Thus most educated and uneducated groups sought and held sufficient biomedical knowledge to understand that diabetes was incurable and to commit to biomedical management. For most people, hope for a cure was synonymous with hope for biomedical breakthroughs in diabetes treatment and distinct from minority belief in a cure that was subsumed within an all-encompassing faith in the healing power of a Christian God.

Challenges for diabetes care in Ghana

These findings may not be generalisable to other regional and ethnic contexts. For example, religious and policy responses might be different in northern Ghana, which is predominantly Muslim and served by a better equipped voluntary biomedical sector. However, the theory driven, multi-site, multi-experiential qualitative approach adopted has uncovered clear patterns of illness practice across key

demographic arenas such as geographical location, socioeconomic status, diabetes status, and support systems; these can instruct new developments in diabetes policy and service delivery. For instance, wealthy urban people tend to doctor shop or healer shop for regulated ethnomedical services (highly concentrated in the urban south); they might find restricted diets oppressive, but they can afford these recommended alternatives. The health of this group is least compromised. For low income and rural people, and especially those on expensive insulin treatments, the consequences of living with diabetes are more severe; this group has least access to biomedical and regulated ethnomedical services, they cannot afford recommended foods, and they are likely to gravitate towards faith healers as a spiritual response to chronic suffering.

Challenges for health care and policy development lie in providing affordable drugs and food, prioritising psychosocial support, and regulating faith healing practices. Policy discussions suggest that the provision of affordable or subsidised pharmaceutical drugs is unlikely to occur in the short term.¹¹ Two partial solutions exist, however. A recently implemented national health insurance scheme provides cover for chronic conditions and may alleviate the financial burden for people who can afford premium payments. The second solution lies in the expanded use of scientifically approved ethnomedical drugs, which have proved effective for urban people on oral treatment. The clinical and policy climate is conducive for such a development; ongoing toxicological tests and clinical trials indicate that effective herbal medicines for diabetes exist, and research suggests that ethnomedical practitioners are willing to submit their drugs to trials if costs are covered and that doctors are willing to refer patients to regulated ethnomedical services.^{18 19} This development may serve simultaneously as a regulatory exercise aimed at making ethnomedical diabetes care more transparent and the implementation of a referral system more sustainable.

The high cost of recommended foods is neglected in the local literature but deserves empirical work that engages with the agricultural and food export sectors. The lack of social and psychological services and a welfare system in countries such as Ghana places the burden of psychosocial and economic support on families. Low income families are unlikely to provide consistent, long term support to their diabetic relatives.²⁰ Self help groups are becoming important providers of psychosocial support in Africa and other low income regions.^{21 22} In Nkoranza, the diabetes self help group provided valuable support, especially for people abandoned by their families and community. Lessons can be drawn from this group for the other study sites. Finally, the role of faith healers as healthcare providers for people with diabetes deserves research and policy attention. Future research will have to examine the feasibility of developing educational and regulatory interventions that aim, simultaneously, to enhance their psychosocial and spiritual role and minimise damaging aspects of their healing repertoires.

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What is already known on this topic

Healer shopping is the primary and dominant practice for Africans with chronic illness and is a function of culturally mediated spiritual beliefs and the need for cures

People abandon biologically centred biomedicine and gravitate towards ethnomedical systems because ethnomedicine is deemed to provide cures for spiritually caused conditions

Problematic ethnomedical treatment methods undermine self care and biomedical goals

What this study adds

Ethnomedical healer shopping within the Ghanaian diabetes context is a secondary practice, coexisting with biomedical management, spiritual action, and medical inaction

Spiritual causal theories exist but are secondary to biological and lifestyle theories; ethnomedicine is consulted for cheaper pharmacological, rather than spiritual, treatment

Healthcare goals are undermined by high cost of prescribed drugs and foods, poor psychosocial support, and unregulated ethnomedical and faith healer treatments

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- 1 Kroeger A. Anthropological and socio-medical health care research in developing countries. *Soc Sci Med* 1983;17:147-61.
- 2 Green EC. Sexually transmitted disease, ethnomedicine and health policy in Africa. *Soc Sci Med* 1992;35:121-30.

- 3 Kirby JP. The Islamic dialogue with African traditional religion: divination and healthcare. *Soc Sci Med* 1993;36:237-47.
- 4 Nkwi PN. Perceptions and treatment of diarrhoeal diseases in Cameroon. *J Diarrhoeal Dis Res* 1994;12:35-41.
- 5 Rekdal OB. Cross-cultural healing in east African ethnography. *Med Anthropol Q* 1999;13:458-82.
- 6 Ryan GW. What do sequential behavioural patterns suggest about the medical decision-making process? Modeling home case management of acute illness in a rural Cameroonian village. *Soc Sci Med* 1998;46:209-25.
- 7 Nyamwaya D. A case study of the interaction between indigenous and Western medicine among the Pokot of Kenya. *Soc Sci Med* 1987;25:1277-87.
- 8 Unwin N, Setel P, Rashid S, Mugusi F, Mbanya J, Kitange H, et al. Noncommunicable diseases in sub-Saharan Africa: where do they feature in the health research agenda? *Bull World Health Org* 2001;79:947-53.
- 9 DeJong J. *Traditional medicine in Sub-Saharan Africa: its importance and potential policy options*. Washington, DC: World Bank, 1991.
- 10 Monitoring and Evaluation Team. *Formative and baseline research on diabetes mellitus in Ghana*. Accra: Ghana Diabetes Care and Disease Management Project, 1998.
- 11 Amoah AGB, Owusu KO, Adjei S. Diabetes in Ghana: a community prevalence study in Greater Accra. *Diabetes Res Clin Pract* 2002;56:197-205.
- 12 Ofei F, Forson A, Appia-Kusi J. Self-care behaviour amongst Ghanaian diabetics. Unpublished conference paper available from Dr Francis Ofei, University of Ghana Medical School, PO Box 4236, Accra, Ghana, 1996.
- 13 De-Graft Aikins A. Living with diabetes in rural and urban Ghana: a critical social psychological examination of illness action and scope for intervention. *J Health Psychol* 2003;8:557-72.
- 14 De-Graft Aikins A. Social representations of diabetes in Ghana: reconstructing self, society and culture. Unpublished PhD thesis, London School of Economics and Political Science, 2004.
- 15 Rose D, Efraim D, Gervais M, Joffe H, Jovchelovitch S, Morant N. Questioning consensus in social representations theory. *Papers on Social Representations* 1995;4(2):1-155.
- 16 Moscovici S, Duveen G. *Social representations: explorations in social psychology*. New York: New York University Press, 2000.
- 17 Bediako K. Africa and Christianity on the threshold of the third millennium. *African Affairs* 2000;99:303-23.
- 18 Government of Ghana (Ministry of Health). *The health of the nation: analysis of health sector programme of work: 1997-2001*. Accra: Ministry of Health, 2001.
- 19 De-Graft Aikins A. Exploring biomedical and ethnomedical representations of diabetes in Ghana and the scope for cross-professional collaboration: a social psychological approach to health policy. *Social Science Information* 2002;41:603-30.
- 20 De-Graft Aikins. Strengthening quality and continuity of diabetes care in rural Ghana: a critical social psychological approach. *J Health Psychol* 2004;9:295-309.
- 21 Valente TW, Watkins SC, Jato MN, van der Straten A, Tsitol LP. Social network associations with contraceptive use among Cameroonian women in voluntary associations. *Soc Sci Med* 1997;45:677-87.
- 22 Krause M. The transformation of social representations of chronic disease in a self-help group. *J Health Psychol* 2003;8:599-615.

Randomised controlled trials in Africa of HIV and AIDS: descriptive study and spatial distribution

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Abstract

Objectives To identify and describe randomised controlled trials on HIV and AIDS conducted in Africa and to map their spatial distribution using exact geographic coordinates.

Design Construction and analysis of a database of trials conducted wholly or partly in Africa and reported before 2004.

Data sources CENTRAL, Medline, Embase, and LILACS.

Results Our comprehensive search yielded 284 distinct records that were potentially eligible for inclusion in the database. Of these, 150 articles reported on 77 eligible trials published or reported from 1987 to 2003. Seven trials were identified exclusively from the CENTRAL database. Trials were conducted in 18 of 48 countries in sub-Saharan Africa. None were conducted in north Africa. Only 19

had a principal investigator located in an African country. Forty two trials assessed prevention and 35 assessed treatment. Most studies were funded by government agencies outside Africa (n = 43), with the pharmaceutical industry providing partial support to 16 of these. The pharmaceutical industry provided full or partial support to a further 18 trials. Only 43 trials reported conducting a power calculation for determining sample size. There was no mention of ethical approval or informed consent in 19 and 17 trials, respectively.

P+ The search terms and the full list of references for included trials can be found on bmj.com

ELPS This is an abridged version. The full version is on bmj.com