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The changing role of indigenous lay midwives in Guatemala: New frameworks for analysis

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ABSTRACT

Objectives: to examine the present-day knowledge formation and practice of indigenous Kaqchikel-speaking midwives, with special attention to their interactions with the Guatemalan medical community, training models, and allopathic knowledge in general.

Design/participants: a qualitative study consisting of participant-observation in lay midwife training programs; in-depth interviews with 44 practicing indigenous midwives; and three focus groups with midwives of a local non-governmental organization.

Setting: Kaqchikel Maya-speaking communities in the Guatemalan highlands.

Findings: the cumulative undermining effects of marginalization, cultural and linguistic barriers, and poorly designed training programs contribute to the failure of lay midwife-focused initiatives in Guatemala to improve maternal-child health outcomes. Furthermore, in contrast to prevailing assumptions, Kaqchikel Maya midwives integrate allopathic obstetrical knowledge into their practice at a high level.

Conclusions and implications: as indigenous midwives in Guatemala will continue to provide a large fraction of the obstetrical services among rural populations for many years to come, maternal-child policy initiatives must take into account that: (1) Guatemalan midwife training programs can be significantly improved when instruction occurs in local languages, such as Kaqchikel, and (2) indigenous midwives' increasing allopathic repertoire may serve as a productive ground for synergistic collaborations between lay midwives and the allopathic medical community.

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Introduction

Guatemala is one of the most impoverished nations in Latin America, performing consistently poorly on nearly all indicators of health, social, and economic development (MSPAS et al., 2009; UNDP, 2009). Furthermore, according to recent governmental surveys, 38% of the population of Guatemala self-identifies as indigenous Maya (MSPAS et al., 2009), a number which grossly underestimates the true proportion of the population which preserves at least some components of Maya ethnic identity, such as the use of traditional woven clothing or the speaking of 21 distinct Mayan languages (Richards, 2003). This indigenous population shoulders the brunt of the

country's burden of poverty, with well-documented and wide disparities in health and economic outcomes (Gragnolati and Marini, 2003; Kestler, 1995; MSPAS et al., 2009).

Since the advent of the World Health Organization's Safe Motherhood Initiative in 1987, global health policy has focused on measurable improvements in maternal-child health outcomes in the world's poorest countries, including Guatemala. Notwithstanding, Guatemala still has one of the highest maternal mortality ratios (MMR) in the region; official statistics place the current MMR at 110 per 100,000 live births (WHO et al., 2008). Especially outside the major metropolitan areas, as many as 70% of births in Guatemala occur in the home, with lay midwives in attendance. The remainder of births occur in what the Ministry of Health (MOH) calls a 'health-care establishment,' a term which encompasses a diverse array of clinical settings, including private clinics, local Health Posts, regional Maternity Centres, and departmental or national hospitals (MSPAS et al.,

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2009). In these settings, births may be attended by either physicians or nurses, although with regard to the latter, there are no formal training or licensure requirements leading to a nurse midwife or equivalent certification.

Given this configuration of the maternity workforce, with an overwhelming majority of services provided by lay midwives, it is not surprising that most policy efforts at reducing the MMR in Guatemala have historically focused on the development of lay midwife training initiatives. Indeed, the Guatemalan government's efforts in this regard considerably predate the Safe Motherhood Initiative, as formal training programs for midwives were established as early as 1955 (Goldman and Gleib, 2000). Currently, the Ministry of Health (MOH) grants a license to practice as a lay midwife to individuals who demonstrate consistent attendance at continuing education activities, which are typically 1 day training sessions held on a monthly basis at regional or local Health Post facilities. Periodic 2-week classes are also offered to non-practicing applicants who wish to begin work as a lay midwife. Licensure and training requirements are enforced primarily by the refusal of local health authorities to grant a birth certificate to parents who contract with a non-licensed midwife.

Lay midwife training in Guatemala has been and continues to be provided by a large range of actors, including the MOH, large regional NGOs, and local initiatives run by religious organizations or small groups of international volunteers (Berry, 2006, 2010; Maupin, 2008, 2009, 2011; Rohloff et al., 2011). Previous literature has criticized the methodology of these programmes, principally their use of classroom pedagogies that rely heavily on advanced literacy skills and use of Spanish, a language many indigenous midwives do not speak (Greenberg, 1982; Kruske and Barclay, 2004; Lang and Elkin, 1997; Maupin, 2008). Furthermore, in both Guatemala and elsewhere in the developing world, training programmes for lay midwives and other traditional birth attendants (TBAs) have been scrutinized for their failure to clearly impact maternal-child health outcomes (Bailey et al., 2002; Kruske and Barclay, 2004). In Guatemala, the MMR has not declined statistically in over 20 years and, in fact, several independent estimates have suggested that the true MMR is much higher than official statistics purport (e.g., Schieber and Stanton, 2000), despite the intensive development of numerous lay midwife-focused interventions.

Against this background, more recent policy in Guatemala has followed global trends in emphasizing a shift away from the utilization of lay midwives and TBAs in favour of skilled birth attendants (SBAs)—namely, physicians and nurse midwives—as mandated by the United Nations' Millennium Development Goals (United Nations, 2007). In Guatemala, this policy has been implemented in two ways. First, there has been a general redirection of funding away from TBA programs and towards the improvement of emergency obstetrical services at the regional hospital level, spearheaded by the MOH, USAID, and other non-governmental partners (Berry, 2010). Second, under the auspices of the MOH's refocused rural health programme, the Sistema Integral de Atención en Salud (Integrated System for Health Service, SIAS), training programs for lay midwives have remained numerically abundant, but have been considerably scaled back in complexity. Furthermore, under SIAS, the role of the lay midwife as an autonomous rural health agent has been undercut and restricted, with a new emphasis on near-universal referral of patients to hospital-level obstetrical services (Berry, 2006, 2010; Maupin, 2008, 2009, 2011).

Criticisms of a hospital- and SBA-focused policy point to the lack of convincing data that maternal outcomes in obstetrical facilities in Guatemala are significantly improved. In one study the MMR from physician-attended births was 91.5 per 100,000 live births while the MMR from traditional midwife-attended births was only slightly higher at 96.6 per 100,000 live births (Kestler, 1995). Furthermore, death from sepsis rates for

uncomplicated hospital-attended vaginal births are significantly higher than for in-home vaginal births (Kestler and Ramírez, 2000). There is also doubt about the capacity of the obstetrical system to handle an increase in demand for SBA services. Regional obstetrical centres remain universally under-staffed and under-resourced, in large part because of ongoing disparity in the rural-urban distribution of health-care resources. For example, 80% of Guatemalan physicians work exclusively in the capital city, and the poorest 40% of citizens, largely rural, account for only one-quarter of national health-care expenditure (Gragnotati and Marini, 2003).

In light of this ongoing and evolving controversy in Guatemala about the role of lay midwives in the provision of health-care services to rural women, we take up a qualitative investigation of the present-day knowledge formation and practice of indigenous Kaqchikel-speaking midwives, with special attention to their interactions with the Guatemalan medical community, with training models, and with allopathic knowledge in general. Our hypothesis is that close attention to these interactions demonstrates the ways in which the 'failure' of lay midwife-focused initiatives in Guatemala are due not to an inherent inability of the constituency to respond to societal and public health needs but, rather, to the cumulative undermining effects of marginalization, cultural and linguistic barriers, and poorly-designed programming. Findings of this investigation have important implications for the structuring of maternal-child health policy in Guatemala and for the role of lay midwives as community health agents.

Methods

This investigation was commissioned and sponsored by Wuqu' Kawoq (<http://www.wuqkawoq.org>), a non-profit organization working to develop rural health-care services in Guatemala, as part of a situation and needs assessment prior to the development of a new midwife training protocol. In addition to their home institutions, all authors are also current staff members or volunteers at Wuqu' Kawoq. The research protocol was reviewed by Wuqu' Kawoq's own IRB and by Partners Healthcare (home institutional IRB for PR) and granted exemption under 45 CFR 46.101(b)(2) (research involving the use of educational tests, survey procedures, interview procedures or observation of public behaviour).

We present data derived from interactions with Kaqchikel-speaking midwives from the departments of Chimaltenango and Sacatepéquez. These two departments are located in the central Guatemalan highlands, a short distance west of the capital city down the Pan-American Highway. Both departments contain medium-sized urban centres of 30,000–60,000 people, such as the cities of Antigua (Sacatepéquez) and Chimaltenango (Chimaltenango), which serve as important sites of tourism and business and are typically dominated by non-indigenous political interests. However, outside these centres, the bulk of the population is indigenous, and traditional agricultural lifestyles are still common, as is the wearing of indigenous clothing and the use of Kaqchikel Maya (spoken by more than 500,000 individuals) in everyday speech.

Most of our research interactions occurred in 2008–2009 as a series of in-depth interviews with 44 practicing midwives who were recruited using snowball sampling (Coleman, 1958). These interviews focused on: educational background and nature of professional formation in midwifery; individual practice characteristics, such as use of medicinal plants or pharmaceuticals; experiences interacting with the Guatemalan medical community; experiences attending various types of midwife training sessions; and knowledge of best practices in midwifery (e.g., hospital referral for prior caesarean

section). Interviews were about 1 hr in length, were largely conducted in Kaqchikel, and were recorded to facilitate analysis.

In addition to the in-depth interviews, over the same time period, we conducted participant observations, consisting of attendance approximately once monthly at midwife training sessions. Sessions typically lasted 2–4 hrs and consisted of 20–40 participants and 1–3 facilitators. We conducted observations in two training environments; the first were training sessions offered by the MOH, while the second were trainings offered by a NGO that was begun and led by a self-organized group of local midwives. In these sessions, we focused on observing: interactions between participants and facilitators; pedagogical methodology; and language use and comprehension among participants. MOH sessions were typically in Spanish, although small talk between participants was generally in Kaqchikel. The NGO sessions were conducted in Kaqchikel. Participant observation and focus group sessions were not recorded; rather, extensive note taking before and immediately after each session was used to document observations.

We also conducted three focus groups in Kaqchikel with the midwife leadership of the above-mentioned NGO. These groups consisted of 5–10 participants, and conversation focused on: the role of language and culture in the group's work; interactions with the Guatemalan medical community; and conceptions of midwife 'professionalization.' Focus groups were not recorded but, rather, documented with extensive note taking. They were also supplemented by recorded interviews in Kaqchikel of 5–10 mins in length in which 9 staff and board members were asked to give their narrative assessment of the origins and philosophy of their organization.

Findings

Basic characteristics of in-depth interview participants

Summary data derived from the 44 in-depth interviews are summarized in Table 1. The mean age of participants was 54 years. The majority of participants, 59%, were monolingual in Kaqchikel, whereas the remainder were bilingual; there were no participants monolingual in Spanish only. The formal educational level of participants was exceedingly low, with a mean of only 1.3 years of primary school education, and a full 63% of participants had never attended primary school. On average, participants had practiced midwifery for 21 years, and the average patient volume was around 5 patients per month, although there was considerable variation for both of these parameters.

Midwife training programs: language barriers

Among in-depth interview participants 86% had participated in MOH midwife training sessions and 100% had participated in

Table 2
Knowledge formation and scope of practice among in-depth interview participants (n=44).

<i>Characteristic</i>	
Knowledge formation (%)	
Apprenticeship	36
MOH training	86
NGO training	100
Diving calling	43
Therapeutic modalities (%)	
Prenatal or other vitamins	77
Pharmaceuticals (other than vitamins)	30
Medicinal plants	63
Practice parameters (%)	
Obligatory prenatal physician visit	100
Obligatory referral for prior caesarean	94
Urgent referral for postpartum haemorrhage	75
Knows signs/symptoms of:	
Anaemia	91
Preeclampsia	81
Postpartum infection	63
Training in basic neonatal resuscitation	47

NGO-sponsored training sessions (Table 2). Nearly all participants endorsed Kaqchikel-Spanish language barriers as a major determinant of the quality of the training sessions they attended. For example, one interviewee remarked:

When it's Spanish, one doesn't even understand. If it's in Kaqchikel, it will come to you, but if not then you don't understand anything, all that happens is that you get really sleepy.

Another interviewee, who was also on the board of directors of the midwife-led NGO mentioned in the Methods sections, informed us that the impetus for launching that NGO had been previous dissatisfying experiences with Spanish-language educational sessions and the desire to develop similar material in Kaqchikel. Training facilitators in Spanish-language workshops, she alleged, misinterpret participants' inability to follow technical Spanish vocabulary as 'boredom' and 'inattention.' On the contrary, she noted that since her NGO has begun sponsoring classes in Kaqchikel, there has been a surge of community-wide interest and high levels of attendance.

Lack of proficiency in Spanish was a common source of embarrassment and discomfort. Focus group participants endorsed that because of the lack of a common language with the facilitator, they generally remain silent and do not ask for clarifications in traditional Spanish-language training environments, even when they have substantial questions or doubts about material. For example, one informant related:

In the Health Post, there's one facilitator...you can hardly bear it...they make you feel like you aren't worth anything...it hurts our feelings, and there are very few of us who want to participate, oh God, it's the worst, they make you feel so stupid...

Our participant observations in Spanish-language MOH-sponsored sessions corroborate these sentiments. On one day, we engaged in small talk in Kaqchikel with participants prior to a session. This led the young non-indigenous nurse facilitator to remark awkwardly in Spanish that it was a great embarrassment to her that foreigners knew a language that local health staff did not. On this day, conversations in Kaqchikel ended as the nurse facilitator began the formal presentation in a slow, singsong Spanish. Shortly, the room was buzzing with whispers and side-conversations in Kaqchikel as participants who understood

Table 1
Basic characteristics of in-depth interview participants (n=44).

<i>Characteristic</i>	
Mean age (years \pm SD)	54 \pm 11
Language preference (%)	
Kaqchikel only	59
Spanish only	0
Both	41
Mean education (years completed \pm SD)	1.3 \pm 2.3
No formal education (%)	63
Mean length of practice (years \pm SD)	21 \pm 12
Mean patients/month (\pm SD)	5.1 \pm 6.9

Spanish attempted to translate the training session to their less Spanish-fluent neighbours. This was distracting both to the participants and the facilitator. One can understand how the facilitator might interpret such activity as disinterest while participants struggle to glean what they can from the training.

In contrast, our participant observations of training sessions conducted in Kaqchikel by the midwife-led NGO have an entirely different feel. During one such session, one of the facilitators began with an exhortation, 'If there is something you don't understand, don't be afraid to speak up. [The lecturer] speaks your language.' During the closing formalities of that same session one elderly participant stated through tears that she and her colleagues had stopped going to the official MOH trainings because the majority of them did not understand Spanish. 'However, with you,' she concluded, 'we can ask anything we want because you understand us and we understand you.' Another remarked:

[This place] is closer to my point of view, because they talk with us with patience and are very friendly...the nurse here has a great way about her, she will not become angry and the training is not scolding...I think that I will continue to attend as long as these training sessions are still going on, because I say that we forget a lot of things, but with this training we can remember.

Midwife training programs: antagonism and racism

In addition to facilitators' lack of indigenous language competency, a second factor contributing to the inefficacy of lay midwife training programs are attitudes of the Guatemalan medical community toward traditional midwifery practices. For example, several in-depth interview participants alleged that midwife training programs often served principally to eliminate or severely limit lay midwifery practices. This reality was also evident among narratives related by staff at the midwife-led NGO, where initial efforts to self-organize were met with great resistance by local MOH staff:

So we started meeting once every month and we did this for 2–3 years, getting together, having workshops, learning about first aid measures and midwifery. At this point it became clear that we needed to organize better and form an association, because of all the difficulties the midwives were having with the Health Post, and because they had no knowledge of how to defend their rights when the Health Post abused them, so we put together the organizational documents and became an official association. After that there were lots of problems with the Health Post because they realized that they were not going to be able just to push around the midwives just because they wanted to. They got very angry, but because we were now an association with some collective power, we went to Congress and involved the human rights laws, talking about all the difficulties the midwives were having, and thanks to God everything worked out fine.

While the midwives successfully defended their right to self-organize and self-regulate, they no longer attend MOH sessions, and officials at the local MOH post continue to be hostile to their work.

Furthermore, many indigenous lay midwives encounter overt racism in training contexts. One informant remarked:

The truth is, when we went there to the Health Post, there was basically no one who spoke Kaqchikel, more still they see that you are Kaqchikel, indigenous and they treat you as if you were inferior...

Another informant related that felt great excitement upon receiving a letter from the MOH post informing her that she was invited to attend an all-expenses-included 2-day training workshop in Antigua, the tourist 'hotspot' and formal colonial capital of Guatemala. At dinner after the first day of classes, an official approached her and the other midwives from stating that there was not enough food for all participants and they would have to leave. They complied, only to find their table turned over to a group of non-indigenous midwives. Subsequently, they tried to check into their room, but the organizers had deferred their lodging accommodations to the non-indigenous midwives as well. Conference centre staff then demanded they leave the premises before the police were called.

Midwife knowledge base and formation

The sources of knowledge and professional formation of the midwives who participated in in-depth interview are summarized in Table 2. Many informants viewed their practice of midwifery to be a sacred vocation, as echoed in the words of one middle-aged interview participant:

Speaking of my work, my grandmother was a midwife and my mother was also a midwife, so midwifery is like an inheritance given to me by God. I was 14 years old when I delivered my first baby and now I am 51 years old. So here I am, thanks to God. I am very thankful to God because this work has been a great blessing given to me.

Indeed, 43% specifically endorsed either divine calling to midwifery or divine revelation of specific aspects of their practice as an important component of their formation as midwives. Furthermore, as also noticeable in the above quote, apprenticeship was an important component of training for some informants. Interestingly, however, formal training sessions, either offered by the MOH or by NGOs, were much more commonly cited as sources of professional formation than either divine calling or apprenticeship. This respondent's story is typical, in that it combines several of these themes:

I finished primary school and then I studied to be a health promoter...I went to all the trainings, always, and after that I began my work as a midwife, but I had a dream where I realized while still young that I had a desire to do this work, and this is a gift from God, but then I worked on cultivating the desire, I went to classes to learn to be a midwife.

Responses to questions about therapeutic modalities also revealed a prominent role for allopathic modalities. For example, 77% of participants used prenatal or other manufactured vitamin supplements in their practices, whereas only 63% used medicinal plants. One interviewer provided a typical response:

When the patient first comes to me...I ask them if they have seen a doctor yet, then they say no, so then I say now it's necessary for you to have a prenatal visit because you need prenatal vitamins, they are necessary for the development of your baby.

Furthermore, 30% of participants also used additional pharmaceutical preparations in addition to vitamins. Among users of medicinal plants, 7 species were mentioned by interview participants and only three of those—chamomile (*Matricaria recutita*), St. John's wort (*Hypericum perforatum*), and lavender (*Lavandula latifolia*)—were mentioned by multiple participants (Table 3).

Participant observation yielded similar results. For example, we frequently observed vigorous discussions among participants about available therapeutic options for common pregnancy-

Table 3
Medicine plant use by in-depth interview participants.

Plant name	Times mentioned
Chamomile (<i>Matricaria recutita</i>)	13
St. John's wort (<i>Hypericum perforatum</i>)	9
Lavender (<i>Lavandula latifolia</i>)	5
Mint (<i>Mentha</i> spp.)	2
Aloe (<i>Aloe vera</i>)	2
Apasote (<i>Chenopodium ambrosioides</i>)	1
Wormwood (<i>Artemisia absinthium</i>)	1

related conditions where allopathic remedies—such as prenatal vitamins, oral rehydration solutions, acetaminophen, and effer-vescent cold preparations—were more commonly endorsed than plant-based therapies. Two of the training sessions we participated in were explicitly devoted to a discussion of medicinal plants. However, in both sessions discussion was limited to just one or two common agents and quickly devolved to a discussion of pharmaceutical remedies. For example, on one occasion during a discussion about the treatment of soil-transmitted helminth infections in children, no participants mentioned the use of plant-based therapies for this indication although nearly all were aware of the use of albendazole or mebendazole for the same.

Moving beyond the narrow focus of choice of therapeutic agents, our participant observation sessions consistently demonstrated the striking degree to which Kaqchikel lay midwives were actively engaged in the assimilation of large amounts of allopathic obstetrical knowledge. For example, in the training sessions organized by the midwife-led NGO, much of the training material was adapted directly from the Hesperian Foundation's world-class midwife training manual, *Libro para Parteras* (Klein et al., 2007). Over the time period of our participation, training sessions were held on a monthly basis, facilitated by senior members of the organization and sympathetic local physicians. Sophisticated themes were addressed, including neonatal resuscitation and screening and triage algorithms for maternal anaemia and preeclampsia.

Results from our in-depth interviews corroborated these general findings from participant observation by eliciting responses along the lines of various allopathic practice parameters for midwives (Table 2). For example, among individual participants, obligatory referral of all pregnancies for medical prenatal visits was universal, and referral for prior caesarean and postpartum haemorrhage were also high, at 94% and 75% respectively. Knowledge of signs and symptoms of common pregnancy related complications, such as anaemia (91%), preeclampsia (81%), and postpartum infection (63%), were high, and nearly half of all participants had received training in neonatal resuscitation. In-depth interviews participants also expected competence in allopathic obstetrical knowledge among their peers, routinely criticizing colleagues who were less committed to this training:

Let's just say, I give a lot of importance to the training, like I say to my colleagues, I go because I want to learn something; now, if I don't pay attention like some of my colleagues...even when I'm sick, I still do everything possible, I don't fall asleep, that's why I know so much.

This line of discussion led to several lengthy conversations, in which individual participants launched into detailed discussions from memory of the long list of contraindications to home delivery, indications for referral to a public sector physician, or descriptions of common intrapartum complications and their proper treatment (in almost all cases, quick transport to a health-care facility). In one particularly memorable interview, an elderly midwife with only very basic literacy skills, regaled us

with a long discussion of her understanding of the physiology of postpartum haemorrhage including, at one point, hand-drawn illustrations produced on the spot to demonstrate the anatomic difference between placenta accreta and placenta percreta.

Discussion

In this study we have used qualitative investigative methodology to examine the changing roles of indigenous lay midwives in Guatemala. We have undertaken this study against an emerging policy background that, in keeping with the directives of the Safe Motherhood Initiative and the Millennium Development Goals, has progressively attenuated the role of lay midwives and other TBAs in the provision of obstetrical services. In Guatemala, this shift has been justified in large measure by the perceived failure of lay midwife training programs to impact maternal-child health outcomes.

However, the assessment that lay midwife training programs are ineffective deserves a careful root-cause analysis. Extant literature, for example, is replete with examples of poorly designed, culturally inappropriate midwife training programs (Greenberg, 1982; Kruske and Barclay, 2004; Lang and Elkin, 1997; Maupin, 2008). In this paper, we add new qualitative data focusing specifically on the ways in which language barriers contribute to training programs' low quality. Government health service workers persisted in their general disregard for indigenous languages and did not provide training in these languages. As a result, midwives with little Spanish fluency felt demeaned and were unable to comprehend training materials, an ethnographic insight corroborated by basic demographic data collected during our in-depth interviews. The interviews revealed that that, in our sample, the majority of participants were monolingual in Kaqchikel and possessed, on average, just over 1 year of formal primary school education. In contrast, our observations of training sessions in a local midwife-led NGO had a much different feel. There, trainings were offered in Kaqchikel and used a more participative pedagogy; as a result, attendance and satisfaction were much higher. These contrasts strongly suggest that one major factor in the (in) effectiveness of indigenous midwife training is insistence on Spanish as a medium of instruction.

In addition to language and pedagogical barriers in training sessions, midwives also are marginalized by opposition to their practice and professional organization by the medical community. For example, observers of midwife training programs over the last 3 decades have noted that often a disproportionate amount of training time is devoted to attacking traditional birthing practices (such as the use of medicinal plants, alternative birth positions, and the sweat bath) rather than to constructive interchange and knowledge acquisition (Cosminsky, 1982; Greenberg, 1982; Hinojosa, 2004; Maupin, 2008). Furthermore, Maupin (2008, 2009, 2011) has elegantly documented the ways in which rural midwife training paradigms have been used to undermine midwives broadly as rural health agents. Similarly, in our sample, many informants alleged that midwife trainings were utilized to restrict or eliminate midwifery practice. Indeed, when the midwife-led NGO observed in our sample attempted to self-organize and develop its own culturally and linguistically appropriate trainings, this was vigorously opposed by local health authorities. While anecdotal, these incidents suggest that the widespread perception among indigenous midwives that the broader health community is biased against them culturally, linguistically, and racially are not unfounded. Doubtlessly, these biases have greatly impacted the efficacy of midwife training efforts.

In the final section of our study, we turn to an analysis of the process of knowledge acquisition and professional formation

among midwives. This is an area where the ethnographic and anthropological literature is extensive; however, most of these studies of indigenous midwives in Guatemala have restricted themselves to enumerating differences from the allopathic medical community, through analysing topics such as folk aetiological systems, culturally-bound diseases, cosmovision, the use of herbal and traditional remedies, and the prevalence of sacred callings and specific ritual practices (Adams 1952; Cosminsky 1982; Currier 1966; Eder and Garcia Pú, 2003; Foster, 1994; Greenberg, 1982; Messer, 1987; Mosquera Saravia, 2006; Paul, 1975; Paul and Paul, 1975; Rogoff, 2011; Villatoro, 2001; Walsh, 2006). As interesting and important as this literature is, it tends to shift our attention away from the complex, negotiated experiences of indigenous lay midwives at the intersections of culture and profession. Very little work, for example, has attempted to document the developing sense of professional identity and the integrative and syncretistic practices of contemporary indigenous midwives, although a few recent studies have assumed this direction (Berry, 2006; Hinojosa, 2004; Maupin, 2008). We feel that this lacuna in the literature is not just a issue of marginal theoretical interest to anthropology, since portrayals of indigenous midwifery as idiosyncratic and culturally-bound add fuel directly to the fire of policies that advocate for diminishing their role in national health initiatives (Bailey et al., 2002; Kruske and Barclay, 2004; Röst et al., 2004).

By comparison, in our in-depth interviews, although 43% of participants endorsed divine calling as a component of their professional formation as midwives, 100% endorsed allopathic training sessions (Table 2). Similarly, although traditional plant-based therapies were still an important component of practice for some midwives, as a whole participants in both in-depth interviews and participant observation sessions were more likely to use pharmaceutical modalities, especially prenatal vitamins, than plants. Finally, participants displayed a high level of allopathic knowledge acquisition (Table 2) and, generally, a strong commitment to the principles of referral for obstetrical complications and continuing education. Taken all together, these findings provide an alternative portrait of indigenous Kaqchikel midwives, which demonstrates both the high degree to which traditional elements of practice are supplemented by allopathic practices and the strong desire for continuing education and professionalization (along at least partially allopathic lines).

Conclusions

Driven by a recent policy emphasis that shifts the place of birth from the home to the hospital, the role of indigenous lay midwives has increasingly been restricted in Guatemala. Here, however, we present data demonstrating that justifying this shift based on the 'ineffectiveness' of lay midwife training classes fails to take into account the historically low quality and linguistic inappropriateness of those training programs, as well as the ways in which midwives remain marginalized and undermined by both overt racism as well as bias in the allopathic community. Furthermore, we document the ways in which midwives avidly seek out and acquire allopathic knowledge and incorporate it into their practice in dynamic and adaptive ways.

These findings have implications both for future research and also for policy. From the standpoint of research on midwifery practice in Guatemala, it is important to recognize the ways in which an ethnographic focus on the socio-religious and difference aspects of midwifery contributes to the view among policy makers that indigenous midwives are 'untrainable,' in large part by neglecting analysis of other elements, such as professional identity and educational formation. Items like 'Do you think birth is sacred? Why?' (Walsh, 2006) can be construed as 'leading questions,' in that

they manufacture an undue emphasis on spirituality in midwifery practice which do not accurately reflect the daily experience of midwives as professional negotiators at the intersection of traditional and allopathic culture. Future research on midwifery in Guatemala must begin to uncover these intersections, with the goal of promoting productive and synergistic collaborations between lay midwives and the allopathic medical community.

Second, as we document, the fact that indigenous midwives in Guatemala have increasingly acquired allopathic knowledge and incorporated it dynamically into their practice, and that there are nascent but encouraging signs of professional self-organization, all advocate for a reevaluation of the public health policy which has marginalized their role in health-care delivery. Rather than ascribing blame to midwives themselves for their own 'inefficacy' we must begin to recognize and address the systemic biases within the health-care sector itself that marginalizes them and restricts their efficacy. In particular, initiatives should seek to include midwives at the policy table by addressing the cultural and linguistic deficiencies that undermine current efforts at training and continuing education and by developing formal mechanisms for true professional self-organization that are not merely attempts to subject midwifery to regulation and control by allopathic entities.

The issue of empowerment of the midwifery profession in Guatemala is not simply one of theoretical interest; rather, it is a pressing public health concern. As we point out in the introduction to this paper, the expertise and infrastructure for referral obstetrical care in Guatemala remains extraordinarily nascent. Most births still occur in the home, and there are serious doubts regarding the capacity of the obstetrical infrastructure both to handle an increase in demand for services and to deliver services that are reliable and of high quality. Furthermore, published data strongly suggest that contact with lay indigenous midwives is a key determinant of concomitant contact with allopathic obstetrical practitioners (Glei and Goldman, 2000; Sibley et al., 2004). Thus, restricting the role of the midwife will likely result in even further decreased utilization of modern obstetrical services. Almost certainly, therefore, indigenous midwives in Guatemala will continue to provide a large fraction of the obstetrical services among rural populations for many years to come, and, accordingly, maternal-child policy initiatives must seek to integrate them and collaborate with them in effective ways.

One major limitation of our study is the well-known fact that informant midwives may tailor opinions and reports about practices depending on perceived reactions of their audiences, as Jordan (1993) documents among Yucatec Maya midwives in Mexico. In our work, the midwives we interview are as much collaborators and colleagues as they are research subjects. As such, we recognize that the narratives they shared with us may reflect their stake in the ways that we produce knowledge about them. However, our ongoing longitudinal collaboration, our linguistic competence in our collaborators' native language, and the multidisciplinary nature of our research team all lead us to believe that this work largely reflects accurate insights into the contemporary practice of Kaqchikel-speaking lay midwives in Guatemala.

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