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# The challenge of providing infertility services to a low-income immigrant Latino population

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#### Abstract

Study Objective—To provide insight into the experience of low income immigrant Latino couples seeking infertility treatment.

**Design**—Qualitative interview study.

**Setting**—Infertility Clinic at a University-affiliated urban public teaching hospital.

**Patients**—Infertile low-income immigrant Latino couples (105 women and 40 men).

**Interventions**—In-depth tape-recorded interviews.

Main Outcome Measures—After transcription and translation, the interviews were coded and analyzed for thematic content.

**Results**—We identified four major challenges to providing infertility services to this population: (1) Communication: Language and cultural barriers resulted in patients having difficulty both in understanding diagnoses and treatments and in communicating their questions, concerns and experiences to physicians; (2) Continuity: Because medical student and residents rotated frequently, patients usually saw a different physician at each visit. (3) Bureaucracy: Patients reported having difficulty with appointment scheduling, follow-up visits, and timed laboratory procedures. (4) Accessibility: Patients faced issues of limited availability and affordability of treatment.

Conclusions—At a large, urban, University-affiliated infertility clinic, challenges related to communication, comprehension, continuity, bureaucracy, accessibility, availability, and affordability impeded the delivery of optimal infertility care to many low income immigrant Latino

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Low-income Latino immigrant patients attending an infertility clinic at a University-affiliated teaching Hospital faced significant challenges relating to communication, comprehension, physician continuity, clinic bureaucracy, and limited availability/affordability of services.

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patients. We recommend a greater availability of translators and both patient and physician cultural orientations to address these health care barriers.

# Keywords

Infertility; health care disparities; Latinos; low-income

### Introduction

At the International Conference on Population and Development held in 1994, the United Nations formally acknowledged that the appropriate treatment of infertility was an integral part of reproductive health (1). Yet in the developing world infertility is rarely acknowledged as a serious public health problem because many of these societies are considered to be overpopulated and in need of population control (2). In the Industrial West, particularly the United States, the focus of medical and social science infertility research has been almost exclusively on white, middle-to-upper income couples who have used advanced reproductive technologies (3).

However, the population demographics of the United States are rapidly changing. Between 1990 and 2000 the Latino population in the U.S. increased from 22.4 million to 35.3 million, making Latinos the fastest growing ethnic group in the country (4). Projections from the Department of Finance indicate that the population of California will be more than 50% Latino by the year 2042 (5). The impact of infertility in the Latino community has not been adequately examined, in part due to the perception of high fertility rates among Latinos (6). As a result, the problems that infertile Latinos face and the strategies they use in their efforts to create families remain largely invisible to practitioners, social scientists, and policy analysts.

In 2003 we began a four-year qualitative, anthropological study to examine the experiences of low-income Latinos of Mexican and Central American descent as they live with infertility, seek medical treatment, and take other actions to resolve unwanted childlessness. The preliminary findings from this research demonstrated that infertility was a devastating condition for Latinos that had far-reaching effects on women and men individually as well as on the couple relationship. Because parenthood continued to be a strong cultural expectation for Latinos and childless families were viewed as incomplete, both women and men were stigmatized and their gender identities were severely undermined (7).

In this current analysis we focus on the challenges of access to and utilization of health care resources and the process of medical treatment by examining the experience of Latino men and women at the infertility clinic of a large University-affiliated urban county general hospital that primarily serves this ethnic population.

#### **Materials and Methods**

Participants were recruited through their attendance at the infertility clinic of a large University-affiliated urban county general hospital that serves a primarily Latino population. The clinic provided low-cost and free medical care and was staffed by medical students and residents training in Obstetrics and Gynecology who saw the patients under the supervision of a board-certified Reproductive Endocrinologist. The clinic met one afternoon per week and conducted basic testing, diagnosis, and treatment. Handouts describing these tests and treatments were available in both English and Spanish.

Participants were interviewed three times. Couples were first interviewed together, followed by solo interviews with each partner six months later and a final interview one year after the

initial interview. Women and men interviewed without their partners were also interviewed three times at these intervals. Interviews were semi-structured and lasted 1 to 2 hours. The interviews were conducted in a location of the participant's choice, usually in their own homes. Participants were interviewed in the language of their choice, either Spanish (89%) or English (11%). In all three interviews, participants gave descriptive narrative accounts of their efforts to conceive, with the interviewer asking clarifying questions about chronology, thoughts, actions, and feelings. Each interview was tape recorded, translated into English, and transcribed.

Each line of text of each interview transcript was then analyzed for its thematic content and assigned one or more codes, i.e., a key word defining a specific theme, idea, or concept. By entering the coded interview transcripts into QSR International's NUD\*IST data sorting program, all interview data identified by any specific code could be retrieved for further analysis. This paper is based on an analysis of the interview data identified by the codes "Doc/Clinic" (discussion or description of clinical encounters and experiences with physicians and clinic staff), "Understand" (patients' comprehension or understanding of their medical diagnosis or treatment), "Continuity" (references to continuity of medical care), "Bureaucracy" (references to access to or denial of appointments, treatment; paperwork), and "Policy" (suggestions or criticisms directed at changing or improving the healthcare system).

The study protocol and consent form were approved by the Institutional Review Board, Committee on Human Research, University of California, San Francisco; the study was approved and supported by the National Institute of Child Health and Development, National Institutes of Health.

#### Results

## **Demographics**

Thirty-nine couples were interviewed in addition to 66 individual women and one individual man for a total of 105 women and 40 men. The demographic characteristics of the participants are detailed in Table 1. The participant's mean age was 33 with a range of 18–48 for women and 19–53 for men. The vast majority immigrated from either Mexico or Central America, spoke exclusively Spanish, and identified as Roman Catholic. A third of participants had a grade school education only, less than half graduated from high school, and more women than men went to college. Eighty-eight percent of men were employed while half of women in this sample were not working outside the home. Approximately half of the employed women and men worked at unskilled labor and only 15% had white collar jobs. Over 90% of men and women had an annual household income of less than \$30,000 and over 80% had no health insurance.

We identified four major challenges to providing infertility services to this low-income immigrant Latino population: (1) Communication (2) Continuity (3) Bureaucracy and (4) Accessibility.

(1) Communication—The first major challenge was communication between physicians and patients. Language and cultural barriers led to patients often not understanding their diagnosis and treatment, and to difficulties in communicating questions, concerns and experiences to their physicians.

The inability to effectively communicate due to language could be traced most directly to an inadequate availability of translators. Because of the often long wait for a translator to arrive, resident physicians often attempted to take medical histories and communicate diagnoses and treatment plans directly to patients in Spanish. Although sometimes adequate for basic

conversation, without fluency or idiomatic nuance, physicians' Spanish was often too rudimentary to adequately and effectively convey the medical information. On the other hand, in an effort to be precise, physicians sometimes used literal translations of medical terminology that were too technical. For example, although the medical term for fallopian "tube" is "trompa," this word can have multiple meanings in Spanish and it was sometimes difficult for patients to recognize this word's meaning in this medical context. Without the aide of a translator, patients found physician-patient communication frustrating. As one 30 year-old Guatemalan woman said, "In the hospital all over the place it says you have the right as a patient if you don't know the language to have translator - but it is not true."

Another component that contributed to unsatisfactory doctor-patient interactions was a variety of misperceptions and miscommunications that resulted from differing communication styles and expectations. For example, patients often described their infertility in an extended narrative. This style of communication was often at odds with physicians' need to get a medical history in a short period of time. Additional obstacles to effective communication were nonverbal and reflected patients' perceptions and experiences of physician's bedside manner. Some patients described physician's demeanor as unfriendly and reported being intimidated by or afraid of the doctors. Some patients were apprehensive about being scolded for missing an appointment; others were embarrassed to ask questions about their treatment for fear of appearing ignorant or being stigmatized for being from another country. For example, when asked about her understanding of blood tests that had been performed, one 19 year old Mexican woman said, "I don't ask. The time I asked it was to know about my hormones and I don't know about that. So I don't even ask because it's embarrassing... I feel that they are not going to listen to me or I don't know what I think....the doctors they look at me with this face...I don't know what it is, maybe because I am not from this country...that is why I don't want to go back to the hospital."

Some individuals seemed to question whether their physician was sufficiently empathetic to their infertility predicament. Others interpreted the exhaustion of available/affordable medical treatment possibilities as a form of dismissal. For example, a 22 year-old woman of Mexican descent, after relating a history of failing to ovulate despite extensive trial of clomiphene, had the following interchange in her interview:

**Patient:** When I talk to the gynecologist, the last time I had an appointment, she says that she does not consider it too important [that I get pregnant].

**Interviewer:** She did not think it was important?

**Patient:** Yes, like she thought there was nothing more to be done. And I got home very sad because I did not want to tell my husband.

Finally, some patients experienced physician's communication of a poor prognosis as uncaring, for example a 41 year-old native Nicaraguan woman stated, "Doctors never give you positive possibilities; they always tell you negative things."

We found that patients often did not understand their medical diagnosis, treatments, or the causes of their infertility. This could be traced to several factors. First, patients had little medical knowledge of women's bodies. They were not only unfamiliar with references to hormones, fallopian tubes, ovulation, or the uterus, but were often embarrassed to admit they did not understand the meaning of the terminology. For example, patients often did not understand the purpose or meaning of the medical tests or fertility treatments. For example, one 29 year-old Mexican woman said, "The doctor said that one of my tubes was not permeable. But I didn't understand what permeable was, what was that?...I imagine that it was a sponge that didn't absorb, or I don't know... I never asked what it was." One husband refused to have sperm

analysis because he did not like "people doing experiments on him." In other cases, although an explanation had been offered, it was incorrectly or inadequately understood. For example, a 41 year-old Mexican woman described a proposed myomectomy as a procedure where "They take your whole uterus out, they cut it all up, they put it back in" while a 27 year-old Mexican patient with polycystic ovary syndrome described her condition as, "There was a layer over my ovaries, which are like cysts, and they come off when I have my menstruation but they impede in some way the ovule from being impregnated."

Many patients expressed frustration with their lack of comprehension about the cause of their infertility. For example, a 41 year-old woman stated, "I don't know, at this point I don't know why I never got pregnant. It is kind of a big mystery to me." A 38 year-old Mexican woman spoke in the same vein, "I tried by all means, and nothing happened. And I went they told me everything was fine, that is what I understood." As a result, some patients realized that they had an inadequate understanding and expressed the desire for more comprehensive patient education. For example, a 23 year-old Mexican woman said, "They only give us the medicine and that is it. But there has not been anyone that tells about the medication, how it works, and it is going to last this long and you are going to have results, nothing. We would like to have therapies and programs where we can talk about it and they understand us."

Compounding these challenges to communication and comprehension, we found that many women in this study had consulted a traditional healer to help them to become pregnant. Most commonly, these practitioners recommended massage and/or a variety of herbal teas to promote fertility. While a number of women voiced a measure of skepticism regarding the effectiveness of healers' remedies, humoral medical explanations for infertility nevertheless remained a point of reference for participants in the study. For example, one 30 year-old Mexican woman said, "There were many herbs but I can't remember their names. Like when they say that you have a gassy stomach that means it is cold. They say that this makes the ovaries freeze...they say that the stomach gets cold because the woman in my town walk around in bare feet." While this different framework for understanding the body can be viewed as "complementary," it may also have engendered confusion by adding alternative explanations to what was already a complicated illness narrative.

**(2) Continuity**—A second major challenge to providing quality care to low income immigrant Latino couples in this study was the lack of continuity of physician care. Because medical students and residents rotated through the REI rotation every 4 to 6 weeks, patients usually saw a different physician with each visit.

Patients expressed frustration that there was always a "new doctor" seeing them who was unfamiliar with their case. This in turn undermined their desire to form a meaningful doctor-patient relationship with the physician. As one 39 year-old Peruvian woman expressed it, "A new doctor is not going to know your whole file...It is like for the first 5 minutes they read your whole life history and it is not like having a permanent doctor that is more patient. One that wants to listen to details and you can tell him what your situation is."

Patients' resentment at having to repeat their story from the beginning at each visit also led to feelings that the care was not compassionate or suited to their needs. As a 27 year-old Mexican woman said "There were a lot of doctors; there is always a different one. Sometimes I felt they were not giving it the importance it deserves." Another 32 year-old Mexican woman added, "I have to retell them my medical history at each visit...It is frustrating. I get angry because I have to retell the story that starts in 1996... The feelings of anger and frustration return and the poor doctor really is not at fault. I feel as though they don't want to cooperate with me."

The lack of continuity led some physicians to focus on the immediate interval test or treatment without giving the patient an overview of their clinical situation. In addition, the lack of continuity of physicians sometimes led to a corresponding lack of continuity of advice and medical opinion. For example, one 43 year-old Mexican woman said, "I am confused about many things they have told me. Because when I am not with one person I am with another. They change doctors. They all have different opinions."

Finally, the physicians' relative lack or experience combined with their unfamiliarity with the patient's case history served to undermine their credibility in the patient's estimation. For example, the 43 year-old Mexican woman quoted above continued by saying "Most of them are students, and I know that sometimes they consult their bosses, but it is not the same. Sometimes I have insisted that a more capable person come, but they say there are too many people. But I need to know something concrete, because I can't be in doubt all the time."

**(3) Bureaucracy**—The protocols of medical insurance and the workings of the hospital clinic system was, for many patients, an impediment to obtaining and receiving care. Patients experienced frustration with appointment scheduling, timed laboratory procedures, and follow-up visits. These issues were compounded by the relative paucity of new patient infertility appointment slots and a complicated call-in system for making appointments. As a 31 year-old Salvadoran woman said, "I wanted a fertility treatment, but I had to wait six months before being seen. I lost the first one, and I had to wait for a long time."

Because attending the hospital clinic requires one or two authorization/eligibility checks before seeing a physician, patients often faced unpredictable and frustrating delays of several hours in the waiting area. As a 32 year-old Mexican man said, "If you go for an appointment you need to take your lunch. I understand that there are a lot of people, but they should have more control because there are people who come in with an appointment and they still have to wait two hours just the same."

Patients were often given specific days to go to lab for blood tests, for example to check their response to ovulation-inducing medications. However if the lab was busy, patients might be told that they had to come back later. Many patients reported that missing a critical lab test could mean waiting another month to repeat the treatment or even starting the regimen all over again. Several patients had to repeat the same treatment on multiple occasions. Because many patients, especially men, have inflexible work schedules that could not be altered, getting to the lab at a specific time was difficult. For example, a 46 year-old Mexican man said, "We took a sperm count test but like I said I was working and I missed the appointment, so I never went down there."

**(4) Accessibility**—A final challenge to accessibility of infertility care included issues relating to the availability and affordability of treatment.

The Infertility clinic was staffed by medical students and residents in Obstetrics and Gynecology under the supervision of a Board-certified Reproductive Endocrinologist. Meeting one afternoon a week, the clinic offered the basic infertility work-up (semen analysis, hysterosalpingogram, and hormonal tests), hysteroscopy, laparoscopy, and ovulation induction with bromocriptine, clomiphene, and/or metformin. Intrauterine insemination (IUI), gonadotrophin stimulation, in-vitro fertilization, and therapeutic donor insemination were not available.

Patients frequently were unaware of the limits to the treatments that were available to them. One 45 year-old Mexican woman said, "She [doctor] said she can't help me because they don't do that [IUI] there [at the clinic] and that is why I dropped it...it is not even an option for me."

Another 41 year-old Mexican woman added, "Then she [doctor] started giving me the Provera treatment, and the Clomid and I want to keep trying because with it my period comes, and I can come out pregnant. Then, like she did not want to keep on giving it to me, but I said, 'Oh, no, it can't be'. She [doctor] said there are other things, but we don't have them here."

Most were dismayed by the cost of seeking more advanced therapy elsewhere. One 30 year-old Mexican woman said, "They did both the laparoscopy and laparotomy...but nothing happened. The lady doctor was very nice, she explained things to us, she said to save such and such amount of money, or to adopt because it was going to be difficult for us to conceive... they said it would run about fifteen thousand dollars. She said to try in-vitro, but he [husband] still was not working and when she said that I had barely started working. I said 'no.'"

Finally, some patients would exhaust the available treatment options only to return and start all over again. For example, one 40 year-old Mexican woman said, "We had like a year and a half and that was when we started Clomid again.... We went to General Hospital and I went to the appointment and the option they gave us was Clomid, even though they had already given it to me."

### **Discussion**

Access to health care for low-income patients and ethnic minorities has been problematic across a wide range of health conditions. Although the 1995 National Survey of Family Growth found that Latino women reported infertility more often than Caucasian women, there has been no research on the experiences of infertility and infertility treatment by low income Latinos in the United States (8). In a recent publication (7) we were, to our knowledge, the first to address the experience of infertility among low income Latino men and women in the United States. In this paper we have identified a series of significant challenges and barriers to the delivery of infertility services at an urban, University-affiliated infertility clinic in the San Francisco Bay Area.

The first barrier was communication – both linguistic and cultural. In 1995 the National Coalition of Hispanic Health and Human Services Organizations addressed the importance of understanding the influence of culture and language on health care delivery (9). It has been consistently found that even a minimal language barrier not only results in patient dissatisfaction, but is associated with lower comprehension, compliance, and overall quality of care (10–14). Due to a relative lack of translators (or the time constraints that inhibits the ability to wait for a translator to arrive), resident physicians would often try to communicate with patients in Spanish. While they may have enough fluency for rudimentary conversation, their ability to explain complicated infertility diagnosis and treatment concepts was often inadequate. Ironically, physicians' use of literal translations of medical terms (rather than idioms or expressions more appropriate for the patient's educational level) contributed to a failure of comprehension.

In addition to language barriers, "cultural assumptions and expectations shape the doctor—patient relationship and may present a formidable barrier to effective care" (15). Many patients were not acculturated to the concept of medical history taking, testing, diagnosis, and treatment. Furthermore, patients' use of an extended non-linear narrative to describe their infertility experience was at odds with the preference of resident physicians who were pressed for time. As a result, the physician did not get all the relevant pieces of information needed for best practices.

Our finding that patients frequently did not ask for clarification about their diagnosis and treatment could be attributed to several possible linguistic and cultural factors. First, patients' were embarrassed at their lack of understanding of reproductive anatomy or physiology and

were reluctant to admit that they did not understand what was being said. In addition, physicians are generally held in high regard by Latinos and "it may be seen as disrespectful to physicians if patients disagree with or doubt the physicians' opinions, ask too many questions, or get involved in the decision-making process" (16). Finally, this communication breakdown may represent a "vicious circle" where the lack of patient questions leads physicians to underestimate the amount of information that low income minority patients want (16).

Patients' experience of a doctor's bedside manner is not only reflective of cultural expectations but can play a role in enhancing or undermining effective communication and comprehension. For example, physicians may not realize that subtle cues such as eye contact and body language may signal potential misunderstandings between a physician and patient (17). We found that the resident physicians' relatively reserved and formal interrogations and serious demeanors were sometimes experienced by patients as demonstrating an uncaring attitude on the part of providers. Kagawa-Singer has concluded that "Most clinicians lack the information to understand how culture influences the clinical encounter and the skills to effectively bridge potential differences" (18). Compounding this barrier was the fact that a patient was unlikely to see the same physician on consecutive visits. This lack of continuity was a source of patient frustration and served to undermine patients' confidence in the information they were receiving.

Because many of these men and women were relatively young, healthy, and recent immigrants, the infertility clinic may have been their first encounter with the American health care system. Patients' unfamiliarity with the concept of medical insurance and the workings of the hospital clinic system was an impediment to obtaining and receiving care. As a result, patients had difficulty dealing with timed laboratory procedures, appointment scheduling, authorization/eligibility verification, and long waits. We found ample support for the finding that "Bureaucratic intake processes and long waiting times for appointments have both been cited disproportionately by minority patients as major barriers to access to health care" (19) as well as the conclusion that health care systems that are "complex, underfunded, bureaucratic, or archaic in design" create structural barriers for patients from minority populations (10,12).

Over the last two decades there has been increasing attention paid to the disparities in the quality, availability, and delivery of health care services based on race and ethnicity. For example, the Agency for Healthcare Research and Quality recently found that based on 38 measures of quality of care received, Latino individuals received adequate care only half as frequently as Caucasians (20). These disparities are also found with infertility care. Even in Massachusetts, the state with the most comprehensive infertility insurance coverage in the United States, the utilization of IVF services by African American and Hispanic women is substantially less than projected from their representation in the state's population (21). The response to the steady accumulation of literature citing disparities in health and health care has resulted in the academic, public, and private health care industries focusing increased attention on *cultural competence* (22), i.e., "the ability of health care providers and institutions to deliver effective services to racially, ethnically, and culturally diverse patient populations" (23).

Although training in cultural competency is becoming an accreditation requirement in undergraduate medical education (24), current efforts appear to be inadequate (25). For example, when third-year medical students at Emory University recently completed a 40-item cultural competence questionnaire, the mean knowledge score was 55% (26). Resident physicians may receive even less training or exposure to cultural competence training. A 2003 survey of 3435 resident physicians found that although 96% of the physicians-in-training indicated that it was important to address cultural issues when providing care, 83% of obstetrics and gynecology residents reported receiving little or no evaluation in cross-cultural care during their residencies. Identified barriers to delivering cross-cultural care included lack of time for

cross-cultural training and a lack of role models (27). A recent national sampling of 68 residents found they perceived a mixed message about cultural competence, i.e., they recognized its importance, but received little formal training. Furthermore, they interpreted that the inadequacy of the time and resources devoted by their training programs indicated that it was a low priority for their academic institutions (28). As a result, "many developed coping behaviors rather than skills based on formally taught best practices" (28).

Although widely supported by medical and nursing professional organizations, the practical application of cultural competence remains a challenge to clinicians, researchers, and educators (29) and is not without controversy. Some have suggested that there is only a general perception, rather than clear evidence, that cultural competence training has a positive effect on minority health care quality (30,31). As an example, although Barkin (32) and Assemi (33) found that 8 hour to 2 week Spanish language immersion and cultural competency courses improved cross-cultural knowledge, skills, and communication, Price has pointed to an overall lack of methodological rigor in studies evaluating cultural competence training of health professionals (34).

An additional concern is that efforts to be "culturally competent" may actually have a negative impact on patient care if they unintentionally encourage stereotyping (31). For example, in an ethnographic study of clinicians' views of Latino culture in the context of amniocentesis decision making, Hunt and de Voogd found that most clinicians said Latinas are likely to decline amniocentesis because they are "religious, fatalistic, male-dominated, family-centered, and superstitious" and ironically provided less complete information to Hispanic patients in their efforts to be culturally sensitive (31). Finally, Reimann has challenged current efforts to teach cultural competence with his conclusion that "knowledge of cultural factors per se and simple exposure to Mexican Americans in practice do not directly facilitate culturally competent care" (35).

Despite these controversies, accumulating research points to the importance and significance of cultural competence in the delivery of quality medical care. The challenges and barriers to providing infertility services identified in this study have clear policy implications that inform this debate. At the most general level, difficulties in service provision arose in part because professional cultures of health care provision sanction and reproduce certain norms and behaviors. Yet these behaviors are sometimes at odds with expectations and understandings of particular groups of patients – in this case, low-income Latinos. We found that cultural "incompetence" in the clinic tended to emerge in the encounter between the cultures of medical professional and the culture of health care recipient, rather than from a failure to acknowledge the particular ethnic traditions or values of the Latino patient population. We conclude that achieving cultural competence not only requires a better grasp of the viewpoint of patients in a particular ethnic group, but also a clearer awareness of the impact of being trained to practice as physicians within a medical system with its own idiosyncratic protocols. As the situation stands currently at the site of service under consideration, several specific barriers to realizing this competency remain.

The first barrier is the need for enhanced communication – both linguistic and cultural. There is an indisputable need for readily available, high-quality professional interpreters, even if we acknowledge their limitations. For example, the use of professional interpreters does not enable physicians with limited Spanish fluency ability to elicit patients' problems and concerns as well as their Spanish-speaking colleagues (14). Additional deficiencies that have been observed in interpreter-mediated encounters were that (a) physicians were more likely to ignore patients' questions, and (b) patients were less likely to ask questions or to express their concerns compared with patients speaking directly to their physician (36). Finally, Baker found that Latinos reported dissatisfaction with their care, even when interpreters were used, possibly

because they were less likely to rate their provider as respectful and concerned about them (37). Despite these caveats, we would suggest that professional interpreting is most needed when the patients are first seen (in order to get accurate and complete historical information), when they are given a specific diagnosis, and when they are given a poor prognosis, for example, bilateral tubal occlusion, azoospermia, or premature ovarian failure. We also found support for the suggestion that using an interpreter in combination with visual aids may enhance comprehension.

Effort also is needed to simplify or streamline bureaucratic barriers with respect to clinic access, insurance eligibility, and making appointments. This would require an adequate availability of Spanish-speaking support staff. In addition, prior to starting their rotation at the REI Clinic, resident physicians and medical students would benefit from a formal training session that introduces them to the challenges of communication, comprehension, and cultural competence with respect to infertility care. Subjects to be addressed include the fact that many patients have had little or no contact with the practice of Western medicine, either in the United States or in their homelands, and that the Clinic organization is unfamiliar to them. Physicians must recognize that they may be unwittingly intimidating and that patients have a different way of expressing themselves about their infertility and may not volunteer information that is necessarily useful or appropriate. Finally, because the language barrier may mask the often significant gap between physician and patient educational level and sophistication, physicians need to learn how to provide clear, thorough explanations using a vocabulary that the patients can understand.

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# References

- 1. United Nations. 5–13 September 1994; Cairo: Report of the International Conference on Population and development; 1995 E.95.XIII.18
- 2. Nachtigall RD. International disparities in access to infertility services. Fertil Steril 2006;85:871–875. [PubMed: 16580367]
- 3. Becker, G. Berkeley: University of California Press; 2000. The elusive embryo: How women and men approach new reproductive technologies.
- Census 2000 Redistricting Data (P.L. 94-171). United States Census Bureau; Population by Race and Hispanic or Latino Origin, for All Ages and for 18 Years and Over, for the United States: 2000 (PHC-T-1).
- 5. May M. California Hispanics expected to be state's majority by 2042. San Francisco Chronicle. 2007 July 10;
- Bean FD, Swicegood CG, Berg R. Mexican-origin fertility: New patterns and interpretations. Soc Sci Quart 2000;81:404

  –420.
- 7. Becker G, Castrillo M, Jackson R, Nachtigall RD. Infertility among low-income Latinos. Fertil Steril 2006;85:882–887. [PubMed: 16580369]
- 8. Abma JC, Chandra A, Mosher WD, Peterson LS, Piccinino LJ. Fertility, family planning, and women's health: new data from the 1995 National Survey of Family Growth. Vital Health Stat 1997;23:1–114.
- Meeting the health promotion needs of Hispanic communities. Policy and Research, National Coalition of Hispanic Health and Human Services Organizations (COSSMHO). Am J Health Promot 1995;9:300–311. [PubMed: 10150733]
- 10. Seijo R. Language as a communication barrier in medical care for Latino patients. Hispanic J Behav Science 1991;13:363.
- 11. Todd KH, Samaroo N, Hoffman JR. Ethnicity as a risk factor for inadequate emergency department analgesia. JAMA 1993;269:1537–1539. [PubMed: 8445817]

 Perez-Stable EJ, Napoles-Springer A, Miramontes JM. The effects of ethnicity and language on medical outcomes of patients with hypertension or diabetes. Med Care 1997;35:1212–1219. [PubMed: 9413309]

- 13. Morales LS, Cunningham WE, Brown JA, Liu H, Hays RD. Are Latinos less satisfied with communication by health care providers? J Gen Intern Med 1999;14:409–417. [PubMed: 10417598]
- 14. Fernandez A, Schillinger D, Grumbach K, Rosenthal A, Stewart AL, Wang F, et al. Physician language ability and cultural competence an exploratory study of communication with spanish-speaking patients. J Gen Intern Med 2004;19:167–174. [PubMed: 15009796]
- 15. Carrillo JE, Green AR, Betancourt JR. Cross-cultural primary care: a patient-based approach. Ann Intern Med 1999;130:829–834. [PubMed: 10366373]
- Waitzkin H, Cabrera A, Cabrera EAD, Radlow M, Rodriguez F. Patient-doctor communication in cross-national perspective. Med Care 1996;34:641. [PubMed: 8691907]
- 17. Juckett G. Cross-cultural medicine. Am Fam Physician 2005;72:2267–2274. [PubMed: 16342851]
- Kagawa-Singer M, Kassim-Lakha S. A strategy to reduce cross-cultural miscommunication and increase the likelihood of improving health outcomes. Acad Med 2003;78:577–587. [PubMed: 12805036]
- 19. Phillips KA, Mayer ML, Aday LA. Barriers to care among racial/ethnic groups under managed care. Health Aff 2000;19:65–75.
- Rockville, MD., editor. National Healthcare Disparities Report. Agency for Healthcare Research and Quality; 2004.
- 21. Jain T, Hornstein MD. Disparities in access to infertility services in a state with mandated insurance coverage. Fertil Steril 2005;84:221–223. [PubMed: 16009188]
- 22. Betancourt JR, Green AR, Carrillo JE, Ananeh-Firempong O. Defining cultural competence: a practical framework for addressing racial/ethnic disparities in health and health care. Public Health Rep 2003;118:293–302. [PubMed: 12815076]
- 23. Bigby, J. Cross-Cultural Medicine. Philadelphia, PA: American College of Physicians; 2003.
- 24. Crosson JC, Deng W, Brazeau C, Boyd L, Soto-Greene M. Evaluating the effect of cultural competency training on medical student attitudes. Fam Med 2004;36:199–203. [PubMed: 14999577]
- 25. Crandall SJ, George G. Applying theory to the design of cultural competency training for medical students: a case study. Acad Med 2003;78:588–594. [PubMed: 12805037]
- 26. Bussey-Jones J, Genao I, St George DM, Corbie-Smith G. Knowledge of cultural competence among third-year medical students. J Natl Med Assoc 2005;97:1272–1276. [PubMed: 16296218]
- 27. Weissman JS, Betancourt J, Campbell EG, Park ER, Kim M, Clarridge B, et al. Resident physicians' preparedness to provide cross-cultural care. JAMA 2005;294:1058–1067. [PubMed: 16145026]
- 28. Park ER, Betancourt JR, Kim M, Maina AW, Blumenthal D, Weissman JS. Mixed messages: residents' experiences learning cross-cultural care. Acad Med 2005;80:874–880. [PubMed: 16123471]
- 29. Canales MK, Bowers BJ. Expanding conceptualizations of culturally competent care. J Adv Nurs 2001;3:102–111. [PubMed: 11555054]
- 30. Dogra N, Carter-Pokras O. Stakeholder views regarding cultural diversity teaching outcomes: a qualitative study. BMC Med Educ 2005;5:37. [PubMed: 16259640]
- 31. Hunt LM, de Voogd KB. Clinical myths of the cultural "other": implications for Latino patient care. Acad Med 2005;80:918–924. [PubMed: 16186611]
- 32. Barkin SR, Balkrishnan R, Manuel J, Hall MA. Effect of language immersion on communication with Latino patients. N C Med J 2003;64:258–262. [PubMed: 14983612]
- 33. Assemi MC, Cullander, Hudmon KS. Implementation and evaluation of cultural competency training for pharmacy students. Ann Pharmacother 2004;38:781–786. [PubMed: 15026567]
- 34. Price EG, Beach MC, Gary TL, Robinson KA, Gozu A, Palacio A, et al. A systematic review of the methodological rigor of studies evaluating cultural competence training of health professionals. Acad Med 2005;80:578–586. [PubMed: 15917363]
- 35. Reimann JO, Talavera GA, Salmon M, Nuñez JA, Velasquez RJ. Cultural competence among physicians treating Mexican Americans who have diabetes: a structural model. Soc Sci Med 2004;59:2195–2205. [PubMed: 15450697]

36. Rivadeneyra R, Eldlerkin-Thompson V, Silver RC, Waitzkin H. Patient centeredness in medical encounters requiring an interpreter. Am J Med 2000;108:470–474. [PubMed: 10781779]

37. Baker DW, Hayes R, Fortier JP. Interpreter use and satisfaction with interpersonal aspects of care for Spanish-speaking patients. Med Care 1998;36:1461–1470. [PubMed: 9794340]

Table 1

Demographics of study population

Characteristics	Women (n = 105) n (%)	Men (n = 40) n (%)			
			Age		
			Mean age (range)	33.0 (18–48)	33.5 (19–53)
Place of birth					
Mexico	57 (54)	25 (62)			
Central America	34 (33)	11 (28)			
United States	7 (7)	1 (2)			
South America	6 (6)	3 (8)			
anguage spoken					
Spanish only	91 (87)	33 (83)			
Bilingual	14 (13)	7 (17)			
Marital status					
Married	55 (52)	22 (55)			
Religious affiliation					
Roman Catholic	87 (83)	36 (90)			
Protestant	5 (5)	0 (0.0)			
Other	9 (9)	2 (5)			
No religious affiliation	4 (4)	2 (5)			
Participation as couple or individual					
Couple	39 (37)	39 (98)			
Individual	66 (63)	1 (2)			
Education					
Grade school only	36 (34)	15 (38)			
Some high school	16 (15)	7 (18)			
High school graduate	24 (23)	12 (30)			
Some college/vocational training	20 (19)	4 (10)			
College graduate	9 (8)	2 (5)			
Employment					
Currently working	49 (47)	35 (88)			
Unemployed	31 (30)	4 (12)			
Homemaker	25 (24)	0			
Type of Employment					
Unskilled	42	20			
Semi-skilled	16	5			
Skilled	4	8			
White-collar	17	6			
Health Insurance					
Uninsured	85 (82)	32 (80)			
Medicaid	12 (11)	0 (0)			
Private	8 (7)	8 (20)			

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>\$41,000

Women Men (n = 105)(n = 40)n (%) n (%) Characteristics Annual Household Income \$10,000 or less 28 (27) 8 (20) 11,000 - 20,00040 (38) 16 (40) \$21,000 - 30,000 18 (17) 10 (25) \$31,000 - 40,000 7 (7) 5 (13)

5 (5)

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1 (3)