

Original Research

Vietnamese diabetic patients and their physicians: what ethnography can teach us

ABSTRACT ● **Objectives** To describe the cultural context of type 2 diabetes mellitus among Vietnamese immigrants in the United States, including people's ideas about cause and proper treatment; and to suggest ways in which better control of the disease can be achieved in this population. ● **Design** The method was ethnographic. A native speaker used a structured interview guide to talk with 38 Vietnamese patients, and family members of 2 other patients, being treated for type 2 diabetes. In addition, 8 Vietnamese health providers—5 physicians, 2 nurses, and an herbalist—were interviewed. ● **Setting** A low-income area of southern California populated by a large number of Vietnamese. ● **Participants** Forty patients being treated for type 2 diabetes and 8 health practitioners. ● **Results** Three quarters of the patients had not achieved good control of their diabetes. Ideas about the cause and proper treatment of the disease were culturally shaped. Many patients used eastern (herbal) medicine and described a strong aversion to insulin injections. Patients stopped taking their oral medications when using eastern medicine, and a quarter lowered their dose whenever they felt “out of balance.” Almost two thirds had used traditional home remedies for diabetes. Two had received nonstandard medical care from neighborhood physicians trained in Viet Nam; 1 of these patients died during the study. ● **Conclusion** The Vietnamese community and physicians serving that community need culturally appropriate education about type 2 diabetes and modern therapy for the disease.

Close to 800,000 Vietnamese immigrants were living in the United States in 2000.¹ Nationally, mortality related to type 2 diabetes mellitus is higher for Asians and Pacific Islanders than for non-Hispanic whites,^{2,3} and there is evidence that many Vietnamese are unfamiliar with the clinical manifestations of the disease. For example, a telephone survey of 426 Vietnamese in Houston, Texas, found that 60% did not recognize any signs or symptoms of diabetes when important symptoms such as increased urinary frequency were read to them.⁴

For Vietnamese immigrants, lack of past contact with diabetic patients may be a factor in their unfamiliarity with the disease. Type 2 diabetes is relatively uncommon in Viet Nam, where it is called *tiêu đường*—literally, “urinate sugar.” (In rural areas of the country, people have traditionally diagnosed it by seeing ants attracted to the urine.) In the United States, however, its prevalence is increasing in Vietnamese as in other ethnic groups, perhaps because Vietnamese immigrants have adopted a higher-calorie diet and more sedentary lifestyle that puts people at risk of developing obesity, a major risk factor for the disease. One primary care physician in San Jose, California, reported that half of his Vietnamese patients had type 2 diabetes (Dr Alfonso Bañuelos Jr, oral communication, July 2000).

Our study was carried out in Orange County, California, home to the largest number of Vietnamese (nearly 140,000) outside of Viet Nam.^{5(p33)} As in national data, county figures show higher diabetes-related morbidity and mortality among Asians and Pacific Islanders than among non-Hispanic whites.⁶ In July 2000, we investigated factors underlying this increased risk. Through preliminary inquiries, we had learned that knowledge of diabetes—

especially early symptoms such as thirst—was minimal in the local Vietnamese community.

METHOD

We developed a 50-item Vietnamese-language interview guide to elicit patients' demographic information and their ideas about the cause and treatment of diabetes. Because the method was ethnographic, with a focus on understanding diabetes from the patient's point of view,⁷ we emphasized asking many follow-up questions, such as “Why did you do that?” and “Can you tell me about a time when that happened?” After the interview guide was reviewed by a Vietnamese physician for content validity, it was pretested on a small group of patients and put into final form (see this article on our web site for a link to an English version of the interview guide). The research protocol was approved by our university's institutional review board.

One of us (N N), a native speaker of Vietnamese, interviewed 38 patients with type 2 diabetes mellitus who were born in Viet Nam. Thirty-six were interviewed at the Nhân Hòa [“Harmony among the People”] Clinic in Garden Grove, California, which serves low-income Vietnamese patients from all over Orange County. They were approached when they came for appointments or diabetes classes. Four nonclinic patients were identified by a Vietnamese friend of the first author (D S M). Two of these were interviewed in their homes. The other 2 were hospitalized for severe complications of diabetes and were unable to answer questions, so we gathered information from relatives—a husband in 1 case, and a daughter in the other.

For clinic and hospitalized patients, we used medical

Dorothy S Mull

*Clinical associate professor
of family medicine*

Nghia Nguyen

3rd-year medical student

J Dennis Mull

*Professor of clinical family
medicine*

Keck School of Medicine
University of Southern
California
Los Angeles, CA 90033

Correspondence to:

Dr D S Mull

jcmull@apc.net

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records to classify their diabetes as “well controlled,” “fairly well controlled,” or “poorly controlled” using criteria described below. For the 2 patients interviewed at home, we obtained test results from records they had maintained. Diabetes was considered well controlled if patients had glycated hemoglobin (Hb A_{1c}) values of lower than 7%, fairly well controlled if they had values of 7% to 8%, and poorly controlled if they had values higher than 8%. If Hb A_{1c} readings were absent (31/40 patients), we assessed control by fasting serum glucose levels. We considered a level lower than 6.7 mmol/L (120 mg/dL) over a 3-month period as well controlled, a level 6.7 to 8.9 mmol/L (120–160 mg/dL) as fairly well controlled, and a level greater than 8.9 mmol/L (160 mg/dL) as poorly controlled.

The interviewer took detailed notes on patients' responses, including anecdotes and other information elicited by follow-up questions. When data collection was complete, 2 of us (D S M and J D M)—a medical anthropologist and a physician—independently summarized the quantifiable data and analyzed half of the qualitative data to identify recurrent themes.^{8,9} All interviews were then coded to this list of themes. Interauthor agreement (reliability) was virtually complete. We resolved the few initial discrepancies in coding by conferring with the interviewer. Finally, 2 Vietnamese physicians independently reviewed the themes and pronounced them consistent with their observations in the community.

Besides these physicians, we also interviewed 3 other Vietnamese physicians working at the clinic, 2 Vietnamese public health nurses, and a practitioner of eastern herbal medicine. These health care providers were asked to comment on findings from the patient interviews.

RESULTS

Patient characteristics

Patient characteristics are summarized in the table, which shows that three quarters of the patients studied had diabetes that was not well controlled. Women had received less education than men, and all 12 patients who were functionally illiterate were female.

Themes emerging from content analysis

Gender differences in education

Clinic personnel related the differences in education to a traditional expectation in Viet Nam that women would not work outside the home. They added that, in their experience, limited schooling was associated with inadequate understanding of diabetes medicines, fatalism, and reluctance to ask for transport to medical appointments. The public health nurses reported seeing poorly educated women in homes who had never received any biomedical treatment for their diabetes. They quoted 1 such woman as saying, “I’m old, and I don’t want to bother my son

Demographic and clinical characteristics of 40 Vietnamese diabetes patients, southern California, 2000

Characteristic	Patients, no. (%) or mean value
Sex	
Female	29 (72)
Male	11 (28)
Mean age (range), yr	59.0 (39–77)
Mean years (range) diagnosed with diabetes	6.2 (<1–22)
Mean years (range) in United States	12.9 (3–26)
Mean years (range) of schooling	9.2 (0–16)
Women	7.6 (0–12)
Men	13.0 (0–16)
Functionally illiterate	12 (30)*
Facility with English	
Little or none	25 (62)
Able to converse easily	15 (38)
Living situation	
Married and living with spouse and/or married children	36 (90)
Living alone	4 (10)
Employed at least part time	9 (22)
Low income†	35 (92)
Status of diabetes‡	
Poorly controlled	18 (45)
Fairly well controlled	12 (30)
Well controlled	10 (25)

*All women.

†Income low enough to qualify for free physician visits, medicines, and blood tests, other than Hb A_{1c}.

‡See text.

with taking me to a doctor, so I just drink tea and pray that I won’t get any worse.”

Ideas about the causes of diabetes

When asked what had caused their disease, most patients mentioned worry and “sadness” brought on by stress (see box). Several noted that diabetes was much more common in the United States than in Viet Nam and attributed this to people being more worried and/or perspiring less in the United States. Perspiration was seen as desirable because it removed body toxins that could damage vital organs.

Treatment of diabetes

All patients were taking oral diabetes medicines, either alone (33/40) or in combination with insulin (7/40). However, judging from their medical records, only a few (9/40) had had even 1 Hb A_{1c} test to assess long-term serum glucose control. Clinic physicians said that cost was

Causes of diabetes

- “When my family had to leave Viet Nam in a boat in 1978 and we all suffered so much, that’s when I got diabetes”
- “I think I got diabetes because I was so weak after I spent all those years in a labor camp in North Viet Nam, and also I was so sad about my brother dying in the war”
- “I never had diabetes before, but after my daughter died of leukemia, I felt really dizzy, and my son took me to an emergency room. I had a blood sugar of 550, so they put me on insulin”
- “One of my friends suddenly got diabetes after his boss called him in and told him he was being let go from his job; he died not too long after that”
- “I’ve noticed that a lot of Vietnamese people get diabetes in the United States, but almost no one got it in Viet Nam. It could be because people are worried all the time—about their children not listening to them, about money. Also, people sweat less here, and the heat can’t get out of their bodies, and that can bring on diabetes, too”

a factor because people were charged \$15 for it, but it was also possible that the test was not prescribed frequently enough. The public health nurses had not even heard of it.

Our interviews highlighted 5 key themes associated with diabetes treatment (see the next box).

Use of eastern (herbal) medicine

Nine patients (8 female) said they had used eastern medicine for diabetes for as long as 6 months. During that

Attitudes about treatment of diabetes

- **Use of eastern (herbal) medicine** “Eastern medicine is much safer than doctors’ medicine because it cools your body and brings it back into balance. Doctors’ medicine has a lot of strong hot chemicals—you can get really bad side effects if the dose is too high for you”
- **Use of home remedies** “Since I was diagnosed with diabetes 2 months ago, I’ve been using different things from the market to bring my sugar down—bitter gourd, guava leaf tea, and banana tree sap. If those don’t work, then I’ll think about taking doctors’ medicine”
- **Attitudes toward insulin** “If you have to take insulin, for sure you’re going to die soon. Also, they say that some people go blind because of it”
- **Attitudes toward diet** “I know I shouldn’t eat too much sugar, but it’s hard because we like our coffee very sweet. I did change to that thin Indian rice because I heard it has less starch. It seems like people eat much more here than they did in Viet Nam”
- **Use of neighborhood doctors trained in Viet Nam** “We go to them because they understand our language and we don’t have to wait as long as in a clinic, but we can’t really ask them any questions. Some of them seem to be just rushing through”



Fresh and dried bitter melon—an item commonly used by Vietnamese immigrants to treat type 2 diabetes mellitus. Fresh bitter melon is boiled and eaten, and the cooking liquid is consumed as a tealike beverage. Some people grind it up raw and drink the resultant slurry. Dried bitter melon, sold in packets in Vietnamese markets, is used to make tea.

time, they had stopped their western (“doctors”) medicines for fear of undesirable “conflicts.” All had abandoned eastern medicine after their serum glucose levels soared. They said that they had tried it because it lacked the harmful side effects of western medicine, such as liver and kidney damage. Some were also seeking to cure, and not just treat, their disease—an outcome that they said was promised by newspaper and radio advertisements.

Clinic personnel explained that in traditional Chinese medicine, diabetes is thought to come from excess heat in the body. People are therefore wary of western pharmaceuticals, all of which are considered “hot” and laden with undesirable chemicals. Ten patients said that they lowered their maintenance dose of oral medication whenever they felt “out of balance.” One said that she halved her dose without telling her Vietnamese-speaking, US-educated physician because she felt dizzy. She explained that although the physician spoke Vietnamese, “he didn’t seem to understand, so I didn’t mention what I did.”

Patients said that although eastern medicine was available in capsule form, it was traditionally sold as a mixture of dried herbs sometimes wrapped in red or pink paper for good luck. They said that the herbalist did not need to be present; in fact, the medicine was usually dispensed by a shop assistant. They added that it was expensive—a week’s

supply cost \$35 to \$70. They described how they typically boiled the herbs in 3 cups of water until it evaporated down to 1 cup, then strained out the leaves and drank the tea.

We went to interview one herbalist in his shop, but he was reluctant to give details about his diabetes therapies. Keeping his distance, he remained partly hidden behind a curtain. He said only that his herbs were imported from China and worked by “cooling” the body and letting it “rest.” He saw patients primarily as walk-ins, and it appeared that no medical records were kept.

Use of home remedies

Twenty-five patients said that they had used traditional Vietnamese plant remedies (*thuoc vuon*, “garden medicine”), but only 2 of those patients had stopped their diabetes medications while using such remedies. Twenty-two had used bitter melon (*Momordica charantia*), often called bitter gourd (*kho qua* in Vietnamese), which resembles a knobby cucumber and is used in both fresh and dried form (figure). Five had made tea from guava leaves (*Psidium guajava*, Vietnamese *la oi*), and 3 had drunk sap, imported from Viet Nam, from the trunk of the seeded banana tree (*Musa velutina*, Vietnamese *mu chuoí hot*). All of these remedies were thought to lower serum glucose levels.

Attitudes toward insulin

There was a strong aversion to insulin injections. Two patients had refused them after a physician recommended them, and another said that he took them only when his blood glucose level was above 300 mg/dL [16.6 mmol/L]; otherwise, he relied on bitter melon.

Patients gave many reasons for disliking insulin. In order of frequency, these were the following:

- Taking insulin indicated that a person was gravely and chronically ill
- The needle was painful
- As a very “hot” substance, insulin would imbalance the body and cause severe consequences such as blindness
- A person might become dependent and require ever more insulin

The clinic pharmacist reported that about 30% of patients brought back half of their monthly insulin supply unused for these reasons.

We observed that some clinic physicians were feeding into patients’ negative attitudes by using insulin as a threat—warning people that if they did not take oral medications as prescribed, they would have to start taking insulin. We saw that people expressed great distaste when

insulin syringes were passed around at the diabetes classes accompanied by such comments.

Attitudes toward diet

Many patients said that in response to dietary advice, they had reduced their rice intake from 2 bowls to 1 at each meal or were eating less rice and more rice noodles (believed to contain more water and less starch). Although most were trying to avoid excessive consumption of sugar and fatty foods, several described problems posed by Vietnamese dietary habits, such as using heavily sugared condensed milk in coffee and eating heartily at weddings.

Use of neighborhood physicians trained in Viet Nam

Patients said they preferred Vietnamese physicians for easier communication, but 8 commented that US-trained physicians might be more skilled and “pay more attention” to patients than physicians trained in Viet Nam, some of whom were seen as mainly interested in making money. Indeed, histories of the 2 hospitalized patients suggest that some practitioners have not kept up with modern diabetes therapy.

In 1 case, an elderly woman diagnosed with diabetes for 10 years had reportedly had no blood tests for glucose levels at all, only annual urine tests administered by her physician, and she had never been told that diabetes was serious. When she was taken to the hospital after a major stroke, her serum glucose level exceeded 16.6 mmol/L (300 mg/dL). In the other case, a woman in her 60s who formerly took insulin had changed to a physician who took her off insulin and, according to her daughter, never gave her any advice except to limit salt intake. Her kidneys failed, her leg was amputated, and she died shortly after the interview took place.

Patients who had consulted neighborhood physicians trained in Viet Nam reported that consultations were brief and explanations minimal. Clinic physicians said that even in their own practices, a strong cultural belief that worry can worsen diabetes symptoms led them to avoid lengthy discussion of complications. These physicians also thought that traditional respect for elders sometimes created problems. They said that because patients disliked taking insulin, physicians sometimes kept them on oral medications alone even when control was inadequate. Or they accepted fasting serum glucose values as high as 8.9 mmol/L (160 mg/dL) to avoid confronting an older patient, although they knew that levels should be less than 6.7 mmol/L (120 mg/dL).

DISCUSSION

Many Vietnamese immigrants with type 2 diabetes mellitus know little about it, partly because in Viet Nam, high levels of physical activity and low-fat diets protected

against obesity, a risk factor for the disease. Most are also indigent, advanced in age, non-English-speaking, and steeped in traditional culture. These are significant barriers to prompt diagnosis and good control of diabetes. The present study highlights several common problems for such patients: lack of transport, reliance on eastern herbal medicine, aversion to “hot” oral medications and insulin injections, and patronage of physicians trained in Viet Nam who may be unfamiliar with new developments in diabetes therapy. Older women may be especially vulnerable because of their relatively low literacy rates and traditional unassertiveness in a male-dominated culture.¹⁰

Few of the patients in this study had achieved good control of their disease. Further, 2 of 4 patients interviewed outside the clinic had experienced very serious complications of their diabetes. The poor health of these patients indicates that future research should not be conducted solely in clinic waiting rooms.

Some of the themes that emerged from our study are similar to those found in other qualitative studies of patients who have diabetes. For example, patients saw perspiration as beneficial to health, a concept that has also been documented in British Bangladeshis.¹¹ The way in which physicians fueled patients’ fears of insulin injections—by warning them that if they did not comply with prescribed regimens, they would have to go on insulin therapy—has also been previously described in a study conducted in a Texas clinic serving Mexican Americans.¹²

In designing culturally appropriate interventions, health workers need to draw on findings such as those reported here. For example, people who are concerned about the effect of “hot” western medicines can be encouraged to “cool” the body with edible herbs or teas rather than discontinue their medications. Some plant-based remedies may actually have mild hypoglycemic effects.^{13,14} Focus groups should be conducted at gathering places like Vietnamese social centers to reveal knowledge gaps, access problems, and other causes of treatment failure. Also, because modern diabetes therapy changes rapidly, physicians serving this population should have their knowledge updated through continuing medical education classes. They should be cautioned not to give patients the idea that insulin is something to be feared.

Planners should use the Vietnamese predisposition to look with favor on blood tests to generate interest in diabetes screening in the community, and the screening should be free. Third-party payers should be lobbied to make the Hb A_{1c} test free as well. Vietnamese celebrities, some of whom are widely known to have suffered serious complications from type 2 diabetes, should be enlisted in such efforts.

Patients need to be taught how to request proper medications and periodic tests from their physicians, including the important Hb A_{1c} test, which the American Diabetes Association recommends should be performed at least every 6 months.¹⁵ The Diabetes Health Record cards newly available to patients in Vietnamese (Diabetes Control Program, California Department of Health Services, Sacramento, www.dhs.ca.gov/diabetes) hold much promise. Only through vigorous patient and physician education can Vietnamese people with diabetes have access to the best modern medical care.

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