

# FEELING THE PULSE IN MAYA MEDICINE: AN ENDANGERED TRADITIONAL TOOL FOR DIAGNOSIS, THERAPY, AND TRACKING PATIENTS' PROGRESS

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Throughout history, diagnostic tools utilizing the human senses, such as pulse diagnosis, have developed all over the world. In many areas where medical technology is limited or absent, they persist, whereas in other areas these skills are in danger of extinction. The practice of pulse diagnosis by the accomplished Maya healer, Don Elijio Panti, who lived in Belize, Central America, was observed over the final decade of his life and work. Don Elijio used pulse palpation as a diagnostic tool, therapeutic tool, and as a means for tracking patients' progress. He could diagnose a wide array of both physical and spiritual afflictions and was observed diagnosing 42 different conditions or states throughout this period by feeling the pulse. He recognized at least 28 distinct pulse types. Herein, the authors report the detailed system of an endangered diagnostic tradition as practiced by the late, acclaimed Maya healer, includ-

ing pulse-type descriptions and corresponding diagnoses. Pulse diagnosis is still practiced today among some of Belize's diminishing population of traditional healers, although no practice appears to be as developed as that of the previous generation of Maya healers. Furthermore, it is unlikely that there are new practitioners of pulse diagnosis in the Maya community to maintain and build on the disappearing tradition. Given the unfortunate paucity of data on Maya pulse diagnosis, the practice of pulse diagnosis in Traditional Chinese Medicine (TCM) is used as an illustrative framework for documenting Don Elijio's practice. Corresponding diagnoses from TCM and Don Elijio's system are compared, elucidating similarities between the two disparate medical systems.

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## INTRODUCTION

Practices of diagnosis through palpating the pulse can be found in the traditional systems of medicine in various cultures throughout the world. Feeling the pulse is still a widely used contemporary diagnostic tool, most well known in Traditional Chinese Medicine (TCM) and Ayurveda, since those practices of pulse diagnosis are not only recorded but are also still current topics in the discourses of their traditions. However, practices of pulse diagnosis have also been recorded in Japanese, Tibetan, Unani (Greco-Persian), and ancient Greek and Egyptian medicine.<sup>1-4</sup> To the majority of contemporary Western physicians, the pulse is largely only of concern and use in reflecting the state

of the cardiovascular system. In Western biomedicine, when the pulse is palpated, one is feeling the distention and subsequent recoil of the arterial wall as oxygenated blood pumped from the left ventricle of the heart circulates throughout the body. The pulse can be felt at any artery close to the surface of the body but is most commonly palpated at the radial artery on the palm side of the wrist. Although certainly used as a diagnostic tool, pulse palpation plays a minor role in technologically assisted diagnosis in the West.<sup>2</sup> Presented here is the distinct practice of pulse diagnosis by the late, highly revered, traditional Maya healer, Don Elijio Panti, who resided for many decades in San Antonio, a Maya community located in the Cayo District of Belize, Central America.

It is not surprising that systems of pulse diagnosis have been developed and honed in various localities around the world, either in pretechnological societies or present day rural areas with limited access to modern diagnostic technologies. Many traditional medical systems rely on the human senses as their primary diagnostic tools. Pulse diagnosis is typically used in conjunction with other diagnostic measures, but in Don Elijio's practice, as well as in Ayurveda and TCM, it has a prominent role in diagnosing patients' conditions. Although a patient may choose to withhold or neglect to mention certain relevant information to the consulted healer, they cannot control what their pulse relays to the diagnostician. As Don Elijio always noted, "*el pulso me dice todo*," meaning "the pulse tells me all."

Originally from a small Maya village on the slope of Lake Petén Itzá in Guatemala, Don Elijio Panti was one of the most highly respected healers in Central America until his death in 1996 at the age of 103. Don Elijio learned much of what he knew

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about healing from his mentor while working in the chiclé camps in the Petén region of Guatemala in 1935; however, he considered God and the nine maya spirits to be his best teachers. Don Elijio was one of the very last Maya *b'men* (doctor/priest, literally translated as "one who knows") of his culture residing in Belize, which is the highest rank of traditional healer in Maya culture.<sup>5,6</sup> He was a master herbalist and diagnostician and highly sought after for his healing abilities. In our attempts to document, communicate, and encourage the revitalization of endangered ethnomedical traditions, we herein report the entirety of the information collected on Don Elijio's practice of pulse diagnosis, the depth and complexity of which we consider to be unmatched by any of the extant traditional Maya healers in Belize, and perhaps all of Central America.

## METHODOLOGY

Don Elijio's practice of pulse diagnosis was observed by Rosita Arvigo during her apprenticeship with the healer between the years of 1984 and 1996, and beginning in 1987 also formally studied as part of the Belize Ethnobotany Project conducted by MJB and RA. The table of conditions and states diagnosed by Don Elijio through pulse palpation (Table 1) was compiled from various field notes recorded during these years. Don Elijio did not have his system of pulse diagnosis recorded in any way, nor did he have names for the pulse types he recognized. To organize his system, a framework borrowed from TCM was utilized. Pulse-type descriptions from one particular text, *Chinese Herb Medicine and Therapy*,<sup>7</sup> were translated into Spanish and read to Don Elijio to elicit, as near as was possible, a complete set of pulse types and corresponding diagnoses recognized by the healer. For each pulse type, Don Elijio was asked whether or not he recognized the pulse type, and if so, what the corresponding diagnoses could be. Additionally, he was asked to add any other pulse types that he recognized that were not part of the system presented from the text on TCM pulse types. All of these responses were compiled to create Table 2. We acknowledge that some of the Chinese pulse types from *Chinese Herb Medicine and Therapy*<sup>7</sup> may not be recognizable by the names listed to current practitioners of TCM. However, this was the original document used for eliciting Don Elijio's system of pulse diagnosis, and unfortunately, as he is no longer with us, we are unable to repeat the study with a more authoritative, widely used text on pulse types and descriptions in TCM. Thus, for those with knowledge of TCM pulse diagnosis, the pulse descriptions themselves in Table 2 may be less ambiguous points of reference than the pulse-type names.

## RESULTS

Pulse was used by Don Elijio to diagnosis a wide variety of afflictions, noting in particular its pace and intensity. From observation, he was seen to be able to diagnose at least 42 conditions or states through feeling a patient's pulse (Table 1). The pulse of a healthy individual could easily be felt at the radial artery on the wrist above the thumb. The higher up the arm he would need to go to find the pulse would be indicative of the severity of the ailment, be it physical or spiritual. A healthy

**Table 1.** Conditions and States Diagnosed by Don Elijio Through Pulse Palpation

Physiological conditions
Anemia
Blood clots
Common cold
Constipation
Diarrhea
Gastritis
Intestinal parasites
Internal bleeding
Irregular menstruation
Migraine
Mucous congestion
Poisoning
Rheumatism
Scanty menstruation
Skin conditions
Systemic toxemia
Spiritual and culture-bound diseases
<i>Descuido</i> (lack of proper care to body)
<i>Envidia</i> (envy)
<i>Friedad</i> in women (coldness in organs)
Insanity
<i>Irritacion</i> (hot head and belly with cold hands and feet in infants)
<i>Pasmo</i> (blocked, trapped, or bruised blood)
<i>Pesar</i> (grief)
Spirit possession
<i>Susto</i> (fright)
Visions of evil spirits
Witchcraft
States
Approaching death
Chronic illness
Debility
Fatigue
Menarche
Menopause
Pain
Postoperative state
Recent wounds, falls, or blows
Winds
<i>Mal viento</i> (evil wind)
<i>Viento caliente de los Mayas</i> (hot wind of the Mayas)
<i>Viento de agua</i> (water wind)
<i>Viento de la milpa</i> (wind of the corn field)
<i>Viento de los cruces</i> (wind of the crossroads)
<i>Viento frio</i> (cold wind)

pulse was felt as steady and moderate, whereas a sick patient's could be felt as thin and weak or fat and rapid. Don Elijio would also say Maya prayers "into" the pulse as a component of treat-



**Table 2.** Maya Pulse Descriptions and Corresponding Diagnoses

	Pulse Type <sup>a</sup>	Pulse Description <sup>a</sup>	Don Elijo's Diagnosis <sup>b</sup>
1	Alternate pulse	Irregular, erratic beat, alternating back and forth between states	This person has a very bad case of <i>susto</i> if it is a child, and likely a mixture of hot and cold diseases if an adult
2	Big pulse	Resembles the large pulse, but is rapid, tight, and feels like the surface of a drum with outer tension and inner emptiness	A person who takes too many baths and is quite ill with hot and cold diseases
3	Chordal pulse	Vibrates full, long, hard, and forceful, like the taut string of a bow or piano	Signifies that the patient suffers from chronic rheumatism and has a cold
4	Fast pulse	Exceeds 90 beats per minute for adults or 6 beats per respiratory cycle	Signifies the presence of rheumatism or <i>susto</i> (fright) in the patient
5	Feeble pulse	Very subtle and almost undetectable	Signifies a person with constitutional weakness, cold in the body ( <i>frieldad</i> ) and anemia; <i>frieldad</i> in women leads to infertility, painful menses, leukorrhea, and tiredness; <i>frieldad</i> in men leads to impotency, burning and mucus in the urine, constipation
6	Firm pulse	Forceful and long under both heavy and light pressure and remains even when pressure is reduced	A physically healthy, vital person
7	Harsh pulse	Beats harshly, roughly, and irregularly	Signifies that the patient has "sick blood," which means they are anemic or have toxic blood
8	Hidden pulse	One must depress the artery against the radius to feel such an extremely submerged pulse	Signifies a person with a nervous disorder, blood clots, and a chronic, perhaps hidden disease
9	Hurried pulse	Characterized by 7 to 8 beats per respiratory cycle	This person is in pain
10	Knotty pulse	Resembles a slow pulse with an irregular rhythm	This person has a long standing rheumatic condition and a cold condition in the body
11	Large pulse	Forceful and full	This person eats too much food, and may have intestinal parasites, constipation, and obesity
12	Long pulse	The interval between beats stretches very long	Signifies a very sick person with "bad wind" disease (there are many wind diseases), as well as a mixture of hot and cold diseases
13	Moderate pulse	Feels buoyant, full, and soft and is neither quick nor slow, but stable	A person in a normal state of health and emotional balance
14	Moving pulse	Feels round and smooth, much like a pea	A very serious disorder
15	Rapid pulse	Beats rapidly and resembles the fast pulse but is also knotty and alternates between being rapid and moderate	This person is a chronic overeater but may be healthy nonetheless
16	Rapid, fat, and jumpy pulse <sup>c</sup>	Rapid, fat, and jumpy <sup>c</sup>	Signifies that the patient suffers from a spiritual disease such as envy or witchcraft
17	Scattered pulse	Feels void when lightly palpated and disappears when palpated heavily	A nervous but healthy person
18	Short pulse	Beat feels weak and passes quickly	A person with gastritis, constipation or <i>ciro</i>
19	Slippery pulse	Feels like rolling pearls	Signifies that the person has "bad blood" or systemic toxemia and needs a purge and cleansing teas
20	Small or fine pulse	Feels like a fine, soft thread	A person with "weak blood" and a stubborn constitution; may be an angry or bilious personality
21	Solid pulse	Feels strong under both gentle and heavy palpation	A healthy person has a solid pulse, which signifies both physical and spiritual balance
22	Soft pulse	Very small and soft, seeming to float and only felt with light palpation	A balanced state of health
23	Tense pulse	Feels like a turning rope when pressed lightly and feels rigid when pressed deeply	A person with "weak blood" and anemia
24	Terminal pulse	Multiple different pulse types that are all uneven and scattered and usually show multiple abnormalities	Patient is terminally ill, in particular if the irregular pulse is found only above the elbow

**Table 2.** Continued

	Pulse Type <sup>a</sup>	Pulse Description <sup>a</sup>	Don Elijo's Diagnosis <sup>b</sup>
25	Void pulse	Feels broad, but hollow like the end of a cut scallion	That of a person who has recently had an operation and been subjected to drugs and anesthesia
26	Watery pulse <sup>c</sup>	Watery <sup>c</sup>	Internal bleeding, often in the abdomen
27	Watery, bouncy, bubblelike pulse <sup>c</sup>	Watery, bouncy and bubblelike <sup>c</sup>	Signifies a patient with a skin condition
28	Weak or deficient pulse	When palpated lightly, feels small, sunken or submerged, but feels hollow when palpated heavily	Signifies that the patient has a sickness that is a combination of a hot and a cold disease (example: patient may have fever and catarrh); <i>irritacion</i> is a sickness of infants characterized by hot belly, hot head and cold, clammy hands and feet—that pulse would feel weak and deficient

<sup>a</sup>All pulse type names and descriptions are from Hsu and Peacher<sup>7</sup> with the exception of types 16, 26, and 27, which do not have Chinese equivalents and are therefore named from Don Elijo's descriptions.

<sup>b</sup>As recorded by Don Elijo's apprentice, Rosita Arvigo.

<sup>c</sup>Pulse type recognized only in the Maya tradition, with no Chinese equivalent. Thus, pulse type is named from Don Elijo's description.

ments, because he considered it a direct route to a person's blood, the essence of their being.<sup>5</sup> In his system, each ailment had a specific prayer to be repeated nine times, a religiously significant and sacred number to the Maya people.<sup>6</sup> Three prayers were said into the pulse at each wrist, starting on the right, then moving to the left, and completing the final three while holding the hand over the forehead of the patient. In addition to utilization of the pulse in diagnosis and as a therapeutic tool, Don Elijo was able to track his patient's progress through feeling the patient's pulse throughout their stay and during subsequent follow-up visits.

The full set of 28 pulse-type descriptions from *Chinese Herb Medicine and Therapy*<sup>7</sup> were translated to Spanish and read aloud to Don Elijo. Of these 28, he recognized 25 of these pulse types in his system also. Don Elijo did not recognize the floating pulse, the submerged or sunken pulse, or the late or slow pulse as they were described in *Chinese Herb Medicine and Therapy*.<sup>7</sup> However, he did recognize a total of 28 pulse types in his system as well. The three pulse types unique to Don Elijo's system are the watery pulse, the rapid, fat, and jumpy pulse, and the watery, bouncy, bubblelike pulse (Table 2).

## DISCUSSION

A brief introduction to some of the concepts particular to Maya medicine is needed here to understand some of the diseases Don Elijo diagnosed through feeling his patients' pulses. Contemporary Maya medicine maintains a rich system of explanations for diseases and other phenomena of human health, made even more complex through syncretic incorporations of health-related beliefs from other cultural systems.<sup>8</sup> Traditional Maya healers in Belize will first determine if the patient's affliction is due to physical or spiritual causes before beginning any treatment.<sup>6</sup> The symptoms can be the same for some physical and spiritual diseases, and illnesses can simultaneously have both types of causes.<sup>8</sup> The belief that health accompanies thermal equilibrium is one that is widespread in Central America and the

Caribbean. Any quick change in external or internal body temperature is believed to be the cause of many illnesses. Ailments, medicinal plants, and foods are almost all categorized as hot or cold; foods and medicinal plants categorized as hot are used to counteract the symptoms of cold ailments and vice versa.<sup>6</sup> Winds, which are also typically classified as hot or cold, merge the physical and spiritual worlds. They are believed to be the cause of many illnesses and can be thought of as pathways over which spirits and forces, both beneficial and harmful, travel. However, even though disease-causing spirits embody and travel on the winds, in the physical sense, the winds, like other hot and cold phenomena, disrupt the body's thermal equilibrium, causing illness by throwing the individual into a state of either excess cold or heat.<sup>8</sup> The Maya spiritual diseases and wind-borne illnesses diagnosed by Don Elijo are discussed in more detail below.

## Maya Spiritual and Culture-Bound Diseases

Most traditional peoples, including the Maya, have health conditions that are specific to their culture or locality. These are known as culture-bound syndromes or diseases.<sup>9</sup> *The DSM-IV-TR: Diagnostic and Statistical Manual of Mental Disorders*, published by the American Psychiatric Association, suggests that a culture-bound syndrome in the arena of mental illness "... denotes recurrent, locality-specific patterns of aberrant behavior and troubling experience that may or may not be linked to a particular DSM-IV diagnostic category."<sup>10</sup> Don Elijo characterized these conditions as having a spiritual origin and diagnosed and treated them as such. Spiritually based, culturally bound diseases such as *susto*, *pesar*, and *envidia* tend to have an accompanying pulse that is fat, rapid, and jumping; the fatter and faster the pulse, the more serious the condition, according to Don Elijo.

*Susto*, known in many Latin American cultures, can be translated as *fright* or *trauma* and can afflict a person of any age, but is seen more commonly in infants and young children. This spiritual disease can arise when one witnesses a particularly frightening occurrence or experiences something traumatic. Someone with *susto* is very unhappy, suffers from chronic indigestion and



gastrointestinal upsets, and cannot sleep, often experiencing nightmares. *Pesar*, or grief, can affect people of any age when a loved one has passed away or left the home and is often indicated by difficult, shallow, painful breathing accompanied by frequent sighing. *Envidia* is a spiritual disease, resulting when one is the object of another's envy. A person falls victim to this condition, particularly when the envy or jealousy creates a regular and long-term projection of negativity on to the victim. This can produce negative effects on both the emotional and physical well-being of a person. Victims of *envidia*, like *susto*, experience digestive upset and poor sleep patterns accompanied by nightmares, but also feel a lack of interest in the daily affairs of their life and a lack of self confidence often leading to a breakdown.<sup>6</sup> Conditions such as these are commonly presented by people from this region to physicians in local medical clinics; even when the patients have immigrated, for example, to the United States, they still consider culture-bound syndromes a significant health issue.<sup>9</sup>

The recognition that changes in emotional states are also reflected in the pulse is not limited to Maya medicine. The ancient Greek physician known as Galen (Claudius Galenus of Pergamum; 129-200 AD), whose philosophy influenced European medical practice for over a millennium, also considered the pulses that are correlated with certain emotional states to be distinguishable. He observed the pulse in anger to be deep, large, vigorous, quick, and frequent. Accompanying grief was a pulse small, slow, faint, and sparse. In sudden violent cases of fear, it is quick, tremulous, irregular, and uneven; however, in cases where fear has been present for a long time, the pulse was felt to be similar to that of someone with grief.<sup>11</sup>

### The Winds Recognized and Diagnosed by Don Eljio

As was widespread in traditional Maya healing, Don Eljio made a distinction between afflictions that were of natural causes and those that had spiritual or supernatural origins.<sup>6</sup> This distinction is commonly accepted by a significant proportion of the population throughout much of Latin America. Spirits in the Maya culture have limited domains of agency, and what they are able to do is related to the ways in which they manifest themselves in the world people inhabit.<sup>12</sup> There is a Maya belief that many spirits are embodied in the winds and their agency is limited to the domain of natural wind. It seems that individual varied wind spirits embody very particular winds associated with certain seasonal and weather-related characteristics, and through those they inflict distinct enough conditions to be distinguished through diagnosis. There are benevolent winds, malevolent winds, errant winds, and generally benevolent winds that can cause havoc when not respected or handled properly. Malevolent or bad winds, known as *mal vientos*, are believed to cause a multitude of ailments, of which the symptoms are many and diverse. One who has been afflicted with such a spiritual disease may display poor sleeping patterns accompanied by nightmares, depression, heart palpitations, lack of appetite, indigestion, itching skin conditions, and often hears voices.<sup>6</sup>

The winds link the natural world to the supernatural, each wind being a force with both a natural and supernatural component, which causes corresponding illness with both physical and spiritual symptoms. By feeling the pulse of his patients, Don Eljio was able to diagnose at least six different *vientos* that cause

both physical and spiritual symptoms. *Viento de agua* (water wind), which is caused by exposure to rain and dampness after hard work and perspiration, could be felt in the pulse, as could *viento de la milpa* (wind of the corn fields), caused by a sudden windy rain when one is working in or returning home from work in the cornfields, as well as *viento frio* (cold wind) caused by exposure to cold drafts. Other *vientos* that could also be diagnosed through pulse palpation were *mal viento* (evil wind) caused by evil spirits, *viento caliente de los Mayas* (hot wind of the Mayas), caused by errant Maya spirits who especially harm women sitting on their doorstep at dusk brushing their hair, and *viento de los cruces* (wind of the crossroads), caused by the presence of evil spirits and errant winds at crossroads.

Interestingly, the Chinese also recognize the involvement of winds in a vast array of human disease. Wiseman and Ellis<sup>13</sup> state that in TCM, wind is considered to be "swift and changeable, capable of rapid movement and frequent change and often invades the body in conjunction with other evils," and it is said in Chinese medicine that, "Wind is the chief of the hundred diseases." Diseases in TCM, considered to be caused by wind, are characterized by this changeability, and often symptoms such as wandering pain or itching are unfixed in their location. Wind is considered to be blustering and violent, able to cause serious damage in a short period of time. We turn now to other points of comparison between the traditional Chinese and Maya medical systems.

### Comparison of Maya Pulse Diagnosis to That of TCM

Palpation, particularly of the pulse, is one of the four major diagnostic techniques in TCM, in addition to observing, inquiring, and the concurrent act of listening and smelling. The most accurate diagnoses are made through the analysis of the complete set of information gained through the four diagnostic measures.<sup>14</sup> The pulse can be taken at different positions on the body, but for comparative purposes, pulse taking on *cun kou* (the wrist pulse) will be discussed. The diagnostician typically uses three fingers to palpate both wrists at three positions known as inch, bar, and cubit.<sup>15</sup> The total six positions (three on each wrist), can be felt at three depths or pressures, namely superficial, middle, and deep.<sup>16</sup> Don Eljio palpated the pulse by either using the index, middle, and ring fingers simultaneously or by using his thumb and seemingly only at the superficial level. He felt the pulse on the radial artery—first on the right wrist and then on the left. However, either wrist could be palpated, and differentiation between diagnostic quality was not made. Don Eljio used palpation of the pulse to track patients' progress; this can similarly be found in Chinese and Japanese practices, where pulse diagnosis is used to monitor the response of a patient's body to treatment.<sup>1</sup> The pulse is palpated often prior to treatment, several times throughout, and finally after treatment has been completed, noting any alteration.

Some interesting similarities emerge when information on TCM pulse types and corresponding diagnoses from various sources is compared with Don Eljio's diagnoses for similar pulse types. Not surprisingly, the two systems can feel a state of satisfactory health reflected similarly in the pulse. The firm pulse, which is forceful and long under both heavy and light pressure and remains even when pressure from the diagnostician is reduced, according to Don Eljio, indicates a physically healthy,





**Figure 1.** Don Elijio Panti feeling a sick child's pulse for diagnostic purposes.

vital person; in TCM, it denotes a firm conformation, as it does also in the solid pulse,<sup>7</sup> which feels strong under both gentle and heavy palpation and is indicative of both physical and spiritual balance in Don Elijio's system. The moderate pulse, which feels buoyant, full, and soft and is neither quick nor slow—but stable—is felt in a person in a normal state of health in both Chinese and Maya diagnostic systems.

More compelling are the similarities in diagnoses of dissatisfactory health. For instance, the feeble pulse or minute pulse, which is very subtle and almost undetectable, according to Don Elijio, would signify a person with a constitutional weakness, *frieldad* (cold in the body), and anemia. *Frieldad* in women leads to infertility, painful menses, leukorrhea, and tiredness. In men, it leads to impotency, burning and mucus in the urine, and constipation. This feeble pulse signifies deficient yang in TCM and may indicate deficiencies marked by extreme weakness, cold limbs, an aversion to cold, and in some cases cold uterine bleeding in females.<sup>14,17</sup> The harsh pulse, which beats harshly, roughly, and irregularly, signified to Don Elijio that the patient had "sick blood," which meant that they were anemic or had toxic blood. In TCM, this pulse can indicate the loss or stagnation of blood and is found in individuals lacking vigor.<sup>7</sup> The hidden pulse, which is so submerged that the diagnostician must depress the artery against the radius to feel the pulse, according to Don Elijio could indicate a nervous disorder, blood clots, and a chronic, perhaps hidden disease. Similarly, in TCM the hidden pulse can denote that the pathological site is deep within the body and is usually indicative of stagnant Qi or blood clots.<sup>7</sup> The large or big pulse is forceful and full and, according to Don Elijio, would indicate that the person eats too much food and may have intestinal parasites, constipation, and obesity. The same pulse in TCM can accompany abdominal pain, intestinal worms, distended abdomen, constipation, and is associated with excess stomach Qi.<sup>7,17</sup> The short pulse, which feels weak and passes quickly, would indicate that the patient has *ciro* (gastritis) and constipation, to Don Elijio, and in TCM can indicate the accumulation and stagnation of food and mucus.<sup>15,17</sup> Lastly, Don Elijio could diagnosis terminal illness in a patient if the pulse was highly irregular, particularly if the pulse could only be

detected above the elbow. Traditional Chinese Medicine has multiple terminal pulses, all of which are uneven and scattered and usually show multiple abnormalities, which can indicate approaching death.<sup>7</sup>

### A Disappearing Diagnostic Tradition

Evidence for the validity of pulse palpation as a valuable and useful diagnostic technique can be derived from observations of the degree of similarity between these two systems. Considered in conjunction with other parallels between the two cultures' medical systems, including acupuncture and the heat and cold duality in disease concepts, such similarity is even more intriguing.<sup>8</sup> Traditional Maya healers interviewed by Mexican physicians in Campeche and Yucatán "acknowledged that the art of reading pulse was, at one time, very advanced, but those who know it well are all very old or have passed on."<sup>8</sup> We believe that this is also the case with the contemporary Maya residing in Belize. As with the Maya in Campeche and Yucatán, the individuals in Belize with this knowledge are late in their years, and we are not aware of the training of any new practitioners in Maya pulse diagnosis. The paucity of data on the topic of Maya pulse diagnosis is unfortunate; however, traditional healers from all three Maya ethnic groups in Belize—the Mopan, the Q'eqchi', and the Yucatec—who continue to practice pulse diagnosis have been identified. We hope to continue to be able to study their practice of pulse diagnosis in attempts to document, communicate, and encourage the revitalization of this and other endangered ethnomedical traditions in Belize, which are valuable to the health and diversity of the country's people.

### STUDY LIMITATIONS

Don Elijio Panti passed away in 1996, and it has therefore not been possible to collect any additional data on his system of pulse diagnosis. The original inquiry used one particular text, *Chinese Herb Medicine and Therapy*,<sup>7</sup> to elicit Don Elijio's potential diagnoses for pulse-type descriptions read to him, translated from that document. We recognize that the text used is not one that is widely used today; however, since Don Elijio is no longer alive we cannot attempt the exercise with a source that is considered more widely authoritative in current TCM practices. Figure 1.

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