

# Discovering Miracles in the Mountains of Honduras

---

Mary Warner, M.D.  
*Radiologist*  
*Brigham and Women's Hospital*  
*Boston, Massachusetts*



Honduras is a vibrant country, brimming with clear turquoise waters, pristine beaches, lush jungles, breathtaking mountains, challenging rivers and fascinating ancient ruins. Vast expanses of Mother Nature are to be found everywhere. Yet, in 1998, Mother Nature dealt the country a massive blow when Hurricane Mitch, one of the deadliest hurricanes on record, swept through parts of Central America, killing more than 11,000 people of which about 60 percent were located in Honduras. With maximum sustained winds of 180 miles per hour, many small villages were annihilated and large swaths of land denuded of any vegetation. Scores of villagers were left homeless in outer lying areas with nothing left but the clothes they were wearing at the time.



The government, seemingly at a loss of what to do, gathered up those left homeless and transported many to the devastated plains in the mountains to begin life anew. They were given plastic tarps and a handful of other materials to build "homes," creating small tent villages. One such village became known as Nuevo Sacramento (New Sacramento), home to several hundred people. Located in the mountains about 30 miles outside of Tegucigalpa, the capital of Honduras, Nuevo Sacramento had no running water, sewage or electricity. Villagers could only access groundwater (contaminated) through a single well pump at the village center. Medical services were virtually nonexistent.

## Committed to Serve

In 2001, the situation in Nuevo Sacramento remained much the same. Fortunately, churches and other charitable groups began outreach trips to the village, albeit on a limited basis. That same year, our high school youth group at All Souls Congregational Church, located in Bangor, Maine, prepared to set out on a mission trip to help build homes and provide

spiritual support for this neglected village. One of our adult congregational members, a physician with medical mission experience in Africa, volunteered to join the group and bring much needed medical help.

With the ongoing needs so great, our church made a commitment to send a mission team to the area every two years, increasing its outreach especially in the medical care area. In 2007, the medical part of the team grew to five physicians and six other healthcare professionals. Along with the 39 teens and 20 other adults, we set out to build homes, work with the children and tend to a wide variety of healthcare needs in both Nuevo Sacramento and Agua Blanca (White Water), a similar village located about 10 miles away.

### **From Arthritis to Parasites**

Although a number of improvements had occurred in Nuevo Sacramento in recent times, including running water and electricity, there was still no sewage and the ground water remained contaminated. Agua Blanca had better facilities, including a church and a school, due to its proximity to the larger village of Ciudad Espania, but was an even poorer village with only a common cistern without any water purification system. Animals and livestock walked through both villages at will. This, along with inadequate disposal of human waste, created health issues such as parasites – a very common ailment – and were (and continue to be) largely responsible for the groundwater contamination.



Lack of nutrients in the villagers' diet was rampant as well, especially in the children. Despite poor diets, young children are expected to do chores requiring extensive upper body work early on in age. Consequently, we saw an unusual amount of elbow and shoulder arthritis, most notably in young women. Additionally, complaints of gastrointestinal distress, from other causes than parasites, were frequent. Naturally, as in every trip, we also saw many obstetrical cases.

Splitting our week between the two villages, we set up the "clinic" in the basement of a church in Nuevo Sacramento and in an abandoned church in Agua Blanca. The clinic included an intake area, vital statistic station and four physician stations. Fortunately, a number of our teens and a couple of college students



were fluent enough in Spanish to serve as translators. Rotating 12 teens and the college students, histories could be taken at the intake area with the help of one of our nurses. Additional translators worked with the nurses taking vitals and the doctors during the medical exams. The rest of the group was busy with construction projects and children's work.

We equipped the clinic with a variety of donated medications, medical supplies and 16,000 children's vitamins. Despite careful explanation on when and how often to take the latter, we quickly discovered that the vitamins were being consumed like candy. We resolved this situation by giving them to the school principal who distributed them daily. Toothbrushes and fluoride were also provided.

### **Premium Compact Ultrasound**

In support of diagnostic imaging needs for the clinic, *ZONARE Medical Systems* loaned us its *z.one ultrasound system*, a premium compact unit weighing just 5.5 pounds. Rechargeable battery packs powered the *z.one* system throughout our days in both clinics. Lacking electricity in the clinics, the battery-powered *z.one* system served as our only diagnostic imaging modality and we used it extensively with obstetrical patients as well as several patients with worrisome abdominal complaints.

Patients began arriving the first day individually and in entire families. We saw a wide variety of cases from abdominal pain to routine OB exams. Through it all, the *z.one* system performed extremely well, especially in such primitive conditions.

The color Doppler and PW Doppler provided excellent diagnostic information. The Auto-Opt also came in handy when needed. Just a touch of the button helped quickly capture a great image. This was especially useful during our busier times at the clinics and greatly contributed to the ease-of-use of the *z.one* system, and in turn facilitated rapid throughput.

The portability of the unit actually made use of ultrasound in this type of situation possible. I was able to transport the system, transducers and battery packs



easily between our camp grounds outside of Tegucigalpa, where I recharged the batteries each night, and the villages. Most importantly, both my fellow physicians and I were very impressed with the high image quality from such a compact unit.

These attributes and features were especially helpful with the obstetrical patients we saw. It was an emotional experience to watch the faces of the mothers-to-be, thrilled to see their unborn babies. Many literally shed tears of joy at the sight of these precious miracles they were carrying and seeing for the first time.

### **Miracles Through the “Eyes” of Ultrasound**

In all, we saw over six hundred patients in the Nuevo Sacramento and Agua Blanca. Houses were built, children taught and bodies healed. But, the truly fortunate ones were those of us who came to serve. Seeing lives touched, both physically and spiritually, helps you become aware of the miracles around you.

Looking at unborn babies for the first time through the “eyes” of ultrasound certainly emphasized these miracles. In fact, when asked what was one of their most important “*God sightings*” at the last group gathering, several teens who served in the clinic responded, “*watching the unborn babies on the ultrasound machine.*”

For all of us who were blessed to serve, it seems we indeed discovered miracles in the mountains of Honduras.

---

*Mary Warner is a practicing radiologist at the prestigious Brigham and Women’s Hospital, a teaching affiliate of Harvard Medical School. She received her medical degree from Duke University Medical School where she also completed her residency in diagnostic radiology. Her specialty is diagnostic ultrasound imaging in which she completed a fellowship at Vanderbilt University Hospital.*

