

Trip to Haiti Changes Lives – Students and Patients

What began as a discussion of endemic goiter during a lecture on the thyroid later resulted in three UT College of Medicine students traveling to Haiti and uncovering a problem previously unknown to the World Health Organization. Now these students are working to improve the health of an entire community.



On their way to the remote destination, Caleb Trent, COM '08 graduate (left), and Elliott Tenpenny, M4 (right), wave in the background.

It was a class taught by Lester VanMiddlesworth, PhD, MD, a distinguished professor in the Department of Physiology, that first peaked the interest of Elliott Tenpenny, M4; Philip Sutherland, M2; and Caleb Trent, a 2008 UT COM graduate and now an intern in emergency medicine at Washington University. Dr. VanMiddlesworth discussed how iodine deficiency in certain regions could cause enlarged thyroids of entire populations or endemic goiter. He also shared the remarkable effect supplements can have on endemic iodine deficiency. Untreated it is currently the No. 1 cause of preventable mental retardation worldwide.

Then an invitation from a community leader in Haiti prompted these medical students to put into practice the things they had discussed in the classroom and would lead Tenpenny to say, "This has been the most important thing that I have been involved in while in medical school."

Organizing the trip themselves, the UTHSC medical students set off to investigate the health of a community in the mountainous area northwest of Jacmel Haiti. They made their first weeklong trip in

March 2008, and then they returned for two more weeks at the end of July.

"Working on this project has made me think about public health issues and international efforts to eradicate treatable and preventable diseases," said Sutherland. "I have a growing realization of the importance of this project and the way it is impacting my development both as an individual and as a future clinician."

Before leaving, the students sought the advice of Dr. VanMiddlesworth; he encouraged the medical students that it would be an important problem to investigate and would require collecting specimens from the natives they would meet. Obtaining 100 small, clean tubes in which to collect samples, these UT COM students set off on their journey.

To Dr. VanMiddlesworth's surprise, the students returned with pictures of people with goiters and 88 urine samples transported back to the United States on ice for preservation. The samples were then sent to Boston University Hospital to be analyzed by Dr. Lewis Braverman's lab.

The transportation of the samples was not as easy as it may sound. Traveling over incredibly rugged terrain, it was

a full day journey by truck, mule and foot to get to the people they would screen.

As guests of community leaders, the med students were driven by truck from

Port Au Prince to Jacmel on a road that turned into a gravel track in a dry riverbed. When the road in the riverbed ended, the medical students still had a three-hour walk to the village in which they were headed.

Thankfully, natives met the medical students to help them across the mountain. Supplies were loaded onto mules and carried on people's heads. "When we arrived there, many of the children would run from us, scared," Tenpenny remembered. "The leaders in



Left to right: Upon their return, Lester VanMiddlesworth, PhD, MD; Elliott Tenpenny, M4; and Philip Sutherland, M2, discussed the results of the students' findings.

the community then told us that we were the first white people to have ever traveled to that area, and the first the children had ever seen."

Even with this hesitation from some of the younger children, the students agree that the reception was incredibly warm, and they felt very welcomed.

In order to set up a makeshift clinic, the local church was used, with sheets curtaining off small areas so that the patients would have some degree of privacy. Patients were interviewed individually, a brief history was obtained, and if the person wanted to participate in the research, they were photographed and donated urine samples.

When it was time to leave, community members again loaded the mules and themselves and set off for a three-hour hike down the mountain – this time in the pouring rain.

The provided samples showed that moderate to severe iodine deficiency and endemic goiter existed among this community. "I am proud to have been able

to expose a previously unknown group of people suffering from a major disease to the worldwide medical community," said Tenpenny. Explaining further, he said, "This was previously unknown to the World Health Organization as only three studies have been done to investigate iodine deficiency in Haiti in the past 20 years."

These students are continuing to make this problem known to the health care community through presentations and publication. They have shared their research findings at the 79th annual meeting of the American Thyroid Association and are also submitting a paper for publication. Information

was also shared at endocrinology and physiology grand rounds seminars on the UTHSC campus in Memphis.

"Our students are highly motivated to use their learning to improve communities," praised Dr. VanMiddlesworth. "Their efforts have resulted in increased understanding and major contributions to the people involved."

But, these UT College of Medicine students and graduate have not stopped with papers and presentations.



A large crowd waits inside the church to be seen by the "doctors."



Community members gather outside the church.

After receiving full support from the government of Haiti, Sutherland, Tenpenny and Trent are beginning treatment for the at-risk individuals in this population and are developing a long-term plan for the area.

"Identifying the problem is not enough to satisfy me," stated Sutherland. "I find myself challenged to work towards a solution that will positively impact the health of this community (in Haiti).

"I am quite excited when I think about the potential benefits for this community if a treatment plan can be successfully implemented," he continued.

"I think there is much work to be done, and I am excited to see where this takes us and UT in the future as we combat this problem," added Tenpenny.



Locals helped carry the medical supplies to the village.

