

FOCUS ON HEALTH**UTHSC students' project becomes an international health mission**

Special to the Tri-State Defender

It is, perhaps, a student's greatest dream. You embark on a medical research project with peers and discover new information that professionals want you to discuss at medical conferences and conventions.

That dream came true for three determined University of Tennessee College of Medicine students who went to Haiti to collect research and ended up uncovering a problem that merited the attention of the World Health Organization. Their work now is helping to improve the health of an entire community they have come to know and respect.

This adventure grew out of a classroom discussion on how iodine deficiencies in certain regions could cause enlarged thyroids of entire populations, or "endemic goiter." The class, taught by Lester VanMiddlesworth, PhD, MD, a distinguished professor in the Department of Physiology, piqued the interest of Elliott Tenpenny, M4; Philip Sutherland, M2; and Caleb Trent, MD, a 2008 UT COM graduate and now an intern in emergency medicine at Washington University. The students learned the remarkable effect supplements can have on endemic iodine deficiency. Left untreated, it is the leading cause of preventable mental retardation worldwide.

The students wanted to do more with this knowledge. They were lucky enough to receive an invitation from a community leader in Haiti to conduct medical research in a mountainous area northwest of Jacmel, Haiti. They made their first weeklong trip in March 2008 and returned for two more weeks at the end of July. They said it was exciting to be able to put their classroom knowledge on this issue to such good use.

"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."

Added Tenpenny, "This has been the most important thing that I have been involved in while in medical school."

Dr. VanMiddlesworth worked as an adviser to the medical students who would have to undertake the difficult task of collecting and shipping specimens. Obtaining 100 small, clean tubes in which to collect samples, these UT COM students set off on their journey.

Traveling over incredibly rugged terrain, it was a full day's 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 destination.

The locals met the medical students to help them across the mountain. Supplies were loaded onto mules and carried on people's heads. During the journey the students found they had to learn about the culture and make



A trio of University of Tennessee Health Science Center students — Elliott Tenpenny, Philip Sutherland, and Caleb Trent — went to Haiti to collect research and now are committed to improving the health of an entire community. Here Haitian locals help carry medical supplies to the village. (University of Tennessee Health Sciences Center photo.)

some minor adjustments.

"When we arrived there, many of the children would run from us, scared," Tenpenny remembered. "The leaders in 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."

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.

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 transported to a lab at Boston University Hospital.

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.

sociation 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," said 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.

After receiving full support from the government of Haiti, Sutherland, Tenpenny and Dr. 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," said 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 said.

"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.

(Want to help these students continue their critical work in Haiti? Their next trip is scheduled for March 2009. Please send your check — made out to UTHSC Development Department — to 62 S. Dunlap, Ste. 500, Memphis, TN 38163. (Note the Special Education Fund — Endocrinology on the memo line.) A donation of iodized oil has been received; more is needed, as well as funds for air and ground travel.)