

## ACHSP Report for March 2014

After months of preparation, we launched our first round of community health research, this year in West Virginia, the weekend of March 1<sup>st</sup> with orientation and training. Our teams were comprised of student volunteers offering their one-week spring breaks over a span of three weeks.

This **first week** we had a small team with 6 students from **Eastern Mennonite University** and **Houghton College**, along with local volunteer, **Eric Autenreith**. While initially the small size was a disappointment, we discovered advantages in that we needed to learn how to record our data utilizing Garmin Rino 655T units that recorded photos, GPS locations, and served as walkie-talkies for communication between teams and coordinators. Peter Illyn had received 15 units from a special grant through Garmin and a funder (each unit retails for over \$500) just before coming out to West Virginia. This initial group helped us learn how to use the units and record the data. Even with the smaller crew, a nice number of family health surveys was gathered, even though the first Monday we could not get in the field due to inclement weather.

The **second week** we had 14 student volunteers from **Wheaton, Gordon, Covenant, Indiana Wesleyan, and Lee colleges**. **Karen Pritchard**, a lecturer at Pensacola State College in Florida, assisted all week. As planned, we relocated to another area of West Virginia for our **third week**, with 15 students from the **University of Wisconsin** and nursing students from **Mercy College** (Iowa). **Martha Doyle**, a psychology professor from Mercy College, participated with her students.



Janet Keating and Dustin White of OVEC visit

Our staff included **Peter Illyn, Jessica Illyn, and Allen Johnson**. **Sage Russo, Dustin White, and Eric Autenreith** also participated. Jessica Russo did an outstanding job handling registrations, cooking and cleanup, database entry, and group cohesion. Peter Illyn's leadership, coordination of activities, teaching, and personal charisma were exemplary. Allen Johnson assisted with surveys, transportation, database entry, planning and coordination, training, and mapping. The research is under the auspices of **Dr. Michael Hendryx** (now of Indiana University).

All our team members obtained IRB certification which entails integrity of data gathering. Locations were in Fayette, Raleigh, Kanawah, and Mingo counties of West Virginia. Although gathering



Peter Illyn training student volunteers for research

family health histories in impacted communities adjacent to mountaintop removal operations is our primary goal, a secondary goal is that the students have powerful experiences of their own during their volunteer week. We let our volunteers have a day during the midweek as a break from the surveys and as a time for some sightseeing, hiking, and refreshing. Building team cohesion was successful during these weeks.

During these first three weeks we conducted about 450 surveys in the impacted communities. Our follow up teams in May/June would gather up several hundred more in these communities as well as similar numbers in our control populations.

The Garmin Rino GPS units were excellent helps as we began to learn how to use them. Each team had a unit with a specific name. The units could operate as a voice walkie talkie, and also to pinpoint paired-team's locations, which helped considerably when the drivers needed to pick up a team to transport to another location. Furthermore, the photo capacity helped us locate houses in which no one was home, so a follow-up team can come by later, perhaps in the evening when folks might be home. Each team also carried paper tracking forms.

This study, overseen by researcher **Dr. Michael Hendryx**, is focusing particularly on populations adjacent to mountaintop removal operations. The GPS coordinates show home proximity, which we try to keep within 2 to 3 miles maximum. The completed study will safeguard personal privacy location. Each surveyor went through several hours of IRB training with certification on subject rights, confidentiality, and proper gathering of data. Each surveyor also learned proper administration of oxymeters, spirometers, survey protocol, along with an orientation to Appalachian culture.

The second round of data gathering began the weekend of May 25 and continued for four weeks utilizing both temporary stipend staff as well as short term volunteers. These teams conducted

surveys in **control populations** otherwise similar in socio-economic, lifestyle, and cultural traits, without being nearby mountaintop removal operations or other extraneous environmental pollution sources. After completing the control area surveys, the teams then would **revisit** the neighborhoods previously surveyed in March to gather data from people who had not been home on our earlier round, such as people who work day jobs.

This study builds upon three years of previous studies held in West Virginia, Kentucky, and Virginia, with increased sophistication and detail. Collected data will take a number of months to tabulate and analyze prior to dissemination. Some of our previous studies have been published in peer-reviewed journals.

These studies incur considerable expense. Thus we thank those who have contributed toward the ACHSP. All contributions toward CFTM from the first of 2014 through June went toward the ACHSP.



Student volunteers visit New River Gorge



Happy faces at the end of the Second Week



More happy faces at end of the Third Week

## Appalachian Community Health Survey Project: June Update

The 2014 ACHSP research is our most extensive since we began in 2011. Researcher **Dr. Michael Hendryx** uses analysis of previous studies to probe deeper into the hypothesis of a correlation between mountaintop mining pollution and increased rates of sickness in adjacent populations.

Our student volunteers are trained to objectively gather family health histories and conduct simple respiratory tests. However, each team of volunteers is available for only four days of service during a spring break. Home visits are during the shortened daylight hours during the month of March. They miss some of the people who work day jobs. This discrepancy raises the valid concern that people home during the day during weekdays are statistically more likely to be older or sicker while younger and healthier people are away at work. Studies in our previous years accounted for this by using the same methodology in our control populations with similar lifestyles, the variable being proximity to mountaintop removal activity.

However, this year's study used GPS coordinates for GIS mapping to correlate proximity to mountaintop mining operations. Second, in late spring we went back to the same communities in the evening hours when working people were home. Our control population data was gathered in a parallel way.

In order to do this second round, the ACHSP contracted several young people to conduct the studies over a four week period in late May and into mid-June. Several of these folks have been student volunteers in the past. Each was certified through the protocol of the **Institutional Review Board (IRB)** and trained to our research method. We stayed two weeks at Cedar Lakes near Ripley, WV, another week at Babcock State Park, and a fourth week in Mingo County. The team did much of its own cooking and housekeeping, planned routing for the next day's surveys, and inputted into our database.

Our diligent, hard-working, productive team members included **Sarah Yonts, Joel Miner, Shayna Balting, Jessie Daniels, Deborah Wigton, Calvin Wetzel, and Jenny Howland**. OVEC loaned us the stellar services of **Dustin White** for the four weeks, as well as one week from **Michael Cook** who was volunteering for the summer while working on a Ph.D. thesis. **Julien Rashid**, who had volunteered as a University of Wisconsin student during his March spring break, graciously volunteered his help the last nine days. **Peter Illyn** of **Restoring Eden** was with us the first two weeks. **Christians For The Mountains** supplied some days with **Jessi Russo**, with **Allen Johnson** along for the full ride.

This year's effort has been significantly more costly. Spring break projects have included supplemental financial contributions from students. This year's four additional weeks required from us the cost of contracting help, along with providing meals, lodging, and transportation expenses. OVEC provided much needed financial help as well as the

fulltime services of an employee, **Dustin White**. **Civil Society Institutes** and **The One Foundation** gave us a very generous financial support that helped immensely in covering expenses. And a number of **Christians For The Mountains** supporters contributed much appreciated monetary help. Thank you, each and all. And our grateful thanks for those who offered their **prayers**. And thanks be to **God** for an anointing, for success, and for safety!

Studies of this level can take a year to analyze, write up, and publish. In the meantime, those many previous studies, including those that the ACHSP helped on, need to be brought to the attention of our fellow citizens and to public policymakers.

**Dr. Michael Hendryx**, formerly at West Virginia University, took a professorship at Indiana University a year ago to be with his wife who had landed a position there. Hendryx continues to be committed to further research in Appalachia, including some blood tests to gauge air-borne particulates possibly associated with surface mining, a project we are also helped with.

However, unless this year's study reveals startling information that begs for further investigation, next year's student spring break might be in another region in the country where suspected environmental toxins might be impacting human health. Research here is strongly pointing to causality between mountaintop mining pollution and seriously impaired community health.

**The Precautionary Principle** suggests that if evidence points to an action, procedure, or practice that is causing harm, then those practices should be curtailed until remedied. **The ACHE Act (HR 526)** is a bill in Congress to address the research by freezing new or expanded Mountaintop Removal permits until a major federal study is conducted in communities adjacent to Mountaintop Removal operations. See [www.acheact.org](http://www.acheact.org) for further information on how you can be actively involved.



Shayna Balting and Calvin Wetzel



Dustin White and Jessie Daniels



Jessi Russo and Sarah Yonts



Joel Miner and Jenny Howland



Rebekah Epling with her father, Gary Epling