

## **IU Richard M. Fairbanks School of Public Health Highlights, 2014-15**

During the 2014-15 year, our third as a stand-alone school, the IU Richard M. Fairbanks School of Public Health (FSPH) continued to focus on growth. The year was characterized by significant expansion in all areas—our faculty and staff, student enrollment, academic offerings, community engagement, and research portfolio. In the coming year, we will maintain a rapid growth trajectory as we welcome a new associate dean, more new faculty, and more students from IUPUI and other universities in Indiana and abroad. We look forward to moving into a larger facility located in the health science epicenter on campus. Our continued growth and new location will position us well to become a true leader in the education of future public health researchers and professionals.

### **The Success of our Students**

- With tremendous pride, the IU Richard M. Fairbanks School of Public Health became accredited as a school of public health in 2015. Awarded by the Council for Education in Public Health (CEPH), this designation represented years of dedicated effort by many to build academic programs, acquire adequate numbers of faculty, and develop the administrative infrastructure to support the school. CEPH accredited FSPH for 5 full years, the maximum allowed for a new school of public health.  
<http://www.pbhealth.iupui.edu/index.php/news/school-news/iu-richard-m-fairbanks-school-of-public-health-indianapolis-earns-accreditation-from-the-council-on-education-for-public-health/>
- Student enrollment in the IU Richard M Fairbanks School of Public Health continues to trend upward, approaching 600 students and a 13% increase from the previous year. Growth in student enrollment was led by our undergraduate programs, up 51%. Our fastest growing program is our new Bachelor of Science in Public Health in Community Health, in which enrollment has tripled.
- The FSPH awarded our first doctoral degrees in Epidemiology and Health Policy and Management. Two students graduated from each program in 2014-15. This year was the second for awarding doctoral degrees in Biostatistics, with four graduates receiving this degree.
- The number of faculty and staff in the FSPH has increased by over 40%. Thirteen new faculty members have joined our ranks, including 2 new associate deans, 1 department chair, 4 regular faculty, 3 visiting professors, 2 lecturers and 1 research associate. They were joined by 7 new staff members. Now, 45 faculty members, 22 staff and 9 post docs are proudly affiliated with the FSPH.
- The FSPH Environmental Health Science Department has established a new cutting edge program in product stewardship, the first in the country. Product stewardship is the design and management of consumer products to minimize negative effects on human health and the environment. Graduate students can take these courses for academic credit

toward their degree program. Non-student professionals can also earn an online certificate in product stewardship via our Public Health Training Center.

### **Advances in Health and Life Sciences**

- Constantin Yiannoutsos, Ph.D., continues his work with the International Epidemiologic Databases to Evaluate AIDS. Funded by the National Institute of Allergy and Infectious Diseases (NIAID), this group collaborates to collect data at seven regional sites throughout the world to facilitate AIDS research. They do so by defining key variables, harmonizing data, and implementing methods that cost-effectively generate large data sets to answer high priority HIV/AIDS questions and streamline the research process.
- Yi Wang, Ph.D., assistant professor in Environmental Health Science, published three articles in 2014-2015 focused on air pollution exposure and cardiovascular disease. As lead author, he published a systematic review and meta-analysis in the Journal of the American Heart Association (August 2014) on short term changes in ambient particulate matter and the relationship with stroke risk <http://jaha.ahajournals.org/content/3/4/e000983.short> . His article in the Journal of Occupational & Environmental Medicine (September, 2014) looked at the relationship between ambient air pollution exposure and higher serum levels of adipokine leptin, a risk factor for cardiovascular disease in older adults [http://journals.lww.com/joem/Abstract/2014/09000/Long\\_Term\\_Exposure\\_to\\_Ambient\\_Air\\_Pollution\\_and.3.aspx](http://journals.lww.com/joem/Abstract/2014/09000/Long_Term_Exposure_to_Ambient_Air_Pollution_and.3.aspx). Dr. Wang was one of 10 authors in an article for the Journal of the American Heart Association (September, 2014). They found higher levels of hypertension in postmenopausal women who lived close to major roadways <http://jaha.ahajournals.org/content/3/5/e000727.short>.
- Chunyan He, Sc.D., was seventh out of 10 lead authors on a study that involved a consortium of 166 institutions and 204 investigators, published in Nature (July, 2014) <http://news.medicine.iu.edu/releases/2014/07/Komen-Chunyan.shtml>. This study showed that the age at which girls reach menarche can be influenced by either parent. A genetic epidemiologist at FSPH, Dr. He's contribution was the genotyping and analysis of 300 healthy breast tissue samples from the Komen Tissue Bank and 300 malignant breast tissue samples from the IU Simon Cancer Center Procurement and Distribution Core. The study was the first to show that imprinted genes can control the rate of development after birth. The age of menarche is important as a risk factor for chronic disease later in life, such as type 2 Diabetes, cardiovascular disease, and breast cancer. Dr. He's work was funded in part by the Indiana Clinical and Translation Sciences Institute.
- In a study published in the medical journal PLOS (October, 2014), Jiali Han, Ph.D., and his colleagues found that women with 15 or more cutaneous nevi, commonly known as moles, were 35% more likely to be diagnosed with breast cancer than women with no nevi. <http://inscopearchive.iu.edu/headlines/2014-03-13-headline-iuscc-gift-inscope.shtml>. Dr Han's team analyzed data for 74,523 white nurses who participated in the Nurses' Health Study. They found that higher mole counts indicated higher level of sex hormones, also a risk factor for breast cancer. Although more populations need to be

studied, higher mole counts could be used as a marker for breast cancer. Dr. Han is the inaugural chair of the FSPH Department of Epidemiology, and the Rachel Cecile Efrogmson Professor in Cancer Research at the Indiana University Melvin and Bren Simon Cancer Center.

- Hongmei Nan, M.D., Ph.D., research associate professor in the FSPH Department of Epidemiology, published an article in the Journal of the American Medical Association (March, 2015). Dr. Nan and her colleagues identified genetic markers that may help determine who benefits from regular use of aspirin and other non-steroidal anti-inflammatory drugs to lower one's risk of developing colorectal cancer. Although their findings need to be validated in further studies, they may facilitate targeted colorectal cancer prevention strategies, and they contribute to the field of precision medicine <http://www.indystar.com/story/news/2015/03/17/iu-research-helps-show-aspirins-effect-colon-cancer/24906225/>. For her work, Dr. Nan received the Junior Investigator Award from the International Aspirin Foundation, and her study was cited in a blog by Francis Collins, Director of the NIH.
- Ross Silverman, J.D., MPH, and Professor in the Health Policy and Management Department, published four articles, three in the areas of vaccination policy and one on the state medical board's role in opioid prescribing <http://onlinelibrary.wiley.com/doi/10.1111/pme.12580/abstract;jsessionid=7E7CF5A7D8435B511D68EA51D69777C4.f04t03>, . His January article in JAMA with Tony Yang, Sc.D., MPH, looked at the characteristics of strong exemption policies for vaccinations required for school entry <http://jama.jamanetwork.com/article.aspx?articleid=2091313>. . Professor Silverman partnered with Dr. Yang again on an article on social distancing policies for unvaccinated children in the event of an outbreak (New England Journal of Medicine, April, 2015) <http://www.nejm.org/doi/full/10.1056/NEJMp1501198>. In Chest (June, 2015) Professor Silverman and Kristin Hendrix, Ph.D. made the case for mandatory requirement of measles vaccine for school entry in the wake of the Disneyland outbreak. <http://journal.publications.chestnet.org/article.aspx?articleid=2319180>.
- Health Policy and Management Chair, Nir Menachemi, Ph.D., and newly hired faculty member, Joshua Vest, Ph.D., published an article in Health Affairs (March, 2015) <http://www.ncbi.nlm.nih.gov/pubmed/25732499>. Drs. Menachemi and Vest looked at the impact of health information exchanges (HIE) on the cost, service use, and quality of health care. Their meta-analysis of 27 studies showed that 57% of the studies reported some benefits of HIE. However, studies with the strongest designs, such as randomized controlled trials and quasi-experiments, were less likely to associate benefits from HIEs. Of the six studies with strongest internal validity, two found positive effects, three found no effects, and one showed negative effects.
- Stephen Jay, MD, and colleagues published an article in Hypertension (October, 2014) <http://hyper.ahajournals.org/content/64/4/891.long>, They developed a decision model to perform a cost benefit analysis on clinic monitoring of blood pressure vs. home monitoring, a more effective method for diagnosis and treatment of hypertension. Their findings showed the reimbursement of home blood pressure monitoring was beneficial

from the insurer's perspective compared to clinic monitoring. Dr. Jay is professor emeritus in the Health Policy and Management Department and founding chair of the Department of Public Health at the IU School of Medicine.

- Christopher Harley, PhD, a newly hired faculty member in the Health Policy and Management Department, is principal investigator on an RO1 award that aims to develop decision support for pain management in primary care settings  
<http://news.medicine.iu.edu/releases/2015/07/christopher-harle.shtml> .

### **Contributions to the Well-Being of the Citizens of Indianapolis, the State of Indiana, and Beyond**

- IU Richard M. Fairbanks School of Public Health MPH alumna Jennifer Walthall, M.D., MPH, was appointed Deputy Commissioner of the Indiana State Department of Health <http://news.medicine.iu.edu/releases/2014/10/Walthall.shtml>. Dr. Walthall is division chief of pediatric emergency medicine at IU School of Medicine, and practices medicine at Riley Hospital for Children/IU Emergency Medicine and Trauma Center. She graduated from the FSPH MPH program with a Social and Behavioral Science concentration in 2013. She is the first Indiana Deputy Commissioner to also serve as Director of Health Outcomes.
- The Indiana Public Health Training Center at the FSPH has combined forces with training centers from six states in Region 5 of the Health Research and Services Administration (HRSA) to provide collaborative programming. States participating with Indiana in the collaborative are Illinois, Michigan, Wisconsin, Ohio and Minnesota <http://pbhealth.iupui.edu/index.php/iphct/>.
- The FSPH has established a new Center for Public Health Practice. The center convened the first Council for Public Health Practice, a statewide group of researchers, practitioners, legislators and others interested in advancing public health in Indiana. The group has subdivided into four taskforces, each chaired by an academician and practice professional. Task forces are focused on assessing public health infrastructure, evaluating policy, promoting workforce development, and convening an annual conference.
- The FSPH has received a one-year grant from HRSA to provide traineeships to Master of Public Health students in Biostatistics, Epidemiology, and Environmental Health Science. The goal of the project is to expose students to the work of the state and local health departments as a way to encourage them to seek employment with these organizations post-graduation. Students are paid to work 350 hours for the department and complete academic requirements for their MPH internship and final project.

### **Collaboration**

- The FSPH is in the process of establishing a collaborative agreement with Franklin College to provide students an opportunity to earn their bachelor's degree and Master's in Public Health in 5 years. Students will study for their bachelor's degree in the first 3

years at Franklin, then complete the final two years at IUPUI to earn their master's degree. Collaborations with Earlham and Wabash College are also underway.

- A joint Master of Science in Biostatistics program with Shanghai Jiao Tong University in China is moving through the IUPUI approval process. Master's students would study mathematics in China in the first year of their program, and study Biostatistics in Indianapolis at FSPH in their second year.
- The FSPH continued its collaboration with Eskenazi Health Systems to conduct educational, research and service projects. Professor Kathryn Coe, PhD, Social and Behavioral Sciences, engaged her Culture and Qualitative Methods students at two clinic sites to investigate ways to assess and improve health of the population they serve. In addition to the West 38<sup>th</sup> Street facility, students worked for the first time at the Pedigo clinic, which is embedded in the Horizon House day shelter for homeless individuals. Students had the opportunity to investigate effects of the nutritional environment, chronic disease education and treatment, and mental health issues that impact homeless people <http://pbhealth.iupui.edu/index.php/about/faculty-and-staff/c/kathryn-coe-phd/>.
- In a joint project with the Marion County Public Health Department, Professor Cynthia Stone, Dr.PH, worked with students to conduct a Health Impact Assessment (HIA) on the health effects of not having a grocery store located in the Avondale Meadows neighborhood. The assessment showed that Meadows residents had higher rates of morbidity and mortality from nutrition-related chronic diseases and higher health care costs than the county at large. Dr. Stone testified before the City-County Council and was interviewed by the media about the HIA's findings. <http://www.wthr.com/story/28416441/new-grocery-for-avondale-meadows-area>. <http://fox59.com/2014/07/21/proposed-avondale-meadows-redevelopment-district-could-mean-big-improvements/> The Council subsequently designated the Meadows as a Tax Increment Finance district, and developers have secured a commitment from a national chain to locate a full service grocery store in the neighborhood. <http://www.wthr.com/story/28416441/new-grocery-for-avondale-meadows-area>.
- Three faculty members and several students in the Environmental Health Science Department are collaborating with the Indiana State Department of Health on a 5-year comprehensive asthma control project funded by the Centers for Disease Control. According to Steven Lacey, PhD, department chair and lead for the FSPH team, the project fits squarely at the intersection between public health and health care and will inform both sectors in preventing and treating asthma.
- IU Richard M. Fairbanks School of Public Health spearheaded the first annual World Heart Day. Partnering with Indianapolis' first lady, Winnie Ballard, Fairbanks staff mobilized several schools on the IUPUI campus to commemorate the day by walking from the University Library to the Circle downtown. The campus response was tremendous, with hundreds of people making the trek to the city's center <http://wishtv.com/2014/09/29/hundreds-walk-to-raise-awareness-for-heart-disease/>.

## Best Practices

- Epidemiology faculty member Thomas Duszynski, MPH, worked with the Indiana State Department of Health Enteric Disease Investigation Division to adapt an evidence-based program developed in Minnesota. The IU-SERT Program (IU Student Epidemiology Response Team) embeds teams of MPH students in the division to investigate outbreaks of enteric disease. The first team of four students is focused on investigation and follow-up of salmonella outbreaks. Plans are in process to expand the team's work to other enteric diseases, such as Norovirus, and to respiratory illnesses.
- Work continues on Professor Dennis Watson's R34 study funded by the National Institute on Drug Abuse (NIDA) and conducted in partnership with the Midwest Harm Reduction Institute of Heartland Alliance. The project seeks to adapt and study an implementation strategy for the Housing First (HF) model, an evidence-based practice for housing chronically homeless individuals with mental illness and substance use disorder. HF programming is wide-spread, and stronger implementation of its core components is likely to result in more effective programming with a larger public health impact.
- Indiana Public Health Training Center has launched a series of monthly webinars, entitled Public Health Insights and Innovations, for public health professionals already working in the field. The goal of the webinars is to disseminate best practices around the 10 Essential Public Health Services and to support health departments' application for accreditation. Nearly 300 practitioners have attended the first four webinars <http://pbhealth.iupui.edu/index.php/iphtc/insights-and-innovations/>.