

Putting knowledge to work – Implementation of programs, technologies and other tools

UNC public health researchers develop and adapt evidence-based solutions for specific health challenges. Through new techniques, tools, technologies and programs, they bring research findings to bear on such problems as obesity, tobacco use, adverse drug reactions, pollution, health inequities and others. By developing innovative ways to implement their research in the real world, they provide individuals, health advocates, care givers and practitioners with the best available ways to prevent, control and treat disease.

Designing model programs



Dianne Ward, EdD, professor, Nutrition

Challenge: Childhood obesity has more than tripled in the last 30 years.

Goal: Promote healthy weight among young children through better nutrition and more physical activity in early care and education settings

Intervention: An engaging interactive online tool that gives child-care providers direct access to proven strategies for healthy weight development from birth to age 5

How it works: Ward led the team that developed the successful Nutrition and Physical Activity Self-Assessment for Child Care (NAP SACC) program. NAP SACC improves child-care environments through free, Web-based training to health consultants in many states and addresses nutrition and physical activity practices at early care and education settings. Those consultants then help child care centers that serve children ages 2 to 5 boost food quality and physical activity. With a Blue Cross Blue Shield of North Carolina Foundation grant, Ward will create a new online resource for the state, improve its user-friendliness and adapt it for direct use by care providers in family homes and child care centers. Within the original NAP SACC model, a new “Baby NAP” component will address breastfeeding, infant feeding and other issues related to very young children. Both projects are administered by the UNC Center for Health Promotion and Disease Prevention.

See: www.napsacc.org



Vijaya Hogan, DrPH, clinical associate professor, Maternal and Child Health

Challenge: Even when health institutions request input from disadvantaged communities, barriers often prevent vulnerable populations from achieving health equity.

Goal: Establish a replicable model of community-centric engagement in maternal and child health

Intervention: Hogan and colleagues will develop a community-centered evidence base of specific and effective strategies to reduce infant mortality among African-American women in Philadelphia.

How it works: With funding from the W.K. Kellogg Foundation (www.wkcf.org), the Philadelphia Roadmap to Health Equity in Maternal and Child Health actively will engage African-American women affected by preterm birth and infant mortality in decision-making processes and practices that affect their lives. The project will build the women's research, leadership and critical thinking skills and develop their capacity to engage health and social services institutions. The women will determine how health care and social service delivery need to change and will present their recommendations to the relevant local and national institutions. Hogan's team will develop novel recommendations and strategies that can be used to address other health disparities through community engagement.

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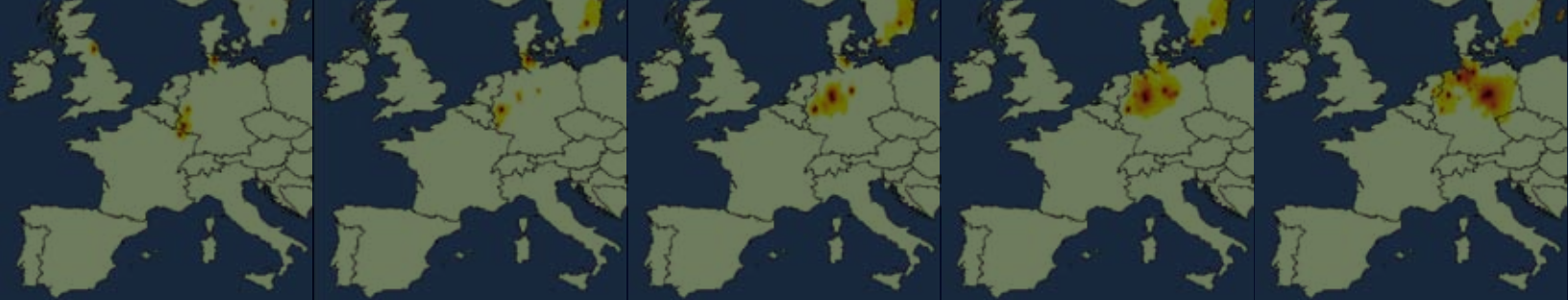
Challenge: Obesity and poor health can be exacerbated by social and economic factors.

Goal: Develop replicable products and strategies to address these problems across North Carolina and in other states

Intervention: Widen the impact of the successful HOPE (Health, Opportunities, Partnerships, Empowerment) Works program originated by the late Marci Campbell, PhD, former professor of nutrition at the School.

How it works: With funding from the Centers for Disease Control and Prevention, Carter-Edwards and her team determine the most effective ways to expand participation in HOPE Works, which helps low-income women in three rural eastern North Carolina counties set and meet goals for improved health and financial well-being. The Seeds of HOPE project team will revise the HOPE Works materials to make them easier to use, disseminate the program more widely through women's social networks and existing organizations, and identify which methods and products most effectively counter socio-economic impacts on health.

See: www.hpdp.unc.edu/research/current-projects/seeds-of-hope



Developing innovative techniques, tools and technologies



Kurt Ribisl, PhD, professor, Health Behavior

Challenge: Tobacco use remains the leading cause of preventable death in the U.S.

Goal: Enable tobacco control advocates to document the pervasiveness of tobacco industry activity in the retail environment and make the case for policy change

Intervention: Ribisl is developing customizable, observational assessment, mapping and policy-testing tools that will allow public health workers to gather, organize and display data about tobacco sales, marketing and promotions in stores.

How it works: Advocates collect assessment information on paper forms or with smartphones or other Web-enabled mobile devices. The mapping tool lets decision makers see where tobacco retail locations are concentrated, how close they are to schools and parks, and how the retailers will be impacted by various policy options.

See: www.countertools.org



Nabarun Dasgupta, MPH, doctoral candidate, Epidemiology

Challenge: Adverse events related to prescribed medicines and medical devices are under-reported.

Goal: Improve drug and device safety by streamlining the reporting process

Intervention: With collaborators at Children's Hospital Boston, Dasgupta developed a smartphone application that allows health professionals and patients to report adverse drug reactions more easily. This fall, the U.S. Food and Drug Administration launched an update that also allows reporting on medical devices. Future adaptations likely will track drug shortages, counterfeit drugs and adverse events related to vaccines.

How it works: With the customizable app, patients and physicians can look up specific medicines and devices, report issues, access user forums, and receive FDA safety alerts and relevant media updates. MedWatcher also can track how devices perform during public health emergencies.

See: www.medwatcher.org



This design sequence is based upon Dr. Marc Serre's epidemiological maps showing the spread of the Black Death in Europe between 1347 and 1351.



Marc Serre, PhD, associate professor, Environmental Sciences and Engineering

Challenge: Pollutants in the air and water adversely impact cardiovascular, respiratory and possibly neurocognitive and neurodevelopmental health.

Goal: Improve techniques for mapping air and water pollution in North Carolina and across the U.S.

Intervention: Serre has developed geostatistical techniques that allow more precise pollution exposure estimates for a given location.

How it works: His lab maps exposure, disease and risk statistics in space and time. Colleagues at UNC and in more than 40 countries use his mapping methods in epidemiological studies, for instance to discover and understand relationships between exposure to hazardous air pollutants and autism, sleep disturbance and cognitive disorders. Serre continues to perfect his techniques and discover new applications for them.

See: www.unc.edu/depts/case/BMElab



Deborah Tate, PhD, associate professor, Health Behavior, Nutrition

Challenge: Obesity-related illness is a significant problem among the more than 5 million veterans served by the U.S. Department of Veterans Affairs (VA).

Goal: Support veterans' self-guided efforts to achieve a healthy weight and a healthy lifestyle

Intervention: Tate helped create a new version of the VA's MOVE! weight-loss program by integrating evidence-based tools such as Telephone Lifestyle Coaching (TLC).

How it works: MOVE! TLC now provides veterans with a workbook to guide them through lessons and exercises. A trained coach calls regularly to discuss the lessons and support each veteran's progress. The TLC version of the VA program resulted in increased weight loss and high participant satisfaction. Tate is now developing an eMOVE! version that will integrate Web-based tools.

See: www.move.va.gov/WhatMoveCanDoForMe.asp

—Kathleen Kearns