



SHOW Conducts Variety of Health Research

SHOW's annual health survey is only one part of SHOW business. SHOW is also an infrastructure for health research, and has been conducting different types of public health studies for multiple agencies throughout the Badger state. A valuable resource for Wisconsin health research, SHOW provides a wide variety of services—from research planning to research studies and to the analysis of research findings. To date, SHOW has conducted 20 studies for outside organizations. Here are a few highlights from research collaborations:

County Health Departments Hire SHOW to Measure Health Programs

Kenosha, La Crosse, Manitowoc, Marathon, Rock, and Winnebago

In 2012, county health departments statewide were awarded grants from the U.S. Centers for Disease Control to increase healthy eating, decrease smoking and second-hand smoke exposure, and to increase exercise. SHOW developed a new study for this work to measure health before and after the county programs. SHOW trained 23 local researchers to meet with over 1,400 residents, and to collect a variety of health information and measurements. SHOW's work helped Wisconsin county health departments measure and improve health programs.

vizHOME: SHOW Joins UW Team to Improve Health Care at Home

UW School of Nursing, UW College of Engineering and the Wisconsin Institute for Discovery

SHOW joined a UW team to help improve how people manage health conditions in their homes. VizHOME researchers are connecting with SHOW participants (who have specific health conditions) and snapping images of the interiors of their homes. The images are rendered at the Wisconsin Institute for Discovery's CAVE, a virtual reality environment, and will be studied to find ways that people can better set up their living space to improve their health care at home. Funding came from the Agency for Healthcare Research & Quality.

SHOW Conducts Wisconsin Great Lakes Fish Consumption Studies

Wisconsin Department of Health Services (DHS)



SHOW is currently working on a third study for the Great Lakes Fish Consumption Study at DHS. SHOW visits many communities throughout the state to meet with fishermen and to interview them about their health, take health measurements

(blood pressure, height, weight, etc.) and collect a variety of samples for analysis—including hair samples, blood samples and samples of dust from inside homes. SHOW is helping DHS to look at a variety of health issues with this information, including levels of mercury, PCBs and PBDEs.

SHOW Collects Hair Cortisol to Help UW Researchers Understand Metabolic Disease

UW School of Medicine and Public Health and College of Letters and Science

SHOW is helping UW researchers look at the role that stress may play in metabolic disease. This disease is characterized by obesity, high blood pressure, high blood sugar levels, high triglycerides and low lipoproteins. SHOW will be providing health data, neighborhood data and hair samples for the research. Hair samples will be studied for markers of stress in blood levels over time.

SHOW Looks at Vitamin D Deficiency in Wisconsin

UW Department of Population Health Sciences

SHOW conducted a pilot study to measure levels of vitamin D in participants. The SHOW team used an instrument that measured color levels in skin, and also provided data about participants' diets and DNA samples for genetic testing. 300 SHOW participants chose to take part in the study, which is helping science better understand who may be at risk for deficiencies.

High Costs and Not Brushing Primary Causes of Poor Oral Health

20% of Wisconsinites do not receive necessary oral health care. According to SHOW research, the primary reason that adults aren't getting the care they need is because it costs too much.

1453 SHOW participants chose to take part in the oral health screening project, a collaborative study with the State of Wisconsin Department of Health Services. Oral health screening and survey data were used to look at oral health in the state.

Individuals who said that they did not brush their teeth daily had nearly twice as many oral health problems as those who reported daily brushing.

"The current Affordable Care Act doesn't include provisions for increasing access for oral health care," says Dr. Kristen Malecki, UW researcher and SHOW's co-Director. "Emphasizing the importance and value of teeth-brushing in primary care visits may be an opportunity for improving health and health equity."

Prescription Drug Use High in Wisconsin

55% of Wisconsin's adult residents are prescribed and taking at least one prescription drug and 14% are taking at least five, according to 2008-2010 SHOW data. The findings also show high rates



of prescribing to vulnerable populations, including minorities, the elderly, and the obese. The top ten medications used by Wisconsin adults were prescribed for cardiovascular disorders, diabetes, hypothyroidism, gastric, and respiratory disorders.

The research team, led by UW alumni Jianhong Che and Dr. Kristen Malecki, found high rates of polypharmacy, or the prescribing of four or more medications to single individuals. Polypharmacy is a known health risk which may result in complex drug interactions and make adverse events more likely,

decreasing quality of life, mobility, and cognition. The study found that more than a quarter of all SHOW participants ages 60-74 used five or more medications in the past month.

Researchers also found high rates of prescribing to other vulnerable populations. 60% of Wisconsin women and 50% of men were prescribed at least one drug. Obese people were five times more likely to be prescribed five or more drugs than their normal-weight counterparts. 22% of Wisconsin's black population are prescribed at least five medications--nearly twice as many as whites (13%). Medication use was also found to be higher among former smokers and lower income residents of the state.

Researchers strongly urge doctors to prescribe medications appropriately and suggest that programs which monitor safe and appropriate medications be supported. These monitoring efforts are especially important for protecting vulnerable populations and improving quality of life among prescription drug users in the state.

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45% of Well Owners Do Not Regularly Test Drinking Water

Regular testing of private well water is important for reducing exposures to groundwater contamination and protecting health. There are no mandated private well testing requirements, so the Wisconsin Department of Natural Resources (DNR) and the Wisconsin Department of Health Services (DHS) hired SHOW to find out if private well owners regularly test and why.

In 2014, SHOW households that used a private well as their main source of drinking water were invited to participate in a study of private well water behaviors and perceptions. SHOW found that 45% of respondents reported not testing well water

in the last ten years, and the main reason given was that they "have been drinking the well water for years without any problem." Only 19% of respondents reported testing the water within the past year, which is the recommendation from authorities. Those who did test their wells shared that their main reason was "to know if their well water is safe to drink."



Survey of the Health of Wisconsin (SHOW)
University of Wisconsin
School of Medicine and Public Health
Medical Sciences Center, Room 1083
1300 University Avenue
Madison, WI 53706



School of Medicine
and Public Health
UNIVERSITY OF WISCONSIN-MADISON