

Welcome

Dear CHPAMS Members and Friends,

On behalf of the China Health Policy and Management Society (CHPAMS), we would like to invite you to join “Bridging the Minds in Health Policy”, our very 1st conference to be held in Atlanta! The purpose of this conference is to learn from the leaders in the field and to share our experience, achievements, and vision with fellow members and friends from different disciplines. The conference allows many “virtual” friends from social media to shake hands and give each other a warm hug!

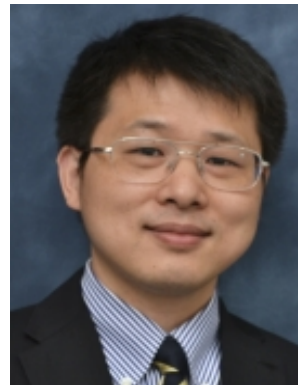
We encourage conference participants to take full advantage of the one and half day to talk with fellow attendees at the keynote speech event, roundtables, scientific presentations, networking lunch, team-building event, and other social venues. CHPAMS has come a long way from Boston to Atlanta for the first time in its eight years of history and hopefully we could make it a memorable moment for you!

CHPAMS is a volunteer-driven organization and we thank the Conference Planning Committee as well as many volunteers who make this conference happen. We really treasure your support and commitment to CHPAMS! We are proud of being a CHPAMSer to make contributions not only to our own fields but to the society in general.

GO CHPAMS!



Qi (Harry) Zhang, Ph.D.
President (2014-2016), CHPAMS
Associate Professor
Old Dominion University



Zhuo (Adam) Chen, Ph.D.
President-elect (2016-2018), CHPAMS
Senior Health Economist
Centers for Disease Control and Prevention

Program Agenda

MAY 13, 2016 (FRIDAY)

1:00-1:30 pm **Registration**

1:30-2:30 pm **Icebreaking session: Introduction of CHPAMS**

Drs. Qi (Harry) Zhang and Zhuo (Adam) Chen, CHPAMS Board of Directors
Moderator: *Dr. Liang Wang*, Assistant Professor, East Tennessee State University

2:30-3:30 pm **Keynote: Global Health in the US, China and the Rest of the World**

Dr. Jeffery Koplan, Vice President for Global Health, Emory University, Founding Director of Emory Global Health Institute; Former Director, Centers for Disease Control and Prevention (CDC)

3:30-3:45 pm Break

3:45-5:00 pm **Roundtable1: Health Policy and Public Health in China: Then and Now**

Panelists:

Dr. Jeffery Koplan, Vice President for Global Health, Emory University, Founding Director of Emory Global Health Institute; Former Director, CDC
Dr. Marshall Kreuter, Retired, Professor, Institute of Public Health, College of Health and Human Sciences, Georgia State University; Former Director, Division of Chronic Disease Control and Community Intervention, CDC
Dr. Yuling Hong, Associate Director for Science, Division for Heart Disease and Stroke Prevention, CDC
Dr. Eri Saikawa, Assistance Professor, Emory University

Moderator: *Dr. Zhuo (Adam) Chen*, Senior Health Economist, CDC; Secretary, CHPAMS

5:00-7:30 pm Dinner (Location: Marlow's Tavern, 1520 Avenue Place, Suite B-120, Atlanta, GA 30329)

MAY 14, 2016 (SATURDAY)

8:30-9:00 am *Coffee*

8:45-9:00 am **Greetings from China**

Mr. Dong (Roman) Xu, Executive Deputy Director, Sun Yat-sen Global Health Institute, Sun Yat-sen University; Treasurer, CHPAMS

- 9:00-10:15 am Roundtable 2: Paper Clinic: How to write and publish a paper with impact**
 Panelists:
Dr. Richard Rothenberg, Regents’ Professor; Director of the Research Core for the Center of Excellence on Health Disparities, School of Public Health. Georgia State University
Dr. Penny Prime, Professor of International Business, JM Robinson College of Business, Georgia State University; Director, China Research Center
Dr. Qi (Harry) Zhang, Associate Professor, Old Dominion University; President, CHPAMS
 Moderator: *Dr. Xin Xu*, Senior Health Economist, CDC
- 10:15-10:30 pm Break**
- 10:30-11:45 am Scientific Session I:**
 Presenters:
 I-1 *Dr. Xi Chen*, Xin Zhang, Xiaobo Zhang. “Happiness in the Air: How Does a Dirty Sky Affect Mental Health and Subjective Well-being?”
 I-2 *Dr. Donglan Zhang*. “Assessing Local Health Interventions with Evidence-Based Simulation: An Agent-Based Modeling Approach”
 I-3 *Weiguang Wang, Dr. Guodong Gao*. “The Role of Quality and Competition in Physician Public Reporting: the Case of PQRS”
 I-4 *Dr. Ji Lin*. “Cost-effectiveness of Intensive Lifestyle Interventions for Adults with Cardiovascular Disease (CVD) Risk Factors Based on the New U.S. Preventive Services Task Force (USPSTF) Recommendations”
 I-5 *Dr. Haiyan Qu*, Richard Shewchuk, Joshua Richman, Monika Safford. “Latent Class Cluster Analysis as a Method for Developing Tailored Diabetes Self-Management Interventions”
 Moderator: *Dr. Marie Ng*, Senior Data Scientist, IBM Watson Health
- 11:45-12:15 pm Luncheon speech: Intro of State Administration of Foreign Experts Affairs**
Mr. Yanguang Zhong, President, China Association for International Exchange of Personnel, Atlanta Office
- 12:15-1:00 pm Boxed lunch**
- 1:00-2:15 pm Roundtable 3: Beyond Ivory Tower: Career and Networking**
 Panelists:
Dr. Xi Chen, Assistant Professor, Yale University
Dr. Marie Ng, Senior Data Scientist, IBM Watson Health
Dr. Changzheng Yuan, Post-doc research fellow, Harvard University; Co-founder, Evaluations for mHealth Interventions (EMI).

Dr. Zheng (Jane) Li, Lead Environmental Health Scientist, CDC/ATSDR;
Director of Public Relations, CHPAMS
Moderator: *Dr. Xuesong Han*, Strategic Director of Health Policy & Healthcare
Delivery Research, American Cancer Society

2:15-2:30 pm Break

2:30-3:45 pm **Scientific Session II:**

Presenters:

II-1 *Ms. Di Liang*, Donglan Zhang. “Children’s Geographic Proximity and Older Parents’ Depressive Symptoms in China”

II-2 *Dr. Hongyun Fu*, Gary Mundy, Kai Wang, Lisa Johnston, Kim Longfield.

“The Role of Alcohol and Illicit Drug Use in Risky Sexual Behaviors among Men Who Have Sex with Men in Southwest China - Results from a Behavioral Survey”

II-3 *Xu Ji*, Jason Hockenberry, Laura Gaydos, Peter Joski. “Active Transportation to School and Childhood Obesity: Evidence from China”

II-4 *Chen Zhang*. “The Silent Epidemic of Coinfections of Tuberculosis and Hepatitis B/C virus in a Cohort of People Living with HIV/AIDS from China: Predictors and Sequelae”

II-5 *Dr. Bingxiao Wu*. “Moral Hazard in Expert Services: Evidence from an Intervention to Reduce Health Care Spending in China”

Moderator: *Dr. Liang Wang*, Assistant Professor, East Tennessee State University

3:45-4:00 pm Break

4:00-4:45 pm *CHPAMS Strategic Planning*

Moderator: *Dr. Qi (Harry) Zhang*, Associate Professor, Old Dominion University;
President, CHPAMS

4:45-5:30 pm *China Health Review Strategic Planning session*

Moderator: *Dr. Zhuo (Adam) Chen*, Senior Health Economist, CDC; Secretary,
CHPAMS

5:30-5:45 pm *CHPAMS Transition Ceremony*

Moderator: *Dr. Zheng (Jane) Li*, Lead Environmental Health Scientist,
CDC/ATSDR, Director of Public Relations, CHPAMS

5:45-8:00 pm Dinner (Location: BoBo Garden, 5181 Buford Hwy, NE, Doraville, GA)

MAY 15, 2016 (SUNDAY)

Time (TBD) Team building activities (Amicalola State Park; Raining day backup option:
Georgia Aquarium)

Key Participants' Brief Bios

KEYNOTE SPEAKER



Jeffrey P. Koplan, MD, MPH

Dr. Jeffrey P. Koplan is Vice President for Global Health at Emory University. He has also held leadership roles in government as Director of the US Centers for Disease Control and Prevention (the CDC) where he had a 26-year career and in the private sector as President of the Prudential Center for Health Care Research of the Prudential Insurance Company. He has worked on many of the major public health issues of our time, including infectious diseases such as smallpox, HIV/AIDS, polio and SARS, environmental issues such as the Bhopal chemical disaster, disease risk factors such as tobacco use, malnutrition and physical activity and the prevention of chronic diseases such as diabetes, cancer, heart disease and stroke. He has extensive international experience including assignments in Bangladesh, India, and Trinidad and Tobago. He has worked in collaborative relationships with Hong Kong and Chinese health officials since 1979. His work has included US-China bilateral projects, World Bank Loan missions and World Health Organization consultations. He is an honorary professor at and senior advisor #001 to the China CDC. He was honored with China's National Friendship Award in 2013, is a Master of the American College of Physicians, and was elected to membership in the U.S. National Academy of Medicine. He is a trustee of the Robert Wood Johnson Foundation and The China Medical Board. He served as a trustee of the Yale Corporation, the governing body of Yale University and currently chairs the Visiting Committee to the Harvard – T.H. Chan School of Public Health of Harvard University.

INVITED PANELISTS AND SPEAKERS



Marshall W. Kreuter, PhD

Dr. Kreuter was professor of Institute of Public Health, College of Health and Human Sciences, Georgia State University and Adjunct Professor of Public Health, Rollins School of Public Health, and Emory University. From 1982 to 1990, Dr. Kreuter served first as the Director of the Division of Health Education and then as Director of the Division of Chronic Disease Control and Community Intervention at CDC. Before his return to the Centers for Disease Control and Prevention (CDC) in 1999, Dr. Marshall Kreuter was president and founder of Health 2000, a public health consulting firm in Atlanta providing technical support and consultation in health promotion program planning and implementation to

domestic and international public, private, and voluntary organizations.



Richard Rothenberg, M.D., MPH

Dr. Richard Rothenberg currently serves as the Regents' Professor and the Director of the Research Core for the Center of Excellence on Health Disparities for the School of Public Health Georgia State University. Dr. Rothenberg received his M.D. from Harvard Medical School in Boston, MA and a master's degree in public health from Harvard School of Public Health. He previously worked at Emory University as Professor of Medicine (1993-2007) and prior to that had spent 25 years at the Centers for Disease Control and Prevention (CDC).



Penelope (Penny) Prime, PhD

Dr. Prime is Professor of International Business at the Institute of International Business, J. Mack Robinson College of Business, Georgia State University. Dr. Prime is also the founder and director of the China Research Center, a non-profit organization dedicated to research and education about contemporary China. Her teaching and research focus on development of emerging markets, with a particular emphasis on China's economy and business environment. Dr. Prime received her doctor degree in Economics from University of Michigan.



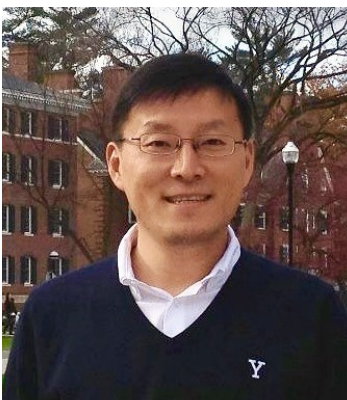
Yuling Hong, PhD, MSc, MD

Dr. Yuling Hong is Associate Director for Science at Division for Heart Disease and Stroke Prevention, US Centers for Disease Control and Prevention (CDC) and an adjunct professor at Emory University. Dr. Hong received his Bachelor of Medicine (MD equivalent) from Shanghai Medical University, MSc in Epidemiology from Erasmus University Rotterdam, the Netherlands and PhD in Epidemiology from the Karolinska Institute, Sweden. He directed the American Heart Association (AHA) Statistics and Epidemiology Unit for 8 years. Prior to that, he was a faculty member at the Washington University School of Medicine, St. Louis, Missouri. His research interests include cardiovascular disease epidemiology, surveillance and prevention, scientific database management, quality of care and outcomes research, genetic epidemiology, and evidence-based guideline development. Dr. Hong is an editorial board member of the Journal of American College of Cardiology Cardiovascular Imaging. Dr. Hong is a fellow of AHA and the official US CDC liaison to AHA Science Advisory and Coordinating Committee.



Eri Saikawa, PhD

Dr. Eri Saikawa is an assistant professor in the Department of Environmental Sciences at Emory University. She earned her doctoral degree from Princeton University and continued her research at MIT as postdoctoral associate and research scientist. Her interdisciplinary research areas include: 1) atmospheric chemistry (modeling air pollution, mainly fine particulate matter and tropospheric ozone, in Asia); 2) environmental health (measuring exposure in Tibetan households from indoor air pollution and assessing the adverse health impacts due to ambient air pollution); 3) biogeochemistry (modeling global soil nitrous oxide emissions); 4) climate science (estimating emissions of non-CO2 greenhouse gases), and 5) environmental policy/politics (analyzing the impacts of environmental standards and trade as well as analyzing policymaking processes).



Xi Chen, PhD

Dr. Chen is an assistant professor of Public Health (Health Policy), of Global Health, of Economics, and of Faculty of Arts and Sciences at Yale University. He is a faculty fellow at the Yale Institution for Social and Policy Studies (ISPS), the Yale Climate Change and Health Initiative, the Yale Macmillan Center for International and Area Studies, the Yale Institute for Network Science (YINS), and a faculty advisor of the Yale-China Association. His areas of interest involve Health, Labor, Development Economics, and Applied Econometrics and Quantitative Methods.



Changzheng Yuan, ScD

Dr. Changzheng Yuan is a post-doc research fellow in Nutritional Epidemiology at Harvard T.H. Chan School of Public Health. She holds a doctoral of science degree in Nutrition and Epidemiology from Harvard T.H. Chan School of Public Health, and a bachelor of medicine degree in Preventive Medicine from Peking University. Her research areas include fundamental methodology in measuring diet and nutrition, and translational practice in health promotion. She is involved in several health promotion initiatives in China, including Prenatal SMS Advice Program, Health and Places Initiative, Breast Cancer Education and Awareness Initiatives. She is one of co-founders of the Evaluations for mHealth Interventions (EMI),

aiming at promotion and evaluation of mHealth interventions in low-resource settings.



Dong (Roman) Xu, MPP

Dong (Roman) Xu is the executive deputy director of the Sun Yat-sen Global Health Institute (SGHI) of the Sun Yat-sen University. His research focuses on developing and evaluating health system innovations, payment systems, health quality assessment and mHealth. Before his SGHI work, he held leadership positions at the China Medical Board (CMB), Harvard Medical School's Harvard Medical International, Medtronic Inc., and the Chinese Medical Association. Roman is concurrently conducting his dissertation research as the PhD candidate at the University of Washington Global Health (implementation science) program; he obtained his master in public policy (health policy) from Harvard University in 2004 and bachelor in medical English from West China University of Medical Sciences in

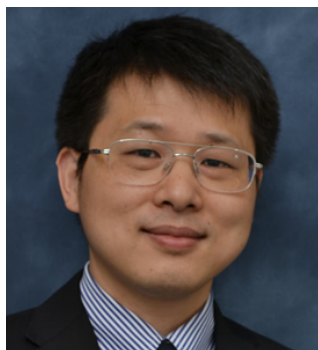
1996.



Yanguang Zhong

Mr. Yanguang Zhong, as the President of China Association for International Exchange of Personnel (Atlanta Office), is responsible for building up a distinguished platform for both international talents and domestic institutes in need of foreign intellectuals. He is also operating a professional website (www.chinajob.com) for providing HR service to international talents.

CHPAMS MEETING PLANNING COMMITTEE



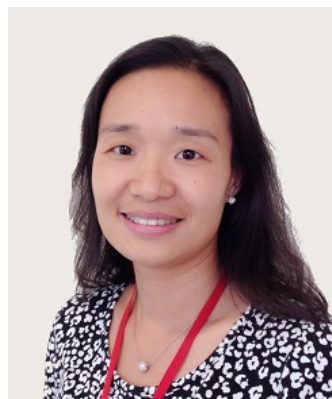
Zhuo (Adam) Chen

Dr. Zhuo (Adam) Chen is a Senior Health Economist with the US Centers for Disease Control and Prevention (CDC). Adam received his PhD (2004) in Economics and MS (2002) in Statistics from Iowa State University. His research has focused on health economics and applied econometrics. Dr. Chen received the 2013 CDC Excellence in Behavioral and Social Science Research Award and the 2016 Federal Asian Pacific American Council Civilian Award in Diversity Excellence. He served on the Board of Directors of the Chinese Economists Society twice, and on the Steering Committee of the CDC Health Economics Research Group for two terms. He is serving as the President of the Association of Asian and Pacific Islander Employees of CDC/ATSDR (2014-2016), Former Vice President (2012-2014) and Director (2014-2016) of the Association of Chinese Professionals (Atlanta), and the Founding Editor of China Health Review.



Qi (Harry) Zhang

Dr. Qi (Harry) Zhang is an Associate Professor in the School of Community and Environmental Health at Old Dominion University in the U.S. As a health economist, he has an active research agenda on socioeconomic determinants of health and related health policies in the U.S. and China. He has more than 30 publications in international journals and has been a Principal Investigator or Co-Investigator on multiple grants funded by National Institutes of Health and US Department of Agriculture. He received his B.A. in economics from Fudan University in 1998 and his Ph.D. in economics from the University of Alabama in 2001.



Zheng (Jane) Li, PhD, MPH, MS

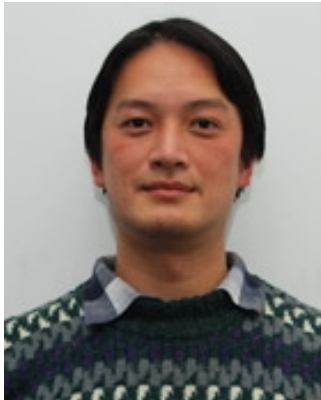
Dr. Zheng (Jane) Li is a Lead Environmental Health Scientist with the US Centers for Disease Control and Prevention (CDC)/Agency for Toxic Substances and Disease Registry (ATSDR). Her research areas include environmental health, environmental epidemiology, exposure assessment, air pollution, chemistry, etc. She was the President of the Association of Asian and Pacific Islander Employee of CDC/ATSDR (2012-2014). She received a BS in chemistry from Wuhan University, MS in chemistry from Mississippi State University, PhD in Environmental Engineering at Georgia Institute of Technology with a minor in environmental health from Emory University, and a MPH in public health practice from the University of South Florida.



Yang Liu, PhD

Prof. Yang Liu received his Ph.D. in environmental science and engineering from Harvard University in 2004 and completed his postdoctoral training in Harvard T.H. Chan School of Public Health in 2008. He joined the Rollins School of Public Health of Emory University in 2009 and currently is a tenured associate professor in the Department of Environment Health. His research interests include the application of satellite remote sensing in air pollution exposure modeling and health effects studies, and the potential impacts of global climate change on public health. He has led and participated in multiple projects funded by NASA, EPA, and NIH. He is a member of the multiple NASA science teams and a PI member of the NASA

Air Quality Applied Science Team (AQUEST). He is a Co-investigator of USEPA's Southeastern Center for Air Pollution and Epidemiology (SCAPE). He is an adjunct professor at Chinese Academy of Sciences, and a senior visiting fellow at the School of Public Health, Fudan University, China.



Lu Shi, PhD

Dr. Lu Shi is an assistant professor in the Department of Public Health Sciences. Lu earned his PhD in Policy Analysis from F.S. Pardee RAND Graduate School in 2008. His research interests include population health modeling, empirical methods, and behavioral and cognitive economics. He has joined the preparatory work of China Health Policy and Management Society since 2008, and is the current Executive Editor of China Health Review.



Xin Xu, PhD

Dr. Xin Xu is a senior economist and the lead of the economic team at Office on Smoking and Health, CDC. His main research interests include tobacco control policy evaluation, economic evaluation of tobacco control and prevention interventions, and assessing health and economic consequences of tobacco use. Dr. Xu joined CDC in 2009 as a Prevention Effectiveness Fellow at Division of Reproductive Health. Prior to joining CDC, Dr. Xu worked as a postdoctoral research associate at the Institute of Health Research and Policy, the University of Illinois at Chicago, where his research was focused on tobacco control, substance abuse, and obesity prevention. Dr. Xu received his Ph.D. in economics with a focus on Health Economics and

Applied Econometrics in 2008 from the University of Illinois at Chicago.



Xuesong Han, PhD

Dr. Xuesong Han is a cancer epidemiologist and Strategic Director of Health Policy & Healthcare Delivery Research at the American Cancer Society, where she conducts research largely focused on the impact of health insurance and related policies on cancer care and outcomes. Her research interests also include cancer survivorship and health equity. Xuesong received her PhD in Epidemiology & Public Health from Yale University in 2010, and completed a two-year fellowship at the Gillings School of Global Public Health, University of North Carolina at Chapel Hill. She currently holds an adjunct faculty appointment at the Rollins School of Public Health, Emory University.



Marie Ng, PhD

Dr. Marie Ng is a Senior Data Scientist at IBM Watson Health. Prior to joining IBM, she was an Assistant Professor of Global Health at the Institute for Health Metrics and Evaluation (IHME) at the University of Washington. She has also worked in various academic and non-profit institutions around the world including the Karolinska Institute, University of Hong Kong and UNICEF. Her expertise is in quantitative methods, particularly focusing on developing and applying new techniques for predicting health outcomes and evaluating the impact of population health programs. Marie has published in a number of high impact journals including the Lancet and JAMA. She studied at the University of Southern California, where she received a PhD in Applied Statistics and an MS in Mathematical Statistics. She obtained a BS in Psychology from the University of Washington.

CHPAMS Board of Directors

CURRENT 2014 – 2016

President:	张琪 Qi (Harry) Zhang, PhD
Secretary:	陈茁 Zhuo (Adam) Chen, PhD, MS, MMgt
Treasurer:	徐东 Dong (Roman) Xu, MPP
Director of Fund Raising:	王友发 Youfa Wang, MD, PhD, MS
Director of Academics:	史律 Lu Shi, PhD
Director of Membership:	宁毅 Yi Ning, PhD
Director of Public Relations:	李峥 Zheng (Jane) Li, PhD, MPH, MS

INCOMING 2016 – 2018

President:	陈茁 Zhuo (Adam) Chen, PhD, MS, MMgt
Secretary:	李峥 Zheng (Jane) Li, PhD, MPH, MS
Treasurer:	张琪 Qi (Harry) Zhang, PhD
Director of Fund Raising:	徐东 Dong (Roman) Xu, MPP
Director of Academics:	吴丹虹 Marie Ng, PhD
Director of Membership:	韩雪松 Xuesong Han, PhD
Director of Public Relations:	王亮 Liang Wang, PhD

Abstracts

I-1: Happiness in the Air: How Does a Dirty Sky Affect Mental Health and Subjective Well-being?

Xin Zhang¹, Xiaobo Zhang¹, Xi Chen²

¹ Peking University; ² Yale University

Previous studies evaluating the welfare cost of air pollution have not paid much attention to its potential effect on mental health and subjective well-being (SWB). This paper attempts to fill the gap by investigating the impact of air pollution on several key dimensions, including mental health status, depressive symptoms, moment-to-moment happiness, and evaluative happiness. We match a nationwide longitudinal survey in China with local air quality and rich weather conditions according to the exact time and place of survey. By making use of variations in exposure to air pollution for the same individuals over time, we show that air pollution reduces hedonic happiness and increases the rate of depressive symptoms, while life satisfaction has little to do with the immediate air quality. Our results shed light on air pollution as an important contributor to the Easterlin paradox that economic growth may not bring more happiness.

I-2: Assessing Local Health Interventions with Evidence-Based Simulation: An Agent-Based Modeling Approach

Donglan Zhang

Centers for Disease Control and Prevention

Introduction: Despite the great achievement of public health interventions and increased availability of scientific evidence, more approaches are warranted to promote evidence-based health policies. This paper introduces a useful approach – agent-based modeling (ABM) to inform health policies, and uses three examples to demonstrate how ABM is applied to compare policy effectiveness, illustrate potential causes for the effect of an intervention to vary across regions and forecast long-term health and economic benefits of interventions that are based on social norm change.

Method and Results: We construct an ABM to represent how a synthetic adult population makes dietary choices. (1) In the first example, simulations are performed to contrast the potential effects of taxes, zoning regulations and media campaigns on the evolution of dietary decisions among population in downtown Los Angeles. Results show that a 20% increase in taxes on fast foods would lower the probability of fast-food consumption by 3 percentage points, whereas improving the visibility of positive social norms by 10% could improve the consumption of fruits and vegetables by 7 percentage points and lower fast-food consumption by 6 percentage points. Zoning policies had no significant impact. (2) In the second example, using data from 34 New York City (NYC) neighborhoods, we simulate how a mass media and nutrition education campaign may increase the proportion of the population who consume two or more servings of fruits and vegetables per day in NYC. We found that the proposed intervention results in substantial increases in daily fruit and vegetable consumption, but the campaign may be less effective in neighborhoods with relatively low education levels or a relatively high proportion of male residents. (3) In the third example, using data from the California Health Interview Survey to calibrate our ABM of fruits and vegetables consumption and hypertension status. We explore the extent to which an effective norm-changing health communication intervention could help control the growing hypertension prevalence. Our simulations show a 0.39 percentage annual reduction in hypertension prevalence within 5 years. At the scale of the adult population in Los Angeles County (LAC), this translates to averting 22,388 cases of hypertension. This intervention is projected to save annual healthcare cost of \$16,410,404 for hypertension treatment in LAC.

Discussion: A well-designed, validated agent-based model has the potential to provide insights on the potential impact of policies before their implementation, and shed light on the important neighborhood factors that may affect the efficacy of the intervention.

I-3: The Role of Quality and Competition in Physician Public Reporting: the Case of PQRS

Weiguang Wang, Gordon Gao

Center for Health Information and Decision Systems, University of Maryland, College Park

Introduction: Physician Quality Reporting Systems have been implemented by CMS to collect quality information from individual physicians. Quality disclosure is voluntary for all eligible physicians. However, 10 years after the implementation of PQRS (formerly known as PQRI), the participation rate has not been as high as expected. As of August 2015, the participation rate was still only 39.54% of all eligible physicians. In this paper, we studied the impact of both individual factors and market factors on physicians' participation decisions. We examine the role of physician quality, market competition, and service volume in physician quality disclosure decisions.

Method: We focus on the surgeons who perform knee surgeries. The CMS "Physician Compare" dataset provides information about physicians PQRS participation status as of 2015. We treat physicians' decisions as group level decisions and define groups based on physician address. We use ProPublica's "Surgeon Scorecard" data (which includes procedures performed, patient volume, location, etc.) for detailed quality measures. We measure physicians' quality using both the absolute measures as well as relative ranking in each local market, defined by the Dartmouth Atlas of Health Care. Our data contains a national sample of 4,552 surgeons across 306 markets.

Results: We do not find evidence suggesting that a physician's quality plays a significant role in PQRS participation ($p=0.68$). On the other hand, service volume is positive and significant ($p<0.01$). We also find that participating in PQRS increases with local market competition ($p<0.01$).

Discussion: While one would expect that high quality physicians have greater motivation for public reporting of quality, we do not find evidence for this common belief. One possible explanation might be that physicians are unaware of their quality ranking. The strong effect of service volume might be due to the tie to the financial incentives offered by CMS. This suggests that the incentives are effective in motivating PQRS participation. The significance of competition suggests that if the market keeps its current trend of consolidation, participation to the public reporting of quality can be more challenging in the future. Therefore, the above findings have important policy implications.

I-4: Cost-effectiveness of Intensive Lifestyle Interventions for Adults with Cardiovascular Disease (CVD) Risk Factors Based on the New U.S. Preventive Services Task Force (USPSTF) Recommendations

Ji Lin

Centers for Disease Control and Prevention

Introduction: The United States Preventive Service Task Force (USPSTF), in 2014, recommended intensive behavioral counseling interventions to promote a healthful diet and physical activity for adults age ≥ 18 who are overweight or obese with at least one known CVD risk factor, including hypertension, dyslipidemia, impaired fasting glucose, or metabolic syndrome. USPSTF made these recommendations based on health benefits of the lifestyle-based counseling from randomized clinical trials.

Method: We examined the long-term health implications and cost-effectiveness of the recommendations for the U.S. population using a disease progression model. Baseline risk factor levels and population characteristics were estimated from the 2005–2012 National Health and Nutrition Examination Survey. Assumptions about the effectiveness of the lifestyle-based counseling were obtained from the USPSTF systematic review associated with a median of 16 sessions in 12 months. We assumed the counseling program cost based on estimates from systematic review. Cost-effectiveness was measured in incremental cost-effectiveness ratios (ICERs) in costs per quality-adjusted life year (QALY). Future QALYs and costs, including intervention costs and future medical costs saved were discounted at 3% annually.

Results: Approximately 44% of the US adults would be eligible for the USPSTF recommended intervention. Compared with no intervention, the intervention would result in a higher cost and gain in QALYs with an ICER of \$13,900/QALY. The CE varied greatly by sub-population group. ICERs ranged from cost-savings for persons who were obese with all three major risk factors (IFG, hypertension, and dyslipidemia) to 103,200/QALY for persons who were overweight with none of them.

Discussion: The recommended intervention is cost effective based on the conventional cost-effectiveness threshold of \$50000/QALY. However, the CE varied substantially within the recommended population, largely depending on the level of individuals' risk for diabetes and CVD. Prioritizing the recommended intervention based on persons' risk would yield a larger total gain in health.

I-5: Latent Class Cluster Analysis as a Method for Developing Tailored Diabetes Self-Management Interventions

Haiyan Qu¹, Richard M. Shewchuk¹, Joshua Richman², Monika M. Safford³

¹ Dept. of Health Services Administration, School of Health Professions, University of Alabama at Birmingham (UAB) ² Dept. of Surgery, School of Medicine, UAB; ³ Division of General Internal Medicine, Weill Dept. of Medicine, Weill Cornell Medical College

Introduction: Patient engagement in their own care has been shown to lead to better outcomes for patients with type 2 diabetes, and an important first step in achieving engagement is education. However, education alone has been shown to yield only modest improvements in glycemic control, suggesting that more intensive interventions may be needed. In resource-constrained settings, an understanding of which patients are at greatest need and providing them with the most effective services can maximize the efficient use of resources. Interventions that are tailored to the specific psychosocial needs of patients with diabetes may be more effective than a “one size fits all” approach. The purpose of this study was to identify patient subgroups with distinct characteristics to inform development of tailored interventions.

Method: Data used in this study were obtained from the community-based cluster-randomized ENCOURAGE trial conducted in rural Alabama from 2010 to 2012 (n=405). A latent class cluster analysis was conducted using baseline measures of trust in physicians, perceived discrimination, perceived efficacy in patient-physician interactions, social support, patient activation and diabetes distress. The trial’s primary outcomes were hemoglobin A1c, body mass index, systolic blood pressure, low density lipoprotein cholesterol, and quality of life; secondary outcomes were diabetes distress and patient activation.

Results: We identified 3 classes of participants: Class 1 (n=72) had high trust, activation, perceived efficacy and social support; low diabetes distress; and good glycemic control ($7.1 \pm 1.3\%$). Class 2 (n=178) had moderate values in all measures with higher baseline A1c ($8.1 \pm 2.1\%$). Class 3 (n=155) had high diabetes distress; low trust, patient activation, and perceived efficacy; with similar baseline A1c ($8.2 \pm 2.1\%$) as Class 2. Intervention effects differed for these 3 classes.

Discussion: We identified distinct subpopulations which exhibited different responses to the ENCOURAGE intervention. The Generalized Additive Models analysis demonstrated that the peer-support intervention, which was culturally adapted and highly individualized but not tailored to characteristics of patients in the different classes, had differing effects across the 3 classes. This suggests that among individuals with uncontrolled diabetes in this population, there were distinct groups that may have benefitted from different intervention approaches. Such groups can be defined based on characteristics that could be used as intervention targets. Future studies can determine whether these approaches can be used to target scarce resources efficiently and effectively in real-world settings to maximize the impact of interventions on population health, especially in impoverished communities.

II-1: Children's Geographic Proximity and Older Parents' Depressive Symptoms in China

Di Liang¹, Donglan Zhang²

¹ Department of Health Policy and Management, University of California, Los Angeles; ² Centers for Disease Control and Prevention

Introduction: Diagnosable depression and depressive symptoms were found to be prevalent among people above retirement age in China – self-reported 30% in men and 43% in women. Previous studies have shown that co-residence with adult children may have psychological benefits for the elderly parents, while little is known about the association between children's geographic proximity and their older parents' depressive symptoms. This study aims to explore this relationship using China-based data.

Method: The 2011-2012 China Health and Retirement Longitudinal Study (CHARLS) was used for this analysis. Our sample included older parents aged 60 years or above. Elders' depressive symptoms were measured using the 10-item Center for Epidemiologic Studies Depression Scale (CES-D). We used the estimated distance to one's nearest child to measure parent-child geographic proximity. Logistic regressions were performed to examine the association between proximity and parents' probability of having serious depressive symptoms (CES-D score ≥ 10), with adjustment of the elders' age, gender, socioeconomic status, marital status, residential region, number of difficulties with daily living, self-reported physical health and children's socioeconomic status.

Results: We found that 47.09% of the older parents had serious depressive symptoms (N=4333). 46.58% of the respondents had at least one child living in the same household, 44.14% living within 10 km, 4.94% living within 10-100 km and 3.34% living more than 100 km away. Compared to living in the same household, having the nearest child living more than 100 km away was associated with a 14% ($p < 0.01$) increase in the risk of having serious depressive symptoms. Further analyses showed that child living far away was associated with a 7% increased risk ($p > 0.05$) of having depressive symptoms among married women; a 12% increased risk ($p < 0.05$) among married men; a 32% ($p < 0.05$) increased risk among unmarried women; and a 23% increased risk ($P < 0.05$) among unmarried men. Controlling for children's financial support and informal care did not change the results, but controlling for the child-parent contact frequency reduced the positive relationship between distance and elders' depressive symptoms.

Discussion: We found that older parents having the nearest child living 100 km away were more likely to have serious depressive symptoms. This might partly be explained by the reduced contact frequency with one's children. As the generation impacted by the "one-child" policy turned to their 60s, elders in China are expected to have fewer children living nearby. More research is warranted to understand the relationship between children's proximity and parents' health.

II-2: The Role of Alcohol and Illicit Drug Use in Risky Sexual Behaviors among Men Who Have Sex with Men in Southwest China - Results from a Behavioral Survey

Hongyun Fu¹, Gary Mundy², Kai Wang³, Lisa Johnston⁴, Kim Longfield⁵

¹ Eastern Virginia Medical School; ² Helen Keller International; ³ FHI 360; ⁴ Tulane University School of Public Health and Tropical Medicine; ⁵ Population Services International

Introduction: Historically, HIV epidemic in China was primarily driven by injecting drug use, however, sexual modes of transmission had risen and surpassed injection drug use as the predominant HIV transmission modes by 2005. In particular, a rapid surge in HIV and other sexually transmitted infections (STI) in men who have sex with men (MSM) was reported, with a nearly ten-fold increase in HIV prevalence in MSM in China in the past decade. Existing studies highlight high co-morbidity of drug use and HIV/STI in MSM in China and worldwide. We explored associations between alcohol/drug use and risky sexual behaviors using data from a 2013 behavioral survey of MSM in Kunming and Nanning cities in southwest China, where the CAP-3D Project (Control and Prevention of Three Diseases - HIV, Malaria, and Tuberculosis) was implemented with support from the United States Agency for International Development.

Methods: We recruited 780 males aged ≥ 18 who reported anal sex with a male in the past 3 months, using respondent-driven sampling (RDS). Interviews were conducted face-to-face, using a structured questionnaire which covered demographic and socioeconomic characteristics, sexual behaviors and condom use with different types of sexual partners, alcohol drinking and illicit drug use, and utilization of sexual health services, including peer-led behavioral change communication, HIV testing and counseling, STI screening and treatment. Data analyses used RDS Analysis Tool and STATA-13.

Results: Within the past 12 months, 16% of MSM reported regularly drinking alcohol (≥ 3 times weekly); and 6% ever used illicit drugs. Forty-seven percent of regular alcohol users and 61% of illicit drug users reported having sex after using alcohol/drugs. Regular alcohol use was associated with a higher likelihood of having a male commercial partner (OR=3.56, $P < 0.05$) in the past 3 months. Having sex after drinking alcohol was associated with a higher likelihood of having ≥ 6 male partners (OR=2.93, $P < 0.10$) and experiencing STI symptoms (OR=2.09, $P < 0.05$), but a lower likelihood of consistent condom use (CCU) with regular male partners (OR=0.35, $P < 0.05$). Illicit drug use was associated with a higher likelihood of having ≥ 6 male partners (OR=5.48, $P < 0.01$) and CCU with casual male partners (OR=5.82, $P < 0.01$), but a lower likelihood of CCU with regular male partners (OR=0.09, $P < 0.05$) and female partners (OR=0.16, $P < 0.05$).

Conclusions: Findings reveal a significant association between alcohol/drug use and sexual risk-taking, and highlight the need to integrate harm reduction into HIV prevention efforts targeting MSM in China.

II-3: Active Transportation to School and Childhood Obesity: Evidence from China

Xu Ji¹, Jason M. Hockenberry^{1,2}, Laura M.D. Gaydos¹, Peter J. Joski¹

¹ Health Policy and Management Department, Rollins School of Public Health, Emory University

² National Bureau of Economic Research, Cambridge, MA

Introduction: With the growing trend of childhood obesity, active transporting (e.g. walking or bicycling) to and from school (ATS) has been recommended as an important source of daily physical activity and obesity prevention among school children in the U.S. and Europe. In China, due to a changing environment with rapid urbanization, the prevalence of ATS has decreased while childhood obesity has steadily increased. One proposed solution is to refocus efforts to increase ATS; however, little is known on whether this is likely to be successful in reducing childhood obesity. This study examines whether ATS reduces obesity/overweight among Chinese school children and how the effect of ATS is moderated by the built environmental factor, school location.

Method: Using the 1997-2009 China Health and Nutrition Surveys, we derived an analytic sample of 2,187 children (5,164 person-years; 6-18) who responded to the survey during our study period. We exploited the longitudinal nature of data and derived the following outcome measures: (1) an indicator for being obese, (2) an indicator for being overweight, and (3) BMI zscore. ATS was defined as the percent of time spent on walking or bicycling to/from school out of a child's total time. We used linear models to examine whether ATS impacts obesity/overweight independently and how this relationship is moderated by the availability of schools within the community. To address the potential confounding attributable to unobservable time-invariant individual heterogeneity, we employed person-fixed-effects methods.

Results: ATS alone did not have significantly independent effects on reducing obesity/overweight. In our person-fixed-effects analysis, we found a strong interaction effect of ATS time and school location on overweight/obesity. Chinese children whose schools were located within local communities were 1.4% less likely to become obese and 2.4% less likely of being overweight when they spend more time (approximately 15 minutes per-day) on ATS, compared to those living in communities without schools. Magnitudes of these estimates were smaller and less precisely estimated when fixed-effects methods were not applied.

Discussion: ATS is not likely to impact every Chinese student equally and can be most successful in reducing obesity/overweight for children attending schools located within their local communities. Interventions aiming at mitigating the growing trends of pediatric obesity in China should refocus on the promotion of daily active commuting time, and specifically target children who attend schools located inside their communities. Future interventions other than ATS are also necessary for children travelling outside of their communities for education.

II-4: The Silent Epidemic of Coinfections of Tuberculosis and Hepatitis B/C virus in a Cohort of People Living with HIV/AIDS from China: Predictors and Sequelae

Chen Zhang

Vanderbilt University

Introduction: The coinfection of viral hepatitis and tuberculosis (TB) among people living with HIV/AIDS (PLWHA) make the syndemic even worse as there is higher mortality and morbidity among PLWHA with coinfections compared to people with HIV mono-infection. In the current study, we explored predictors and sequelae among a group of Chinese PLWHA to guide future program strategies and enhance the repertoire of action for both preventative and clinical purposes.

Method: Between October 2012 and August 2013, we conducted a cross-sectional study in Guangxi Autonomous Region (Guangxi) of China. With an overall participation rate of 90%, we finally recruited 3,002 patients with 2,987 (99.5%) completed the survey and were included in the data analysis. We employed both predictive and explanatory modeling strategies to explore predictors and sequelae of coinfections among PLWHA.

Results: A total of 2,987 PLWHA were included in the data analysis. The overall prevalence of coinfection was 15.6% with 4.4% of HBV, 5.4% of HCV and 4.8% of TB, respectively. Predictors of coinfections included history of injecting drugs or drinking alcohol, sharing needles, having sex with sex workers or casual partners, higher viral loads and lower CD4 counts. Meanwhile, coinfections may lead to various physical and psychological problems among PLWHA.

Discussion: As an entangled phenomenon, coinfections among PLWHA produce continuous and shifting scenarios, which add complexity to clinic, epidemiological and political ways of dealing with health risks among PLWHA in China. Exploring predictors and sequela of these coinfections can act as heuristic lens to rewrite and rethink the trajectories and histories of the syndemic in both Chinese and global settings.

II-5: Moral Hazard in Expert Services: Evidence from an Intervention to Reduce Health Care Spending in China

Bingxiao Wu

Rutgers University

Introduction: We examine how physicians in China respond to a pay-for-performance (P4P) scheme that intends to reduce drug over-prescription. In 2005, China imposed a policy that penalizes hospitals with high drug sale percentage in the total revenue. Using a unique patient-level data from a large Chinese hospital before and after the P4P scheme that penalizes a physician financially if her drug-percentage (i.e. drug expenditure as a percentage of total expenditure) is above a certain threshold, I find that physicians responded by increasing expenditures on non-drug services, especially diagnostic tests. There is no significant impact on drug expenditures and length of stay. The overall effect was to increase total expenditures. This finding is consistent with the inducement hypothesis as physicians in China may receive under-the-counter commission for prescribing certain drugs. We also find that increased non-drug expenditures were concentrated among insured patients, suggesting that physicians have stronger incentives to act in the patients' interests than in the interests of the third-party payer.

Method: We use a difference-in-difference estimation to identify the effect of P4P on drug and non-drug expenditures. We first show that physicians with drug-percentage above the penalization threshold (i.e. affected) and those with drug-percentage equal or below the threshold for penalization (i.e. unaffected) experienced similar trend in non-drug expenditures before P4P. We then estimate the difference in changes in expenditures between patients who are treated by affected physicians and a comparison group of patients who are treated by unaffected physicians. For robustness check, we replace the binary measure of affected with a continuous measure which measures the extent to which the affected physician's drug-percentage is above the threshold.

Results: Compared with unaffected physicians, the affected physicians increase their diagnostic test expenditures by 22% for the insured patients and by 12.5% for the uninsured patients. One percentage point above the threshold makes the physician to increase the diagnostic tests expenditures by around 6.7% for insured patients; there is no significant effect if the physician's initial drug percentage falls below the threshold. Among the three types of diagnostic tests, we find our results are mostly driven by increased expenditures on checking (e.g., ultrasound and electro-cardiac) and radiology (e.g., CT scans), which are non-invasive, but not lab tests (e.g. blood test) which are invasive.

Discussion: Over-prescription of medication has long been identified as a major issue in physician practice in China. This paper documents an unintended consequence of the drug-percentage payment scheme in China, which aims to reduce drug expenditure. Our result indicates that a proper measurement of performance is crucial in determining the effectiveness of P4P.

Special Thanks

SPECIAL THANKS TO ALL VOLUNTEERS:

Zongshuan Duan

Yixin Duan

Di Liang

Ji Lin

Yu Liu

Feijun Luo

Yinan Peng

Haiyan Qu

Ziwei Song

Chengbin Wang

Zhuo Yang

Chenchen Yu

Jun Zhang

Kun Zhang

Chao Zhou

Xilin Zhou

Yingtao Zhou

Weiming Zhu

