

**Harvard Medical School
Curriculum Vitae**

Date Prepared: March 30, 2009
Name: Yulei He
Office Address: Department of Health Care Policy
Harvard Medical School
180 Longwood Avenue
Boston, MA, 02115
Home Address: 276 Grove St. Apt 3
Auburndale, MA, 02446
Work Phone: 617-432-3428
Work E-Mail: he@hcp.med.harvard.edu
Work FAX: 617-432-3435
Place of Birth: Changsha, Hunan Province, China

Education

1997	B.S.	Biology	University of Science and Technology of China
2000	M.S.	Public Health	University of Illinois at Chicago
2005	Ph.D.	Biostatistics	University of Michigan – Ann Arbor

Postdoctoral Training

2005 – 2007	Post Doctoral Fellow in Biostatistics	Department of Health Care Policy	Harvard Medical School
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Faculty Academic Appointments

2007 -	Assistant Professor	Department of Health Care Policy	Harvard Medical School
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Other Professional Positions

1996 – 1997	Research Assistant	Department of Genetics, Institute of Microbiology, Chinese Academy of Sciences, Beijing, China
1997 – 1998	Research Assistant	Laboratory of Molecular Biology, Department of Biological Science, University of Illinois at Chicago
1999 – 2000	Research Assistant	Health Research and Policy Center, University of Illinois at Chicago
2000 – 2003	Research Assistant	Survey Research Center, Institute for Social Research, University of Michigan – Ann Arbor
2003	Statistical Summer Intern	Clinical Biostatistics Department, Pfizer Inc., La Jolla, CA
2003 – 2005	Research Assistant	Department of Biostatistics, University of Michigan – Ann Arbor

Professional Societies

2003 -	American Statistical Association
2003-	Member
2010	Representative to ENAR
2004 -	International Biometric Society, Eastern North American Region (ENAR)
2004-	Member
2010	Representative to Joint Statistical Meetings Program Committee
2008 -	AcademyHealth
2008-	Member
2008 -	Society for Medical Decision Making
2008-	Member
2009 -	Sigma Xi
2009-	Member

Editorial Activities

2006 -	Ad-hoc Reviewer	Journal of Statistical Computation and Simulation
2006 -	Ad-hoc Reviewer	Statistics in Medicine
2006 -	Ad-hoc Reviewer	The American Statistician
2007-	Ad-hoc Reviewer	Health Services and Outcomes Research Methodology
2007-	Ad-hoc Reviewer	Journal of Biomedical Informatics
2008-	Ad-hoc Reviewer	Survey Methodology
2008-	Statistical Reviewer	Circulation: Cardiovascular Quality and Outcomes
2008-	Ad-hoc Reviewer	Journal of Statistical Software
2008-	Ad-hoc Reviewer	Journal of the American Statistical Association
2009-	Statistical Reviewer	American Journal of Managed Care
2009-	Ad-hoc Reviewer	Journal of Applied Statistics
2009-	Ad-hoc Reviewer	Health Services Research

Honors and Prizes

1996	Outstanding Student Scholarship	University of Science and Technology of China
2001	Award for the best performance in Ph.D. qualifying exam	Department of Biostatistics, University of Michigan
2002	John B. Lansing Founders Scholarship	Survey Research Center, Institute for Social Research, University of Michigan
2005	Traveling grant	University of Michigan Graduate School
2004	American Statistical Association (Health Policy and Statistics Section) Student paper award	For manuscript entitled “Handling Missing Longitudinal Covariates in Child Development Study: a Nonparametric Multiple Imputation Approach”
2005	One-term dissertation fellowship	University of Michigan Graduate School

2008 Traveling grant

National Institute of Statistical
Science/American Statistical
Association Junior Researcher
Writing Workshop

Report of Funded and Unfunded Projects

Funding Information

2005 – 2008	Co-Investigator/ Senior Statistician	NCI sub to Dana Farber	\$160,963
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Grant #U01 CA93344-02

CanCORS Statistical Coordinating Center

The major goal of the study is to provide statistical support and consultation, and carry out methodological research for Cancer Care Outcomes Research and Surveillance Consortium (CanCORS). My role is to develop imputation strategies to handle nonresponse in CanCORS data and statistical methods to combine information collected from multiple sources.

2008 – 2010	Co-Investigator/ Senior Statistician	Dana Farber Cancer Institute Sub	\$246,979
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Disparities in Breast Cancer: The Influence of Physicians and Hospitals

The major goal of the study is to understand whether the hospitals and physicians from whom black and white breast cancer patients get their care contribute to racial disparities in treatment and outcomes, and assess how patients select the providers from whom they receive care. My role is to assist the study design, provide statistical support and consultation, and offer statistical supervise and training for clinical trainees and data analysts.

2008 – 2009	Co-Investigator/ Senior Statistician	Pharmaceutical Research and Manufacturers of America (PhRMA)	\$158,536
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The Impact of Part D on Hospitalizations

The major goal of the study is to investigate whether expanded drug coverage provided by the Medicare Part D program reduced hospitalizations. My role is to assist the study design and provide statistical support and consultation.

2009 – 2011 Co-Investigator/
Senior Statistician The Commonwealth Fund \$203,284

Evaluating the Global Payment Model Development by Blue Cross, Blue Shield of MA

We evaluate the clinical and economic effects of The Alternative Quality Contract (AQC), developed by Blue Cross Blue Shield of Massachusetts.

2009 – 2014 Co-Investigator/
Senior Statistician NIH/National Institute on Aging \$352,050

Grant #R01 AG034417

Income Effects and Current Law Forecasts of Health Care Spending Growth

This project will construct a microsimulation model for that will quantify the common intuition that budget constraints will, over time, slow Medicare spending growth. Our contribution will be to improve existing current-law forecasts by making this intuition explicit and by allowing forecasters to better understand how cost sharing may slow spending. Unlike existing models, our model will be grounded in economic theory and model spending relative to income at the beneficiary level.

2008 – 2013 Co-Investigator/
Senior Statistician National Cancer Institute \$326,349

Grant #R01 CA132900

Population-Based Assessment of Cancer Trials Generalizability in the Elderly

While more than two thirds of all cancer patients in the United States are diagnosed at or after age 65, less than one third of participants in chemotherapy clinical trials are 65 or older. This well known under-representation of the elderly on chemotherapy trials has created an enormous void in clinical knowledge regarding the risks and benefits of even standard chemotherapy regimens in the elderly; this void may compromise informed decision-making by physicians and their elderly cancer patients and result in inappropriate over and under-treatment of the elderly. This research is focused on studying the survival outcomes of elderly Medicare cancer patients following treatment with what can be considered standard chemotherapy regimens and, thus, seeks to begin to fill the large void in clinical knowledge regarding the effectiveness of chemotherapy in elderly Medicare patients.

Current Unfunded Projects (Under Review)

2009-2010 Co-Investigator/ Senior American Cancer Society \$199,800
Statistician

Effect of MA Health Insurance Reform on Breast Cancer Screening & Diagnosis

The major goal of the study is to examine the effect of the Massachusetts health insurance legislation on rates of mammography screening and stage at diagnosis for women diagnosed with breast cancer in Massachusetts during the several years before the Health Reform Law was implemented, during implementation, and following implementation.

2009 – Co-Investigator/ Senior National Institute on Aging \$1,724,080
2014 Statistician

Evaluating Mechanisms to Slow Health Care Spending Growth

This Program Project consists of four Projects that propose to examine potential strategies for controlling health care spending growth. Projects 1 – 3 use longitudinal administrative data to model spending growth, with each project focusing on the relationship between a particular cost containment strategy and trends in spending (Project 1: higher patient cost sharing; Project 2: traits of physician group practices; Project 3: managed care health plans). Project 4 develops a macro-economic model of the consequences of spending growth and uses the results from Projects 1 - 3 to inform parameters of that model. The Projects in this program grant will be built around a common Administrative Core and Clinical Services Core

2009-2011 Co-Investigator/ Senior NIH/NIA \$294,756
Statistician

Data Infrastructure for Nursing Home Comparative Effectiveness & Use Studies

This project will create a comprehensive data infrastructure to conduct future comparative effectiveness studies of therapies delivered in the nursing home setting.

2009-2010 Co-Investigator/ Senior AstraZeneca International \$88,496
Statistician

Evaluation of Clinical and Economic Impact of VBID in HAMP

We propose to assess the clinical and economic effects of the VBID initiative at HAMP, focusing on the assessment of the impact of the intervention on use of Statins. Previous studies have identified associations between copayment structure and adherence of statins (for example, see: Chernew et al. 2008; Goldman et al., 2004; Huskamp et al. 3003). The results show that lower copayment level generally increase adherence among Statins users. However, the corresponding clinical and economic implications are

uncertain, and the evaluations have not been performed within a new benefit design environment. In this study, we will evaluate the impact of the HAMP program on adherence to Statins as well as its clinical and economic effect under the implementation of VBIP

Report of Local Teaching and Training

Teaching of Students in Courses

1998	Introduction to Statistical Computing		
Graduate Students	Teaching Assistant: Division of Epidemiology and Biostatistics	2 hours of class, 2 times a week	
2002	Methods of Survey Sampling		
Graduate Students	Teaching Assistant: Summer Institute in Survey Research Techniques	2 hours of class, 2 times a week	
2003 - 2004	Introduction to SAS Statistical Programming		
Graduate Students	Instructor: Department of Biostatistics	2 hours of class, 2 times a week	

Supervised or Supported Trainees

2008	Rachel Freedman, M.D.	Oncology Fellow, Dana Faber Cancer Institute
2008	Tara Sussman, M.S.	Ph.D. Candidate, Department of Health Policy and Management, Harvard School of Public Health
2008	Jason Block, M.D.	Research Fellow, Department of society, human development, and health, Harvard School of Public Health

Local Invited Presentations

2007	A Short Introduction to Multiple Imputation	
	Department of Biostatistics and Computational Biology, Dana Faber Cancer Institute	Dana Faber Cancer Institute

2008	Missing data, Multiple Imputation, and Associated SAS procedures	Department of Health Care Policy, Harvard Medical School	Department of Health Care Policy
2008	A Short Introduction to Multiple Imputation (Using CanCORS Dataset)	Center for Outcomes and Policy Research, Dana Faber Institute	Dana Faber Cancer Institute
2008	Misreporting, Missing Data, and Multiple Imputation, Improving Accuracy of Cancer Registry	Department of Health Care Policy, Harvard Medical School	Department of Health Care Policy
2009	Multiple Imputation in a Large-scale Complex Survey: A Practical Guide	Department of Biostatistics and Computational Biology, Dana Faber Cancer Institute	Dana Faber Cancer Institute

Report of Regional, National and International Invited Teaching and Presentations

2003	Semiparametric Approach for Multiple Imputation of Unobserved Values in Longitudinal Studies	San Francisco, CA	Joint Statistical Meeting, American Statistical Association
2004	Handling Missing Longitudinal Covariates in Child-development Study: A Functional Multiple Imputation Approach	Toronto, Canada	Student Paper Award Session Joint Statistical Meeting, American Statistical Association
2004	Nonparametric Multiple Imputation for Incomplete Longitudinal Data via Functional Mixed Models		

	Pittsburg, PA	International Biometric Society, Eastern North American Region
2004	Nonparametric Multiple Imputation for Incomplete Longitudinal Data via Functional Mixed Models	
	Tucson, Arizona	Department of Epidemiology and Biostatistics, University of Arizona School of Public Health
2004	Nonparametric Multiple Imputation for Incomplete Longitudinal Data via Functional Mixed Models	
	Dallas, TX	Division of Biostatistics, University of Texas Southwestern Medical Center at Dallas
2004	Nonparametric Multiple Imputation for Incomplete Longitudinal Data via Functional Mixed Models	
	Rahway, New Jersey	Department of Clinical Biostatistics, Merck Co.
2004	Nonparametric Multiple Imputation for Incomplete Longitudinal Data via Functional Mixed Models	
	Cleveland, OH	Case Western Reserve University / MetroHealth Medical Center
2005	Semiparametric Approach for Multiple Imputations of Unobserved Values in Longitudinal Studies	
	Boston, MA	International Conference on Health Policy Research, American Statistical Association

2005	Multiple Imputation for Non-Normal Missing Data Using Tukey's g_h Distribution	
	Austin, TX	International Biometric Society, Eastern North American Region
2005	Multiple Imputation for Non-Normal Missing Data Using Tukey's g_h Distribution	
	Boston, MA	Department of Health Care Policy, Harvard Medical School
2005	Multiple Imputation using Multivariate g_h Transformation	
	Minneapolis, MN	Joint Statistical Meeting, American Statistical Association
2006	Combining Information from Various Data Sources To Improve Analyses of Adjuvant Cancer Therapies	
	Seattle, WA	Joint Statistical Meetings, American Statistical Association
2006	Multiple Imputation for Nonnormal Continuous Missing Values in Complex Surveys	
	Tampa, FL	Invited Session: Solutions for missing data in complex sample surveys relevant in health policy research International Biometric Society, Eastern North American Region
2007	Combining Information from Cancer Registry and Medical Records Data to Improve Analyses of Adjuvant Cancer Therapies	
	Dallas, TX	Center for Health Care Analysis and Research, Baylor Health Care System

- 2007 Combining Information from Cancer Registry and Medical Records Data to Improve Analyses of Adjuvant Cancer Therapies
Gainesville, FL
Department of Epidemiology and Health Policy Research, University of Florida College of Medicine
- 2007 Combining Information from Cancer Registry and Medical Records Data to Improve Analyses of Adjuvant Cancer Therapies
Miami, FL
Division of Biostatistics, University of Miami Miller School of Medicine
- 2007 Combining Information from Cancer Registry and Medical Records Data to Improve Analyses of Adjuvant Cancer Therapies
San Antonio, TX
Department of Epidemiology and Biostatistics, University of Texas Health Sciences Center at San Antonio
- 2007 Combining Information from Cancer Registry and Medical Records Data to Improve Analyses of Adjuvant Cancer Therapies
Boston, MA
Department of Ambulatory Care and Prevention, Harvard Medical School
- 2007 Combining Information from Cancer Registry and Medical Records Data to Improve Analyses of Adjuvant Cancer Therapies
Boston, MA
Department of Health Care Policy, Harvard Medical School

2007	Analysis with Missing Data in a Complex Survey of Cancer Care using Weighting and Multiple Imputation	Atlanta, GA	International Biometric Society, Eastern North American Region
2007	Imputation in a Multimode Multi-instrument Study of Cancer Care	Salt Lake City, UT	Invited Session: Confronting the Realities of Massive Imputation in Complex Surveys Joint Statistical Meetings, American Statistical Association
2008	Imputation in a Complex Survey of Cancer Care,	Philadelphia, PA	International Conference on Health Policy Research, American Statistical Association
2008	Assessing the Adequacy of Imputation Models Using Posterior Predictive Checking	Arlington, VA	International Biometric Society, Eastern North American Region
2008	Combining Information on Adjuvant Cancer Therapies from Multiple Sources	Denver, CO	Joint Statistical Meetings, American Statistical Association
2008	Determination of Hospital Performance on the Basis of Eligible Patients	Philadelphia, PA	Featured Poster Presentation Annual Meeting, Society for Medical Decision Making
2009	The Health Care World Is Not Flat: Understanding Geographical Variations in Quality of Hospital Care.		Invited Session

	Houston, TX	Bayesian Biostatistics Conference
2009	Analysis with Missing Data Using Multiple Imputation for the Workshop of Analysis of Messy Data Hollywood, Florida	Workshop, around 80 persons Annual Conference in Research Approaches for Mental Health Interventions
2009	Multiple Imputation for Multivariate Incomplete Data: A Practical Guide Chicago, Illinois	Short course, around 60 persons. Annual Research Meeting for Academy Health

Report of Scholarship

Publications

1. Zhou J, **He Y** and Yuan Y. Comparison of Schuirmanns Two One-Sided Tests with Nonparametric Two One-Sides Tests for Non-normal Data in Clinical Drug-Drug Interaction Studies. *Online Journal of Pharmacokinetics* 2:33-43, 2004.
2. **He Y**, Raghunathan TE . Tukey's gh Distribution for Multiple Imputation. *The American Statistician* (60) 251-256, 2006.
3. Hsu CH, Green SB, **He Y**. A Weighted Logistic Regression Model for Estimation of Recurrence of Adenoma. *Statistics in Medicine* (26), 1567-1578, 2007.
4. Yucel R, **He Y**, Zaslavsky AM. Using Calibration to Improve Rounding in Imputation. *The American Statistician*. 2008;62(2):125-129.
5. **He Y**, Yucel R, Zaslavsky AM. Misreporting, Missing Data, and Multiple Imputation: Improving Accuracy of Cancer Registry Databases. *Chance*. 2008;21(3):55-58. [PMCID: PMC2731972]
6. **He Y**, Zaslavsky AM. Combining Information from Cancer registry and Medical Records Data to Improve Analyses of Adjuvant Cancer Therapies. *Biometrics*. 2009;65(3):946-952.

7. Freedman R, **He Y**, Winer E.P, and Keating N. Trends in Racial and Age Disparities in Definitive Local Therapy of Early-Stage Breast Cancer. *Journal of Clinical Oncology* 2009;27(5):713-719.
8. Kessler RC, Green JG, Gruber M, Guyer M, **He Y**, Jin R, Kaufman J, Merikangas KR, Sampson NA, Zaslavsky AM. National comorbidity survey replication adolescent supplement (NCS-A): III. Concordance of DSM-IV/CIDI diagnoses with clinical reassessments. *Journal of American Academy of Child and Adolescent Psychiatry*. 2009;48(4):386-399.
9. **He Y**, Zaslavsky AM, Harrington DP, Catalano P, Landrum MB. Multiple Imputation in a Large-Scale Complex Survey: A Practical Guide. *Statistical Methods in Medical Research*. 2009; Aug 4 [Epub ahead of print].
10. **He Y**, Raghunathan TE. On the Performance of Sequential Regression Multiple Imputation with Nonnormal Error Distribution. *Communication in Statistics: Simulation and Computation* 2009;38(3-5):856-883.
11. Keating NL, Kouri E, **He Y**, Weeks JC, Winder EP. Racial Differences in Definitive Breast Cancer Surgery: Are They Explained by the Hospitals where Patients Undergo Surgery? *Medical Care*. 2009; 47(7):765-73.
12. Block J, **He Y**, Zaslavsky AM, Aynian J. Psychosocial Stress and Change in Weight Among U.S. Adults. *American Journal of Epidemiology*. 2009;170(2):181-192. [PMCID: PMC2727271]
13. Huskamp HA, Keating NL, Malin JL, Zaslavsky AM, Weeks JC, Earle CC, Teno JM, Virnig BA, Kahn KL, **He Y**, Ayanian JZ. Discussions with Physicians about Hospice among Patients with Metastatic Lung Cancer. *Archives of Internal Medicine*. 2009;169(10):954-962. [PMCID: PMC2689617]
14. Klabunde CN, Ambs A, Keating NL, **He Y**, Doucette WR, Tisnado D, Clauser S, Kahn KL. The Role of Primary Care Physicians in Cancer Care. *Journal of General Internal Medicine*. 2009; 24 (9), page 1029. [PMCID: PMC2726889]

Letters to Editor

1. **He Y**, Raghunathan TE. Responses to Discussion of “Tukey’s g Distribution for Multiple Imputation” by Demirtas H. and Hedeker D. *The American Statistician* (60) 348-349, 2006.

2. Yucel R, **He Y**, Zaslavsky AM. Responses to Discussion of “Use Calibration to Improve Rounding in Imputation” by Demirtas H. and Hedeker D. *The American Statistician*. (62) 364-365, 2008

Proceedings of Meetings

1. Zhou J, Coate B, **He Y**. Empirical Power Computation Using SAS for Schuurmann’s Two One-sided Tests Procedure in Clinical Pharmacokinetic Drug-drug Interaction Studies. *SAS Users Group International Proceedings* 29, 2004.
2. **He Y**, Zaslavsky AM. Combining Information from Several Data Sources to Improve Analyses of Adjuvant Cancer Therapies. *Proceedings in Health Policy Statistics*, American Statistical Association, 1600-1603, 2006.
3. **He Y**, Zaslavsky AM. Imputation in a Multiformat and Multiwave Survey of Cancer Care. *Proceedings in Health Policy Statistics*, American Statistical Association, 2007

Dissertation

13. **He Y**. Multiple Imputation for Continuous Nonnormal Missing Data [dissertation]. Ann Arbor (MI): University of Michigan; 2005.

Manuscripts Submitted

1. **He Y**, Zaslavsky AM. Posterior Predictive Checking of Imputation Models. Under Review. *Journal of Computational and Graphical Statistics*.
2. Elena MK, **He Y**, Winer EP, Keating NL. Influence of Birthplace on Stage at Breast Cancer Diagnosis and Treatment in Hispanic Women. Under Review. *Breast Cancer Research and Treatment*
3. **He Y**. Missing Data Analysis Using Multiple Imputation: Getting to the Heart of the Matter. Under Review. *Circulation: Cardiovascular Quality and Outcomes*
4. Afendulis C, **He Y**, Zaslavsky AM, Chernew ME. The Impact of Medicare Part D on drug-sensitive hospitalizations. Under Review. *JAMA*.
5. **He Y**, Wolfe RE, Normand SLT. The Health Care World Is Not Flat: Understanding Geographical Variations in Quality of Hospital Care. Under Review. *Health Services and Outcomes Methodology*.

Work in Progress

1. **He Y**, Wolfe RE, Normand SLT. Determination of Hospital Performance on the Basis of “Eligible” Patients.
2. Huskamp HA, Keating NL, Malin JL, Zaslavsky AM, Weeks JC, Earle CC, Teno JM, Virnig BA, Kahn KL, **He Y**, Ayanian JZ. Hospice Use among Patients with Metastatic Lung Cancer.
3. Ayanian JZ, Zaslavsky AM, Arora NK, Malin JL, Ganz PA, van Ryn M, Hornbrook MC, Kiefe CI, **He Y**, Urmie J, Harrington, DP. Patients’ Perspectives on the Quality of Care for Lung Cancer and Colorectal Cancer: Findings from the CanCORS Consortium.
3. Klabunde CN, Ambs A, Ganz P, **He Y**, Hornbrook M, Keating N, Potosky A. A population-based assessment of cancer specialists’ involvement in clinical trials.

Narrative Report

My research focuses on the development and application of statistical methodology for health care and health services research.

My primary methodological research topic is the analysis of data sets with missing values. In health services research, the complicated study design and nature of variables often make it difficult to obtain valid inferences in the presence of missing data. My general research goal is to develop and implement appropriate imputation strategies to address such problems.

Distributions of many of the variables used in health services studies display nonnormal shape, often with strong skewness and heavy tails (e.g, medical cost data). Using the typical imputation based on a normal distribution would create a distorted distribution for the imputations and thus produce invalid inferences. In my doctoral dissertation research, I used the Tukey’s gh distribution, a flexible family that can accommodate a wide variety of density shape, to impute continuous nonnormal data. Despite the complicated density form of the gh distribution, I developed a simple imputation algorithm. I further extended this method to handle multiple incomplete variables which often arise in practice.

Currently, I am a statistician in the Statistical Coordinating Center for Cancer Care Outcomes Research and Surveillance Consortium (CanCORS). This is a large cohort study of cancer care in U.S., involving thousands of patients and collecting data from multiple research sites and information sources. I developed and applied a class of sequential regression multiple imputation models for the incomplete survey data in CanCORS. The multiply-imputed survey database is accessible within the consortium so

that CanCORS investigators can easily analyze the completed data in a proper manner. The future goal is to release the database to outside users, yet using multiply-imputed synthetic version to protect the confidentiality.

Another methodological challenge from CanCORS is how to make a better use of the information collected from multiple sources. Although collected for the same set of subjects, information from some sources may be less accurate than others. For example, the data for receiving the adjuvant therapies are usually underreported in registry databases. I developed a class of hierarchical Bayesian models to impute/correct the misreported treatment variables in the registry sample using information from medical records data (gold standard) collected for a relative small sample. As a result, combining information from the two sources is better than using either source alone, thus increasing the utility of the data collected. Extension of this work involves integration of more than two sources (e.g. surveys, medical records, registry data, and claims) to obtain better statistical inferences.

Despite the popularity of using imputation for incomplete data problems, assessment and diagnostics of imputation models are rarely done in practice. I proposed to use posterior predictive checks for imputation model assessment. This approach generates posterior predictive replicates of completed data (after imputation), and applies the planned analysis to both the completed data and their replicates. The difference of the analysis results, measured by the posterior predictive p-values, shows the similarity of the two sets of the data and thus reflects the goodness-of-fit of the models. The checking procedure can be applied to a wide variety imputation models, and can be easily implemented using existing imputation software.

A second focal point of my methodological research is to develop analytic methods for comparing providers using outcome and process-based measures. To date I have evaluated the effectiveness of different performance constructs for several acute care process measures based on the eligible number of patients. I have also developed a class of multilevel item response models to construct latent quality estimates of providers with multiple process measures and different levels of clustering. These models are applied to study the geographic variations of hospital performance on evidence-based therapy measures for heart attack, heart failure, and pneumonia. The future research involves developing innovative approaches to constructing composite profiles from multiple performance measures.

My applied research includes cancer, mental health, and health economics. I am involved in a number of studies examining patterns, quality, and cost of care, and their impact on patient outcomes. Some of them include using the National Comorbidity Study – Adolescent to assess the pattern of adolescent mental health; the disparity for receiving the breast cancer treatment among different racial, ethnic, nativity, and aging groups; the pattern of hospice care among late-stage cancer patients; the role of primary care physicians in caring cancer patients; and the effect of physician-group traits and cost-sharing rules of care plans on the growth of medical spending.

My methodological work encompasses Bayesian analysis, latent-variable approach, hierarchical modeling, and multivariate modeling. My current and future research mainly involves developing and implementing innovative statistical methods in these areas to various empirical problems in health policy and outcomes research. In my projects, both methodological and applied, I was able to link my background in statistical methodology with substantive problems in health care policy, and make important contributions to the direction of research projects. The interaction with my collaborators also allows me to learn from them, gaining experiences from various areas in health policy including medicine, economics, and sociology, developing my own expertise and independent, substantive interests, and consequently becoming an even more effective statistical researcher and collaborator.