

TUYEN HOANG

Curriculum Vitae

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843 Health Sciences Road • Irvine, CA 92697-1385 • Phone: (949) 824-3354

EDUCATION

PhD, Biostatistics, 2004, University of California, Los Angeles

MS, Biostatistics with a minor in Epidemiology, 1999, University of California, Los Angeles

BA, Mathematics with a minor in Computer Science, 1997, University of California, Los Angeles

POSITIONS AND EMPLOYMENT

Aug 2016-current: Assistant Director, Biostatistics, Epidemiology & Research Design Unit, Institute for Clinical and Translational Science (ICTS), UC Irvine

2004-Feb 2016: Biostatistician, Veterans Affairs Healthcare System, Los Angeles

2001-2004: Research assistant, Department of Biomedical Informatics, UCLA

1999-2001: Research assistant, Jonsson Comprehensive Cancer Center, UCLA

1998-1999: Research assistant, Department of Education, UCLA

1997-1998: Teaching assistant, Department of Statistics, UCLA

PROFESSIONAL MEMBERSHIPS AND HONORS

1999 – present: Member of the American Statistical Association

1994: IVC Associated Students Scholarship

1994: IVC Honors Society Scholarship

1994: IVC Mathematics Scholarship

1995: Sylvia Tischhauser Scholarship

1995: California Retired Teachers Association Scholarship

1996-1997: Southern California Edison Scholarship

2002: UCLA School of Public Health Traineeship Award

RESEARCH PUBLICATIONS

1. Wong GC, Berman BA, **Hoang T**, Bernaards C, Jones C, Bernert JT. Children's exposure to environmental tobacco smoke in the home: comparison of urine cotinine and parental reports. *Archives of Environmental Health*, 57(6), 584-590. 2002.
2. Berman BA, Wong GC, Bastani R, **Hoang T**, Jones C, Goldstein DR, Bernert JT, Hammond KS, Tashkin D, Lewis MA. Household smoking behavior and ETS exposure among children with asthma in low-income, minority households. *Addictive Behaviors*, 28(1), 111-128. 2003.

3. Kramer JB, Satter DE, Saliba D, Harker JO, Wang M, Finke B, **Hoang T**. Identification of American Indian and Alaska Native veterans in administrative data of the Veterans Health Administration and the Indian Health Service. *American Journal of Public Health*, 96(9),1577-1578. 2006.
4. Shrank WH, **Hoang T**, Ettner SL, Glassman PA, Nair K, DeLapp D, Dirstine J, Avorn J, Asch SM. The implications of choice: prescribing generic or preferred pharmaceuticals improves medication adherence for chronic conditions. *Archives of Internal Medicine*, 166(3), 332-337. 2006.
5. Kanwal F, **Hoang T**, Spiegel BMR, Dominitz J, Goetz M, Gifford A, Asch S. Predictors of treatment in patients with chronic hepatitis C virus infection—Role of patient versus non-patient factors. *Hepatology*, 46(6), 1741-1749. 2007.
6. Goetz MB, Bowman C, **Hoang T**, Anaya H, Osborn T, Gifford A, Asch S. Implementing and evaluating a regional strategy to improve testing rates in VA patients at risk for HIV, Utilizing the QUERI process as a guiding framework: QUERI Series. *Implementation Science*, 3:16. 2008.
7. Anaya HD, **Hoang T**, Golden JA, Asch SM. Improving HIV screening with nurse-based referral and streamlined counseling. *Journal of General Internal Medicine*, 23(6), 800-807. 2008.
8. Goetz MB, **Hoang T**, Bowman C, Knapp H, Rossman B, Smith R, Anaya H, Osborn T, Gifford AL, Asch SM., and the QUERI-HIV/Hepatitis Program. A systemwide intervention to improve HIV testing in the Veterans Health Administration. *Journal of General Internal Medicine*, 23(8), 1200-1207. 2008.
9. Rongey CA, Kanwal F, **Hoang T**, Gifford AL, Asch SM. Viral RNA testing in hepatitis C antibody positive veterans. *Am J Prev Med*, 36(3), 235-238. 2009.
10. Goetz MB, **Hoang T**, Henry SR, Knapp H, Anaya HD, Gifford AL, Asch SM; and the QUERI-HIV/Hepatitis Program. Evaluation of the sustainability of an intervention to increase HIV Testing. *J Gen Intern Med*. 2009.
11. **Hoang T**, Goetz MB, Yano EM, Rossman B, Anaya HD, Knapp H, Henry R, Bowman C, Gifford A, Asch SM. The impact of integrated HIV care on patient health outcomes. *Medical Care*, 47(5), 560-567. 2009.
12. Sanders GD, Anaya HD, Asch S, **Hoang T**, Golden JF, Bayoumi AM, Owens DK. Cost-Effectiveness of Strategies to Improve HIV Testing and Receipt of Results: Economic Analysis of a Randomized Controlled Trial. *J Gen Intern Med*; 25(6):556-63. 2010.
13. Kanwal F, Schnitzler MS, Bacon BR, **Hoang T**, Buchanan PM, Asch SM. Quality of care in patients with chronic hepatitis C virus infection: a cohort study. *Ann Intern Med*;153(4):231-9. 2010.
14. Knapp H, Anaya H, Feld J, **Hoang T**, Goetz M. Launching Nurse-Initiated HIV Rapid Testing in the Veterans Affairs Primary Care: A Comprehensive Overview of a Self-Sustaining Implementation. *International Journal of STD & AIDS*. 2011.

15. Kanwal F, **Hoang T**, Kramer JR, Asch SM, Goetz MB, Zeringue A, Richardson P, El-Serag HB. Increasing prevalence of HCC and cirrhosis in patients with chronic hepatitis C virus infection. *Gastroenterology*;140(4):1182-1188. 2011.
16. Goetz MB, **Hoang T**, Knapp H, Henry R, Anaya H, Chou A, Gifford A, Asch S. Exportability of an Intervention to Increase HIV Testing in the Veterans Health Administration. *The Joint Commission Journal on Quality and Patient Safety*; Vol 37 No. 12. 2011.
17. Kanwal F, **Hoang T**, Kramer J, Chrusciel T, El-Serag HE, Dominitz JA, Asch SM. The Performance of Process Measures in Hepatitis C. *Am J Gastroenterol*; 107(10):1512-21. 2011.
18. Kanwal F, **Hoang T**, Chrusciel T, Kramer JR, El-Serag HB, Dominitz JA, Asch SM. Process of Care for Hepatitis C Infection Is Linked to Treatment Outcome and Virologic Response. *Clin Gastroenterol Hepatol*. 2012.
19. Goetz MB, **Hoang T**, Knapp H, Burgess J, Fletcher M, Gifford A, Asch S, and QUERI HIV/HEP. Central implementation strategies outperform local ones in improving HIV testing in Veterans Healthcare administration facilities. *J Gen Intern Med*. 2013.
20. Anaya HD, Butler JN, Solomon JL, Knapp H, **Hoang T**, Kan V, Rodriguez-Barradas MC, Hare KA, Kertz B, Bokhour B. Implementation of nurse-initiated rapid HIV testing at high-prevalence primary care sites within the U.S. Veterans Affairs Health Care System. *Sex Transm Dis.*; 40(4):341-5. 2013.
21. Kanwal F, **Hoang T**, Chrusciel T, Kramer J, El-Serag HE, Durfee J, Dominitz JA, Yano E, Asch SM. Association between facility characteristics and the process of care delivered to patients with hepatitis C virus infection. *Dig Dis Sci.*; 59(2):273-81. 2014.
22. Goetz MB, **Hoang T**, Kan VL, Rimland D, Rodriguez-Barradas M. Development and Validation of an Algorithm to Identify Patients Newly Diagnosed with HIV Infection from Electronic Health Records. *AIDS Res Hum Retroviruses*. 2014.
23. Goetz MB, **Hoang T**. Rates and Predictors of Newly Diagnosed HIV infection among Veterans Seen in the Veterans Health Administration. *J Acquir Immune Defic Syndr.*; 69(5):544-50. 2015.

SELECTED OPERATION AND RESEARCH EXPERIENCE

Veterans Health Administration (2004-2016)

1. Department of Health Services Research and Development
 - Provided statistical support to various studies including infectious diseases, geriatrics, cancer research, women's health, and homelessness.
 - Conferred with the clinical teams regarding the study objectives and study designs which included options of clinical outcomes, randomization scheme, sample size and power estimates, statistical methods for testing hypotheses, data collection methods, and timeline of the analysis.
 - Assisted the clinical teams in creating and submitting IRB applications to the Human Subjects regulatory committee to seek approval for the studies.

- Reviewed methods for capturing data on patients' clinical and demographic information to ensure that the data was captured completely and correctly; monitoring ongoing study conduct issues to detect possible impact of any protocol deviations on the analysis; discussing with SAS programmers about any data issues arising during the data cleaning.
- Discussed the statistical plans with the clinical teams, worked closely with SAS programmers to perform the analyses, performed validation of the SAS programmers' work, finalized the analysis, presented results, and interpreted key findings to the clinical teams.
- Collaborated with the clinical teams to write and review manuscripts submitted for publications of the study findings.
- Proactively developed new ideas for quality improvement projects

2. Department of Infectious Diseases

I provided statistical support to Implementation Science studies which promoted innovative HIV diagnostic tests and novel Hepatitis C antiviral drugs at VHA clinics. I participated in these studies through conception, design, conduct, analysis and reporting.

With regards to the evaluation of the effectiveness of novel Hepatitis C antiviral treatments, I classified patients who received treatments into various severity levels based on their biomarker levels. I then conducted statistical tests to compare the rates of treatment success defined by sustained virologic response (SVR) among groups of patients who received different treatments. Due to the fact that this study took place in real-life clinic settings where patients were not randomized into the treatment groups, I used advanced statistical methods to account for differences in patients' disease severity, contraindications (mental health disorders, substance use disorders, obesity, etc.), and demographic factors (age, race/ethnicity, gender, etc.) among the treatment groups.

I developed an advanced algorithm to identify patients at high risk for HIV and Hepatitis C infections based on the latent indicators such as drug use, sexual transmitted diseases, impulsivity disorders, being homeless, history of incarceration, etc. I designed an informatics tool which tapped into electronic medical records to identify patients at risk for HIV and Hepatitis C infection based on the algorithm and prompt providers to test these patients for HIV and Hepatitis C infections. As a result, many more infected patients have been diagnosed and provided with timely treatment.

University of California, Los Angeles (2001-2004)

1. Department of Genetics Research

- Analyzed tissue microarray data obtained from cancer tumors to find genetic biomarkers associated with diagnosis and prognosis of various types of cancer
- Developed an efficient sampling method to collect tissue samples with most pathological information and least tissue waste from cancer tumors
- Developed new statistical methods for rapid analysis of massive tissue microarray data
- Published the statistical methods and data analysis results in my PhD dissertation

2. Department of Biomedical Informatics

- Designed informatics tools using Microsoft SQL to extract data from large electronic medical databases and generate real-time reports for clinical use
- Explored Natural Language Processing methods to analyze text data

SELECTED TECHNICAL TRAINING AND SKILLS

Statistics

- Statistical programming languages: SAS, STATA, SPSS, R
- Statistical methods: study designs, prediction and validation models, hypothesis testing methods, generalized linear regression, survival analysis, Bayesian statistics, and hierarchically clustered data analysis
- Research areas: infectious diseases, epidemiology, genetics, cancer research, clinical trials, and health services

Computer

- Database management and report: SQL, Report Builder, PerformancePoint
- Computer programming languages: C++, JAVA
- Text data techniques: Natural Language Processing methods
- Clinical informatics tools: dashboard, clinical reminder, note template