

## Chelsea L. Shover, PhD

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### **EDUCATION AND TRAINING**

#### **Postdoctoral Research Fellow**

Aug 2018 - Present

Stanford University School of Medicine, Palo Alto, CA  
Faculty Mentor: Keith Humphreys, PhD

#### **PhD, Epidemiology**

University of California, Los Angeles, June 2018

Dissertation Title: *How substance use, health insurance, and social determinants of health affect the HIV prevention continuum in Los Angeles, CA: Focus on Pre-Exposure Prophylaxis (PrEP) and Treatment as Prevention*

Dissertation Chair: Pamina M. Gorbach, MHS, DrPH

#### **BA, English**

Harvard College, May 2011

Thesis Title: *Secondhand Miracles* / Foreign Language Citation in Mandarin Chinese

### **PEER-REVIEWED PUBLICATIONS (26 total)**

#### **Original research (22 total)**

1. **Shover C**, Falasinnu T, Freedman R, Humphreys K. Emerging characteristics of isotonitazene-involved overdose deaths: a case-control study. *J Addict Med*. In press.
2. **Shover C**, Falasinnu T, Dwyer C, Benitez Santos N, Cunningham N, Freedman R, Vest N, Humphreys K. Steep increases in fentanyl-related mortality west of the Mississippi River. *Drug Alcohol Depend*. 2020 Nov 1. doi:10.1016/j.drugalcdep.2020.108314
3. **Shover C**. Availability of extended-release buprenorphine to treat opioid use disorder for Medicaid-covered population. *Psychiat Serv*. 2020 Sep 10. doi:10.1176/appi.ps.202000165
4. Wall-Wieler E, **Shover C**, Hah J, Carmichael S, Butwick A. Opioid prescription and persistent opioid use after ectopic pregnancy. *Obstet Gynecol*. 2020 Sep 1. doi: 10.1097/AOG.0000000000004015. PMID: 32769649.
5. **Shover C**, DeVost M, Cunningham N, Beymer M, Flores D, Flynn R, Gorbach P, Lyman P, Amico KR, Bolan R. Structural, dosing, and risk change factors affecting discontinuation of pre-exposure prophylaxis (PrEP) in a large urban clinic. *AIDS Educ Prev*. 2020: doi:10.1521/aeap.2020.32.4.271
6. **Shover C**, Vest N, Chen D, Stueber A, Falasinnu T, Hah J, Kim J, Mackey I, Weber K, Ziadni M, Humphreys K. Association of state policy allowing medical cannabis for opioid use disorder with dispensary marketing for this indication. *JAMA Netw Open*. 2020 Jul 14. doi:10.1001/jamanetworkopen.2020.10001

7. Caputi T, **Shover C**, Watson R. Physical and Sexual Violence among U.S. Gay, Lesbian, Bisexual, and Questioning Adolescents, 2015-2017. *JAMA Pediatr*. 2020 Mar 9. doi:10.1001/jamapediatrics.2019.6291
8. **Shover C**, Humphreys K. Predictors of availability of long-acting pharmacotherapy for opioid use disorder. *Drug Alcohol Depend*. 2019 Nov 1;204:107586. doi: 10.1016/j.drugalcdep.2019.107586.
9. Maitino E, Shafir S, Beymer M, **Shover C**, Cunningham N, Flynn R, Bolan R. Age at First HIV Test for MSM at a Community Health Clinic in Los Angeles. *AIDS Care*. 2019 Oct 30. doi:10.1080/09540121.2019.1683806
10. **Shover C**, Abraham A, D'Aunno T, Friedmann P, Humphreys K. The relationship of Medicaid expansion to psychiatric comorbidity care within substance use disorder treatment programs. *J Subs Abuse Treat*. 2019 Jul 29. doi https://doi.org/10.1016/j.jsat.2019.07.012.
11. **Shover C**, Davis C, Gordon S, Humphreys K. Association between medical cannabis laws and opioid overdose mortality has reversed over time. *Proc Natl Acad Sci USA*. 2019 Jun 10. doi 10.1073/pnas.1903434116.
12. Shackett B, Blanco J, Hightow-Weidman L, Mgodhi N, Alcamí J, Buchbinder S, ..., **Shover C**, et al. HIVR4P 2018: From Research to Impact Conference Summary and Highlights. *AIDS Res Hum Retroviruses*. 2019 May 29. doi 10.1089/AID.2019.0074.
13. **Shover C**, Javanbakht M, Shoptaw S, Lee S-J, Bolan R, Cunningham N, Beymer M, DeVost M, Gorbach P. Mind the Gaps: Prescription coverage and HIV incidence among patients receiving pre-exposure prophylaxis from a large federally qualified health center in Los Angeles, CA. *AIDS Behav*. 2019 Apr 05. doi 10.1007/s10461-019-02493-w.
14. **Shover C**, DeVost M, Beymer M, Flynn R, Gorbach P, Bolan R. Using sexual orientation and gender identity (SOGI) to monitor disparities in HIV, sexually transmitted infections, and viral hepatitis. *Am J Public Health*. 2018 Nov 01: S277-S283. doi:10.2105/AJPH.2018.304751.
15. **Shover C**, Javanbakht M, Shoptaw S, Lee S-J, Bolan R, Parsons J, Rendina J, Gorbach P. HIV pre-exposure prophylaxis initiation at a large community clinic: Differences between eligibility, awareness, and uptake. *Am J Public Health*. 2018 Oct 01: 1408-1417. doi: 10.2105/AJPH.2018.304623.
16. Gorbach, P, Javanbakht M, **Shover C**, Bolan R, Ragsdale A, Shoptaw S. Associations Between Cannabis Use, Sexual Behavior, and STIs/HIV In a Cohort of Young Men Who Have Sex with Men. *Sex Transm Dis*. 2018 Oct 01. doi: 10.1097/OLQ.0000000000000919.
17. Lee JG, DeMarco ME, Beymer MR, **Shover C**, Bolan RK. Tobacco-free policies and tobacco cessation systems at health centers serving lesbian, gay, bisexual, and transgender clients. *LGBT Health*. 2018;5(4):264-269. doi: 10.1089/lgbt.2017.0208. Epub 2018 Apr 16.
18. **Shover C**, Beymer M, Unger E, Javanbakht M, Bolan R. Accuracy of Presumptive Gonorrhea Treatment for Gay and Bisexual Men: Results from a Large Sexual Health Clinic in Los Angeles, California. *LGBT Health*. 2018;5(2):139-144. doi: 10.1089/lgbt.2017.0115. Epub 2018 Mar 01.

19. Beymer M, DeVost M, Weiss R, Dierst-Davies R, **Shover C**, Benasians C, Talan A, Flynn R, Krysiak R, McLaughlin K, Bolan R. Does HIV Pre-Exposure Prophylaxis Use Lead to a Higher Incidence of Sexually Transmitted Infections? A Case-Crossover Study of Men Who Have Sex with Men in Los Angeles, California. *Sex Transm Infect.* 2018 Sep;94(6):457-462. doi: 10.1136/sextrans-2017-053377. Epub 2018 Feb 27.
20. DeVost M, Beymer M, Weiss R, **Shover C**, Bolan R. App-Based Sexual Partner Seeking and Sexually Transmitted Infection Outcomes: A Cross-Sectional Study of HIV-negative MSM Attending an STI Clinic in Los Angeles, California. *Sex Transm Dis.* 2018 Jun;45(6):394-399. doi: 10.1097/OLQ.0000000000000770.
21. Beymer M, Harawa N, Weiss R, **Shover C**, Toyne B, Meanley S, Bolan R. Are partner race and intimate partner violence associated with incident and newly diagnosed HIV infection in African-American men who have sex with men? *J Urban Health.* 2017 Jun 14. doi: 10.1007/s11524-017-0169-7.
22. Cunningham N, Beymer M, Javanbahkt, M, **Shover C**, Bolan R. Concordance between self-reported STI history and biomedical results among men who have sex with men in Los Angeles, California. *Sex Transm Infect.* 2017;93:514-519.

#### **Reviews and commentaries (4 total)**

1. **Shover C** and Humphreys K. Debunking Cannabidiol as a Treatment for COVID-19: Time for the FDA to Adopt a Focused Deterrence Model? *Cureus.* 2020 Jun 17 doi: 10.7759/cureus.8671
2. Humphreys K and **Shover C**. Recreational cannabis legalization presents an opportunity to reduce the harms of the U.S. medical cannabis industry. *World Psychiatry.* 2020 May 11. Doi: 10.1002/wps.20739
3. **Shover C**. Priorities and concerns of people who use opioids are key to scaling up XR-buprenorphine. *Addiction.* 2020 Apr 18. doi 10.1111/add.15048
4. **Shover C**, Humphreys K. Six policy lessons relevant to cannabis legalization. *Am J Drug Alcohol Abuse.* 2019 Mar 14. doi 10.1080/00952990.2019.1569669.

#### **OTHER RESEARCH REPORT (non-peer reviewed)**

Ilango S and **Shover C**. Blood-borne virus Wave 2 Investigation Report. Santa Barbara County Public Health Department. October 30, 2015.

#### **INVITED TALKS**

1. Invited lecture, NIDA Clinical Trials Network Western Node & Big South/West Node, 2020.
2. Panelist, National HIV and Hepatitis Technical Assistance Meeting, National Alliance of State & Territorial AIDS Directors, 2020.
3. Invited lecture, Population Health Sciences Department Seminar, Weill Cornell Medical College, 2020.

4. Invited lecture, Epidemiology Department Seminar, Boston University School of Public Health, 2020.
5. Invited lecture, Anesthesiology Department Seminar, University of Michigan School of Medicine, 2020. [Deferred due to COVID-19]
6. Invited lecture, Epidemiology Department Seminar, Emory University Rollins School of Public Health, 2020.
7. Invited lecture, General Internal Medicine and Health Services Research Division Seminar, University of California Los Angeles David Geffen School of Medicine, 2020.
8. Invited lecture, Advanced Alcohol Research Seminar, Alcohol Research Group at University of California Berkeley, 2020.
9. Invited lecture, MAT-VA Journal Club Seminar, Veterans Health Administration, 2020.
10. Invited lecture, Center for Opioid Epidemiology and Policy Seminar, New York University Grossman School of Medicine, 2019.
11. Invited lecture, Psychiatry Department Seminar, University of North Carolina Chapel Hill School of Medicine, 2019.
12. Invited lecture, Schaeffer Center for Health Policy and Economics Seminar, University of Southern California Sol Price School of Policy, 2019.
13. Invited lecture, Institute for Addiction Science Seminar, University of Southern California Keck School of Medicine, 2019.
14. Invited lecture, Infectious Diseases and Microbiology Department Seminar, University of Pittsburgh School of Public Health, 2019.
15. Invited lecture, Chicago Center for HIV Elimination Seminar, University of Chicago Pritzker School of Medicine, 2019.
16. Invited lecture, Epidemiology and Biostatistics Department Seminar, Western University Schulich School of Medicine, 2019.
17. Invited lecture, Continuing Medical Education Session, Nevada State Medical Association, 2019.
18. Invited lecture, Drug Policy Research Center Seminar, RAND Santa Monica, 2019.

#### **SCIENTIFIC MEETING PRESENTATIONS (NATIONAL/INTERNATIONAL)**

\*Denotes presentation by a mentee

1. **Shover C**, Vest N, Chen D, Stueber A, Humphreys K. Do medical cannabis laws undermine evidence-based treatment for opioid use disorder? College on Problems of Drug Dependence (2020). Hollywood, FL, oral presentation (virtual due to COVID-19 pandemic).

2. **Shover C**, Vest N, Chen D, Stueber A. Cannabis dispensaries online advertising about opioid use disorder: First-stage results from a multi-state mixed methods study in the Northeastern U.S. American Psychopathological Association (2020). New York, NY, poster presentation.
3. **Shover C**, McGovern M, Humphreys K. Low utilization of long-acting buprenorphine modalities for OUD. Addiction Health Services Research (2019). Park City, UT, poster presentation.
4. Keamy-Minor E\*, Lembke A, **Shover C**. Alcohol screening at ambulatory care visits involving prescriptions of opioids and benzodiazepines. Addiction Health Services Research (2019). Park City, UT, poster presentation. Presented by E Keamy-Minor.
5. **Shover C**, Abraham A, D'Aunno T, Friedmann P, Humphreys K. Impact of Affordable Care Act implementation on psychiatric treatment in outpatient substance use disorder treatment settings. College on Problems of Drug Dependence (2019). San Antonio, TX, oral presentation.
6. Humphreys K and **Shover C**. What would happen if Norway legalized cannabis? Norsk Forening for Avhengighetspsykologi (2019). Oslo, Norway, plenary. Presented by K Humphreys.
7. Fulcher J, Javanbakht M, **Shover C**, Ragsdale A, Brookmeyer R, Shoptaw S, Gorbach P. Attributable Risk of Methamphetamine Use on Viral Suppression Among MSM on ART. Conference on Retroviruses and Opportunistic Infections (2019). Seattle, WA, poster presentation. Presented by J Fulcher.
8. **Shover C**, Flores D, Beymer M, DeVost M, Gorbach P, Flynn R, Amico KR, Chavez P, Lyman P, Toynes B, Bolan R. Online survey about reasons for stopping PrEP is an opportunity to re-engage inactive PrEP clients. HIV Research for Prevention (2018). Madrid, Spain, poster presentation.
9. **Shover C**, Pines H, Shoptaw S, Javanbakht M, Bolan R, Gorbach P. Joint Trajectories of Methamphetamine Use and Viral Load. Poster. Conference on Retroviruses and Opportunistic Infections (2018). Boston, MA, poster presentation.
10. **Shover C**, Javanbakht M, Shoptaw S, Bolan R, Gorbach P. High Discontinuation of Pre-exposure Prophylaxis Within Six Months of Initiation. Poster. Conference on Retroviruses and Opportunistic Infections (2018). Boston, MA, poster presentation.

## **GRANTS**

PI: C. Shover. Title: "Using rapidly available mortality data to measure impact of COVID-19 pandemic control measures on fatal opioid overdoses in the United States." Annual salary recovery or effort: \$25,000. Project period: 10/1/20-9/30/21. Pilot project funded by: NIH P50 DA046351.

### **Pending**

NIH K01-DA050771. PI: C. Shover. Title: "Adoption and scale up of long-acting medications for opioid use disorder by U.S. clinicians." Annual salary recovery or effort: 75%. Project period: 9/1/20-8/31/25. Impact score: 13 (2<sup>nd</sup> percentile).

## **FELLOWSHIPS**

2018-2020 Interdisciplinary Pain and Substance Use Disorder Research T32  
 2017-2018 UCLA Dissertation Year Fellowship, UCLA Graduate Division

2014-2017 Epidemiology Department Fellowship, UCLA Graduate Division  
2014-2016 Future Public Health Leaders Fellowship, UCLA School of Public Health  
2014-2016 Dean's Leadership Grant, UCLA School of Public Health  
2010 Summer Research Grant, Harvard College Research Program

## **HONORS AND AWARDS**

2020 NIDA Director's Award Travel Scholarship  
2018 Research Scholarship, HIV Research for Prevention  
2018 Representative at University of California's Graduate Research Advocacy Day  
2018 New Investigator Scholarship, Conference on Retroviruses and Opportunistic Infections  
2017 Center for Advancing Longitudinal Drug Abuse Research Summer Institute Scholarship, UCLA  
2016 Network Modeling for Epidemics Tuition Scholarship, University of Washington  
2015 Western Users of SAS Software Student Scholarship  
2015 ComSciCon National Workshop Attendee  
2011 Edward Eager Memorial Fund Prize, Harvard College  
2007 United States Presidential Scholar, U.S. Department of Education

## **PUBLIC HEALTH RESEARCH EXPERIENCE**

**Supervising Epidemiologist** June 2020 - Present  
Los Angeles County Department of Public Health

- Contribute to surveillance, outbreak investigation, and data management for COVID-19 response.
- Lead epidemiologist for team focused on people experiencing homelessness.
- Implement location-based contact tracing in homeless shelters and encampments.

**Epidemiology Assistant** Aug 2015 - Sep 2018  
Los Angeles LGBT Center, Los Angeles, CA

- Design and conduct research studies on LGBTQ health, HIV prevention, sexual health.
- Develop clinical questionnaires and manage data; prepare HIV/STI surveillance reports.

**Staff Epidemiologist** Jun - Oct 2015  
Santa Barbara County Public Health Department, Santa Barbara, CA

- Investigate Hepatitis C virus outbreak associated with private outpatient medical clinic.
- Contact patients, obtain test results, manual chart review to construct potential exposure timeline.

**Graduate Student Researcher** Oct 2014 - Jun 2015  
Fielding School of Public Health, University of California Los Angeles, Los Angeles, CA

- Assist with projects in Behavioral Epidemiology Research Group.
- Recruited participants online for mStudy cohort; developed standard operating procedures.

## **TEACHING EXPERIENCE**

2016-Present Teaching Assistant/Associate

1. Challenging Sex and Gender Dichotomies in Medicine (Stanford, Fall 2018)
  - Undergraduate seminar on biology, genetics, and social aspects of sex and gender.
2. Applied Sampling (UCLA, Spring 2018)
  - Upper division undergraduate statistics course on sampling methodology.
3. Scientific Communication (UCLA, Winter 2018)
  - Graduate level course on scientific writing and presentations.

4. Behavioral Epidemiology (UCLA, Spring 2017)
  - Graduate level elective course on quantitative and qualitative methods.
5. Introduction to Epidemiology (UCLA, Fall 2016)
  - Graduate level foundational methods course on study design.

2012-Present Workshop Instructor

- University of California, Irvine Summer Healthcare Experience (2014-Present)
- 826 Valencia, San Francisco, CA (2013)
- School for Young Writers, Christchurch, New Zealand (2012-2013)
- Think Tank Learning, Millbrae, CA (2012)

### **MENTORING EXPERIENCE**

Mentee name and email	Year	Capacity	Current position
Emily Keamy-Minor; eekm@stanford.edu	2019-Present	Med Scholars summer research mentor, with faculty mentor Anna Lembke, MD. Mentored in epidemiological methods to complete project on alcohol screening for patients prescribed opioids or benzodiazepines.	Second-year medical student, Stanford University
Tee Hoatson; hoatson@stanford.edu	2019-Present	Second reader, undergraduate thesis on addiction health services for transgender people.	Stanford class of 2020, now in graduate school at Boston University
Derek Chen; dchen8@stanford.edu	2019-Present	Supervisor for undergraduate research assistantship on cannabis and opioid use disorder policy research project.	Junior, Stanford
Jacky Chu; jacky@stanford.edu	2019-Present	Informal advisor, undergraduate thesis on primary care health services for transgender people.	Senior, Stanford
Rohan Freedman; rohan_freedman@brown.edu	2020-Present	Mentor for Brown University summer scholars program.	Sophomore, Brown University

### **PROFESSIONAL SERVICE**

- 2019-Present Core postdoctoral fellow, Stanford-Lancet Commission on the North American Opioid Crisis
- 2019-Present Grant reviewer: Mitacs
- 2017-Present Ad hoc reviewer: *Addiction*; *AIDS and Behavior*; *Drug and Alcohol Dependence*; *Journal of Addiction Medicine*; *International Journal of Drug Policy*; *JAIDS*; *American Journal of Drug and Alcohol Abuse*; *Annals of LGBTQ Public and Population Health*; *Archives of Sexual Behavior*; *Journal of Policy and Management*; *Journal of Law, Medicine, and Ethics*; *Journal of Psychoactive Drugs*; *PLOS One*; *Sexually Transmitted Diseases*; *Substance Use and Misuse*, *Tobacco Induced Diseases*; American Public Health Association
- 2014-Present University of California, Irvine Summer Healthcare Experience (SHE) Program
  - Co-founded program with Nimisha Parekh, MD, MPH.
  - Lead annual college preparation workshop for high school girls.
- 2017 Science Ambassador, March for Science Los Angeles
- 2015-2016 Co-President, UCLA Public Health Student Association

### **MEDIA COVERAGE**

1. The Washington Post Editorial Board. "The opioid crisis didn't disappear amid the pandemic. It still calls for urgent action." *The Washington Post*. 16 Oct 2020.
2. Lopez G. "Drug overdoses were increasing before Covid-19. The pandemic made things worse." *Vox*. 13 Aug 2020.
3. Mozes, Alan. "Gay, Lesbian Teens at High Odds for Physical, Sexual Abuse." *US News and World Report*. 10 Mar 2020.
4. Johnson C. "Medical pot laws no answer for US opioid deaths, study finds." *Associated Press*. 10 Jun 2019. \*
5. Frakt A. "Can marijuana help cure the opioid crisis?" *The New York Times*. 17 Jun 2019. \*
6. Kahloon I. "Medical marijuana is not the way out of America's opioid crisis." *The Economist*. 24 Jun 2019. \*

\*This study was also covered in *The Wall St. Journal*, *Vox*, *Reuters*, *The Economist*, *The Washington Post*, *NBC*, *The Atlantic*, *The Philadelphia Inquirer*, *The National Review*, and other radio, television, newspaper, and web outlets.

7. Cairns G. "PrEP reduces HIV infections by over 95% in US 'real world' study" *AIDSMap*. 18 Jun 2019.
8. Ryan B. "Truvada and the truth: is HIV prevention propelling the STI epidemic?" *The Guardian*. 21 Oct 2018.

### **CAMPUS TALKS**

1. **Shover, C.** What do we really know about cannabis and public health? Stanford Prevention Research Center. 2019.
2. **Shover, C.** Cannabis or can't-abis? Observed and potential relationships between marijuana policy and public health. Stanford NeuroChoice. 2019.
3. **Shover, C.** Introduction to substance use research from biomarkers to public policy. Systems Neuroscience and Pain Lab Research Training Day. 2019.
4. **Shover, C.** HIV pre-exposure prophylaxis continuum at a federally qualified health center in Los Angeles. Stanford Prevention Research Center. 2018.
5. **Shover, C.** Collecting sex and gender data in epidemiological research. UCLA Epidemiology Doctoral Research Seminar. 2017.

### **OTHER EMPLOYMENT**

2013-2014	Fellowship Coordinator, University of California Irvine School of Medicine
2013	Sub Editor, The Christchurch Star Company, Christchurch, New Zealand
2012	Reporter, Mainland Press, Christchurch, New Zealand
2011-2012	Content Associate, Inflection, LLC, Redwood City, CA
2009	Features Intern, South China Morning Post, Hong Kong



## **PROFESSIONAL AFFILIATIONS**

2019-Present      College on Problems of Drug Dependence, Associate Member  
2018-Present      Delta Omega Honor Society in Public Health  
2017-Present      Society for Epidemiologic Research

## **PROFESSIONAL SKILLS**

SAS; Stata; SQL; R; LaTeX; Qualtrics; TreeAge Pro (decision tree analysis); Carto DB (geographic information system), Microsoft Office Suite

## **LANGUAGES**

Mandarin Chinese, conversational; Spanish, conversational