Elizabeth T. Chin

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EDUCATION	**Stanford University**	Sept 2017 - May 2022 (Expected)

PhD, Biomedical Informatics
Full scholarship funding – 6 years:
    National Science Foundation Graduate Fellowship
    Stanford Graduate Fellowship

	University of California Los Angeles	2013 - 2017

BS, Applied Mathematics
Minor, Bioinformatics

EMPLOYMENT & AFFILIATIONS	**Stanford University**
Department of Biomedical Data Science	2017 - Present

Doctoral candidate
PI: Euan Ashley, MB, ChB, DPhil & Trevor Hastie, PhD
Thesis: Data science and policy: Addressing inequity in health.

	Stanford University
Department of Health Policy	2020 - Present

Researcher
PI: Jason Andrews, MD, MPH; Jeremy Goldhaber-Fiebert, PhD;
    Joshua Salomon, PhD; David Studdert, LLB, ScD
Modeling and assessing health policies in California prisons.

	Harvard University
Immigration Lab	2020 - Present

Biostatistician
PI: Katherine Peeler, MD
Sole statistician for the Peeler Immigration Lab, which focuses on human rights issues and healthcare access in immigration detention centers.

	Quora	Summer 2017

Data Science Intern

	Adobe Systems	Summer 2016

Machine Learning Intern

	University of California Los Angeles
Department of Bioinformatics	2014 - 2017

Research Assistant
PI: Xinshu (Grace) Xiao, PhD
Development of bioinformatic methods for genomics.

	Harvard University
Department of Systems Biology	Summer 2015

Summer Research Fellow
PI: Pardis Sabeti, MD, PhD
Development of machine learning methods for triaging in LMICs.

	University of California Irvine
National Science Foundation	Summer 2014

REU Fellow
PI: Rachel Martin, PhD & Carter Butts, PhD
Development of statistical models for protein modeling.

PUBLICATIONS   *Journal Articles - Original Research*

1. Uppal N, **Chin ET**, Erfani P, Sandoval RS, Lee CH, Mishori R, Peeler KR (2021). "Trends in Decarceration, COVID-19 Cases, and SARS-CoV-2 Testing in US Immigration Detention Centers." *JAMA Network Open*. In press.

2. **Chin ET**, Leidner D, Zhang Y, Long E, Prince L, Li Y, Andrews JR, Studdert DM, Goldhaber-Fiebert JD, Salomon JA (2021). "mRNA-1273 vaccine effectiveness during a SARS-CoV-2 delta outbreak in prison." *New England Journal of Medicine*. doi.org/10.1056/NEJMc2114089.

   $\longrightarrow$ *Media coverage:* Stanford press release, CDC COVID-19 Science Update

3. **Chin ET**, Leidner D, Zhang Y, Long E, Schrag SJ, Verani JR, Wiegand RE, Prince L, Alarid-Escudero F, Goldhaber-Fiebert JD, Andrews JR, Studdert DM, Salomon JA (2021). "Effectiveness of COVID-19 Vaccines among Incarcerated People in California State Prisons: A Retrospective Cohort Study." *Clinical Infectious Diseases*. In press. doi.org/10.1101/2021.08.16.21262149.

   $\longrightarrow$ Co-authored with colleagues from the Centers for Disease Control and Prevention.

4. Huynh B, Kwong L, Kiang M, **Chin ET**, Mohareb A, Jumaan A, Basu S, Geldsetzer P, Karaki F, Rehkopf D (2021) "Public health impacts of an imminent Red Sea oil spill." *Nature Sustainability*. doi.org/10.1101/2021.04.08.21255129.

   $\longrightarrow$ *Media coverage:* Invited commentary, Nature research highlight, Stanford press release, *BBC, CNN, The Guardian, Al Jazeera, The New Yorker, The World*

5. Ryckman T, **Chin ET**, Prince L, Leidner D, Long E, Studdert DM, Salomon JA, Alarid-Escudero F, Andrews JR, Goldhaber-Fiebert JD (2021). "Outbreaks of Covid-19 Variants in Prisons: A Mathematical Modeling Analysis of Vaccination and Re-Opening Policies." *The Lancet Public Health*. doi.org/10.1016/S2468-2667(21)00162-6.

   $\longrightarrow$ *Media coverage:* CDC COVID-19 Science Update

6. **Chin ET***, Ryckman T*, Prince L, Leidner D, Alarid-Escudero F, Andrews JR, Salomon JA, Studdert DM, Goldhaber-Fiebert JD (2021) "Covid-19 in the California State Prison System: An Observational Study of Decarceration, Ongoing Risks, and Risk Factors." *Journal of General Internal Medicine*. doi.org/10.1007/s11606-021-07022-x.

7. **Chin ET**, Leidner D, Ryckman T, Liu Y, Prince L, Alarid-Escudero F, Andrews JR, Salomon JA, Goldhaber-Fiebert JD, Studdert DM (2021) "Covid-19 Vaccine Acceptance in California State Prisons." *New England Journal of Medicine*. doi.org/10.1056/nejmc2105282.

   $\longrightarrow$ *Media coverage:* Stanford press release, *SF Chronicle*, CDC COVID-19 Science Update

8. Kiang M, **Chin ET**, Huynh B, Chapman L, Rodríguez-Barraquer I, Greenhouse B, Rutherford G, Bibbins-Domingo K, Havlir D, Basu S, Lo N. (2021) "Routine asymptomatic testing strategies for airline travel during the COVID-19 pandemic: a simulation analysis." *The Lancet Infectious Diseases*. doi.org/10.1016/S1473-3099(21)00134-1.

   $\longrightarrow$ Editor's choice cover page article.

   $\longrightarrow$ *Policy impact:* Cited in the United Kingdom Scientific Advisory Group for Emergencies' report on international vaccination.

   $\longrightarrow$ *Media coverage:* UCSF press release, *NPR, SF Chronicle*, ABC News, CDC COVID-19 Science Update

9. Erfani P, **Chin ET**, Lee CH, Uppal N, Peel KR (2021) "Suicide rates of migrants in United States immigration detention (2010–2020)." *AIMS Public Health*.

doi.org/10.3934/publichealth.2021031.

10. **Chin ET***, Huynh B*, Chapman L, Murrill M, Basu S, Lo N. (2020) "Frequency of routine testing for COVID-19 in high-risk environments to reduce workplace outbreaks." *Clinical Infectious Diseases*. doi.org/10.1093/cid/ciaa1383.

   ⟶ *Policy impact:* Cited in the Centers for Disease Control and Prevention's report on interim guidance for SARS-CoV-2 testing in workplaces;
   Cited in Africa CDC's interim guidance on rapid antigen testing;
   Cited in the University of California Systemwide Testing and Tracing Task Force's report.

   ⟶ *Media coverage:* CDC COVID-19 Science Update

11. **Chin ET***, Huynh B*, Lo N, Hastie T, Basu S (2020) "Projected geographic disparities in health- care worker absenteeism from COVID-19 school closures and the economic feasibility of child care subsidies: a simulation study." *BMC Medicine*. doi.org/10.1186/s12916-020-01692-w.

   ⟶ *Policy impact:* Cited by the World Health Organization's report on non-pharmaceutical interventions for COVID-19.

12. Paige S*, Galdos F*, Lee S*, **Chin ET***, Ranjbarvaziri S, Feyen DAM, Darsha AK, Xu S, Ryan JA, Beck AL, Qureshi MY, Miao Y, Gu M, Bernstein D, Nelson TJ, Mercola M, Rabinovitch M, Ashley EA, Parikh VN, Wu SM (2020) "Patient-Specific Induced Pluripotent Stem Cells Implicate Intrinsic Impaired Contractility in Hypoplastic Left Heart Syndrome." *Circulation*. doi.org/10.1161/CIRCULATION-AHA.119.045317.

13. Cordero P, Parikh VN, **Chin ET**, Erbilgin A, Gloudemans MJ, Shang C, Huang Y, Chang AC, Smith KS, Dewey F, Zaleta K, Morley M, Brandimarto J, Glazer N, Waggott D, Pavlovic A, Zhao M, Moravec CS, Tang WHW, Skreen J, Malloy C, Hannenhalli S, Li H, Ritter S, Li M, Bernstein D, Connolly A, Hakonarson H, Lusis AJ, Margulies KB, Depaoli-Roach AA, Montgomery SB, Wheeler MT, Cappola T, Ashley EA (2019) "Pathologic gene network rewiring implicates PPP1R3A as a central regulator in pressure overload heart failure." *Nature Communications*. doi.org/10.1038/s41467-019-10591-5.

   ⟶ *Media coverage:* Stanford press release

14. Okokhere P, Colubri A, Azubike C, Iruolagbe C, Osazuwa O, Tabrizi S, **Chin E**, Asad S, Ediale E, Rafiu M, Adomeh D, Odia I, Atafo R, Aire C, Okogbenin S, Pahlman M, Becker-Ziaja B, Asogun D, Fradet T, Fry B, Schaffner SF, Happi C, Akpede G, Günther S, Sabeti PC (2018) "Clinical and laboratory predictors of Lassa fever outcome in a dedicated treatment facility in Nigeria: a retrospective, observational cohort study." *The Lancet Infectious Diseases*. doi.org/10.1016/S1473-3099(18)30121-X.

* Contributed equally to work as co-lead author.

Working Papers

1. Goldhaber-Fiebert JD, Prince L, **Chin ET**, Leidner D, Studdert DM, Salomon JA, Andrews JR (2021) "Waning of Vaccine-Conferred Protection against SARS-CoV-2 Infection in the Delta COVID-19 Era: Matched Case-Control Test-Negative Design Study in Two High-Risk Populations." Under Review.

2. **Chin ET**, Goldhaber-Fiebert JD, Ryckman T, Prince L, Andrews JR, Salomon JA, Studdert DM (2021) "Covid-19 Testing Hesitancy Among Incarcerated Men in California."

3. Prince L, Long E, Studdert DM, Leidner D, **Chin ET**, Andrews JR, Salomon JA, Goldhaber-Fiebert JD (2021) "Uptake of Covid-19 vaccines among frontline workers in California state prisons." Under Review.

PRESENTATIONS

1. Effectiveness of the mRNA-1273 Vaccine during a SARS-CoV-2 Delta Outbreak in a Prison. "California Department of Corrections and Rehabilitation Public Health Update." Nov 2 2021. *Invited speaker.*

2. Stanford Covid-19 modeling and research. "Joint briefing for California Department of Corrections and Rehabilitation, Federal Receiver & Prison Law Office." July 28 2021. *Invited speaker.*

3. Effectiveness of Covid-19 Vaccines among Residents in California State Prisons. "Briefing for California Department of Corrections and Rehabilitation & Federal Receiver." June 28 2021. *Invited speaker.*

4. Resumption of in-person activities and Covid-19 Risks in CDCR Prisons. "Briefing for California Department of Corrections and Rehabilitation & Federal Receiver." April 6 2021.

5. Modeling Vaccination in California Prisons. "Briefing for California Department of Corrections and Rehabilitation & Federal Receiver." February 23 2021.

6. Frequency of routine testing for Covid-19 in High-risk Healthcare Environments. "Massachusetts Primary Care Leader Community Call." December 15 2020. *Invited speaker.*

7. Mass incarceration under COVID-19. "Swiss-Re Covid-19 Summit: Moving from reacting to managing." November 10 2020. *Invited speaker.*

8. Housing density, contacts, & risk of Covid-19. "Briefing for California Department of Corrections and Rehabilitation." November 3 2020. *Invited speaker.*

9. Covid Risk and Transmission in the California Prison System: Data, Models, and Policies. "Stanford Health Policy Research Seminar." September 25 2020. *Invited speaker.*

10. Factors relevant to Covid-19 risk in California prisons. "Briefing for California Department of Corrections and Rehabilitation & Federal Receiver." October 13 2020. *Invited speaker.*

11. Modeling the Spread of Covid-19 in California III. "Briefing for California Department of Corrections and Rehabilitation & Federal Receiver." August 4 2020. *Invited speaker.*

12. Modeling the Spread of Covid-19 in California II. "Briefing for California Department of Corrections and Rehabilitation & Federal Receiver." July 16 2020. *Invited speaker.*

13. Modeling the Spread of Covid-19 in California I. "Briefing for California Department of Corrections and Rehabilitation." July 2 2020. *Invited speaker.*

14. Longitudinal examination of mental health care need & criminal arrests. "Stanford Biomedical Data Science Research Seminar." February 2 2020. Oral presentation.

15. Identifying and interpreting novel trajectories using longitudinal manifold learning. "Stanford Biomedical Data Science Research Symposium." September 19 2019. Poster.

16. Disentangling the longitudinal topological landscape of wellness. "Stanford Biomedical Data Science Research Seminar." March 5 2019. Oral presentation.

17. Network normalization to correct for batch effects in single cell RNA-seq. "Stanford Biomedical Data Science Research Symposium." September 13 2018. Poster.

18. Community structure framework for reducing batch effects in identifying cell populations for single cell RNA-seq. "Stanford Biomedical Data Science Research Seminar." April 17 2018. Oral presentation.

19. Adjusting batch effects in scRNA-seq data using optimal matching. "Chan-Zuckerberg Biohub Conference." November 30 2017. Poster.

20. Aberrant RNA processing in immune response mechanisms in lung adenocarcinoma. "University of California Los Angeles Research Symposium." June 1 2016. Poster.

21. Information theory and Bayesian modeling of prognosis in Lassa Fever patients. "Harvard Research Symposium." August 13 2015. Poster.

22. Bayesian model integration methods to predict protein aggregation. "University of California Irvine Research Symposium." September 2 2014. Oral presentation.

PATENTS	U.S. Patent Application 20180137522, "Segment Valuation in a Digital Medium Environment," May 17, 2018.

SELECTED HONORS

The Lancet Infectious Diseases	2021
Editor's choice article	
National Science Foundation Graduate Fellowship	March 2017
Full scholarship funding – 3 years	
Stanford Graduate Fellowship	March 2017
Full scholarship funding – 3 years	
Amgen Scholars	Summers 2015, 2016 (declined)
$6000 fellowship awarded to fund summer research at the University of California Los Angeles	
Harvard Summer Research Scholar	Summer 2015
$6000 fellowship awarded to fund summer research at the Broad Institute	
Lau Research Fellowship	2015-2016
$2000 research fellowship awarded by University of California Los Angeles	
NSF Research Experience for Undergraduates	Summer 2014
$6000 fellowship awarded to fund summer research at University of California Irvine	
Norma J. Ehrlich Scholarship	2013-2017
Competitive merit scholarship	

TEACHING & MENTORING

Mentor, Stanford Peer-to-Peer Application Mentoring Program	2021

Mentoring two prospective applicants from historically marginalized groups by offering guidance and support throughout the PhD application process.

Research Mentor, Economics PhD summer student — 2021

Guest lecturer, Stanford Advancing Health Equity & Diversity Program — 2021
Taught "Introduction to data analysis" for undergraduate students.

Instructor, Stanford Prison Education Project — 2019-Present
Developed & co-taught seminars for incarcerated individuals at a local jail.

Mentor, Stanford Inclusive Mentorship in Data Science — 2021
Mentored a community college student as part of Stanford's initiative to improve access to data science for individuals from underrepresented groups.

Mentor & Invited speaker, Girls Who Code — 2016, 2021
Mentored early college students to improve retention of women in STEM.

Mentor, AAMPLIFY — 2018-2019
Mentored a high school student as part of AAMPLIFY's goals to help uplift & empower local underserved AAPI students.

Teaching Assistant, Translational Bioinformatics — Winter 2019, Fall 2019
Developed new problem sets, facilitated discussions, and mentored students in writing research proposals around the use of computational methods to translate biomedical data into applications.
Primary faculty: Dennis Wall, PhD

PROFESSIONAL SERVICE

Program Committee
Fairness, Accountability, and Transparency (FAccT) Conference

Reviewer
The Lancet
PLOS Global Public Health
Scientific Reports
PLOS One
Human Resources for Health