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EDUCATION

- 2007 PhD, Public Health, University of California, Los Angeles (UCLA)
 Major field: Community Health Sciences; Minor field: Sociology/Demography
- 1997 MBA, Stanford University Graduate School of Business
- 1992 BA, History, *Magna Cum Laude*, Yale University

POSTGRADUATE TRAINING & FELLOWSHIP APPOINTMENTS

- 2009-11 Program Scholar, Robert Wood Johnson Foundation Health & Society Scholars, University of Pennsylvania
- 2007-09 Postdoctoral Research Associate, Office of Population Research and Center for Health & Wellbeing, Princeton University

ACADEMIC POSITIONS

- 2022- Professor with Tenure, Department of Family and Community Health, University of Pennsylvania School of Nursing. Professor (Secondary Appointment), Department of Medical Ethics and Health Policy, Perelman School of Medicine of the University of Pennsylvania
- 2017-22 Associate Professor with Tenure, Department of Family and Community Health, University of Pennsylvania School of Nursing. Associate Professor (Secondary Appointment), Department of Medical Ethics and Health Policy, Perelman School of Medicine of the University of Pennsylvania
- 2015-17 Assistant Professor (Secondary Appointment), Department of Medical Ethics and Health Policy, Perelman School of Medicine of the University of Pennsylvania
- 2011-17 Assistant Professor, Department of Family and Community Health, University of Pennsylvania School of Nursing

ADMINISTRATIVE POSITIONS

- 2020- Scientific Director, Center for Health Incentives and Behavioral Economics, Perelman School of Medicine of the University of Pennsylvania
- 2019- Director of Engagement, Leonard Davis Institute for Health Economics, University of Pennsylvania
- 2017-23 Associate Director, National Clinician Scholars Program, University of Pennsylvania
- 2019 Interim Director, Center for Health Incentives and Behavioral Economics, Perelman School of Medicine of the University of Pennsylvania
- 2017-20 Associate Director, Center for Health Incentives and Behavioral Economics, Perelman School of Medicine of the University of Pennsylvania

OTHER APPOINTMENTS

Visiting Professor, Institute on Global Health Innovation, Imperial College London
 Senior Fellow, Leonard Davis Institute of Health Economics, University of Pennsylvania
 Senior Fellow, Center for Public Health Initiatives, University of Pennsylvania

Research Associate, Population Studies Center, University of Pennsylvania
 Academic Affiliate, ideas42
 Team Scientist, Behavior Change for Good Initiative, University of Pennsylvania

HONORS/AWARDS/MEMBERSHIPS IN HONORARY SOCIETIES

2022 Editor-in-Chief Award, *American Journal of Health Promotion*
 2021 Departmental Research Award, Family and Community Health, University of Pennsylvania School of Nursing
 2019 Patricia Blaznek Silverstein and Howard A. Silverstein Endowed Term Chair in Global Women's Health, University of Pennsylvania School of Nursing
 2016 Department Award for Exemplary Teaching in the Standing Faculty, Family and Community Health, University of Pennsylvania School of Nursing
 2007 *Phi Delta Omega*
 2004-07 NICHD Predoctoral Trainee, California Center for Population Research, UCLA
 2002-03 Bixby Doctoral Fellow, UCLA School of Public Health
 1990 Richter Summer Research Fellow, Yale College

PUBLICATIONS (143 peer-reviewed research articles)

Journal Articles: Research, Peer Reviewed

1. Thirumurthy H, **Buttenheim AM**, Chetty-Makkan C, Pascoe S. Maximising the value of nudge units for global health. *The Lancet Global Health*. 2023 Aug 1;11(8):e1168-9.
2. Jenssen BP, Schnoll R, Beidas RS, Bekelman J, Bauer AM, Evers-Casey S, Fisher T, Scott C, Nicoloso J, Gabriel P, Asch DA, **Buttenheim AM**,...Leone F. Cluster Randomized Pragmatic Clinical Trial Testing Behavioral Economic Implementation Strategies to Improve Tobacco Treatment for Patients With Cancer Who Smoke. *Journal of Clinical Oncology*. 2023 Jul;JCO-23.
3. Davis M, Siegel J, Becker-Haimes EM, Jager-Hyman S, Beidas RS, Young JF, Wislocki K, Futterer A, Mautone JA, **Buttenheim AM**, Mandell DS. Identifying common and unique barriers and facilitators to implementing evidence-based practices for suicide prevention across primary care and specialty mental health settings. *Archives of Suicide Research*. 2023 Apr 3;27(2):192-214.
4. Piltch-Loeb R, James R, Albrecht SS, **Buttenheim AM**, Dowd JB, Kumar A, Jones M, Leininger LJ, Simanek A, Aronowitz S. What Were the Information Voids? A Qualitative Analysis of Questions Asked by Dear Pandemic Readers between August 2020-August 2021. *Journal of Health Communication*. 2023 Apr 7;28(sup1):25-33.
5. Golos AM, Guntuku SC, Piltch-Loeb R, Leininger LJ, Simanek AM, Kumar A, Albrecht SS, Dowd JB, Jones M, **Buttenheim AM**. Dear Pandemic: A topic modeling analysis of COVID-19 information needs among readers of an online science communication campaign. *PloS one*. 2023 Mar 30;18(3):e0281773.
6. Carpiano RM, Callaghan T, DiResta R, Brewer NT, Clinton C, Galvani AP, Lakshmanan R, Parmet WE, Omer SB, **Buttenheim AM**, Benjamin RM. Confronting the evolution and expansion of anti-vaccine activism in the USA in the COVID-19 era. *The Lancet*. 2023 Mar 18;401(10380):967-70.

7. Patel MS, Milkman KL, Gandhi L, Graci HN, Gromet D, Ho H, Kay JS, Lee TW, Rothschild J, Akinola M, Beshears J, Bogard J, **Buttenheim A**, ...Duckworth A. A Randomized Trial of Behavioral Nudges Delivered Through Text Messages to Increase Influenza Vaccination Among Patients With an Upcoming Primary Care Visit. *American Journal of Health Promotion*. 2023 Mar;37(3):324-32.
8. Dudley MZ, Barnett EE, Paulenich A, Omer SB, Schuh H, Proveaux TM, **Buttenheim AM**, Klein NP, Delamater P, McFadden SM, Patel KM. Characterization of parental intention to vaccinate elementary school aged children in the state of California. *Vaccine*. 2023 Jan 16;41(3):630-5.
9. Opel DJ, Brewer NT, **Buttenheim AM**, Callaghan T, Carpiano RM, Clinton C, Elharake JA, Flowers LC, Galvani AP, Hotez PJ, Schwartz JL. The legacy of the COVID-19 pandemic for childhood vaccination in the USA. *The Lancet*. 2023 Jan 7;401(10370):75-8.
10. Chetty-Makkan CM, Thirumurthy H, Bair EF, Bokolo S, Day C, Wapenaar K, Werner J, Long L, Maughan-Brown B, Miot J, Pascoe SJ, **Buttenheim AM**. Quasi-experimental evaluation of a financial incentive for first-dose COVID-19 vaccination among adults aged ≥ 60 years in South Africa. *BMJ Global Health*. 2022 Dec 1;7(12):e009625.
11. Hoskins K, Linn KA, Ahmedani BK, Boggs JM, Johnson C, Heintz J, Marcus SC, Kaminer I, Zabel C, Wright L, Quintana LM, **Buttenheim AM**...Beidas RS. Equitable implementation of SAFE Firearm: a multi-method pilot study. *Preventive medicine*. 2022 Dec 1;165:107281.
12. **Buttenheim AM**, Schmucker L, Marcus N, Phatsoane M, Msolomba V, Rhagnath N, Majam M, Venter F, Thirumurthy H. Planning and commitment prompts to encourage reporting of HIV self-test results: A cluster randomized pragmatic trial in Tshwane District, South Africa. *PLOS Global Public Health*. 2022 Oct 24;2(10):e0001196.
13. Schmidt H, Shaikh SJ, Sadecki E, **Buttenheim A**, Gollust S. Public attitudes about equitable COVID-19 vaccine allocation: a randomised experiment of race-based versus novel place-based frames. *Journal of Medical Ethics*. 2022 Dec 1;48(12):993-9.
14. Becker-Haimes EM, Ramesh B, Buck JE, Nuske HJ, Zentgraf KA, Stewart RE, **Buttenheim A**, Mandell DS. Comparing output from two methods of participatory design for developing implementation strategies: traditional contextual inquiry vs. rapid crowd sourcing. *Implementation Science*. 2022 Dec;17(1):1-3.
15. Burger R, Köhler T, Golos AM, **Buttenheim AM**, English R, Tameris M, Maughan-Brown B. Longitudinal changes in COVID-19 vaccination intent among South African adults: evidence from the NIDS-CRAM panel survey, February to May 2021. *BMC public health*. 2022 Dec;22(1):1-0.
16. Khazanov GK, Jager-Hyman S, Harrison J, Candon M, **Buttenheim A**, Pieri MF, Oslin DW, Wolk CB. Leveraging behavioral economics and implementation science to engage patients at risk for suicide in mental health treatment: a pilot study protocol. *Pilot and feasibility studies*. 2022 Dec;8(1):1-2.

17. Candon M, Williams N, Zentgraf K, **Buttenheim A**, Bewtra M, Beidas RS, Stewart RE. Variation in Stakeholder Preferences for Implementing Evidence-Based Practices in Behavioral Health Care. *Psychiatric Services*. 2022 Nov 1;73(11):1270-3.
18. Milkman KL, Gandhi L, Ellis SF, Graci HN, Gromet DM, Mobarak RS, **Buttenheim AM**, Duckworth AL, Pope D, Stanford A, Thaler R. A citywide experiment testing the impact of geographically targeted, high-pay-off vaccine lotteries. *Nature Human Behaviour*. 2022 Sep 1:1-0
19. Mello MM, Opel DJ, Benjamin RM, Callaghan T, DiResta R, Elharake JA, Flowers LC, Galvani AP, Salmon DA, Schwartz JL, Brewer NT, **Buttenheim AM**,...Caplan A.. Effectiveness of vaccination mandates in improving uptake of COVID-19 vaccines in the USA. *Lancet (London, England)*. 2022 Aug 13;400(10351):535.
20. Brewer NT, **Buttenheim AM**, Clinton CV, Mello MM, Benjamin RM, Callaghan T, Caplan A, Carpiano RM, DiResta R, Elharake JA, Flowers LC. Incentives for COVID-19 vaccination. *The Lancet Regional Health–Americas*. 2022 Apr 1;8.
21. Thirumurthy H, Milkman KL, Volpp KG, **Buttenheim AM**, Pope DG. Association between statewide financial incentive programs and COVID-19 vaccination rates. *PloS one*. 2022 Mar 30;17(3):e0263425.
22. Leininger LJ, Albrecht SS, **Buttenheim A**, Dowd JB, Ritter AZ, Simanek AM, Valentino MJ, Jones M. Fight Like a Nerdy Girl: The Dear Pandemic Playbook for Combating Health Misinformation. *American Journal of Health Promotion*. 2022 Mar;36(3):563-7.
23. Albrecht SS, Aronowitz SV, **Buttenheim AM**, Coles S, Dowd JB, Hale L, Kumar A, Leininger L, Ritter AZ, Simanek AM, Whelan CB. Lessons Learned From Dear Pandemic, a Social Media-Based Science Communication Project Targeting the COVID-19 Infodemic. *Public Health Reports*. 2022 Mar 3: 00333549221076544.
24. Golos AM, Hopkins DJ, Bhanot SP, **Buttenheim AM**. Partisanship, Messaging, and the COVID-19 Vaccine: Evidence From Survey Experiments. *Am J Health Promot*. 2022 Mar 1: 08901171211049241.
25. Engel-Rebitzer E, Stokes DC, Meisel ZF, Purtle J, Doyle R, **Buttenheim AM**. Partisan Differences in Legislators' Discussion of Vaccination on Twitter During the COVID-19 Era: Natural Language Processing Analysis. *JMIR infodemiology*. 2022 Feb 18;2(1):e32372.
26. **Buttenheim A**, Milkman KL, Duckworth AL, Gromet DM, Patel M, Chapman G. Effects of Ownership Text Message Wording and Reminders on Receipt of an Influenza Vaccination: A Randomized Clinical Trial. *Jama Netw Open*. 2022 Feb 1;5(2):e2143388-.
27. **Buttenheim AM**, Thirumurthy H. Pay-for-performance incentives for health worker vaccination: looking under the hood. *BMJ Qual Saf*. 11 February 2022. doi: 10.1136/bmjqs-2021-014269.
28. Patel KM, McFadden SM, Mohanty S, Joyce CM, Delamater PL, Klein NP, Salmon DA, Omer SB, **Buttenheim AM**. Evaluation of Trends in Homeschooling Rates After Elimination of

Nonmedical Exemptions to Childhood Immunizations in California, 2012-2020. *Jama Netw Open.* 2022 Feb 1;5(2):e2146467-.

29. Takvorian SU, Bekelman J, Beidas RS, Schnoll R, Clifton AB, Salam T, Gabriel P, Wileyto EP, Scott CA, Asch DA, **Buttenheim AM**. Behavioral economic implementation strategies to improve serious illness communication between clinicians and high-risk patients with cancer: protocol for a cluster randomized pragmatic trial. *Implementation Science.* 2021 Dec;16(1):1-2.
30. Beidas RS, Ahmedani BK, Linn KA, Marcus SC, Johnson C, Maye M, Westphal J, Wright L, Beck AL, **Buttenheim AM**, Daley MF. Study protocol for a type III hybrid effectiveness-implementation trial of strategies to implement firearm safety promotion as a universal suicide prevention strategy in pediatric primary care. *Implementation Science.* 2021 Dec;16(1):1-6.
31. Janssen BP, Schnoll R, Beidas R, Bekelman J, Bauer AM, Scott C, Evers-Casey S, Nicoloso J, Gabriel P, Asch DA, **Buttenheim A**. Rationale and protocol for a cluster randomized pragmatic clinical trial testing behavioral economic implementation strategies to improve tobacco treatment rates for cancer patients who smoke. *Implementation Science.* 2021 Dec;16(1):1-2.
32. Last BS, Schriger SH, Timon CE, Frank HE, **Buttenheim AM**, Rudd BN, Fernandez-Marcote S, Comeau C, Shoyinka S, Beidas RS. Using behavioral insights to design implementation strategies in public mental health settings: a qualitative study of clinical decision-making. *Implementation science communications.* 2021 Dec;2(1):1-6.
33. Williams NJ, Candon M, Stewart RE, Byeon YV, Bewtra M, **Buttenheim AM**, Zentgraf K, Comeau C, Shoyinka S, Beidas RS. Community stakeholder preferences for evidence-based practice implementation strategies in behavioral health: a best-worst scaling choice experiment. *BMC psychiatry.* 2021 Dec;21(1):1-2.
34. Last BS, **Buttenheim AM**, Futterer AC, Livesey C, Jaeger J, Stewart RE, Reilly M, Press MJ, Peifer M, Wolk CB, Beidas RS. A Pilot Study of Participatory and Rapid Implementation Approaches to Increase Depression Screening in Primary Care. *BMC Fam Pract.* 2021 Nov 22:228.
35. **Buttenheim A**, Castillo-Neyra R, Arevalo-Nieto C, Shinnick JE, Sheen JK, Volpp K, Paz-Soldan V, Behrman JR, Levy MZ. Do incentives crowd out motivation? A feasibility study of a community vector-control campaign in Peru. *Behav Med.* 2021 Nov;30:1-9.
36. Flanagan S, Gorstein A, Nicholson M, Bradish S, Amanyire D, Gidudu A, Aucur F, Twesigye J, Kyateka F, Balamaga S, **Buttenheim A**, Zimmerman E. Behavioural intervention for adolescent uptake of family planning: a randomized controlled trial, Uganda. *Bull World Health Organ.* 2021 Nov 1;99(11):795-804.
37. Smith PJ, Joseph Davey DL, Schmucker L, Bruns C, Bekker LG, Medina-Marino A, Thirumurthy H, **Buttenheim AM**. Participatory Prototyping of a Tailored Undetectable Equals Untransmittable Message to Increase HIV Testing Among Men in Western Cape, South Africa. *AIDS patient care and STDs.* 2021 Nov 1;35(11):428-34.

38. Davis M, Siegel J, Becker-Haimes EM, Jager-Hyman S, Beidas RS, Young JF, Wislocki K, Futterer A, Mautone JA, **Buttenheim AM**, Mandell DS. Identifying Common and Unique Barriers and Facilitators to Implementing Evidence-Based Practices for Suicide Prevention across Primary Care and Specialty Mental Health Settings. *Archives of Suicide Research*. 2021 Oct 13:1-23.
39. Mancheno C, Asch DA, Klinger EV, Goldshear JL, Mitra N, **Buttenheim AM**, Barg FK, Ungar LH, Yang L, Merchant RM. Effect of Posting on Social Media on Systolic Blood Pressure and Management of Hypertension: A Randomized Controlled Trial. *Journal of the American Heart Association*. 2021 Oct 5;10(19):e020596.
40. Joyce CM, Saulsgiver K, Mohanty S, Bachireddy C, Molfetta C, Steffy M, Yoder A, **Buttenheim AM**. Remote Patient Monitoring and Incentives to Support Smoking Cessation Among Pregnant and Postpartum Medicaid Members: Three Randomized Controlled Pilot Studies. *JMIR Formative Research*. 2021 Sep 30;5(9):e27801.
41. Holroyd TA, Howa AC, Proveaux TM, Delamater PL, Klein NP, **Buttenheim AM**, Limaye RJ, Omer SB, Salmon DA. School-level perceptions and enforcement of the elimination of nonmedical exemptions to vaccination in California. *Human Vaccines & Immunotherapeutics*. 2021 Jul 3;17(7):1986-93.
42. Holroyd TA, Howa AC, Delamater PL, Klein NP, **Buttenheim AM**, Limaye RJ, Proveaux TM, Omer SB, Salmon DA. Parental vaccine attitudes, beliefs, and practices: initial evidence in California after a vaccine policy change. *Human Vaccines & Immunotherapeutics*. 2021 Jun 3;17(6):1675-80.
43. Guntuku SC, **Buttenheim AM**, Sherman G, Merchant RM. Twitter discourse reveals geographical and temporal variation in concerns about COVID-19 Vaccines in the United States. *Vaccine*. 2021 Jun 9.
44. Beidas RS, **Buttenheim AM**, Mandell DS. Transforming Mental Health Care Delivery Through Implementation Science and Behavioral Economics. *JAMA psychiatry*. 2021 Jun 2.
45. Smith P, **Buttenheim A**, Schmucker L, Bekker LG, Thirumurthy H, Davey DL. Undetectable=untransmittable (U= U) messaging increases uptake of HIV testing among men: results from a pilot cluster randomized trial. *AIDS and Behavior*. 2021 May 31:1-9.
46. Schmidt H, Weintraub R, Williams MA, Miller K, **Buttenheim A**, Sadecki E, Wu H, Doiphode A, Nagpal N, Gostin LO, Shen AA. Equitable allocation of COVID-19 vaccines in the United States. *Nature Medicine*. 2021 May 18:1-0.
47. Milkman KL, Patel MS, Gandhi L, Graci HN, Gromet DM, Ho H, Kay JS, Lee TW, Akinola M, Beshears J, Bogard JE, **Buttenheim A**,...Duckworth, AL. A megastudy of text-based nudges encouraging patients to get vaccinated at an upcoming doctor's appointment. *Proceedings of the National Academy of Sciences*. 2021 May 18;118(20).
48. Engel-Rebitzer E, Stokes DC, **Buttenheim A**, Purtle J, Meisel ZF. Changes in legislator vaccine-engagement on Twitter before and after the arrival of the COVID-19 pandemic. *Human vaccines & immunotherapeutics*. 2021 May 8:1-5.

49. Ritter AZ, Aronowitz S, Leininger L, Jones M, Dowd JB, Albrecht S, **Buttenheim AM**, Simanek AM, Hale L, Kumar A. *Dear Pandemic: Nurses as key partners in fighting the COVID-19 infodemic*. Public Health Nursing. 2021 Apr 20.
50. DeDominicis K, **Buttenheim AM**, Howa AC, Delamater PL, Salmon D, Klein NP, Omer SB. Studying attitudes towards vaccine hesitance and California law SB 277 in online discourse: A dataset and methodology. Data in Brief. 2021 Apr 1;35:106841.
51. Hotez PJ, Cooney RE, Benjamin RM, Brewer NT, **Buttenheim AM**, Callaghan T, Caplan A, Carpiano RM, Clinton C, DiResta R, Elharake JA. Announcing the Lancet Commission on Vaccine Refusal, Acceptance, and Demand in the USA. The Lancet. 2021 Mar 27;397(10280):1165-7.
52. Wallis KE, **Buttenheim AM**, Mandell DS. Insights from Behavioral Economics: A Case of Delayed Diagnosis of Autism Spectrum Disorder. Journal of Developmental & Behavioral Pediatrics. 2021 Feb 1;42(2):109-13.
53. Volpp KG, Loewenstein G, **Buttenheim AM**. Behaviorally informed strategies for a national COVID-19 vaccine promotion program. JAMA. 2021 Jan 12;325(2):125-6.
54. Stewart RE, Beidas RS, Last BS, Hoskins K, Byeon YV, Williams NJ, **Buttenheim AM**. Applying NUDGE to inform design of EBP implementation strategies in community mental health settings. Administration and Policy in Mental Health and Mental Health Services Research. 2021 Jan;48:131-42.
55. Davis M, Wolk CB, Jager-Hyman S, Beidas RS, Young JF, Mautone JA, **Buttenheim AM**, Mandell DS, Volpp KG, Wislocki K, Futterer A. Implementing nudges for suicide prevention in real-world environments: project INSPIRE study protocol. Pilot and Feasibility Studies. 2020 Dec;6(1):1-0.
56. **Buttenheim AM**. SARS-CoV-2 Vaccine Acceptance: We May Need to Choose Our Battles. Annals of Internal Medicine. 2020 Sep 4.
57. DeDominicis K, **Buttenheim AM**, Howa AC, Delamater PL, Salmon D, Omer SB, Klein NP. Shouting at Each Other into the Void: A Linguistic Network Analysis of Vaccine Hesitance and Support in Online Discourse Regarding California Law SB277. Social Science & Medicine. 2020 Aug 28:113216.
58. Castillo-Neyra R, **Buttenheim AM**, Brown J, Ferrara JF, Arevalo-Nieto C, Borrini-Mayorí K, Levy MZ, Becerra V, Paz-Soldán VA. Behavioral and structural barriers to human post-exposure prophylaxis and other preventative practices during a canine rabies epidemic. PLOS Neglected Tropical Diseases. 2020 Jul 21;14(7).
59. Beidas RS, **Buttenheim AM**, Kilaru AS, Asch DA, Volpp KG, Lawman HG, Cannuscio CC. Optimizing and Implementing Contact Tracing through Behavioral Economics. NEJM Catalyst Innovations in Care Delivery. 2020 Jun 23.
60. Pomares TD, **Buttenheim AM**, Amin AB, Joyce CM, Porter RM, Bednarczyk RA, Omer SB. Association of cognitive biases with human papillomavirus vaccine hesitancy: a cross-sectional study. Human Vaccines & Immunotherapeutics. 2020 May 3;16(5):1018-23.

61. Cohen N, Mendy FT, Wesson J, Protti A, Cissé C, Gueye EB, Trupe L, Floreak R, Guichon D, Lorenzana K, **Buttenheim A**. Behavioral barriers to the use of modern methods of contraception among unmarried youth and adolescents in eastern Senegal: A qualitative study. *BMC Public Health*. 2020 Dec;20(1):1-9.
62. Hoskins K, Paladhi UR, McDonald C, **Buttenheim AM**. Applying behavioral economics to enhance safe firearm storage. *Pediatrics*. 2020 Feb. e20192268
63. Mohanty S, Joyce CM, Delamater PL, Klein NP, Salmon D, Omer BS, **Buttenheim AM**. Homeschooling parents in California: Attitudes, beliefs and behaviors associated with child's vaccination status. *Vaccine*. 2020 Feb. PMID: 31982257.
64. **Buttenheim AM**, Joyce CM, Ibarra J, Agas J, Feemster K, Handy LK, Amin AB, Omer SB. Vaccine exemption requirements and parental vaccine attitudes: An online experiment. *Vaccine*. 2020 Feb. PMID: 32057577.
65. Griffis H, Asch DA, Schwartz HA, Ungar L, **Buttenheim AM**, Barg FK, Mitra Nandita, Merchant Raina. Using social media to track geographic variability in language about diabetes: Infodemiology analysis. *JMIR Diabetes*. 2020 Feb;5(1):e14431
66. Johnson L, Ramogola-Masire D, Teitelman A, Jemmott JB, **Buttenheim A**. Assessing Nurses' Adherence to the See-and-Treat Guidelines of Botswana's National Cervical Cancer Prevention Program. *Cancer Prev Res (Phila)*. 2019 Dec 18. PMID:31852663.
67. Mohanty S, Delamater P, Feemster K, **Buttenheim AM**. 8 months to 5 days: what happened when Pennsylvania changed the vaccination regulations for provisional enrollment?. *Hum Vacc Immunother*. 2019 Nov 5:1-5. PMID:31567048.
68. Delamater PL, **Buttenheim AM**, Klein NP, Mohanty S, Salmon DA, Omer SB. Assessment of exemptions from vaccination in California, 2015 to 2027. *Ann Intern Med*. 2019 Nov 5. PMID: 31683313.
69. **Buttenheim AM**, Levy MZ, Castillo-Nevra R, McGuire M, Toldeo Vizcarra AM, Riveros LMM, Meza J, Borrini-Mayori K, Naquiraa C, Behrman J, Paz-Soldan VA. A behavioral design approach to improving a Chagas disease vector control campaign in Peru. *BMC Public Health*. 2019 Sep 18;19(1):1272. PMID: 31533762.
70. Castillo-Neyra R, Toledo Vazcarra AM, Arevalo-Nieto C, MacDonald H, De la Puente-Leon M, Naquiraa-Velarde C, Paz-Soldan VA, **Buttenheim AM**, Levy MZ. Socio-spatial heterogeneity in participation in mass dog vaccination campaigns, Arequipa, Peru. *PLoS Negl Trop Dis*. 2019 Aug 1;13(8):e0007600. PMID:31369560.
71. Pingali SC, Delamater PL, **Buttenheim AM**, Salmon DA, Klein NP, Omer SB. Associations of statewide legislative and administrative interventions with vaccination status among kindergartners in California. *Jama*. 2019 Jul;322(1):49-56. PMID: 31265099.
72. Stewart RE, Williams N, Byeon YV, **Buttenheim AM**, Sridharan S, Zentgraf K, Beidas RS. The clinician crowdsourcing challenge: Using participatory design to seed implementation strategies. *Implement Sci*. 2019 Jun;14(1):63. PMID: 31200730.

73. Delamater PL, Pingali SC, **Buttenheim AM**, Salmon DA, Klein NP, Omer SB. Elimination of nonmedical immunization exemptions in California and school-entry vaccine status. *Pediatrics*. 2019 Jun;143(6):e20183301. PMID: 31113831.
74. Agawu A, Hanlon AL, **Buttenheim AM**, Song L, Fiks AG, Feemster KA. Disparities in HPV vaccine series completion by adolescent males: a retrospective cohort study. *Acad Pediatr*. 2019 May 18:S1876-2859(19)39128-7. PMID: 31108236.
75. Gopalan A, Shaw PA, Lim R, Paramanund J, Patel D, Zhu J, Volpp KG, **Buttenheim AM**. Use of financial incentives and text message feedback to increase healthy food purchases in a grocery store cash back program: a randomized controlled trial. *BMC Public Health*. 2019 May 31;19(1):674. PMID: 31151390.
76. McDonald P, Limaye RJ, Omer SB, **Buttenheim AM**, Mohanty S, Klein NP, Salmon DA. Exploring California's new law eliminating personal belief exemptions to childhood vaccines and vaccine decision-making among homeschooling mothers in California. *Vaccine*. 2019 Jan 29;37(5):742-50. PMID: 30626531.
77. Jenssen BP, **Buttenheim AM**, Fiks AG. Using behavioral economics to encourage parent behavior change: Opportunities to improve clinical effectiveness. *Acad Pediatr*. 2019 Jan 1;19(1):4-10. PMID: 30172918.
78. Sinnenberg L, Mancheno C, Barg FK, Asch DA, Rivard CL, Horst-Martz E, **Buttenheim A**, Ungar L, Merchant R. Content Analysis of Metaphors About Hypertension and Diabetes on Twitter: Exploratory Mixed-Methods Study. *JMIR Diabetes*. 2018 Dec 21;3(4):e11177. PMID: 30578222.
79. Mohanty S, **Buttenheim AM**, Joyce CM, Howa AC, Salmon D, Omer SB. California's Senate Bill 277: Local Health Jurisdictions' Experiences With the Elimination of Nonmedical Vaccine Exemptions. *Am J Public Health*. 2018 Nov 29:e1-e6. PMID: 30495995.
80. Beidas RS, Volpp KG, **Buttenheim AM**, Marcus SC, Olfson M, Pellecchia M, Stewart RE, Williams NJ, Becker-Haimes EM, Candon M, Cidav Z. Transforming Mental Health Delivery Through Behavioral Economics and Implementation Science: Protocol for Three Exploratory Projects. *JMIR Res Protoc*. 2019;8(2):e12121. PMID: 30747719.
81. Mohanty S, **Buttenheim AM**, Joyce CM, Howa AC, Salmon D, Omer SB. Experiences With Medical Exemptions After a Change in Vaccine Exemption Policy in California. *Pediatrics*. 2018 Nov;142(5), e20181051. PMID: 30373910.
82. Mohanty S, Carroll-Scott A, Wheeler M, Davis-Hayes C, Turchi R, Feemster K, Yudell M, **Buttenheim AM**. Vaccine Hesitancy in Pediatric Primary Care Practices. *Qual Health Res*. 2018 Nov;28(13):2071-2080. PMID: 29947574.
83. **Buttenheim AM**, Paz-Soldán VA, Castillo-Neyra R, Toledo Vizcarra AM, Borrini-Mayori K, McGuire M, Arevalo-Nieto C, Volpp KG, Small DS, Behrman JR, Naquira-Verlarde C, Levy MZ. Increasing participation in a vector control campaign: a cluster randomised controlled evaluation of behavioural economic interventions in Peru. *BMJ Glob Health*. 2018 Sep 21;3(5):e000757. PMID: 30271624.

84. Jones M, **Buttenheim AM**, Salmon D, Omer SB. Mandatory Health Care Provider Counseling For Parents Led To A Decline In Vaccine Exemptions In California. *Health Aff (Millwood)*. 2018 Sep;37(9):1494-1502. PMID: 30179562.
85. **Buttenheim AM**, Jones M, Mckown C, Salmon D, Omer SB. Conditional admission, religious exemption type, and nonmedical vaccine exemptions in California before and after a state policy change. *Vaccine*. 2018 Jun 18;36(26):3789-3793. PMID: 29778514.
86. Jean S, Elshafei M, **Buttenheim A**. Social determinants of community-level human papillomavirus vaccination coverage in a school-based vaccination programme. *Sex Transm Infect*. 2018 Jun;94(4):248-253. PMID: 29330310.
87. Okatch H, Sowicz TJ, Teng H, Ramogola-Masire D, **Buttenheim AM**. Achieving public and global health competencies: A teaching case study of Botswana's cervical cancer screening program. *Public Health Nurs*. 2018 May;35(3):238-245. PMID: 29424085.
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95. Beidas RS, Becker-Haimes EM, Adams DR, Skriner L, Stewart RE, Wolk CB, **Buttenheim AM**, Williams NJ, Inacker P, Richey E, Marcus SC. Feasibility and acceptability of two incentive-based implementation strategies for mental health therapists implementing cognitive-

- behavioral therapy: a pilot study to inform a randomized controlled trial. *Implement Sci.* 2017 Dec;12(1):148. PMID: 29246236.
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133. Nobles J, **Buttenheim A**. Marriage and socioeconomic change in contemporary Indonesia. *J Marriage Fam.* 2008 Nov;70(4):904-918. PMC4553690.

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Journal Articles: Research, Peer Reviewed Reviews

1. Last BS, **Buttenheim AM**, Timon CE, Mitra N, Beidas RS. Systematic review of clinician-directed nudges in healthcare contexts. *BMJ Open.* 2021 Jul 1;11(7):e048801.
2. Barrera-Cancedda AE, Riman K, Shinnick J, **Buttenheim AM.** Implementation strategies for infection prevention and control promotion for nurses in sub-Saharan Africa: a systematic review. *Implement Sci.* 2019 Dec;30(14):111.
3. Hoskins K, Ulrich CM, Shinnick J, **Buttenheim AM.** Acceptability of financial incentives for health-related behavior change: An updated systematic review. *Prev Med.* 2019 Jul;105762.
4. Bal S, Duckles A, **Buttenheim A.** Visual Health and Visual Healthcare Access in Refugees and Displaced Persons: A Systematic Review. *J Immigr Minor Healt.* 2019 Feb;21(1):161-174.
5. Johnson LG, Armstrong A, Joyce CM, Teitelman AM, **Buttenheim AM.** Implementation strategies to improve cervical cancer prevention in sub-Saharan Africa: a systematic review. *Implement Sci.* 2018 Dec;13(1):28.
6. Sinnenberg L, **Buttenheim AM**, Padrez K, Mancheno C, Ungar L, Merchant RM. Twitter as a Tool for Health Research: A Systematic Review. *Am J Public Health.* 2016 Nov 17;107(1):e1-8.
7. Burson RC, **Buttenheim AM**, Armstrong A, Feemster KA. Community pharmacies as sites of adult vaccination: a systematic review. *Hum Vacc Immunother.* 2016 Dec 1;12(12):3146-59.
8. Wang E, Clymer J, Davis-Hayes C, **Buttenheim A.** Nonmedical exemptions from school immunization requirements: a systematic review. *Am J Public Health.* 2014 Nov;104(11):e62-84. PMC4202987.
9. Su A, **Buttenheim AM.** Maintenance of smoking cessation in the postpartum period: which interventions work best in the long-term?. *Matern Child Healt J.* 2014 Apr;18(3):714-28. PMID: 23812798.

Book chapters

1. **Buttenheim AM** and Thirmurthy H. "Behavioural economics and health", in Detels R et al. (eds), *Oxford Textbook of Global Public Health*, 7th edition. Oxford Textbooks in Public Health, Oxford Academic, 1 Nov. 2021. <https://doi.org/10.1093/med/9780198816805.003.0050>.

Committee Reports

1. Moffitt R, **Buttenheim A**, Beatty A; Committee on Future Directions for Applying Behavioral Economics to Policy; Board on Behavioral, Cognitive, and Sensory Sciences; Division of Behavioral and Social Sciences and Education; National Academies of Sciences, Engineering, and Medicine. *Behavioral Economics: Policy Impact and Future Directions.* Washington (DC): National Academies Press (US); 2023. PMID: 37079710. DOI: [10.17226/26874](https://doi.org/10.17226/26874)

In press, Preprints, and Working papers

1. Govathson C, Ndlovu N, Rambally-Greener L, Schmucker L, Chetty-Makkan CM, Miot J, Thirumurthy H, Pascoe S, Malone S, **Buttenheim A**. Increasing HIV treatment literacy among people living with HIV using a novel health communication aid: Evidence from KwaZulu Natal province, South Africa. medRxiv. 2023:2023-06.
2. Golos AM, **Buttenheim AM**, Ritter AZ, Bair EF, Chapman GB. DataWatch: Effects of an employee COVID-19 vaccination mandate at a long-term care network. In press, Health Affairs.
3. Eyal K, Maughan-Brown B, Njozela L, Köhler T, Ingle K, Brophy T, **Buttenheim A**. Correlates of COVID-19 Vaccination Intentions and opinions about mandates among four groups of adults in South Africa with distinct vaccine intentions: Evidence from a large national survey. Posted: January 5th, 2023 DOI: <https://doi.org/10.21203/rs.3.rs-2346136/v1>
4. Golos AM., **Buttenheim AM**, Chapman GB. Using Analogy-based Messages to Influence Attitudes Toward Workplace COVID-19 Vaccination Mandates. SocArXiv. 2022 Oct 7. Available at [doi:10.31235/osf.io/e8p4s](https://doi.org/10.31235/osf.io/e8p4s).
5. Eyal K, Maughan-Brown B, **Buttenheim A**, Ingle K, Brophy T, Njozela L, Köhler T. COVID-19 Vaccine Survey (CVACS) Survey 2 Key Findings: Policy Brief. Available at <http://hdl.handle.net/11090/1020>. 2022 Apr 19.
6. Maughan-Brown B, Eyal K, **Buttenheim A**, Ingle K, Brophy T. COVID-19 Vaccine Survey (CVACS) Survey 1 Key Findings: Policy Brief. Available at <http://opensaldru.uct.ac.za/handle/11090/1016>. 2022 Feb 9.
7. Schmidt H, Golos A, Sadecki E, Gollust S, **Buttenheim A**. US Adults' Preferences for Allocating 500 Million Free COVID-19 Tests. Available at SSRN 4013115. 2022 Jan 21.

RESEARCH**Ongoing Research Support**

R01MH132401 (Buttenheim, Maughan-Brown, Thirumurthy) 05/22/23-02/28/28
NIH/NIMH \$3,086,346

Inoculating and boosting against HIV vaccine misinformation among adolescent girls and young women in South Africa

The goal of this study is to evaluate the efficacy, safety, durability, and generalized immunity effects of inoculation messages that are boosted with behavioral economics insights to counter HIV vaccine misinformation among adolescent girls and young women in South Africa.. Role: PI

R01MH129223 (Buttenheim, Medina-Marino) 06/01/22-04/30/27
NIH/NIMH \$2,664,920

Improving HIV testing, linkage, and retention in care for men through U=U messaging

Building on our prior work on U=U messaging informed by behavioral economics and human-centered design, the goal of this project is to evaluate the impact of U=U messages on the men's uptake of community-based HIV testing and treatment initiation and achievement of viral

suppression. We will also conduct a multi-method evaluation to inform future implementation of U=U messaging interventions. Role: PI

R37CA259210 (Kornides) 04/01/22-03/31/27
NIH/NCI \$3,151,722
An inoculation theory-based messaging intervention addressing misinformation about HPV vaccine on social media: The Inoculate for HPV Vaccine randomized controlled trial
This project seeks to address misinformation on social media contributing to vaccine hesitancy and low rates of HPV vaccine uptake among adolescents. Achieving the goals of this project has the potential to both improve HPV vaccine uptake in the US and provide replicable methods for rapidly identifying and correcting misinformation surrounding other public health concerns such as COVID-19 or childhood vaccinations. Role: Co-Investigator

R01AI168291 (Castillo-Neyra) 04/01/22-03/31/27
NIH/NIAID \$3,197,878
Spatially responsive mass vaccination strategies for urban rabies
Innovative multidisciplinary approaches to control disease in animals in urban environments are necessary to reduce the risk of spill over to human populations. In this study, we will develop new mass vaccination strategies that optimize the location of vaccination tents increasing participation and vaccine equity. The new strategies will be evaluated using an implementation science approach. Role: Co-Investigator

R01AI170137 (Schmidt, Yearby) 04/01/22-03/31/27
NIH/NIAID \$3,776,351
Using disadvantage indices to address structural racism and discrimination in pandemic vaccine allocation and beyond: Defining the shape of a novel paradigm to promote health equity
The goals of this project are to identify the impact, strengths and weaknesses of using DIs in COVID-19 vaccine allocation to address SRD and improve healthcare access and outcomes of disadvantaged communities of color and identify the possible strengths and weaknesses of using DIs in public health and clinical care outside of emergency settings to address SRD and improve healthcare access and outcomes of disadvantaged communities of color. Role: Co-Investigator

INV049484 (Pascoe, Chetty-Makjan) 05/01/23-12/31/26
Bill & Melinda Gates Foundation \$637,975
Indlela – designing evidence-based nudges to reach HIV epidemic control
The major goal of this grant is to provide capacity building and direct a pilot grant program to apply behavioral economics to HIV prevention in South Africa. Roles: Co-Investigator and Senior Behavioral Design Lead

R01MH123491 (Beidas) 08/15/20-06/30/25
NIH/NIMH \$3,984,657
A comparative effectiveness trial of strategies to implement firearm safety promotion as a universal suicide prevention strategy in pediatric primary care
The main goal of this project is to conduct a hybrid III effectiveness-implementation trial to reduce firearm-related suicide deaths in young people by investigating the most effective way to implement a universal safe firearm storage program in pediatric primary care. Role: Co-Investigator

P50CA244690 (Beidas, Bekelman, Schnoll) 07/01/20-06/30/25
NIH/NCI \$4,841,538
Advancing the quality of cancer care through behavioral economics and implementation science

The goal of the NCI P50 is to advance the science and practice of implementing evidence-based practices for individuals with cancer. Role: Research Program Co-Lead

P30AG034546 (Volpp) 09/15/19-05/31/24
NIH/NIA \$445,431

Penn Roybal Center on Behavioral Economics and Health

The Center facilitates and supports research that advances translation of behavioral economic concepts to improve health behaviors and health care delivery. Specific aims are to: 1.) Facilitate and support research across the NIH Stage model that advances the translation of behavioral economic concepts to improved health and health behaviors for older adults; 2.) Cultivate testing of mechanisms of behavior change and early-stage feasibility pilots; 3.) Support testing of ideas with promise in Stage 1 that have potential to improve the health of large patient populations in research and community settings; and 4.) Collaborate with external health care organizations to disseminate our findings and support the implementation of effective interventions. Role: Co-Investigator

R01AI146129-01 (Levy) 07/01/19-06/30/24
NIH/NIAID \$3,334,847

Immune System for the City: A Paradigm for Control of Urban Disease Vectors

The difficulties faced by a community when trying to control a dangerous insect are in many ways analogous to those faced by the body when attacked by a pathogen. Through evolution mammals have developed a complex and interlocking defense against invaders-an immune system well-honed to detect and control infections. The adaptive immune system relies on communication between autonomous entities to recognize pathogens and recruit effector cells; it includes a combination of systemic and local responses to remove pathogens; and, most amazingly, tightly regulates these responses and creates memory to improve them in the future. Role: Co-Investigator

---- (Guntuku) 02/01/22-12/31/23
Penn University Research Foundation \$49,951

Computational social listening of global vaccine attitudes to increase provider efficacy.

The goal of this project is to build a computational framework to uncover the heterogeneity in misinformation exposure towards COVID-19 vaccination and to create and evaluate audience-targeted messages that counter misinformation and encourage healthy behaviors. Role: Co-Investigator

P30AI045008 (Buttenheim, Supplement PI) 07/01/22-09/30/23
NIH/NIA \$313,251

Penn Center for AIDS Research: Evaluating the B-OK bottles as a strategy to improve implementation of evidence-based adherence counseling and support to end the HIV epidemic

In this study, we will explore whether the B-OK bottles -- a simple yet powerful visual aid -- could improve the effectiveness of treatment adherence support offered during medical case management of HIV, and thus improve HIV treatment outcomes and reduce transmission. Role: PI

1R01AI125405-01 (Omer) 07/01/16-08/31/23
NIH/NICHD \$500,000

Impact of eliminating non-medical exemptions in California

The goal of this study is to develop an evidence base for the implementation of immunization legislation relating to exemptions. Role: Co-Investigator

Completed Support

10T2HL161568 NIH/NHLBI	(Bauermeister, Villarruel)	05/15/21-05/14/23 \$1,398,799
<i>Philadelphia Community Engagement Alliance to address COVID-19 Inequities</i>		
Our coalition across the Philadelphia metropolitan area has the potential to maximize the impact of CEAL resources, pool and leverage existing efforts throughout the city in a coordinated fashion and optimize the rollout and real-time evaluation of interventions focused on COVID-19 disparities across diverse populations (e.g., racial/ethnic minorities, immigrants, communities living in poverty, specific neighborhoods) within the Philadelphia region. Role: Co-investigator		
1R21MH123851 NIH/NIMH	(Wolk, Jager-Hyman)	04/01/21-03/31/23 \$446,719
<i>Leveraging behavioral economics and implementation science to engage suicidal patients in mental health treatment</i>		
Role: Co-Investigator		
----	(Guntuku)	04/01/22-03/31/23 \$94,534
Penn Global Engagement Fund		
<i>Computational social listening of vaccine attitudes in India to increase provider efficacy.</i>		
Role: Co-Investigator		
OPP1195218 Bill & Melinda Gates Foundation	(Thirumurthy)	01/01/20-03/31/23 \$3,498,735
<i>Leveraging social and sexual networks to reach men with HIV testing and linkage services (Amendment)</i>		
Roles: Co-Investigator and Behavioral Design Lead, Indlela: Behavioural Insights for Better Health		
----	(Buttenheim, Guntuku)	02/01/22-01/31/22 \$50,000
Penn MCRI		
<i>Communicating with parents about the COVID-19 vaccine: A natural language processing analysis of public opinion to inform clinical guidance.</i>		
Role: MPI		
1P50MH113840-01 NIH/NIMH	(Mandell, Beidas, Buttenheim)	08/01/17-05/31/22 \$1,368,269
<i>Transforming mental health delivery through behavioral economics and implementation science</i>		
Role: MPI		
1R01HD075869 NIH/NICHD	(Levy, Buttenheim)	09/01/14-05/31/21 \$483,719
<i>Improving participation in vector control campaigns through behavioral economics</i>		
Role: MPI		
11489516 CDC	(Glanz, Volpp)	09/30/14-09/29/19 \$562,307
<i>University of Pennsylvania Prevention Research Center.</i>		
Role: Co-Lead, Evaluation Core		

-----	(Buttenheim)	04/01/17-03/31/19
Penn CHIBE		\$47,025
<i>Feasibility/acceptability pilots of the Smokebeat program for low-income pregnant smokers.</i>		
Role: PI		
1R01HL122457	(Merchant)	07/01/14-06/30/19
NIH/NHLBI		\$417,56
<i>Twitter and cardiovascular health</i>		
Role: Co-Investigator		
-----	(Buttenheim, Cannuscio)	06/01/18-05/31/19
Penn CHIBE		\$37,578
<i>Behavioral economic approaches to increase naloxone uptake.</i>		
Role: MPI		
1R34DE025426	(Buttenheim, Barankay, Stathopoulou)	09/21/16-08/22/17
NIH/NIDCR		\$150,000
<i>A randomized trial of cognitive vs. behavioral incentives to induce sustained healthy oral hygiene habits and improve oral health</i>		
Role: MPI		
-----	(Buttenheim)	6/01/15-05/31/16
Trustees Council for Penn Women		\$5,000
Penn Nursing CHER		\$2,000
<i>Efficacy, coverage and equity implications of a 2-dose vs. 3-dose vaccine schedule in a national school-based HPV vaccination program.</i>		
Role: PI		
1R03HD080732-01	(Buttenheim)	07/15/14-04/30/16
NIH/NICHD		\$100,000
<i>Vaccination status of children exempted from school-entry immunization mandates</i>		
Role: PI		
-----	(Buttenheim)	06/01/13-05/31/14
Penn Nursing ONR		\$9,965
<i>Can policies change norms? Measuring school vaccine exemption norms in the context of regulatory change.</i>		
Role: PI		
-----	(Feemster)	01/01/13-12/31/13
Penn LDI		\$19,941
<i>Retail pharmacy vouchers to promote Tdap vaccination for adults living with infants.</i>		
Role: Co-PI		
KM1CA156715-01	(Metlay)	07/01/11-06/30/13
NIH/NCI		
<i>Career development award in Comparative Effectiveness Research</i>		
Role: Trainee		
-----	(Buttenheim)	12/01/12-3/31/13
Penn PSOM		\$15,000

Increasing uptake of oral rehydration therapy (ORT) through a behavioral economic-mHealth intervention.

Role: PI

----- (Buttenheim) 12/01/11-11/30/12
 Penn GEF, Penn URF \$68,269
Pilot studies to improve participation in Chagas disease vector control programs.
 Role: PI

----- (Buttenheim) 01/01/10-8/31/11
 Penn RWJF HSS \$4,940
Do farmers' markets increase fruit and vegetable intake?
 Role: PI

----- (Buttenheim) 01/01/10-8/31/11
 Penn RWJF HSS \$5,500
Building capacity in agent-based modeling for population health research.
 Role: PI

----- (Asch) 01/01/10-8/31/11
 Penn RWJF HSS \$17,490
The social and spatial clustering of vaccine refusal.
 Role: Co-PI

T32HD07545-06 (Campbell) 09/01/04-08/31/05
 NIH/NICHD 09/01/06-08/31/07
Predocctoral Training Grant, California Center for Population Research, UCLA.
 Role: Trainee

CONSULTATION: RESEARCH/EDUCATIONAL (Reverse chronological)

Vaccine Confidence Fund (2023)

HE²RO/Bill & Melinda Gates Foundation (2021-2022)

University of Cape Town/Bill & Melinda Gates Foundation (2021-2022)

Brown University/Rockefeller Foundation (2020-2021)

ideas42 (2017-20)

HOPE Consulting/Hewlett Foundation (2014-15)

Abt Associates (2014-15)

Office of Smoking and Health, Centers for Disease Control and Prevention (2006, 2012-13)

International Initiative for Impact Evaluation (3ie) (2008-10)

Development Research Group, The World Bank (2005-08)

INVITED LECTURES, PANELS, AND KEYNOTES, LAST 5 YEARS (*VIRTUAL)

2022-3 "Did behavioral economics boost COVID-19 vaccine acceptance? Evidence and insights from WEIRD and LMIC countries."

Leverhulme Center for Demographic Sciences, Nuffield College, Oxford University, United Kingdom. Invited speaker.

Experimental Government Team, Policy Institute, King's College London, London, United Kingdom. Invited speaker.

Department of Economics, University of Otago, Dunedin, New Zealand. Invited speaker.

- 2021 *COVID-19 vaccines: One year later. Leonard Davis Institute, University of Pennsylvania, Philadelphia, PA. Moderator.
- 2021 *A virtual briefing on tactics tested for encouraging COVID-19 vaccination. Behavior Change for Good Initiative, University of Pennsylvania, Philadelphia, PA. Moderator.
- 2021 Informing evidence-based vaccine policy through policy surveillance and behavioral science. Department of Health Management and Policy, Dornsife School of Public Health, Drexel University, Philadelphia, PA. Invited speaker.
- 2021-2 "Can you just tell us what works?" Building the evidence base for effective COVID-19 vaccine demand creation in a dynamic environment.
- *Minnesota Population Center, University of Minnesota, Saint Paul, MN. Invited speaker.
- *National Clinician Scholars Program, University of Michigan, Ann Arbor, MI. Invited speaker.
- Department of Community Health and Prevention, Dornsife School of Public Health, Drexel University, Philadelphia, PA. Invited speaker.
- 2021 *Knowing when to nudge: Behavioral design for better health. Yale School of Nursing, New Haven, CT. Invited speaker.
- 2021 *You Speak: Health Matters Webinar for Journalists. Annenberg Center for Health Journalism, University of Southern California, Los Angeles, CA. Invited panelist.
- 2021 *Indlela: Building behavioral economics capacity in South Africa. Department of Global Health, Boston University School of Public Health, Boston, MA. Invited speaker.
- 2021 *5th Annual Virtual Conference: COVID19: Media, Misinformation, and Science Communication. University of Connecticut, Storrs, CT. Opening keynote.
- 2021 *Behaviorally Informed Strategies for a National COVID-19 Vaccine Promotion Program. VA Connecticut Medical Center, New Haven, CT. Invited speaker.
- 2021 *Improving Pandemic Response with Experiments and Behavioral Economics. Special Online Conference on Experimental Insights from Behavioral Economics in Covid-19. Johns Hopkins University and London School of Economics. Baltimore, MD. Invited panelist.

- 2021 *How to encourage vaccine adoption. USC-Brookings Schaeffer Initiative for Health Policy and the USC Behavioral Science and Well-Being Policy Initiative, University of Southern California, Los Angeles, CA. Invited panelist.
- 2020 *Addressing Challenges in Coronavirus Vaccine Distribution and Uptake. Leonard Davis Institute, University of Pennsylvania, Philadelphia, PA. Panelist/moderator.
- 2020 *Barriers and strategies to achieving optimal COVID-19 vaccination rates. COVID-19 Symposium at Hopkins: Navigating the pandemic when effective vaccines are in the policy toolbox. Johns Hopkins University. Baltimore, MD. Invited panelist.
- 2020 *What happens when we have a vaccine? Dornsife School of Public Health, Drexel University, Philadelphia, PA. Invited panelist.
- 2020 *Rapid behavioral trials to improve HIV testing in South Africa. Ideas42, New York, NY. Invited speaker.
- 2020 *Social and behavioral communication during the COVID-19 Pandemic. Center for Demography and Ecology, University of Wisconsin-Madison, Madison, WI. Invited speaker.
- 2020 *So you've socially distanced, Now what? Leonard Davis Institute, University of Pennsylvania, Philadelphia, PA. Invited panelist.
- 2020 Vaccine Law and Policy: The role of the law from a health justice and human rights lens. Yale University School of Law, New Haven, CT. Invited panelist.
- 2020 Nudging or Fudging? Realizing the potential for behavioral economics to improve population health. Carolina Population Center, University of North Carolina, Chapel Hill, NC. Invited speaker.
- 2019 Weird social science: Contagion and inoculation theory in policy and media. Weird Science symposium, Humanities Studio, Pomona College, Claremont CA. Invited speaker.
- 2018 The potential impact on health of behavioral economics and behavioral psychology. Sciana The Health Leaders Network Annual Cohort Meeting, Salzburg, Austria. Invited speaker.

CONFERENCE PRESENTATIONS: ORAL AND POSTER, LAST 5 YEARS (*VIRTUAL, †POSTER)

Note: For simplicity, only conference presentations where I was the presenter are included.

- 2022 Indlela: A first-of-its-kind “nudge unit” in South Africa bringing behavioural science to HIV care delivery innovation. Otago Global Health Institute, University of Otago, Dunedin, New Zealand.
- 2019 8 months to 5 days: What happened when Pennsylvania changed the immunization regulations for provisional enrollment? American Public Health Association, Philadelphia, PA.

- 2019 Changes in homeschooling rates following elimination of nonmedical exemptions from school entry vaccine mandates in California. American Public Health Association, Philadelphia, PA.
- 2019 Association of neighborhood characteristics with pertussis diagnosis in a retrospective cohort of children born in Philadelphia, Pennsylvania. American Public Health Association Annual Meeting, Philadelphia, PA.
- 2019 Applying insights from participatory design to design implementation strategies. Biennial meeting of the Society for Implementation Research Collaboration, Seattle, WA.
- 2019 Nudge yourself: Stakeholder design of implementation strategies that leverage insights from behavioral economics. Biennial meeting of the Society for Implementation Research Collaboration, Seattle, WA.
- 2019 Making health intervention smarter through behavioral science. Penn Master of Behavioral and Decision Sciences Panel, School of Arts & Sciences, University of Pennsylvania, Philadelphia, PA.
- 2019 Innovative methods to design implementation strategies. Academy Health Annual Research Meeting, Washington, D.C.
- 2019 Models for incorporating stakeholders and practice partners. ALACRITY Center Directors' Meeting, Bethesda, MD.
- 2019 Penn ALACRITY methods core round robin presentation. ALACRITY Center Directors' Meeting, Bethesda, MD.
- 2019 ALACRITY center overview. ALACRITY Center Directors' Meeting, Bethesda, MD.
- 2019 †SMARTQuit (Support, microincentives and remote tracking to quit smoking during pregnancy): Feasibility and acceptability pilot studies. American Public Health Association, Philadelphia, PA.

MEDIA, OPINION, AND ENGAGED SCHOLARSHIP

Media appearances and quoted (reverse chronological order)

1. [Some Philadelphia parents scramble to find COVID-19 vaccine appointments for their young kids.](#) *WHYY*, 07/04/22.
2. [American's flu-shot problem is also its next COVID-shot problem.](#) *The Atlantic*, 03/18/22.
3. [Which coronavirus vaccine will work in the youngest children?](#) *The New York Times*, 03/14/22.
4. [Florida's decision on COVID vaccines for healthy kids adds to confusion and distrust.](#) *Stat News*, 03/07/22.

5. "Cities are ditching vaccine mandates to dine out and watch shows. Did they work?" *The Washington Post*, 03/03/2022.
6. "How to reclaim normal life without being `done'." *The Atlantic*, 02/10/22.
7. "America's COVID Rules are. Dumpster Fire." *The Atlantic*, 01/06/22.
8. "About 30 percent of the fully vaccinated in the U.S. have gotten boosted. Omicron could speed things up." *The Washington Post*. 12/20/21.
9. "Why cash incentives and lotteries for COVID-19 vaccinations failed." *Quartz*, 10/27/21.
10. "Boosters are complicating efforts to persuade the unvaccinated to get shots." *The New York Times*, 10/11/21.
11. "Guess which states are best at requiring vaccines? Not the ones you might think". *The Philadelphia Inquirer*, 09/16/21.
12. "Agencies That Issued Mandates Before Biden's Push Show Some Early Success". *The New York Times*, 09/10/21.
13. "Vaccine Mandates Work, But They're Messy Business". *FiveThirtyEight*, 09/08/21.
14. "The F.D.A. grants full approval to the Pfizer-BioNTech Covid-19 vaccine." *The New York Times*, 08/23/21.
15. "A Step-By-Step Guide to Convincing Your Un-Vaxxed Parents to Get Their Shots". *VICE News*, 08/18/21.
16. "The Vaccine Cards Are the Wrong Size". *The Atlantic*, 08/10/21.
17. "Those nerdy girls' from Philadelphia, all female scientists, tackle COVID questions". *The Philadelphia Inquirer*, 08/06/21.
18. "Why aren't people getting vaccinated?". *WHYY's Radio Times*, 07/23/21.
19. "Breakthrough Infections' Is Not a Helpful Term". *The Atlantic*, 07/13/21.
20. "Learning why people are not vaccinated is key to moving forward". *Our Weekly Los Angeles*, 06/16/21.
21. "America's largest beer company will buy the country a round if it hits Biden's July 4 vaccination goal". *Washington Post*, 06/02/21.
22. "What Drives COVID Vaccine Hesitancy Among Moms?". *MedPage Today*, 06/02/21.
23. "Hol dir die Spritze für deine Chance auf den Gewinn!". *Der Spiegel*, 05/26/21.
24. "How To Best Incentivize COVID-19 Vaccines—Outside Of Herd Immunity And Basic Survival". *The Gothamist/WNYC*, 05/15/21.
25. "Beer and cash for vaccines: the US campaign to win round jab doubters". *Financial Times*, 05/05/21.
26. "West Virginia is offering an incentive to get vaccinated: Money". *The Washington Post*, 04/27/21.
27. "What Do Women Want? For Men to Get Covid Vaccines." *The New York Times*, 04/22/21.

28. ["Amplify Nursing: Special COVID-19 Episode: Alison Buttenheim"](#). *Soundcloud Podcast - Amplify Nursing - Penn Nursing*, 04/22/21.
29. ["Dragging the family to get a COVID-19 vaccine, one arm at a time"](#). *Seattle Times, Los Angeles Times, Yahoo News*, 04/17/21.
30. ["Many Firefighters Are Still Declining The Vaccine As A Brutal Fire Season Looms"](#). *SCPR & LAist*, 04/12/21.
31. ["In the Covid-19 vaccine push, no one is speaking Gen Z's language"](#). *STAT*, 04/08/21.
32. ["White House weighs in on requiring COVID-19 'vaccine passports'"](#). *6ABC*, 04/07/21.
33. ["CDC's messaging problem highlights pandemic's uncertain future"](#). *NBCNews.com*, 04/06/21.
34. ["As Nation Speeds to Vaccinate All, Maryland's Path Shows Challenges Ahead"](#). *The New York Times, MSN.com, and DNUYZ*, 04/02/21.
35. ["Experts hoping to curb COVID-19 vaccine hesitancy"](#). *6ABC*, 04/01/21.
36. ["The next stage of the vaccine drive: Persuading the hesitant"](#). *The Boston Globe*, 04/01/21.
37. ["Missing their shots: Inside Pennsylvania's rough COVID vaccine rollout"](#). *Fortune*, 04/01/21.
38. ["Medical providers still struggle to convince some workers to get COVID-19 vaccine"](#). *The Philadelphia Inquirer*, 03/28/21.
39. ["What the U.S. can learn from mass vaccination campaigns in other countries"](#). *WHYY*, 03/28/21.
40. ["Some still nervous about getting COVID-19 vaccine; expert weighs in"](#). *6ABC*, 03/22/21.
41. ["Vaccine acceptance expert weighs in on AstraZeneca saga"](#). *STAT*, 03/19/21.
42. ["Europe's vaccine safety scare"](#). *STAT News - The Readout Loud Podcast*, 3/18/21.
43. ["You're Not Fully Vaccinated the Day of Your Last Dose"](#). *The Atlantic*, 03/17/21.
44. ["For the first time in decades, vaccines are having a moment. Will it last?"](#). *STAT*, 03/15/21.
45. ["Fewer people take a 'wait and see' approach to COVID-19 vaccine — here's what changed their minds"](#). *MarketWatch*, 03/12/21.
46. ["@DearPandemic: Meet the women answering burning questions big and small about COVID-19"](#). *National Geographic*, 03/10/21.
47. ["'Hassle Factor' and Distrust Shadow Wide U.S. Vaccine Hesitancy"](#). *Bloomberg*, 03/07/21.
48. ["How some Philadelphia apartment buildings are getting their residents COVID-19 vaccines"](#). *WHYY*, 03/04/21.
49. ["Vaccine hesitancy: What drives us to get the jab?"](#). *Healthing.ca*, 03/02/21.
50. ["Compared to Moderna and Pfizer's offerings, the Johnson & Johnson vaccine has a lower efficacy percentage. But that's NOT a reason to be skeptical about getting it."](#) *Zerlina Show on Peacock*, 03/02/21.
51. ["How Johnson & Johnson's COVID-19 vaccine is different from Pfizer's and Moderna's"](#). *The Philadelphia Inquirer*, 02/25/21.
52. ["House Hearing: To Get COVID Vax Confidence, Be Both 'Fast and Fair'"](#). *MedPage Today*, 02/22/21.

53. "Local health officials tell Congress U.S. needs more Covid vaccine doses and it needs to be easier to get the shots". *CNBC*, 02/19/21.
54. "COVID Vaccine Rollout: How We Will Reach Herd Immunity?". *Wharton Business Daily*, 02/18/21.
55. "Delay a Shot? Skip One? Vaccine-Dosing Messaging Is a Nightmare." *The Atlantic*, 02/18/21.
56. "The Health 202: Biden wants a 'public option' health plan. Two Senate moderates say they have just the bill". *The Washington Post & MSN.com*, 02/18/21.
57. "The myth of 'good' and 'bad' Covid vaccines: Why false perceptions overlook facts, and could breed resentment". *STAT*, 02/17/21.
58. "Why Health Care Companies Are Paying Workers To Get The COVID-19 Vaccine". *Huffington Post*, 02/01/21.
59. "Social media 'micro-influencers' join effort to get America vaccinated". *Politico*, 01/30/21.
60. "'Insanity': COVID-19 vaccines for teachers, a key to reopening schools, comes down to location - and luck". *USA Today*, 01/29/21.
61. "5 Ideas From Experts to Speed Up the Vaccine Rollout". *MarketWatch*, 01/28/21.
62. "It's essential to understand why some health care workers are putting off vaccination". *Vox*, 01/28/21.
63. "'THOSE NERDY GIRLS' EXPLAIN THE PANDEMIC TO AMERICA". *The Philadelphia Citizen*, 01/26/21.
64. "To Promote Vaccines, New Orleans Dances With Its Heart on Its Sleeve". *The New York Times*, 01/25/21.
65. "Healthcare Workers of Color Are Receiving Vaccines Less Than White Coworkers". *NBC 10 Philadelphia*, 01/23/21.
66. "Vaccination Efforts". *NPR All Things Considered*, 01/22/21.
67. "5 Ideas From Experts to Speed Up the Vaccine Rollout". *Barron's*, 01/18/21.
68. "It's essential to understand why some health care workers are putting off vaccination". *Vox*, 01/11/21.
69. "The latest on COVID and vaccines". *WHYY's Radio Times*, 01/08/21.
70. "Should the government pay people to take the COVID-19 vaccine? | Pro/Con". *The Philadelphia Inquirer*, 01/06/21.
71. "THE VACCINE IS HERE! THE VACCINE IS HERE!". *The Philadelphia Citizen*, 12/30/20.
72. "Incidental illnesses threaten to give Covid-19 vaccines a bad rap". *STAT News*, 12/28/20.
73. "Experts Outline 5 Ways To Promote the COVID-19 Vaccine". *Very Well Health*, 12/23/20.
74. "How Healthcare Communicators Are Fighting Misinformation, Building Trust In Covid-19 Vaccines". *Forbes*, 12/21/20.
75. "Researchers propose 5 strategies to encourage COVID-19 immunization". *Medical News Today*, 12/17/20.
76. "Flashpoint: Will the masses opt to get the COVID-19 vaccine?". *KYW News Radio Flashpoint*, 12/14/20.

77. "The Covid-19 vaccines are a marvel of science. Here's how we can make the best use of them". *STAT News*, 12/02/20.
78. "The Real Story, Covid vaccines: An opportunity for science?". *BBC World Service*, 11/27/20.
79. "Covid vaccines: An opportunity for science?". *BBC Radio*, 11/27/20.
80. "Coronavirus vaccines can't work without an effective vaccination strategy, experts say". *The Hub*, 11/24/20.
81. "Don't let COVID fatigue trick you': How to survive winter as the pandemic rages on". *MarketWatch*, 11/17/20.
82. "HEALTH CARE BRIEFING: Vaccine Doubts Undermine Warp Speed Effort". 11/02/20.
83. "10 Behavioral Scientists You Should Know". *Forbes*, 10/29/20.
84. "Women who inspire: Culturists breaking through during Covid-19". *NBC News: Know Your Value*, 10/26/20.
85. "Once a COVID-19 vaccine is here, there will be a new challenge: Convincing people it's safe". *The Philadelphia Inquirer, The Boston Herald, The Pittsburgh Tribune Review, The Sun Newspapers, & Others*, 10/24/20.
86. "How to vote in person safely when Pa. isn't requiring masks at the polls". *WHYY Radio*, 10/07/20.
87. "5 Epidemiologist and Public Health Moms on Their Children's Back-to-School Plans". *Working Mother*, 08/17/20.
88. "What COVID-19 pandemic teaches us about human behavior". *CNYCentral and WSTM*, 07/15/20.
89. "Fighting the coronavirus infodemic". *AXIOS*, 07/08/20.
90. "Coronavirus is revolutionizing scientific practices and communication. Here's how". *USA Today*, 07/07/20.
91. "Social Media's 'Infodemic'". *WHYY's The Pulse*, 06/19/20.
92. "Indoors, yelling and packed crowds: Experts sound alarm ahead of Trump's Tulsa rally amid coronavirus". *ABC News*, 06/16/20.
93. "Philly Is About to Start Outdoor Dining. But How Safe Is It?". *Philadelphia Magazine*, 06/10/20.
94. "With COVID-19 cases down, Philadelphia and suburbs move to 'yellow' reopening status Friday". *The Philadelphia Inquirer*, 06/04/20.
95. "School reopening plans should focus on disease control". *The Philadelphia Inquirer*, 06/04/20.
96. "As states reopen, here's what parents should know about distanced play dates, expanded social bubbles and more". *The Washington Post*, 06/02/20.
97. "The 'Nerdy Girls' on COVID-19". *The Sydcast*, 05/31/20.
98. "Protests, masks and public health: Where do my rights end and yours begin?". *WHYY's Radio Times*, 05/27/20.
99. "States are letting stay-at-home orders expire, regardless of virus metrics". *Politico*, 05/15/20.

100. ["When is the best time to reopen Philadelphia?"](#). *Philadelphia Magazine*, 05/06/20.
101. ["Global hangout: Ask the experts-conversations on coronavirus Facebook, Twitter, Instagram"](#). *NBC News*, 05/04/20.
102. ["Outbreaks and epidemics: The role of Public Health"](#). *WHYY*, 05/01/20.
103. ["As protesters swarm state capitols, much of the coronavirus backlash is coming from within"](#). *The Washington Post*, 04/23/20.
104. ["Harrisburg coronavirus shutdown protest"](#). *New Castle News*, 04/21/20.
105. ["LIVE BLOG: Coronavirus In Pittsburgh, April 20-26"](#). *WESA*, 04/20/20.
106. ["Some Democratic PA lawmakers rebuke calls for a 'rush to reopen' in the face of COVID-19 pandemic"](#). *WTAE*, 04/20/20.
107. ["Gov't 'can't save us from the virus': In raucous Capitol protest, thousands call on Wolf to reopen all of PA."](#). *Pennsylvania Capital Star*, 04/20/20.
108. ["Protesters in Pittsburgh demand Gov. Wolf to reopen businesses amid coronavirus pandemic"](#). *Pittsburgh Tribune Review*, 04/20/20.
109. ["When Will It Be Safe To Go Back In The Water?"](#). *The Colin McEnroe Show, WNPR*, 04/13/20.
110. ["Diverse group of women academics launch 'Dear Pandemic' Facebook page"](#). *Insight into Diversity*, 04/08/20.
111. ["Special Episode: Coronavirus 3: Dr. Alison Buttenheim and Dr. Carolyn Cannuscio."](#) *Amplify Nursing Podcast*, 03/27/20.
112. ["How to help, or get help, in Philly during coronavirus"](#). *The Philadelphia Inquirer*, 03/20/20.
113. ["Public health experts worry about spread of COVID-19 misinformation"](#). *Roll Call*, 03/18/20.
114. ["Coronavirus Conversations: The Social Distance Social."](#) *Tradeoffs Podcast*, 03/16/20.
115. ["Special Episode: Coronavirus: Dr. Alison Buttenheim and Dr. Carolyn Cannuscio."](#) *Amplify Nursing Podcast*, 03/13/20.
116. ["Coronavirus Conversations: Alison Buttenheim."](#) *Tradeoffs Podcast*, 03/12/20.
117. ["Coronavirus has shut down schools and events. Here's why that helps, short- and long-term."](#) *The Philadelphia Inquirer*, 03/08/20.
118. ["As COVID-19 creeps closer to Philly, city officials urge precaution"](#). *WHYY*, 03/06/20.
119. ["Maine Referendum Could Bring Back Religious And Philosophical Exemptions for Vaccines"](#). *WBUR*, 02/27/20.
120. ["How Anti-Vaccine Sentiment Took Hold In the United States"](#). *The New York Times*, 09/23/19.
121. ["Take it from Someone Who Almost Died: The Resurgence of Measles is Terrifying"](#). *USC Center for Health Journalism*, 05/23/19.
122. ["Here's What Happened After California Got Rid of Personal Belief Exemptions for Childhood Vaccines"](#). *Los Angeles Times*, 10/29/18.
123. ["In California, Some Doctors Sell 'Medical Exemptions' For Kids' Vaccinations"](#). *US and World Report*, 10/29/18.

124. "What's Happened Since California Let Fewer Families Reject Vaccines". *PBS Newshour*, 09/05/18.
125. "Vaccines and Schools-- a Public Health Power Couple". *WHYY Newsworks -- The Pulse*, 08/23/18.
126. "Many Kids with Exemptions Have Gotten Some Vaccines". *WHYY Newsworks*, 12/01/15.
127. "The Pulse - Feb. 6 2015". *WHYY Newsworks - The Pulse*, 02/06/15.
128. "Measles Outbreak: In US Schools, What's the Risk of Mixing Unvaccinated Kids with Vaccinated Ones?". *International Business Times*, 02/03/15.
129. "Intentionally Unvaccinated Students Putting Other Children at Risk". *Science Daily*, 08/22/12.
130. "Vaccination Exemptions Rise in California Amid Concerns". *Medscape Medical News*, 11/03/11.

Opinion (reverse chronological order)

"Should the government pay people to take the COVID-19 vaccine? | Pro/Con." With Harald Schmidt. *The Philadelphia Inquirer*. 01/06/21.

"School re-opening plans should focus on disease control | Expert Opinion." With Michael Z. Levy. *The Philadelphia Inquirer*. 06/04/20.

"The Vaccination-Exemption Challenge." *Governing*. 07/07/17.

"Challenges Facing a COVID-19 Vaccine: A Behavioral Science Perspective." With Michael Hallsworth. *Behavioral Scientist*. 08/11/20.

"The 50-state laboratory: How can behavioral science bolster vaccination policy?" *Behavioral Scientist*. 09/17/17.

"Anti-vaccination beliefs are contagious like a disease." With Malia Jones. *Washington Post Monkey Cage Blog*. 09/22/14.

Engaged scholarship (reverse chronological order)

"Did behavioral economics boost COVID-19 vaccine acceptance? Evidence and insights from WEIRD and LMIC countries." Cross-Governmental Behavioural Science Network, UK Government. 05/03/23.

"Addressing vaccine hesitancy and disinformation through behavioral science." *Health New Zealand, New Zealand Ministry of Health*. 12/02/22.

"*Dear Pandemic: Amplifying Science, Addressing Misinformation.*" Penn INSPIRE COVID-19 Community Forum. 09/23/21.

"Having 'the conversation': Behavioral science and vaccine acceptance." *Wisconsin Head Start Association*. 09/13/21.

“Dear Pandemic: Amplifying the Science.” Penn Arts & Sciences Professional Women’s Alliance. 06/24/21.

“Philly Vax Sweepstakes Update”. GovLabPHL. 06/21/21

“Covid Vaccine Equity Research Dialogues (CoVEReD): Reaching COVID Vaccine Equity: Are We There Yet?” Leonard Davis Institute (LDI), University of Pennsylvania. 06/21/21.

“Dear Pandemic: Those Nerdy Girls at the Infodemiology Frontlines”. Penn FOCUS. 05/26/21.

“Mandates and Behavioral Change Strategies: Impact on Vaccine Practices and Public Health”. Indiana Immunization Coalition. 05/10/21.

“Covid Vaccine Equity Research Dialogues (CoVEReD): Can we overcome vaccine barriers for immigrants in the US and improve access globally?” Leonard Davis Institute (LDI), University of Pennsylvania. 05/04/21.

“Dear Pandemic with Alison Buttenheim.” Penn Forum for Women Faculty. 04/30/21.

“Covid Vaccine Equity Research Dialogues (CoVEReD): When everyone’s eligible, what happens to vaccine equity?” Leonard Davis Institute (LDI), University of Pennsylvania. 04/20/21.

“Covid Vaccine Equity Research Dialogues (CoVEReD): Should allocation be increased where cases are rising and decreased where demand is low?” Leonard Davis Institute (LDI), University of Pennsylvania. 04/06/21.

“Covid Vaccine Equity Research Dialogues (CoVEReD): What does President Biden’s May 1 deadline for universal eligibility mean for vaccine equity?” Leonard Davis Institute (LDI), University of Pennsylvania. 03/23/21.

“Covid Vaccine Equity Research Dialogues (CoVEReD): What does vaccine choice mean for equity?” Leonard Davis Institute (LDI), University of Pennsylvania. 03/09/21.

“Covid Vaccine Equity Research Dialogues (CoVEReD): Should we use disadvantage indices to allocate vaccine doses?” Leonard Davis Institute (LDI), University of Pennsylvania. 02/23/21.

“The Science of COVID-19 Vaccines and Encouraging Vaccine Uptake.” Testimony presented to the United States Congress House Science, Technology, and Space Committee. 02/19/21.

“COVID-19 Vaccination Uptake Behavioral Science Task Force”. Report to the Centers for Medicare and Medicaid Services. 02/11/21.

“Building public vaccine confidence to prevent COVID-19: Public information gathering session for a rapid expert consultation.” National Academies of Sciences, Engineering and Medicine. 12/18/20.

“COVID-19 Vaccine Communication Expert Panel: Using behavioral science to address vaccine hesitancy and foster vaccine confidence.” Office of Behavioral and Social Sciences Research, National Institutes of Health. 11/05/20.

“Epidemiologist Lunch & Learn”, Hawaii Democratic Party Health Committee. 09/17/20.

“Achieving A Fair and Effective COVID-19 Response: An Open Letter to Vice-President Mike Pence, and Other Federal, State and Local Leaders from Public Health and Legal Experts in the United States.” 03/02/20.

SELECTED PROFESSIONAL ACTIVITIES

Editorial Committee, AAHO/BMJ collection on social media and vaccination behaviour and beliefs, 2023.

Co-Chair, Consensus Committee on Future Directions for Applying Behavioral Economics to Policy, National Academies of Sciences, Engineering and Medicine, 2021-2023.

Commissioner, Lancet Commission on Vaccine Hesitancy. 2020-

Member, Covid-19 Vaccine Communications Workgroup, Philadelphia Department of Public Health. 2021-2022

Member, Covid-19 Vaccine Advisory Committee, City of Philadelphia. 2020-2022

Advisory Committee, COVID-19 Vaccination Field Guide, CDC Vaccine with Confidence. 2021.

Co-Founder and Contributing Writer, Dear Pandemic (www.dearpandemic.org), 2020-21.

Advisory Board Member, The Little Jab Book. 2020-21.

Steering Committee, National Vaccine Day, One Day Sooner. 2020-21.

Member, Framework Committee on Equitable Allocation of the Novel Coronavirus Vaccine, National Academies of Sciences, Engineering and Medicine, 2020.

Member, Science of Teaching and Learning Task Force, Associated Schools and Colleges of Public Health. 2019-2020.

Associate Editor, *BMC Public Health*, 2018-19.

Ad-hoc reviewer, last 5 years: *American Journal of Preventive Medicine*, *American Journal of Public Health*, *Annals of Epidemiology*, *BMC Pediatrics*, *BMC Public Health*, *Bulletin of the World Health Organization*, *Demography*, *Health Affairs*, *Human Vaccines and Immunotherapeutics*, *Jama*, *Journal of Applied Economics & Policy*, *Journal of Epidemiology and Community Health*, *Journal of General Internal Medicine*, *Lancet Global Health*, *Maternal Child Health Journal*, *Nature Human Behavior*, *Pediatrics*, *PLOS Neglected Tropical Disease*, *PLOS One*, *Social Science & Medicine*, *Vaccine*.

MEETING/CONFERENCE ORGANIZING ROLES

2019- Present	Planning Committee Member	Behavioral Science and Health Symposium, Center for Health Incentives and Behavioral Economics. Philadelphia, PA.
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2020- 2021	Co-host and Organizer	Behavioral Science and COVID-19 Vaccine Acceptance: A Conversation (3-part event),
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		Center for Health Incentives and Behavioral Economics, ideas42, Behavior Change for Good, and Behavioral Insights Team North America. Philadelphia, PA
2020	Planning Committee Member	The Critical Public Health Value of Vaccines – Tackling Issues of Access and Hesitancy. Forum on Microbial Threats. Washington, DC
2019	Chair of Committee on Arrangements	National Clinicians Scholars Program. Philadelphia, PA.
2016	Planning Committee Member	Interdisciplinary Association of Population Health Science annual conference. State College, PA.
2015	Steering Committee Member	Health in Latin America and the Caribbean: Equity, Access and Innovation. Penn in Latin America and the Caribbean. Philadelphia, PA.
2013	Co-organizer	Improving Oral Hygiene Behavior: A Workshop to Spark New Ideas.. Philadelphia, PA.
2009-Present	Abstract Reviewer, Session Organizer, Respondent.	Population Association of America, American Public Health Association, Interdisciplinary Association of Population Health Science, Academy Health.

MEMBERSHIPS IN PROFESSIONAL & SCIENTIFIC SOCIETIES & OFFICES HELD

Interdisciplinary Association of Population Health Sciences, 2020-
Society of Judgment and Decision-Making, 2020-
American Public Health Association, 2003-
Population Association of America, 2003-

SERVICE ACTIVITIES AT THE UNIVERSITY OF PENNSYLVANIA

School of Nursing

Graduate Group Progressions Committee (2021-2022)
Ad-Hoc Committee on the BSN to PhD Program (2021-2022)
Senate Bylaws Committee (Member, 2021-2022)
Ad-Hoc Committee on the Composition of the Faculty Personnel Committee (2021)
Search Committee for Assistant Dean for Curricular Affairs and Innovation (Chair, 2019-20)
Faculty Personnel Committee (Member, 2018-21)
Faculty Search Committee (Member, 2015-17)
BSN Curriculum Committee (Member, 2014)
Graduate Group PhD Curriculum Committee (Member, 2012-14)
Planning Committee, N380 Nursing in the Community Course Redesign (Member, 2012-14)
Senate Research Committee (Member, 2012-15, Chair-elect 2015-6, Chair 2016-17)
Lecture Advancement and Review Committee (Member, 2012)

Master of Public Health Program

MPH Curriculum Committee (Member 2012-14, Chair 2014-17, Member 2020-2022)
MPH Admissions Committee (Member 2018-20)
MPH Steering Committee (Member 2014-17)
Evidence-Based Public Health Initiative (Co-Lead 2014-16)

Center for Health Incentives and Behavioral Economics (CHIBE)

Scientific Director (2020-)
Co-Lead, Committee on Anti-Racism and Social Change (2020-21)
Interim Director (2019)
Associate Director (2017-20)
Steering Committee (Member, 2014-)
CHIBE Work in Progress Seminar (Co-Coordinator, 2012-14)

Other University Service

Committee on the Institutional Response to the Climate Emergency (CIRCE) (Member, 2020- 2022)
Travel Sustainability Working Group (Member, 2020-2022)
Faculty Senate Executive Committee (Assistant Prof Representative 2015-17; Secretary 2019-22)
Executive Committee, Population Studies Center (Member, 2014-18)
Center for Public Health Initiatives Review Committee (Member, 2016-17)
Biomedical Review Panel, University Research Foundation (Member, 2014-17)
LDI/Health Policy Patient Engagement and Communication Working Group (Co-Chair, 2012-14)
Provost's Office 2014-15 "Year of Health" Steering Committee (Member, 2013-14)
UPenn-UPCH (Peru) Collaborative Pilot Grant Program (Reviewer, 2012-14)

DOCTORAL DISSERTATION COMMITTEES

Member. Ying Dai. "Pregnancy and Childbirth Risk Factors, Social Adversity, and Adolescents' Sleep Problems: Results From Two Cohort Studie." University of Pennsylvania School of Nursing, 2023.

Chair. Charisse Ahmed. "Optimizing the Design and Implementation of Peer Support Interventions for Adolescents Living with HIV in Sub-Saharan Africa." University of Pennsylvania School of Nursing, 2022.

Member. Valerie Raziano. "Examining Prenatal Care as an Opportunity to Improve Prenatal and Infant Vaccine Receipt." Drexel University Dornsife School of Public Health, Department of Community Health and Prevention, 2022.

Member. Briana Last. "From policy to practice: The socioeconomic context of clinicians and patients in Philadelphia's public mental health system." University of Pennsylvania Department of Psychology, 2021.

Chair. Amy Elizabeth Barrera-Cancedda. "Engaging Nurses in Impelementation Strategies and Evidence-Based Practice Guidelines for Infection Prevention and Control to Support Ebola Preparedness in Sierra Leone." University of Pennsylvania School of Nursing, 2020.

Chair. Katelin Hoskins. "'My name's on their chart, my name is on that money': Nurse practitioners' perceptions of the acceptability of financial incentives for health-related behavior change." University of Pennsylvania School of Nursing, 2020.

Chair. Jason Brown. "Examining the Choice to Seek Non-urgent Urinary Tract Infection Treatment at Emergency Departments." University of Pennsylvania School of Nursing, 2019.

Dissertation Advisor. Tirza Calderon. "Addressing Disparities in Pertussis Epidemiology." University of Pennsylvania School of Medicine, Department of Biostatistics, Epidemiology and Informatics, 2019.

Chair. Lauren Johnson. "Implementing Botswana's National Cervical Cancer Prevention Program: Providers' Fidelity To The See-And-Treat Algorithm." University of Pennsylvania School of Nursing, 2017.

Member. Salini Mohanty. "Pediatrician Response to Parental Requests to Delay Or Refuse Childhood Immunization." Drexel Dornsife School of Public Health, Department of Community Health and Prevention. 2017.

Member. Emilia Flores. "A Multi-Method Evaluation of a Guideline Based Clinical Decision Support Intervention on Provider Outcomes and Inter-Professional Communication." University of Pennsylvania School of Nursing, 2017.

Member. Stephen Perez. "Public Reporting of Healthcare-Associated Infections: The Impact of Public Policy on Healthcare Organizations and Patient Outcomes." University of Pennsylvania School of Nursing, 2017.

Chair. Kelly A. Delaney. "Sustainable Emergencies: The Paradox of Community Management of Acute Nutrition Programs." University of Pennsylvania School of Nursing, 2013.

Member. Diana Khuu. "Weighing In: The Social Problem of Obesity." University of Pennsylvania Department of Sociology, 2013.

POSTDOCTORAL FELLOWS MENTORED

William Smith, MD. 2022-
Dovie Watson, MD. 2021-
Yeonsoo Baik, PhD. 2021-
Philip Smith, PhD. 2020-
Rachel French, PhD. 2019-
Shoshana Aronowitz, PhD. 2019-21
Ashley Ritter, PhD. 2018-21
Kate Wallis, MD. 2019-20
Kirstin Manges, PhD. 2018-20
Rebecca Stewart, PhD. 2018-20
Chethan Bachireddy, MD. 2017-19
Salini Mohanty, DrPH, MPH. 2017-19
Ricardo Castillo-Neyra, DVM, PhD, MPH. 2014-17