Stanford



Marc Lipsitch

Michael and Barbara Berberian Professor, Professor of Biology and Senior Fellow at the Freeman Spogli Institute for International Studies

Medicine - Infectious Diseases

Bio

BIO

Marc Lipsitch and his research group study the impact of medical and public health interventions and human immunity on pathogen populations and the consequences of these changes for human health. Within this broad umbrella we consider both ecological effects (modulating the amount of transmission and infection) and evolutionary ones (shaping the genetic composition of the populations of infectious agents). Specific areas of interest include natural selection imposed by strain-specific vaccines and antibiotics, design and evaluation of measures to control outbreaks and pandemics, methods for evaluating vaccine efficacy, and surveillance design. Tools include mathematical and computational modeling, pathogen population genomics, causal inference methods, and (in the past) experimental microbiology and immunology. In addition to this scientific research, we work in the areas of research ethics and biosecurity (through an appointment at the Center for International Security and Cooperation). He joined Stanford in 2026. From 1999-2025 he was a faculty member at Harvard TH Chan Schooll of Public Health, where he was Professor of Epidemiology (20062025) and founding Director of the Center for Communicable Disease Dynamics (2009-2025). He was founding Director for Science and then Senior Advisor at the CDC's Center for Forecasting and Outbreak Analytics (2021-5).

ACADEMIC APPOINTMENTS

- Professor, Medicine - Infectious Diseases
- Professor, Biology
- Senior Fellow, Freeman Spogli Institute for International Studies
- Member, Bio-X

HONORS AND AWARDS

- Fellow, American Academy of Microbiology (2014)
- Member, National Academy of Medicine (2020)

PROFESSIONAL EDUCATION

- Postdoc, Emory University, CDC , Biology (1999)
- DPhil, University of Oxford , Zoology (1995)
- BA, Yale University , Philosophy (1991)

Teaching

COURSES

2026-27

- Securing Against Biological Threats: Natural, Accidental, Deliberate: BIO 166, BIO 266, PUBLPOL 166 (Aut)

STANFORD ADVISEES

Postdoctoral Faculty Sponsor

Indra Gonzalez Ojeda, Johannes Ponge, Qi Zhan

Doctoral Dissertation Advisor (AC)

Julian Gottfried

Publications

PUBLICATIONS

- **Trust as a hidden driver of epidemic-relevant behavior: Institution- and behavior-specific associations across 20 national survey waves.** *Proceedings of the National Academy of Sciences of the United States of America*
  Zapf, A. J., Dewey, G., Ognyanova, K., Baum, M. A., Hanage, W. P., Lipsitch, M., Uslu, A. A., Druckman, J. N., Perlis, R. H., Lazer, D., Santillana, M.
  2026; 123 (45): e2622260123
- **Advantages of a Two-Stage Randomized Trial Design to Evaluate Antimicrobial Treatment Strategies: a Simulation Study.** *American journal of epidemiology*
  Gago, J., Boyer, C., Lipsitch, M.
  2026
- **Heterogeneity in pre-vaccination population immunity can contribute to variability in vaccine effectiveness estimates.** *medRxiv : the preprint server for health sciences*
  Pillai, A. N., Park, S. W., Lipsitch, M., Cowling, B. J., Cobey, S.
  2026
- **Leveraging limited testing data for early detection of emerging infectious disease outbreaks.** *American journal of epidemiology*
  Zapf, A. J., Lipsitch, M.
  2026
- **Antimicrobial selection and multidrug resistance in four major pathogens in the US Veterans Affairs health-care system: a multicentre, retrospective, cohort study.** *The Lancet. Microbe*
  Pham, T. M., Zhang, Y., Nevers, M., Li, H., Khader, K., Grad, Y. H., Samore, M., Lipsitch, M.
  2026: 101445
- **Vaccine Efficacy Against Naturally Asymptomatic Infections: A Novel Estimand for Quantifying Vaccine Effects.** *Epidemiology (Cambridge, Mass.)*
  Rogawski McQuade, E., Nabi, R., Codi, A., Dean, N., Lipsitch, M., Benkeser, D.
  2026
- **Genotype-based antimicrobial resistance tests need a new regulatory framework.** *The Lancet. Microbe*
  Grad, Y. H., Larremore, D. B., Lipsitch, M.
  2026: 101456
- **Seasonal forcing and waning immunity drive the sub-annual periodicity of the COVID-19 epidemic.** *PLoS pathogens*
  Rubin, I. N., Bushman, M., Lipsitch, M., Hanage, W. P.
  2026; 22 (4): e1014169
- **Unpacking sources of transmission in HIV prevention trials with deep-sequence pathogen data.** *Nature communications*
  Magosi, L. E., Tchetgen, E. T., Novitsky, V., Pretorius Holme, M., Moore, J., Bachanas, P., Lebelonyane, R., Fraser, C., Moyo, S., Hurwitz, K. E., Gaolathe, T., Goyal, R., Makhema, et al
  2026
- **Preventing Disease Emergence Following Eradication: Application to Mpox.** *bioRxiv : the preprint server for biology*
  Hirst, C., Deichmann, J., Saha, A., Longini, I., Handel, A., Lipsitch, M., Weissman, D., Antia, R.
  2026

- **Use of the test-negative design to estimate the protective effect of a scalar immune measure: A simulation analysis.** *American journal of epidemiology*
  Zhang, Z., Boyer, C. B., Lipsitch, M.
  2026
- **Reply to Lowen et al., "The value of virological research in wildlife".** *mBio*
  Lipsitch, M., Aatresh, A. V.
  2026: e0375625
- **Geographic spillover of antimicrobial resistance from mass distribution of azithromycin.** *Nature communications*
  Srivathsan, A., Arzika, A. M., Maliki, R., Abdou, A., Lipsitch, M., Blumberg, S., O'Brien, K. S., Porco, T. C., Hinterwirth, A., Doan, T., Keenan, J. D., Lietman, T. M., Arnold, et al
  2026
- **Defining and Estimating Outcomes Directly Averted by a Vaccination Program when Rollout Occurs Over Time.** *Epidemiology (Cambridge, Mass.)*
  Jia, K. M., Boyer, C. B., Bilinski, A., Lipsitch, M.
  2026
- **Predicting optimal impact interventions in the post-HPV vaccination world.** *International journal of cancer*
  Lehtinen, M., Lipsitch, M., Pimenoff, V. N., Sundström, K., Berkhof, J., Baussano, I., Vänskä, S., Dillner, J.
  2026
- **How Should We Study the Indirect Effects of Antimicrobial Treatment Strategies?: A Causal Perspective.** *Epidemiology (Cambridge, Mass.)*
  Gago, J., Boyer, C., Lipsitch, M.
  2026; 37 (1): 88-97
- **A binary prototype for time-series surveillance and intervention** *EPIDEMICS*
  Olejarz, J., Hoffmann, T., Zapf, A., Mugahid, D., Molinaro, R., Brown, C., Boltyenkov, A., Dudykevych, T., Gupta, A., Lipsitch, M., Atun, R., Onnela, J., Fortune, et al
  2025; 53: 100866
- **Defining and Estimating Outcomes Directly Averted by a Vaccination Program when Rollout Occurs Over Time.** *ArXiv*
  Jia, K. M., Boyer, C. B., Bilinski, A., Lipsitch, M.
  2025
- **Defining and Estimating Outcomes Directly Averted by a Vaccination Program when Rollout Occurs Over Time.** *ArXiv*
  Jia, K. M., Boyer, C. B., Bilinski, A., Lipsitch, M.
  2025
- **What is the relationship between viral prospecting in animals and medical countermeasure development?** *mBio*
  Aatresh, A. V., Lipsitch, M.
  2025; 16 (10): e0203325
- **Equity considerations in COVID-19 vaccine allocation modelling: a methodological study** *INTERFACE FOCUS*
  Rumpler, E., Lipsitch, M.
  2025; 15 (4): 20240037
- **Clade I mpox vaccination: strategies for deployment and evaluation.** *EBioMedicine*
  Pley, C., Panovska-Griffiths, J., Hinch, R., Wymant, C., Abeler-Dörner, L., Ssemwanga, D., Galiwango, R. M., Grabowski, M. K., Di Lauro, F., Ferretti, L., Hay, J., Lipsitch, M., Dunning, et al
  2025; 119: 105890
- **The Social Disvalue Misconception in Clinical Research.** *The American journal of bioethics : AJOB*
  Eyal, N., Lipsitch, M., Smith, P. G.
  2025; 25 (8): 88-89
- **Geographic spillover of antimicrobial resistance from mass distribution of azithromycin.** *medRxiv : the preprint server for health sciences*
  Srivathsan, A., Arzika, A. M., Maliki, R., Abdou, A., Lipsitch, M., Blumberg, S., O'Brien, K. S., Porco, T. C., Hinterwirth, A., Doan, T., Keenan, J. D., Lietman, T. M., Arnold, et al

2025

- **Kinetics of SARS-CoV-2 Shedding in Nursing Home Residents and Staff.** *Journal of the American Geriatrics Society*
  Katz, M. J., Reeves, M., Harris, T. G., Duque, J., Fridkin, S. K., Rebolledo, P. A., Furuno, J. P., Short, E. K., Canaday, D. H., Abul, Y., Gravenstein, S., Cosgrove, S. E., Mody, et al
  2025; 73 (7): 2127-2136

- **Seasonal forcing and waning immunity drive the sub-annual periodicity of the COVID-19 epidemic.** *medRxiv : the preprint server for health sciences*
  Rubin, I. N., Bushman, M., Lipsitch, M., Hanage, W. P.
  2025

- **Linkage-based ortholog refinement in bacterial pangenomes with CLARC.** *Nucleic acids research*
  González Ojeda, I., Palace, S. G., Martinez, P. P., Azarian, T., Grant, L. R., Hammitt, L. L., Hanage, W. P., Lipsitch, M.
  2025; 53 (12)

- **Principal Investigator Responsibility for Flagging Research with Dual-Use or Pandemic Risk.** *Applied biosafety : journal of the American Biological Safety Association*
  Lipsitch, M.
  2025; 30 (2): 139-142

- **Predicting antibody kinetics and duration of protection against SARS-CoV-2 following vaccination from sparse serological data.** *PLoS computational biology*
  Deichmann, J., Barda, N., Canetti, M., Peretz, Y., Weiss-Ottolenghi, Y., Lustig, Y., Regev-Yochay, G., Lipsitch, M.
  2025; 21 (6): e1013192

- **Causal Estimands for Analyses of Averted and Avertible Outcomes due to Infectious Disease Interventions.** *Epidemiology (Cambridge, Mass.)*
  Jia, K. M., Boyer, C. B., Wallinga, J., Lipsitch, M.
  2025; 36 (3): 363-373

- **Focusing a viral risk ranking tool on prediction** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Budeski, K., Lipsitch, M.
  2025; 122 (16): e2419337122

- **The importance of playing the long game when it comes to pandemic surveillance.** *Proceedings of the National Academy of Sciences of the United States of America*
  Shearer, F. M., Lipsitch, M.
  2025; 122 (15): e2500328122

- **Observational research in epidemic settings: a roadmap to reform.** *BMJ global health*
  Ricotta, E. E., Bustos Carrillo, F. A., Angelli-Nichols, S., Barugahare, J., Benton, A., Carlson, C. J., Chang-Rabley, E., Dean, N. E., Duda, S. N., Federer, L., Fill, M. A., LeRoy, E. C., Linton, et al
  2025; 10 (2)

- **A Binary Prototype for Time-Series Surveillance and Intervention.** *medRxiv : the preprint server for health sciences*
  Olejarz, J., Hoffmann, T., Zapf, A., Mugahid, D., Molinaro, R., Brown, C., Boltyenkov, A., Dudykevych, T., Gupta, A., Lipsitch, M., Atun, R., Onnela, J. P., Fortune, et al
  2025

- **Reduced Effectiveness of Repeat Influenza Vaccination: Distinguishing Among Within-Season Waning, Recent Clinical Infection, and Subclinical Infection.** *The Journal of infectious diseases*
  Bi, Q., Dickerman, B. A., Nguyen, H. Q., Martin, E. T., Gaglani, M., Wernli, K. J., Balasubramani, G. K., Flannery, B., Lipsitch, M., Cobey, S.
  2024; 230 (6): 1309-1318

- **Trends in infection incidence and antimicrobial resistance in the US Veterans Affairs Healthcare System: a nationwide retrospective cohort study (2007-22).** *The Lancet. Infectious diseases*
  Pham, T. M., Zhang, Y., Nevers, M., Li, H., Khader, K., Grad, Y. H., Lipsitch, M., Samore, M.
  2024; 24 (12): 1333-1346

- **Prediction of post-PCV13 pneumococcal evolution using invasive disease data enhanced by inverse-invasiveness weighting.** *mBio*
  Qiu, X., McGee, L., Hammitt, L. L., Grant, L. R., O'Brien, K. L., Hanage, W. P., Lipsitch, M.
  2024; 15 (10): e0335523
- **Immune escape and attenuated severity associated with the SARS-CoV-2 BA.2.86/JN.1 lineage.** *Nature communications*
  Lewnard, J. A., Mahale, P., Malden, D., Hong, V., Ackerson, B. K., Lewin, B. J., Link-Gelles, R., Feldstein, L. R., Lipsitch, M., Tartof, S. Y.
  2024; 15 (1): 8550
- **Emulating target trials of postexposure vaccines using observational data.** *American journal of epidemiology*
  Boyer, C., Lipsitch, M.
  2024
- **Considerations for viral co-infection studies in human populations.** *mBio*
  Chin, T., Foxman, E. F., Watkins, T. A., Lipsitch, M.
  2024; 15 (7): e0065824
- **Infectious disease surveillance needs for the United States: lessons from Covid-19.** *Frontiers in public health*
  Lipsitch, M., Bassett, M. T., Brownstein, J. S., Elliott, P., Eyre, D., Grabowski, M. K., Hay, J. A., Johansson, M. A., Kissler, S. M., Larremore, D. B., Layden, J. E., Lessler, J., Lynfield, et al
  2024; 12: 1408193
- **Diagnostics for Public Health - Infectious Disease Surveillance and Control.** *NEJM evidence*
  Lipsitch, M., Grad, Y.
  2024; 3 (5): EVIDra2300271
- **Estimated Excess Deaths Due to COVID-19 Among the Urban Population of Mainland China, December 2022 to January 2023.** *Epidemiology (Cambridge, Mass.)*
  Raphson, L., Lipsitch, M.
  2024; 35 (3): 372-376
- **Public role in research oversight.** *Journal of virology*
  Lipsitch, M., Inglesby, T. V., Cicero, A., Relman, D. A.
  2024: e0006124
- **Optimal environmental testing frequency for outbreak surveillance.** *Epidemics*
  Olejarz, J. W., Roster, K. I., Kissler, S. M., Lipsitch, M., Grad, Y. H.
  2024; 46: 100750
- **Comparison of the Test-negative Design and Cohort Design With Explicit Target Trial Emulation for Evaluating COVID-19 Vaccine Effectiveness.** *Epidemiology (Cambridge, Mass.)*
  Li, G., Gerlovin, H., Figueroa Muñiz, M. J., Wise, J. K., Madenci, A. L., Robins, J. M., Aslan, M., Cho, K., Gaziano, J. M., Lipsitch, M., Casas, J. P., Hernán, M. A., Dickerman, et al
  2024; 35 (2): 137-149
- **What's next: using infectious disease mathematical modelling to address health disparities.** *International journal of epidemiology*
  Richard, D. M., Lipsitch, M.
  2024; 53 (1)
- **Prospective Evaluation of Machine Learning for Public Health Screening: Identifying Unknown Hepatitis C Carriers.** *NEJM AI*
  Dagan, N., Magen, O., Leshchinsky, M., Makov-Assif, M., Lipsitch, M., Reis, B. Y., Yaron, S., Netzer, D., Balicer, R. D.
  2024; 1 (2): AIoa2300012
- **JYNNEOS™ effectiveness as post-exposure prophylaxis against mpox: Challenges using real-world outbreak data.** *Vaccine*
  Rosen, J. B., Arciuolo, R. J., Pathela, P., Boyer, C. B., Baumgartner, J., Latash, J., Malec, L., Lee, E. H., Reddy, V., King, R., Edward Real, J., Lipsitch, M., Zucker, et al
  2024; 42 (3): 548-555
- **EXAMINING BIAS FROM DIFFERENTIAL DEPLETION OF SUSCEPTIBLES IN VACCINE EFFECTIVENESS ESTIMATES IN SETTINGS OF WANING.** *American journal of epidemiology*
  Kahn, R., Feikin, D. R., Wiegand, R. E., Lipsitch, M.

2024; 193 (1): 232-234

- **Estimated preventable COVID-19-associated deaths due to non-vaccination in the United States.** *European journal of epidemiology*
  Jia, K. M., Hanage, W. P., Lipsitch, M., Johnson, A. G., Amin, A. B., Ali, A. R., Scobie, H. M., Swerdlow, D. L.
  2023; 38 (11): 1125-1128
- **Some principles for using epidemiologic study results to parameterize transmission models.** *medRxiv : the preprint server for health sciences*
  Joshi, K., Kahn, R., Boyer, C., Lipsitch, M.
  2023
- **Geographic Targeting of COVID-19 Testing to Maximize Detection in Los Angeles County.** *Open forum infectious diseases*
  Jia, K. M., Kahn, R., Fisher, R., Balter, S., Lipsitch, M.
  2023; 10 (7): ofad331
- **Increased vaccine sensitivity of an emerging SARS-CoV-2 variant.** *Nature communications*
  Lewnard, J. A., Hong, V., Kim, J. S., Shaw, S. F., Lewin, B., Takhar, H., Lipsitch, M., Tartof, S. Y.
  2023; 14 (1): 3854
- **Learning From COVID-19 to Improve Surveillance for Emerging Threats.** *American journal of public health*
  Jernigan, D. B., George, D., Lipsitch, M.
  2023; 113 (5): 520-522
- **Comparative performance of between-population vaccine allocation strategies with applications for emerging pandemics.** *Vaccine*
  Joshi, K., Rumpler, E., Kennedy-Shaffer, L., Bosan, R., Lipsitch, M.
  2023; 41 (11): 1864-1874
- **Mass drug administration of azithromycin: an analysis.** *Clinical microbiology and infection : the official publication of the European Society of Clinical Microbiology and Infectious Diseases*
  Kahn, R., Eyal, N., Sow, S. O., Lipsitch, M.
  2023; 29 (3): 326-331
- **Leveraging Serosurveillance and Postmortem Surveillance to Quantify the Impact of Coronavirus Disease 2019 in Africa.** *Clinical infectious diseases : an official publication of the Infectious Diseases Society of America*
  Kogan, N. E., Gantt, S., Swerdlow, D., Viboud, C., Semakula, M., Lipsitch, M., Santillana, M.
  2023; 76 (3): 424-432
- **Fairness and efficiency considerations in COVID-19 vaccine allocation strategies: A case study comparing front-line workers and 65-74 year olds in the United States.** *PLOS global public health*
  Rumpler, E., Feldman, J. M., Bassett, M. T., Lipsitch, M.
  2023; 3 (2): e0001378
- **Strengthen oversight of risky research on pathogens.** *Science (New York, N.Y.)*
  Pannu, J., Palmer, M. J., Cicero, A., Relman, D. A., Lipsitch, M., Inglesby, T.
  2022: eadf6020
- **Prescribing for different antibiotic classes across age groups in the Kaiser Permanente Northern California population in association with influenza incidence, 2010-2018.** *Epidemiology and infection*
  Goldstein, E., Fireman, B. H., Klein, N. P., Lipsitch, M., Ray, G. T.
  2022; 150: e180
- **Infectious disease dynamics and restrictions on social gathering size.** *Epidemics*
  Boyer, C. B., Rumpler, E., Kissler, S. M., Lipsitch, M.
  2022; 40: 100620
- **Clinical outcomes associated with SARS-CoV-2 Omicron (B.1.1.529) variant and BA.1/BA.1.1 or BA.2 subvariant infection in Southern California.** *Nature medicine*
  Lewnard, J. A., Hong, V. X., Patel, M. M., Kahn, R., Lipsitch, M., Tartof, S. Y.
  2022; 28 (9): 1933-1943
- **BNT162b2 Vaccine Effectiveness against Omicron in Children 5 to 11 Years of Age.** *The New England journal of medicine*

Cohen-Stavi, C. J., Magen, O., Barda, N., Yaron, S., Peretz, A., Netzer, D., Giaquinto, C., Judd, A., Leibovici, L., Hernán, M. A., Lipsitch, M., Reis, B. Y., Balicer, et al
2022; 387 (3): 227-236

- **Hospitalization and Emergency Department Encounters for COVID-19 After Paxlovid Treatment - California, December 2021-May 2022** *MMWR-MORBIDITY AND MORTALITY WEEKLY REPORT*
  Malden, D. E., Hong, V., Lewin, B. J., Ackerson, B. K., Lipsitch, M., Lewnard, J. A., Tartof, S. Y.
  2022; 71 (25): 830-833

- **Mission, Organization, and Future Direction of the Serological Sciences Network for COVID-19 (SeroNet) Epidemiologic Cohort Studies** *OPEN FORUM INFECTIOUS DISEASES*
  Figueiredo, J. C., Hirsch, F. R., Kushi, L. H., Nembhard, W. N., Crawford, J. M., Mantis, N., Finster, L., Merin, N. M., Merchant, A., Reckamp, K. L., Melmed, G. Y., Braun, J., McGovern, et al
  2022; 9 (6): ofac171

- **Wrong question and the wrong standard of proof.** *Journal of medical ethics*
  Lipsitch, M.
  2022; 48 (6): 378-379

- **Fourth Dose of BNT162b2 mRNA Covid-19 Vaccine in a Nationwide Setting.** *The New England journal of medicine*
  Magen, O., Waxman, J. G., Makov-Assif, M., Vered, R., Dicker, D., Hernán, M. A., Lipsitch, M., Reis, B. Y., Balicer, R. D., Dagan, N.
  2022; 386 (17): 1603-1614

- **Indirect protection of children from SARS-CoV-2 infection through parental vaccination.** *Science (New York, N.Y.)*
  Hayek, S., Shaham, G., Ben-Shlomo, Y., Kepten, E., Dagan, N., Nevo, D., Lipsitch, M., Reis, B. Y., Balicer, R. D., Barda, N.
  2022; 375 (6585): 1155-1159

- **Near real-time surveillance of the SARS-CoV-2 epidemic with incomplete data.** *PLoS computational biology*
  De Salazar, P. M., Lu, F., Hay, J. A., Gómez-Barroso, D., Fernández-Navarro, P., Martínez, E. V., Astray-Mochales, J., Amillategui, R., García-Fulgueiras, A., Chirlaque, M. D., Sánchez-Migallón, A., Larrauri, A., Sierra, et al
  2022; 18 (3): e1009964

- **Deep-sequence phylogenetics to quantify patterns of HIV transmission in the context of a universal testing and treatment trial - BCPP/Ya Tsie trial** *ELIFE*
  Magosi, L. E., Zhang, Y., Golubchik, T., DeGruttola, V., Tchetgen Tchetgen, E., Novitsky, V., Moore, J., Bachanas, P., Segolodi, T., Lebelonyane, R., Pretorius Holme, M., Moyo, S., Makhema, et al
  2022; 11

- **Infections, hospitalisations, and deaths averted via a nationwide vaccination campaign using the Pfizer-BioNTech BNT162b2 mRNA COVID-19 vaccine in Israel: a retrospective surveillance study.** *The Lancet. Infectious diseases*
  Haas, E. J., McLaughlin, J. M., Khan, F., Angulo, F. J., Anis, E., Lipsitch, M., Singer, S. R., Mircus, G., Brooks, N., Smaja, M., Pan, K., Southern, J., Swerdlow, et al
  2022; 22 (3): 357-366

- **Deep-sequence phylogenetics to quantify patterns of HIV transmission in the context of a universal testing and treatment trial - BCPP/Ya Tsie trial.** *eLife*
  Magosi, L. E., Zhang, Y., Golubchik, T., DeGruttola, V., Tchetgen Tchetgen, E., Novitsky, V., Moore, J., Bachanas, P., Segolodi, T., Lebelonyane, R., Pretorius Holme, M., Moyo, S., Makhema, et al
  2022; 11

- **Analysis of multiple bacterial species and antibiotic classes reveals large variation in the association between seasonal antibiotic use and resistance.** *PLoS biology*
  Sun, D. S., Kissler, S. M., Kanjilal, S., Olesen, S. W., Lipsitch, M., Grad, Y. H.
  2022; 20 (3): e3001579

- **Antibiotic prescribing across age groups in the Kaiser Permanente Northern California population in association with different diagnoses, and with influenza incidence, 2010-2018.** *Epidemiology and infection*
  Goldstein, E., Fireman, B. H., Klein, N. P., Lipsitch, M., Ray, G. T.
  2022; 150: e85

- **Risk of persistent and new clinical sequelae among adults aged 65 years and older during the post-acute phase of SARS-CoV-2 infection: retrospective cohort study.** *BMJ (Clinical research ed.)*

Cohen, K., Ren, S., Heath, K., Dasmariñas, M. C., Jubilo, K. G., Guo, Y., Lipsitch, M., Daugherty, S. E.
2022; 376: e068414

- **Identifying and Alleviating Bias Due to Differential Depletion of Susceptible People in Postmarketing Evaluations of COVID-19 Vaccines** *AMERICAN JOURNAL OF EPIDEMIOLOGY*
  Kahn, R., Schrag, S. J., Verani, J. R., Lipsitch, M.
  2022; 191 (5): 800-811
- **Antibiotic Use and Presumptive Pathogens in the Veterans Affairs Healthcare System.** *Clinical infectious diseases : an official publication of the Infectious Diseases Society of America*
  Tedijanto, C., Nevers, M., Samore, M. H., Lipsitch, M.
  2022; 74 (1): 105-112
- **SARS-CoV-2 breakthrough infections in vaccinated individuals: measurement, causes and impact.** *Nature reviews. Immunology*
  Lipsitch, M., Krammer, F., Regev-Yochay, G., Lustig, Y., Balicer, R. D.
  2022; 22 (1): 57-65
- **Population impact of SARS-CoV-2 variants with enhanced transmissibility and/or partial immune escape.** *Cell*
  Bushman, M., Kahn, R., Taylor, B. P., Lipsitch, M., Hanage, W. P.
  2021; 184 (26): 6229-6242.e18
- **How to Test Severe Acute Respiratory Syndrome Coronavirus 2 Vaccines Ethically Even After One Is Available.** *Clinical infectious diseases : an official publication of the Infectious Diseases Society of America*
  Eyal, N., Lipsitch, M.
  2021; 73 (12): 2332-2334
- **Effectiveness of a third dose of the BNT162b2 mRNA COVID-19 vaccine for preventing severe outcomes in Israel: an observational study.** *Lancet (London, England)*
  Barda, N., Dagan, N., Cohen, C., Hernán, M. A., Lipsitch, M., Kohane, I. S., Reis, B. Y., Balicer, R. D.
  2021; 398 (10316): 2093-2100
- **Effectiveness of BNT162b2 mRNA COVID-19 vaccine against SARS-CoV-2 variant Beta (B.1.351) among persons identified through contact tracing in Israel: A prospective cohort study.** *EClinicalMedicine*
  Singer, S. R., Angulo, F. J., Swerdlow, D. L., McLaughlin, J. M., Hazan, I., Ginish, N., Anis, E., Mendelson, E., Mor, O., Zuckerman, N. S., Erster, O., Southern, J., Pan, et al
  2021; 42: 101190
- **Effectiveness of BNT162b2 Vaccine against Delta Variant in Adolescents.** *The New England journal of medicine*
  Reis, B. Y., Barda, N., Leshchinsky, M., Kepten, E., Hernán, M. A., Lipsitch, M., Dagan, N., Balicer, R. D.
  2021; 385 (22): 2101-2103
- **Estimating Vaccine Efficacy Against Transmission via Effect on Viral Load.** *Epidemiology (Cambridge, Mass.)*
  Kennedy-Shaffer, L., Kahn, R., Lipsitch, M.
  2021; 32 (6): 820-828
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