



Madelena Ng

Postdoctoral Scholar, Biomedical Ethics

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BIO

Dr. Madelena Ng is a Postdoctoral Scholar and NHGRI T32 ELSI Research Fellow at the Laurie J. Girard Center for Biomedical Ethics (GCBE) at Stanford. Dr. Ng is an applied health scientist whose work evaluates the real-world impact of emerging technologies on people and society. Her research has consistently shown that technological solutions alone are insufficient in addressing the shortcomings inherent in the biomedical research ecosystem.

Prior to Dr. Ng's appointment at GCBE, she was a Postdoctoral Scholar at the Stanford Division in Computation Medicine leading foundational work in AI ethics, governance, and responsible innovation. She will further her training in ELSI research at the intersection of generative biology, multisector research practices, and regulation. As generative AI continues to advance rapidly, she aims to embed ethics into the core of health AI development, operations, and decision-making.

PROFESSIONAL EDUCATION

- DrPH, University of California, Berkeley , Public Health with DE in Science and Technology Studies
- MPH, University of California, Los Angeles , Epidemiology
- BS, University of California, Los Angeles , Neuroscience with minor in Asian American Studies

STANFORD ADVISORS

- Mildred Cho, Postdoctoral Faculty Sponsor
- Nicole Martinez, Postdoctoral Research Mentor

Publications

PUBLICATIONS

- **Genome modelling and design across all domains of life with Evo 2.** *Nature*
Brix, G., Durrant, M. G., Ku, J., Naghipourfar, M., Poli, M., Sun, G., Brockman, G., Chang, D., Fanton, A., Gonzalez, G. A., King, S. H., Li, D. B., Merchant, et al
2026
- **Sequence modeling and design from molecular to genome scale with Evo.** *Science (New York, N.Y.)*
Nguyen, E., Poli, M., Durrant, M. G., Kang, B., Katrekar, D., Li, D. B., Bartie, L. J., Thomas, A. W., King, S. H., Brix, G., Sullivan, J., Ng, M. Y., Lewis, et al
2024; 386 (6723): eado9336
- **Perceptions of Data Set Experts on Important Characteristics of Health Data Sets Ready for Machine Learning: A Qualitative Study.** *JAMA network open*
Ng, M. Y., Youssef, A., Miner, A. S., Sarellano, D., Long, J., Larson, D. B., Hernandez-Boussard, T., Langlotz, C. P.

2023; 6 (12): e2345892

- **The AI life cycle: a holistic approach to creating ethical AI for health decisions.** *Nature medicine*
Ng, M. Y., Kapur, S., Blizinsky, K. D., Hernandez-Boussard, T.
2022
- **Session Introduction: Fairness and Bias in Biomedical AI/ML: Defining Goals and Putting Them Into Practice.** *Pacific Symposium on Biocomputing. Pacific Symposium on Biocomputing*
Martinez-Martin, N., Mahamadou, A. J., Ng, M., Cho, M. K.
2026; 31: 520-523
- **Racial and ethnic disparities in statin adherence: insights from the All of Us Research Program.** *Frontiers in cardiovascular medicine*
Escobar, G., Azizi, Z., de Hond, A., Lewis, A. A., Ng, M. Y., Rodriguez, F., Hernandez-Boussard, T.
2025; 12: 1541082
- **Racial and Ethnic Disparities in Statin Adherence: Insights from the All of Us Research Program.** *medRxiv : the preprint server for health sciences*
Escobar, G., Azizi, Z., de Hond, A., Lewis, A. A., Ng, M. Y., Rodriguez, F., Hernandez-Boussard, T.
2025
- **Global Initiative on AI for Health (GI-AI4H): strategic priorities advancing governance across the United Nations.** *NPJ digital medicine*
Muralidharan, V., Ng, M. Y., AlSalamah, S., Pujari, S., Kalra, K., Singh, R., Schalet, D., Olantuji, T., Malpani, R., Matin, R. N., Omiye, J. A., Zhao, Y., Sands, et al
2025; 8 (1): 219
- **Participant Evaluation of Blockchain-Enhanced Women's Health Research Apps: Mixed Methods Experimental Study.** *JMIR mHealth and uHealth*
Ng, M. Y., Halpern, J., Shane, O., Teng, T., Nguyễn, M., Alt, C. R., Leite, A. B., Moss-Pultz, S., Lyles, C. R., Cheshire, C.
2025; 13: e65747
- **Development of secure infrastructure for advancing generative artificial intelligence research in healthcare at an academic medical center.** *Journal of the American Medical Informatics Association : JAMIA*
Ng, M. Y., Helzer, J., Pfeffer, M. A., Seto, T., Hernandez-Boussard, T.
2025
- **Scaling equitable artificial intelligence in healthcare with machine learning operations.** *BMJ health & care informatics*
Ng, M. Y., Youssef, A., Pillai, M., Shah, V., Hernandez-Boussard, T.
2024; 31 (1)
- **Development of Secure Infrastructure for Advancing Generative AI Research in Healthcare at an Academic Medical Center.** *Research square*
Ng, M. Y., Helzer, J., Pfeffer, M. A., Seto, T., Hernandez-Boussard, T.
2024
- **AI and biosecurity: The need for governance.** *Science (New York, N.Y.)*
Bloomfield, D., Pannu, J., Zhu, A. W., Ng, M. Y., Lewis, A., Bendavid, E., Asch, S. M., Hernandez-Boussard, T., Cicero, A., Inglesby, T.
2024; 385 (6711): 831-833
- **Email-Based Recruitment Into the Health eHeart Study: Cohort Analysis of Invited Eligible Patients.** *Journal of medical Internet research*
Ng, M. Y., Olgin, J. E., Marcus, G. M., Lyles, C. R., Pletcher, M. J.
2023; 25: e51238
- **Organizational Factors in Clinical Data Sharing for Artificial Intelligence in Health Care.** *JAMA network open*
Youssef, A., Ng, M. Y., Long, J., Hernandez-Boussard, T., Shah, N., Miner, A., Larson, D., Langlotz, C. P.
2023; 6 (12): e2348422
- **Usability, inclusivity, and content evaluation of COVID-19 contact tracing apps in the United States** *JOURNAL OF THE AMERICAN MEDICAL INFORMATICS ASSOCIATION*
Blacklow, S. O., Lisker, S., Ng, M. Y., Sarkar, U., Lyles, C.
2021; 28 (9): 1982-1989

- **Smartphone-Based Geofencing to Ascertain Hospitalizations** *CIRCULATION-CARDIOVASCULAR QUALITY AND OUTCOMES*
Nguyen, K. T., Olgin, J. E., Pletcher, M. J., Ng, M., Kaye, L., Moturu, S., Gladstone, R. A., Malladi, C., Fann, A. H., Maguire, C., Bettencourt, L., Christensen, M. A., Marcus, et al
2017; 10 (3)
- **Continuous daily assessment of multiple sclerosis disability using remote step count monitoring** *JOURNAL OF NEUROLOGY*
Block, V. J., Lizee, A., Crabtree-Hartman, E., Bevan, C. J., Graves, J. S., Bove, R., Green, A. J., Nourbakhsh, B., Tremblay, M., Gourraud, P., Ng, M. Y., Pletcher, M. J., Olgin, et al
2017; 264 (2): 316-326
- **IRF8 acts in lineage-committed rather than oligopotent progenitors to control neutrophil vs monocyte production** *BLOOD*
Yanez, A., Ng, M. Y., Hassanzadeh-Kiabi, N., Goodridge, H. S.
2015; 125 (9): 1452-1459
- **Detection of a TLR2 agonist by hematopoietic stem and progenitor cells impacts the function of the macrophages they produce** *EUROPEAN JOURNAL OF IMMUNOLOGY*
Yanez, A., Hassanzadeh-Kiabi, N., Ng, M. Y., Megias, J., Subramanian, A., Liu, G. Y., Underhill, D. M., Luisa Gil, M., Goodridge, H. S.
2013; 43 (8): 2114-2125
- **Preferential Biological Processes in the Human Limbus by Differential Gene Profiling** *PLOS ONE*
Nakatsu, M. N., Vartanyan, L., Vu, D. M., Ng, M. Y., Li, X., Deng, S. X.
2013; 8 (4): e61833
- **Wnt/beta-Catenin Signaling Regulates Proliferation of Human Cornea Epithelial Stem/Progenitor Cells** *INVESTIGATIVE OPHTHALMOLOGY & VISUAL SCIENCE*
Nakatsu, M. N., Ding, Z., Ng, M. Y., Truong, T. T., Yu, F., Deng, S. X.
2011; 52 (7): 4734-4741