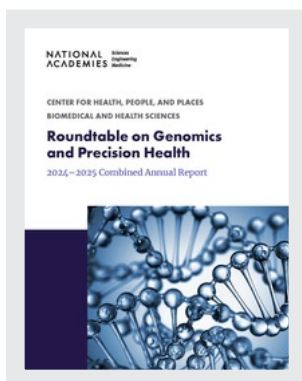


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Roundtable on Genomics and Precision Health: 2024-2025 Combined Annual Report (2026)

DETAILS

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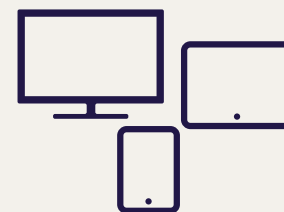
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BIOMEDICAL AND HEALTH SCIENCES

Roundtable on Genomics and Precision Health

2024–2025 Combined Annual Report





About the Roundtable

The Roundtable on Genomics and Precision Health brings together leaders from the government, academia, industry, foundations, associations, patient communities, and other interested groups to meet and discuss global issues surrounding the translation of genomics and genetics research findings into medicine, public health, education, and policy. The primary purpose of the roundtable is to foster dialogue across sectors and among interested parties and institutions and to illuminate and scrutinize critical scientific and policy issues where roundtable engagement and input will help further the field.

The roundtable membership identifies scientific and policy issues where discussion and collaboration will help enable the translation of genomics into health and health care applications. Specific issues and agenda topics are determined by the roundtable members and span a broad range of areas relevant to the translation process. Current areas of emphasis are described in greater detail below and broadly include the areas of health economics, partnerships, population screening, and technological innovations.

To achieve its objectives, the roundtable conducts structured discussions, meetings, public workshops, and webinars; engages in information-gathering activities and learning sessions; develops viewpoints and perspectives; organizes and supports collaboratives; and publishes workshop proceedings.

<https://www.nationalacademies.org/genomicsrt>

Strategic Areas of Focus

The members and staff of the Roundtable on Genomics and Precision Health continue to work toward the roundtable's vision of **realizing the full potential of health for all through genomics and precision health** by encouraging innovation and actions that foster the wide adoption of and access to the benefits of genomics and precision health. In 2024, the roundtable focused on topics such as artificial intelligence (AI); newborn screening and rare diseases; sustaining community engagement in genomics research; how consumer education has changed over the past 10 years; adoption of genomic testing through clinical practice guidelines; and other areas of new discoveries and emerging technologies. In 2025, roundtable members explored topics such as the continued development of AI and its applications in genomics and precision health care; the current landscape of reproductive genomics; the return of variants of uncertain significance results; the roles of polygenic risk scores in health and prevention; partnering with patients to implement cell and gene therapies; and other areas of new discoveries and emerging technologies.

As part of the strategic plan adopted in 2020 and updates that the members made to their plan in 2025, the work of the roundtable centers on economics, partnerships, population screening, and technological advancements. A leadership group provides strategic input and coordination across these areas and oversees progress toward the roundtable's vision and mission, focusing on identifying emerging issues in genomics and precision health that have cross-cutting connections.

Economics

Roundtable work in this area addresses health economic factors influencing the development, adoption, and sustainability of genomics-based technologies, including diagnostics, screening, and emerging therapies. It examines value, reimbursement, coverage, and how value is defined and measured across sectors, including by payers, clinicians, and patients. It also considers the economics of population screening, data resources, and gaps in testing and follow-up care. Recent discussions have focused on higher-cost interventions, such as gene therapies, gene editing, CAR T cells, and fetal therapies, and how concepts like clinical utility are evaluated in payer decision making.

Partnerships

Roundtable work in this area explores how evolving external factors, such as shifting funding landscapes, changing public trust in science, and emerging funding models, are shaping partnerships across the genomics ecosystem. Members consider how different partnership approaches influence research, translation, and sustainability, capturing perspectives from academia, industry, government, and philanthropy. This group also addresses workforce implications, including training pathways, talent mobility, and global trends, drawing on data from sources that track these shifts. Recent discussions have focused on how public-private partnerships can adapt to support innovation and progress.

Population Screening

Roundtable work in this area addresses the growing role of population-level screening in genomics, including issues of access, adoption, and implementation across clinical settings. Members highlight the need for effective guidelines and clinical decision support tools, along with challenges in interpretation and follow-up. Discussions include applications across the lifespan, particularly in prenatal and neonatal contexts.

Technological Advancements

Roundtable work in this area examines emerging technologies shaping the future of genomics, including multi-omics approaches, innovative therapies, artificial intelligence, and polygenic risk prediction. A recent workshop on the use of AI highlighted challenges related to data quality, database ownership and maintenance, and the interoperability of digital tools. Discussions also consider how to effectively implement new technologies while continuing to generate evidence, including the role of pre-implementation research in supporting responsible integration into research and clinical care.

Public Workshops and Events

SUSTAINING COMMUNITY ENGAGEMENT IN GENOMICS RESEARCH: A WORKSHOP (JULY 17, 2024)

This workshop examined how researchers could more meaningfully engage in and sustain interactions with communities in research to foster their participation in genomics and precision health studies. High-level takeaways for how to sustain community engagement included engaging communities before and throughout the research lifecycle; building trustworthiness and relationships through transparency, bidirectional communication, and shared decision making; assembling research and recruitment teams that are representative of the community; compensating community members for their engagement in the work; and shifting power and resources to communities.

EXAMINING CLINICAL GUIDELINES FOR THE ADOPTION OF GENOMIC TESTING: A WORKSHOP (OCTOBER 29, 2024)

This workshop examined how clinical practice guidelines can impact the adoption of genomics into routine medical care and how guidelines for genomic testing are developed by various organizations and implemented within clinical practice, with a focus on exploring inconsistencies across guidelines. Speakers discussed ways guideline development can be pushed forward, including collaborating on and standardizing guideline development across societies; incorporating the implementation of recommendations into guidelines; including patients and communities in decision making; considering the necessary level of evidence for genomic testing guidelines; and funding research and clinical guideline development.

EXPLORING APPLICATIONS OF AI IN GENOMICS AND PRECISION HEALTH: A WORKSHOP (OCTOBER 28, 2025)

This workshop explored current and future applications of AI across translational genomics research and clinical care. Discussions highlighted how AI is being used by scientists, clinicians, and patients, while also examining emerging challenges related to data quality, interoperability, standards, and the consistent application of clinical guidelines. Participants emphasized the need for robust data infrastructure, representative datasets, and rigorous evaluation to ensure trustworthy and accurate AI tools. The workshop also addressed evolving patient engagement with AI, as well as key ethical, policy, and governance considerations, including privacy, transparency, regulatory oversight, and the importance of maintaining human involvement in clinical decision making.

Meetings

January 25, 2024

The roundtable members met for the first session in a two-part series, *General Education on AI Models*, to learn about the basics of deep learning (i.e., AI, machine learning and large language models) and examples of models currently being developed and used in genomics research.

April 17–18, 2024

This roundtable member meeting included sessions highlighting the work of roundtable members, innovative and emerging advances in research, the second part of their AI series on *Applications of AI in Genomics and Precision Health Care*, and updates from National Academies' projects of interest. Each of the working groups also met and shared their tentative plans for 2024, and the members reflected on the strategic plan.

July 17–18, 2024

Members met for *Views and Voices: How Consumer Education Has Changed Over the Past 10 Years*. The roundtable members also debriefed following the workshop on *Sustaining Community Engagement in Genomics Research*, and breakout discussions were held for each of the working groups to continue planning for future 2024 events.

October 30, 2024

The roundtable members debriefed following the workshop on *Examining Clinical Guidelines for the Adoption of Genomic Testing*. Breakout discussions were held for each of the working groups to consider plans for 2025, and National Academies' projects of interest were discussed.

February 5, 2025

The roundtable members met to learn from members of disability communities about research participation in genomics and precision health.

April 2–3, 2025

Members reviewed the annual survey results and participated in a lightning round to share updates with colleagues. The roundtable reflected on the field through a spotlight talk and member presentations, welcomed the new co-chair, Bob Nussbaum, and explored topics in reproductive genetics. Members also held a session, *Views & Voices: Exploring the Return of VUS Results*, and began future planning during a full roundtable discussion.

July 15–16, 2025

Members met to discuss National Academies restructuring updates from the former division executive director and participated in a lightning round to share updates with colleagues. The roundtable explored future directions for public health newborn screening and discussed the role of polygenic risk scores in health and prevention. Members also shared innovative models and partnerships, hosted an initial discussion on gene therapies with the Forum on Regenerative Medicine, and concluded with a brainstorming session on topics of interest for the coming year.

October 29, 2025

The roundtable members debriefed following the workshop *Exploring Applications of AI in Genomics and Precision Health* and completed the annual member survey. Committee members shared information on the recent National Academies report *Aligning Investments in Therapeutic Development with Therapeutic Need: Closing the Gap*, and members learned about developments in the newborn screening space. The meeting concluded with identifying areas for impact in 2026.

Publications

Sustaining Community Engagement in Genomics Research: Proceedings of a Workshop—in Brief

RELEASED: October 2024

Exploring Clinical Guidelines for the Adoption of Genomic Testing: Proceedings of a Workshop—in Brief

RELEASED: March 2025

RELATED ACTIVITIES AND ENGAGEMENT

The roundtable continued to extend its impact beyond formal meetings through public engagement, mentorship, leadership transitions, and collaboration across the National Academies community.

In recognition of Public Health Genetics and Genomics Week, roundtable members participated in the webinar Emerging Opportunities for Genomics to Improve Public Health: Lessons Learned from the National Academies' Roundtable on Genomics and Precision Health on May 22, 2024. The webinar highlighted emerging opportunities for genomics to advance population health and featured discussion of key challenges and opportunities reflected in the roundtable's work. The event attracted nearly 200 participants from across the public health and genomics communities. <https://archive.cdc.gov/#/details?q=https://www.cdc.gov/genomics/php/seminars/emerging-opportunities-for-genomics-to-improve-population-health.html&start=0&rows=10&url=https://www.cdc.gov/genomics/php/seminars/emerging-opportunities-for-genomics-to-improve-population-health.html>

The roundtable also contributed to workforce development and mentorship efforts by hosting a college intern through Health Career Connections during summer 2024. Members shared their expertise, professional experiences, and guidance, providing valuable exposure to careers at the intersection of genomics, public health, and health policy.

The roundtable experienced an important leadership transition during 2024–2025. Members expressed their appreciation to Greg Feero, MD, PhD, for his dedicated service as co-chair and welcomed Robert (Bob) Nussbaum, MD, who joined Catherine (Cathy) Wicklund, MS, CGC, as co-chair beginning in spring 2025.

Looking toward future opportunities, the roundtable's co-chairs participated in a convening of National Academies forum and roundtable leaders in summer 2025 to identify areas for cross-disciplinary collaboration and shared programming. Roundtable members also gathered at the 2025 American Society of Human Genetics Annual Meeting in Boston for an informal networking event, strengthening professional connections and fostering discussion around emerging priorities in genomics and precision health.

Roundtable Membership

(AS OF DECEMBER 2025)

Robert Nussbaum, M.D. (*Co-chair*)
UCSF Medical Center

Adriana Huertas-Vazquez, Ph.D.
Illumina, Inc.

Catherine A. Wicklund, M.S., CGC (*Co-Chair*)
National Society of Genetic Counselors

Jessica Hurt, Ph.D.
Biogen

Devin Absher, Ph.D.
Kaiser Foundation Health Plan, Inc.

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American College of Medical Genetics and Genomics

James Beck, Ph.D.
Parkinson's Foundation

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**Angela Starkweather, Ph.D., ACNP-BC, FAANP,
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American Academy of Nursing

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Senior Program Officer and Roundtable Director

Ashley Pitt, Senior Program Assistant

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Clare Stroud, Ph.D., Senior Program Director

Christa Nairn, MPH, Program Coordinator



Roundtable Sponsors

(AS OF DECEMBER 2025)

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American College of Medical Genetics and Genomics	National Cancer Institute
American Medical Association	National Human Genome Research Institute
American Society of Clinical Oncology	National Institute of Mental Health
American Society of Human Genetics	National Institute on Aging
Association for Molecular Pathology	National Society of Genetic Counselors
Association of Public Health Laboratories	Parkinson’s Foundation
Biogen	The University of Vermont Health Network Medical Group
College of American Pathologists	University of California, San Francisco
Geisinger Health	University of Central Florida
Genome Medical, Inc.	
Health Resources and Services Administration	
Illumina, Inc.	
Kaiser Permanente	

Roundtable Timeline

2007 **July 11–12** Meeting 1

December 4 Diffusion and Use of Genomic Innovations in Health and Medicine Workshop

December 5 Meeting 2

2008 **April 1–2** Meeting 3

July 28 Innovations in Service Delivery in the Age of Genomics Workshop

July 29 Meeting 4

October 6–7 Meeting 5

2009 **February 12** Systems for Research and Evaluation for Translating Genome-Based Discoveries for Health Workshop

February 13 Meeting 6

June 9–11 Meeting 7

August 31–September 1 Direct-to-Consumer Genetic Testing Workshop

November 16–17 Meeting 8

2010 **March 22** The Value of Genetic and Genomic Technologies Workshop

March 23 Meeting 9

May 24 Challenges and Opportunities in Using Newborn Screening Samples for Translational Research Workshop; Meeting 10

July 22 Establishing Precompetitive Collaborations to Stimulate Genomics Driven Drug Development Workshop

July 23 Meeting 11

November 17 Generating Evidence for Genomic Diagnostic Test Development Workshop

November 18 Meeting 12

2011 **February 22–23** Meeting 13

July 19 Integrating Large-Scale Genomic Information into Clinical Practice Workshop

July 20 Meeting 14

November 15 Facilitating Development and Utilization of Genome-Based Diagnostic Technologies Workshop

November 16 Meeting 15

2012 **March 21** New Paradigms in Drug Discovery: How Genomic Data Are Being Used to Revolutionize the Drug Discovery and Development Process Workshop

March 22 Meeting 16

May 24 Evidence for Clinical Utility of Molecular Diagnostics in Oncology Workshop

July 17–18 Assessing the Economics of Genomic Medicine Workshop

July 18 Meeting 17

October 4–5 Sharing Clinical Research Data Workshop

December 3 Improving the Efficiency and Effectiveness of Genomic Science Translation Workshop

December 4 Meeting 18

2013 **February 27** Refining Processes for the Co-Development of Genome-Based Therapeutics and Companion Diagnostic Tests Workshop

February 28 Meeting 19

June 5 Conflict of Interest and Medical Innovation: Ensuring Integrity While Facilitating Innovation in Medical Research Workshop

June 24 Genomics-Enabled Drug Repositioning and Drug Repurposing Workshop

June 25 Meeting 20

December 4–5 Meeting 21

2014

February 3 Assessing Genomic Sequencing Information for Health Care Decision Making Workshop

February 4 Meeting 22

August 18 Improving Genetics Education in Graduate and Continuing Health Professional Education Workshop

August 19 Meeting 23

December 8 Genomics-Enabled Learning Health Care Systems: Gathering and Using Genomic Information to Improve Patient Care and Research Workshop

December 9 Meeting 24

2015

March 10–11 Meeting 25

July 14–15 Meeting 26

November 19 Applying an Implementation Science Approach to Genomic Medicine Workshop

November 20 Meeting 27

2016

March 22 Deriving Drug Discovery Value from Large-Scale Genetic Bioresources Workshop

March 23 Meeting 28

July 19–20 Meeting 29

November 9 Meeting 30

2017

March 8 Enabling Precision Medicine: The Role of Genetics in Clinical Drug Development Workshop

March 9 Meeting 31

July 17–18 Meeting 32

November 1 Implementing and Evaluating Genomic Screening Programs in Health Care Systems Workshop

November 2 Meeting 33

2018

March 20 Meeting 34

June 27 Understanding Disparities in Access to Genomic Medicine Workshop

June 28 Meeting 35

October 5 Virtual Meeting on Return of Research Results

2019

January 23–24 Meeting with Keystone Symposia and American College of Cardiology

March 27 Meeting 36

June 25–26 Meeting 37

October 29 Exploring the Current Landscape of Consumer Genomics Workshop

October 30 Meeting 38

2020

March 24 The Role of Digital Health Technologies in Drug Development Workshop

March 25 Meeting 39

June 22–23 Meeting 40

July 1 Meeting 41

November 10 and 12 Meeting 42

2021

January 28 Meeting 43

March 15–16 Meeting 44

July 14–15 Meeting 45

October 5 Improving Diversity of the Genomics Workforce Workshop

October 6 Meeting 46

October 20 Meeting 47

2022

March 30–31 Meeting 48

June 22 Views and Voices: Reporting Genetics and Genomics

June 23 Meeting 49

October 12 Realizing the Potential of Genomics Across the Continuum of Precision Health Care Workshop

October 13 Meeting 50

2023 **April 12** Meeting 51

June 7 Next-Generation Screening: The Promise and Perils of DNA Sequencing of Newborns at Birth Workshop

June 8 Meeting 52

November 15 Strategic Plan Reflection on the Roundtable's Work Since 2020

November 15–16 Meeting 53

2024 **April 17–18** Meeting 54

July 17 Sustaining Community Engagement in Genomics Research Workshop and Views & Voices: How Consumer Education Has Changed Over the Past 10 Years

July 18 Meeting 55

October 29 Examining Clinical Guidelines for the Adoption of Genomic Testing Workshop

October 30 Meeting 56

2025 **April 2–3** Meeting 57 and Views & Voices: Exploring the Return of VUS Results

July 15–16 Meeting 58

October 28 Exploring Applications of AI in Genomics and Precision Health Workshop

October 29 Meeting 59

2026 **April 29–30** Meeting 60

July 22–23 Meeting 61

October 27 Using Genomic Information from Preconception through Early Childhood

October 28 Meeting 62



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