National Society of Genetic Counselors

Preliminary Program

36th Annual Conference

September 13-16, 2017

Greater Columbus Convention Center
Columbus, OH

Register today at

EARLY REGISTRATION SAVINGS END JULY 19, 2017

www.nsgc.org/conference

JOIN US IN COLUMBUS THIS SEPTEMBER

We invite you to join the National Society of Genetic Counselors (NSGC) and more than 2,100 of your peers as we grow our profession to new heights. The 36th Annual Conference has an agenda packed with diverse educational content and a variety of networking opportunities designed specifically for genetic counselors and other genetics professionals. On behalf of the 2017 Program Committee, we are excited to share our program highlights for this year's conference.

Enhance Your Conference Experience with a Pre-conference Symposium

Choose from one of six in-depth, five-hour sessions to start your week on Wednesday, September 13. Topics include cascade testing, working with patients experiencing grief and loss, counseling for families with brain tumors, hematologic malignancies and pediatric cancers, genetic counselor involvement in research, addressing efficiency of the genetics workforce and variant interpretation and classification. Pre-conference symposium participants can earn up to 5.00 contact hours, pending CEU approval. Read full descriptions of the pre-conference symposia on page 3.

Please note: Additional registration fee applies for pre-conference symposia.

Interactive Workshops

To allow our attendees to explore specific topics through different learning modalities, we have added a new type of breakout session to our conference schedule: two-hour, interactive workshops. These workshops will employ skill-based, active learning to encourage interaction with other session attendees and allow you to expand or enhance your network while you learn. Sign up for your preferred workshop when you register for the conference. Topics include deaf-blindness and sensory deficit simulations, utilizing clinical resources for variant interpretation, teaching genomic medicine, demonstrating your role in genetic counseling and motivational interviewing.

Dr. Beverly Rollnick Memorial Lecture

Whitney Bowman-Zatzkin, a passionate community architect obsessed with connecting the dots of health care to provoke change for the greater good, will share her experience as the Managing Director of Flip the Clinic. Flip the Clinic is a national, open experiment transforming the patient-clinician experience by focusing on the human side of health care in order to find the things that work in a system that's broken. Launched with support from the Robert Wood Johnson Foundation, Flip the Clinic is helping patients, communities and health practitioners work together to create pragmatic, usable interventions around commonplace frustrations to improve the full experience of clinical care – restoring commitment, dedication and care to healthcare.

Make Connections

New this year, we have added longer networking breaks, allowing you more time to make professional connections or catch up with friends. Organized networking events include the Wednesday evening Welcome Reception, training program reunions, Special Interest Group (SIG) meetings and more!

Make your travel plans for Columbus early to ensure you receive the best possible hotel rates and airfare. Be sure to register for the conference **on or before July 19, 2017**, to take advantage of early registration discounts. For more information and up-to-date details on the Annual Conference, please visit **www.nsgc.org/conference**.

We look forward to seeing you in Columbus!

Renee Chard, MS, CGC
2017 Program Committee Chair

Colleen Schmitt, MS, CGC
2017 Program Committee Vice-Chair

Who will win the 2017 Code Talker Award? Join *Genome* magazine and special guest Julia Sweeney (of Saturday Night Live fame) on Friday, 9/15 at 6:30pm to find out!

PRESENTED BY

National Society of Genetic Counselors

Genome

SPONSORED BY

INVITAE

NSGC THANKS OUR SPONSORS

NSGC Year-Round Premier Sponsors

PLATINUM

INVITAE

GOLD

Ambry Genetics®

Conference Sponsors

GOLD

INVITAE

myriad®

BRONZE

Baylor Miraca Genetics Laboratories

Counsyl

GeneDx DNA DIAGNOSTIC EXPERTS

GENPATH The Premier Women's Health Laboratory

PREVENTION GENETICS DISEASE PREVENTION THROUGH GENETIC TESTING

36TH ANNUAL CONFERENCE EXHIBITORS *As of April 21, 2017*

Annual Conference exhibitors and sponsors provide you with information about services and products pertinent to the field of genetics and genomics. Make sure you find the time to visit them while at the conference!

23andMe
AbortionClinics.org/AAF, Inc.
Allele Diagnostics
Ambry Genetics
American Board of Genetic Counseling (ABGC)
ARUP Laboratories
Basser Center for BRCA
Baylor Genetics
BioMarin Pharmaceutical Inc.
Blueprint Genetics, Inc.
Boulder Abortion Clinic, PC
Bright Pink
CancerGene Connect
Center for Fetal Diagnosis and Treatment
City of Hope Clinical Molecular Diagnostic Laboratory
ClinGen
Clovis Oncology
Color
CombiMatrix
Connective Tissue Gene Tests
CooperGenomics
Counsyl
DDC Clinic Molecular Diagnostics Laboratory
Emory Genetics Laboratory
Face2Gene
FORCE: Facing Our Risk of Cancer Empowered
GeneDx
GeneTests.org
Genome Magazine
Genome Medical
GenPath Women's Health
Greenwood Genetic Center
Harmony Prenatal Test
Huntington's Disease Youth Organization (HDYO)
Illumina, Inc.
Integrated Genetics
Invitae
Kaiser Genetics – Northern California
Laboratory for Molecular Medicine
Mayo Medical Laboratories
MNG Laboratories
Myriad Genetic Laboratories
Natera
NIH Genetic Testing Registry
Omicia
Pfizer, Inc.
Phosphorus Diagnostics
PreventionGenetics
Proband (The Children's Hospital of Philadephia)
Progenity
Quest Diagnostics
Recordati Rare Diseases
Retrophin
Seattle Children's Hospital – Plugs Program
Sema4
Sharsheret
ThinkGenetic, Inc.
UAB Medical Genomics Laboratory
UCLA Clinical Genomics Center
UCLA Health
UCSF Fetal Treatment Center
University of Chicago Genetics Services
UNMC Human Genetics Laboratory
UPMC
Variantyx, Inc.

ABOUT NSGC'S 36TH ANNUAL CONFERENCE

The largest national conference dedicated to advancing the profession of genetic counseling.

What Will You Gain?

The NSGC Annual Conference showcases advancements across the breadth of the genetic counseling profession to provide education and build community. Attendees will gain knowledge of clinical and scientific best practices and insights into emerging research. The conference provides a unique opportunity to engage and network with colleagues and pursue professional development.

Conference educational objectives:

- Incorporate recent developments and technologies in genetics/genomics into genetic counseling best practices.
- Highlight emerging research by genetic counselors.
- Discuss the effect of ethical, legal and social issues on the practice of genetic counseling in a variety of settings.
- Support the promotion of our shared genetic counseling skills, history and core values in a variety of professional settings.
- Illustrate the use of advanced counseling techniques and application of counseling theory in the field of genetic counseling.

SIG Meetings

NSGC Special Interest Group (SIG) meetings will be held throughout the conference. As meeting times are confirmed, they will be posted online, in the mobile app and in the final program. Visit **www.nsgc.org/conference** for the most up-to-date information.

Program Reunions

Reunions will take place throughout the conference, typically in the evenings, at off-site venues. As reunion activities are confirmed, they will be posted online, in the mobile app and in the final program. Visit **www.nsgc.org/conference** for current information or to confirm a program reunion for publication.

Enjoy Columbus

Columbus has an energy and excitement that you will notice the instant you arrive in the city. With 33 acres of riverfront parkland, a one-of-a-kind food scene and unforgettable nightlife, you'll have an endless list of places to explore once the Annual Conference sessions are over for the day. Easily accessible neighborhoods surround the downtown area and are bustling with places to eat and shop.

ADA Information

NSGC provides reasonable accommodations for our attendees. Attendees are asked to specify any needed accommodations, dietary restrictions or food allergies by **August 28, 2017**, so that necessary arrangements may be made. Attendees should submit this information through their registration form. A staff member may contact attendees to discuss any accommodations.

Continuing Education

NSGC anticipates approval of continuing education for the pre-conference symposia, Annual Conference general sessions and sponsored meal sessions. CEUs earned through these programs will be accepted by the American Board of Genetic Counseling (ABGC) as Category 1 CEUs for genetic counselor recertification. Individuals must be certified at the time of participation in the activity for CEUs to count towards recertification. The application is pending Category 1 CEU approval and contact hours are subject to change.

Pre-conference Symposia	Earn up to:	5.00	Contact Hours
General Sessions	Earn up to:	21.50	Contact Hours
Sponsored Meal Sessions	Earn up to:	4.50	Contact Hours
Total	**Earn up to:**	**31.00**	**Contact Hours**

2017 CONFERENCE RECORDINGS

Maximize your conference experience: View sessions you missed in Columbus, earn additional CEUs and review the valuable information you gathered during the conference by purchasing online session recordings. The conference recordings package features all pre-conference symposia, plenary and educational breakout sessions.* The online conference recordings will contain synced audio and PowerPoint presentations for each recorded session.

The full session recordings package is available for the special price of $149 for conference attendees.** Registered attendees will be able to order the conference recordings through September 16, 2017, at the discounted rate of $149, or following the conference at an increased rate. The 2017 conference recordings package will be released for viewing in January 2018.

Not planning on attending the Annual Conference? Check the NSGC website in January 2018 for additional information and purchase availability.

To earn Category 1 CEUs, it is required that you complete and pass a quiz included at the conclusion of each session.

Visit **www.nsgc.org/conference** to add the 2017 session recordings to your registration.

* *With speaker approval*

** *Discounted package rates only available when purchased in conjunction with a conference registration.*

RESERVE YOUR MEETING SPACE

If you are the host of a SIG, task force or other organized genetic counselor group, please visit **www.nsgc.org/conference** to complete a meeting space request form. All meeting room requests are available on a first-come, first-served basis and are subject to NSGC approval.

SCHEDULE-AT-A-GLANCE

WEDNESDAY, SEPTEMBER 13

8:00 am – 2:00 pm
Pre-conference Symposia

1:45 pm – 3:00 pm
Welcome to the Annual Conference: First-Time Attendees

3:00 pm – 3:15 pm
Opening Remarks

3:15 pm – 3:45 pm
Plenary Session

3:45 pm – 4:15 pm
Natalie Weissberger Paul National Achievement Award

4:15 pm – 4:45 pm
Plenary Session

5:00 pm – 8:00 pm
Welcome Reception in Exhibitor Suite

5:15 pm – 6:30 pm
Posters with Authors, Group A Authors

THURSDAY, SEPTEMBER 14

7:00 am – 7:45 am
Sponsored Breakfast Sessions

Integrated GENETICS LabCorp Specialty Testing Group
INVITAE

7:00 am – 7:45 am
NSGC 2018 Board and Committee Leadership Program

7:00 am – 7:45 am
NSGC 2018 SIG Leader Orientation

8:00 am – 8:35 am
Janus Lecture

8:35 am – 9:20 am
NSGC State of the Society Address

9:20 am – 9:50 am
Incoming Presidential Address

9:50 am – 10:15 am
Networking Break

10:15 am – 12:15 pm
Workshops and Lecture

12:15 pm – 1:30 pm
Sponsored Lunch Sessions

Baylor Miraca Genetics Laboratories
Counsyl

12:15 pm – 1:30 pm
Break and Exhibitor Hours

12:30 pm – 1:00 pm
ABGC Business Meeting

1:00 pm – 1:30 pm
ACGC Presentation

1:30 pm – 3:00 pm
Educational Breakout Sessions

3:00 pm – 3:45 pm
Exhibitor Hours and Networking Break

3:45 pm – 5:00 pm
Dr. Beverly Rollnick Memorial Lecture

5:00 pm – 5:30 pm
Jane Engelberg Memorial Fellowship Presentation

5:30 pm – 7:45 pm
Exhibitor Hours

5:45 pm – 7:00 pm
Posters with Authors, Group B Authors

7:00 pm – 8:15 pm
Sponsored Evening Sessions

Ambry Genetics
natera Conceive. Deliver.

FRIDAY, SEPTEMBER 15

7:00 am – 7:45 am
Sponsored Breakfast Sessions

illumina
Boulder Abortion Clinic

7:00 am – 7:45 am
NSGC Past Board Member Breakfast

8:00 am – 8:35 am
Plenary Session

8:35 am – 8:50 am
Best Abstract Award

8:50 am – 9:50 am
Professional Issues Panel

9:50 am – 10:30 am
Break and Exhibitor Hours

10:30 am – 12:00 pm
Educational Breakout Sessions

12:00 pm – 3:00 pm
Exhibitor Hours

12:00 pm – 1:15 pm
Sponsored Lunch Sessions

GeneDx DNA DIAGNOSTIC EXPERTS
myriad

1:15 pm – 2:30 pm
Posters with Authors, Group C Authors

2:30 pm – 3:00 pm
Networking Break

3:00 pm – 4:15 pm
Platform Presentations

4:30 pm – 5:35 pm
Research Plenary Session
Sponsored by the Jane Engelberg Memorial Fellowship

5:35 pm – 5:50 pm
Best Student Abstract Award

5:50 pm – 6:20 pm
Audrey Heimler Special Project Award Presentation

6:30 pm – 8:30 pm
Genome Magazine Code Talker Award Ceremony and Celebration

Genome

SATURDAY, SEPTEMBER 16

7:00 am – 7:45 am
Sponsored Breakfast Sessions

BIOMARIN
NTD Eurofins Clinical Diagnostics

8:00 am – 8:50 am
Plenary Session

8:50 am – 9:50 am
Late-Breaking Plenary Session

10:10 am – 11:15 am
Educational Breakout Sessions

11:30 am – 12:45 pm
Platform Presentations

SESSION SPEAKERS + OBJECTIVES

Pre-conference Symposia

Addressing Efficiency of the Genetics Workforce: Hiring Genetic Counseling Assistants, Advocating for Genetic Counselor Positions and Implementing Alternate Service Delivery Models

Bradley Williams, MS, CGC, GeneDx; Parker Read, MS, CGC, UT Southwestern; Kirsty McWalter, MS, CGC, GeneDx; Jennifer Gamm-Ruschman, ScM, Cincinnati Children's Hospital Medical Center; Margaret Bradbury, MS, CGC, MSHS, GeneDx; Sara Pirzadeh-Miller, MS, CGC, UT Southwestern

- Describe two key benefits and challenges to employing a genetic counseling assistant, implementing a genetic counselor career/salary ladder and using alternate service delivery models.
- Identify three roles within your workplace that a genetic counseling assistant could assume.
- Produce a personalized plan to support, hire and utilize a genetic counseling assistant at your workplace.
- Produce a proposal for implementing a career/salary ladder within your workplace.

Cascade Testing When the Stakes Are High: Novel Research Findings, Innovative Technological Tools, and Direct Contact to Assist in Family Communication and Evaluation of At-Risk Relatives

Amy Sturm, MS, CGC, LGC, Geisinger Health System; Janet Williams, MS, LGC, Geisinger Health System; Susan Vadaparampil, PhD, Moffitt Cancer Center; Patrick Lynch, JD, MD, University of Texas MD Anderson Cancer Center; Stephanie Harris, CGC, Brigham and Women's Hospital; Leigha Senter, MS, LGC, Ohio State University Wexner Medical Center; Nicola Poplawski, MBChB, FRACP, MD, South Australian Clinical Genetics Service; Jennifer Wagner, JD, PhD, Geisinger Health System; Jessica Mozersky, PhD, Washington University School of Medicine; Karen Kovak, MS, CGC, Oregon Health & Science University

- Appraise factors influencing uptake of genetic services by at-risk relatives.
- Formulate novel methods of contacting at-risk relatives to promote uptake of genetics services including the evaluation of technological tools and direct contact.
- Evaluate the ethico-legal issues that arise with direct contact.
- Assess health policy issues regarding the systematic implementation of cascade testing.

The Expanding Genetic Counseling Landscape for Cancers of Childhood, Blood and Brain

Michelle Jackson, MS, CGC, Ambry Genetics; Krista Qualmann, MS, CGC, University of Texas Health Science Center at Houston; Sarah Bannon, MS, CGC, University of Texas MD Anderson Cancer Center; Courtney DiNardo, MD, University of Texas MD Anderson Cancer Center; Brian Reys, MS, CGC, UT Southwestern Medical Center; Elizabeth Varga, MS, LGC, Nationwide Children's Hospital; Kami Wolfe Schneider, MS, CGC, Children's Hospital Colorado, University of Colorado; Erin Dunbar, MD, Piedmont Healthcare

- Summarize the differences between adult and pediatric cancer approaches in a variety of clinical genetic counseling settings.
- Apply a genetic risk assessment on a patient with a personal and/or family history of brain tumors, hematologic malignancies and pediatric cancers in a variety of clinical genetic counseling settings.
- Formulate referral protocols for brain tumors, hematologic malignancies and pediatric cancers in a variety of clinical genetic counseling settings.
- Examine clinical quandaries and ethical considerations in the setting of these indications.

Navigating Variant Interpretation in Cardiovascular Genetics: Current Challenges, Gene-Specific Considerations and Efforts toward Standardization

Emily James, MS, LCGC, Invitae; Jill Dolinsky, MS, CGC, Ambry Genetics; Colleen Caleshu, MS, CGC, Stanford University; Juilann McConnell, MS, LCGC, GeneDx; Katherine Spoonamore, MS, CGC, LGC, Indiana University; Birgit Funke, PhD, FACMG, Veritas Genetics; John Garcia, PhD, Invitae; Ana Morales, MS, CGC, Ohio State University; Melissa Kelly, MS, CGC, Rhode Island Hospital; Melanie Care, MSc, CCGC, University Health Network, Toronto General Hospital; Darnelle Lynn Dorsainville, MS, CGC, GeneDx

- List potential sources of differing variant interpretations between laboratories.
- Describe laboratory efforts to resolve differences in variant interpretation.
- Summarize recent research findings on the role clinical genetic counselors can play in variant interpretation.
- Identify ways to address discrepancies between laboratory interpretations, or between laboratory and clinician interpretations, for variants in your own practice.

Unlocking the Acronyms: Research Genetic Counselors and the NIH Partnering Together to Improve Patient Care

Lucia Hindorff, PhD, MPH, National Institutes of Health; Joni Rutter, PhD, National Institutes of Health; Carrie Blout, MS, CGC, LCG, Brigham and Women's Hospital; Sarah Scollon, MS, CGC, Baylor College of Medicine; Shawn Fayer, MSc, MS, CGC, Brigham and Women's Hospital; Myra Roche, MS, CGC, University of North Carolina, Chapel Hill; Toni Pollin, MS, PhD, CGC, University of Maryland School of Medicine; Lori Orlando, MD, MGS, Duke University; Maureen Smith, MS, LGC, Northwestern University; Christin Hoell, MS, CGC, Northwestern University; Juliann Savatt, MS, CGC, Geisinger Health System

- Describe the goals of six NIH-funded genomic medicine networks.
- Define the roles of genetic counselors in these NIH-funded genomic medicine networks.
- Describe how the research generated by these networks is improving knowledge of genomic medicine and impacting patient care.

What's Loss Got to Do with It? Working with Grief as a Genetic Counselor

Amanda Bergner, MS, CGC, Joan H. Marks Graduate Program in Human Genetics, Sarah Lawrence College; Julie C. Sapp, ScM, CGC, National Institutes of Health; Summer Segal, MS, LCGC, PhDc, UCSF Medical Center; Morgan Similuk, ScM, National Institutes of Health

- Explore models of grief theory and narrative medicine and their applicability to many areas of genetic counseling practice, including prenatal, pediatrics and adult medicine, as well as cancer, neurology and cardiology.
- Evaluate how case examples of patients and counselors working around areas of grief and loss in a variety of clinical specialties can further the integration of theory, tools and techniques into participants' own practices.
- Discuss how genetic counselors can engage themselves and clients around issues of grief and loss to advance the profession and their own practice.

SESSION SPEAKERS + OBJECTIVES (CONTINUED)

Plenary Sessions

THURSDAY, SEPTEMBER 14

2017 Janus Lecture

Dee Quinn, MS, CGC

- Discuss the past present and future of teratology.

FRIDAY, SEPTEMBER 15

Genetic Travel Agent? Exploring Medical Tourism and Genetic Counselors' Role in Discussing Controversial Genetic Treatments on the International Stage

Leila Jamal, ScM, PhD, CGC, Johns Hopkins Berman Institute of Bioethics; Christopher Scott, PhD, MA, Baylor College of Medicine Center for Medical Ethics and Health Policy

- Describe the landscape of medical tourism and its implications for genetic counseling practice.
- Summarize the main ethical and policy issues raised by international medical tourism in pursuit of novel or unproven therapies.
- Practice strategies for discussing medical tourism with patients and families.

Jane Engelberg Memorial Fellowship Research Plenary

Christina Palmer, PhD, MS, UCLA; Jehannine Austin, PhD, MSc, University of British Columbia; Sharon Terry, MA, Genetic Alliance

- Describe the role genetic counseling research can play in advancing the genetic counseling profession and promoting effective delivery of genetic services.
- Discuss the current gaps in evidenced-based genetic counseling research and delivery of genetic services.
- Address the impact of genetic counselor-driven research on professional development.

SATURDAY, SEPTEMBER 16

Conflict of Interest: Aren't We All Conflicted on Some Level?

Amy Sturm, MS, CGC, LGC, Geisinger Health System; Steven Keiles, MS, LCGC, Quest Diagnostics; Quinn Capers, MD, Ohio State University Wexner Medical Center; Mikaela Hunt, Mikaela Media

- Explain the importance of identifying a real or perceived conflict of interest (COI), financial and nonfinancial.
- Describe the circumstances in which COI might occur in the GC-patient encounter.
- Analyze various situations to determine if real or perceived COI might exist.

Educational Breakout Sessions

THURSDAY, SEPTEMBER 14

Achieving True Diversity in the Age of Genomic Medicine

Molly McGinniss, MS, LCGC, Illumina; Chao-Ting Wu, PhD, Personal Genomics Education Project, Harvard Medical School; Tshaka Cunningham, PhD, School of Systems Biology, George Mason University; Rev. Chad Baldanza, Christ the King Church

- Recognize the impact of past abuses of genetics, including eugenics, on the current landscape of genomics and health care disparities.
- Identify barriers to engaging minority and underserved populations and methods that have successfully been used to overcome them.
- Summarize how genetic counselors can support educational efforts and increase diversity in genomics initiatives.

Bioinformatics for Genetic Counselors 3.0: New Methods in Clinical Testing

Andrea Forman, MS, LCGC, Fox Chase Cancer Center; Eric W. Klee, PhD, Mayo Clinic; Stephen Lincoln, Invitae; Erica Ramos, MS, Illumina

- Describe both established and emerging bioinformatics tools, databases and genomic technologies used in the rapidly evolving field of clinical testing.
- Evaluate new approaches to variant detection, variant interpretation and to identifying those variants in need of confirmation, in light of new clinical data on these subjects.
- Review various genetic tests under new best practices, including the AMP 2017 guidelines on both test validation and bioinformatics and the ClinGen expert panel findings on variant interpretation.

Inherited Lung Cancer Risks: Looking Beyond Environmental Factors

Geoffrey Oxnard, MD, Dana-Farber Cancer Institute; Diane Koeller, MS, MPH, LGC, Dana-Farber Cancer Institute

- Anticipate counseling issues surrounding lung cancer genetics.
- Recognize families who should be tested for inherited lung cancer risk.
- Incorporate discussions of inherited lung cancer risks into counseling.

Reversing the Bystander Effect: Empowering Genetic Counselors to Identify Fraud, Waste and Abuse and Create Change in our National Healthcare System

Stephanie Gandomi, MS, LCGC, Blue Shield of California; Mary Simone, Blue Shield of California

- Identify signs of fraud, waste and abuse in the healthcare system.
- Demonstrate how to recognize opportunity for intervention.
- Describe legal and ethical codes of conduct that exist for genetic counselors when faced with professional situations involving fraud, waste and/or abuse in the healthcare system.
- Explore resources that exist for genetic counselors when faced with fraud, waste and abuse situations in the professional setting.

Translational Medicine in Epilepsy Genetics

Beth Rosen-Sheidley, MS, CGC, Boston Children's Hospital; Ann Poduri, MD, MPH, Boston Children's Hospital; Lacey Smith, MS, CGC, Boston Children's Hospital; Katherine Helbig, MS, LCGC, Ambry Genetics Laboratory; Ingo Helbig, MD, Children's Hospital of Philadelphia; Candace Myers, PhD, University of Washington

- Identify current gaps in knowledge that make obtaining a definitive genetic diagnosis in epilepsy particularly challenging.
- Outline efforts to provide functional analysis for variants in genes associated with epilepsy as well as efforts for drug-screening in animal models.
- Describe examples of how findings have translated back to the clinic to inform patient care, and identify ways in which such efforts need to be expanded.
- Describe ongoing collaborative efforts in clinical research relevant for patients with seizure disorders.

FRIDAY, SEPTEMBER 15

Inside Pandora's Box: Implications of ACMG Secondary Findings for Cardiology & Oncology Clinical Practice

Allison Cirino, MS, CGC, Brigham and Women's Hospital; Zoe Powers, MS, CGC, Ambry Genetics; Anna Kamp, MD, MPH, Nationwide Children's Hospital; Megan Frone, MS, CGC, National Cancer Institute, NIH, DHHS; Cynthia A. James, ScM, PhD, CGC, Johns Hopkins; Rebecca McClellan, MS, CGC, Johns Hopkins Medicine; Stephanie Harris, CGC, Brigham and Women's Hospital

- Examine the various approaches used to evaluate and manage patients in both clinical and research settings with secondary findings in genes associated with inherited arrhythmia/cardiomyopathy and cancer conditions identified through exome sequencing.
- Identify the psychosocial implications of ACMG secondary findings for the patient and the broader family.
- Apply an ethical framework to the handling of secondary findings in clinical practice.

Is More Better? A Debate on Carrier Screening for the Next Generation

Speakers To Be Announced

- Compare expanded and conventional carrier screening approaches and the technological benefits and limitations of each.
- Understand the ability of each testing type to detect at risk couples/carriers.
- Evaluate the optimal carrier screening approach for various clinical circumstances and patient populations.
- Summarize the pros and cons of expanded and conventional carrier screening.

Returning Clinically Relevant Exome Results for Developmental Brain Disorders to Adult Research Participants

Brenda Finucane, MS, LGC, Geisinger Health System; Emily Palen, MS, LGC, Geisinger Health System; Karen Wain, MS, LGC, Geisinger Health System

- Describe emerging new perspectives on shared genomic etiologies of developmental brain disorders (DBD) in children and adults.
- Evaluate potential medical, psychological and family benefits of returning DBD-related genomic test results to adults with cognitive and psychiatric symptoms.
- Identify potential challenges and negative outcomes of returning DBD-related genomic test results to adults with cognitive and psychiatric symptoms.
- Recognize the implications of DBD-related genomic results across diverse genetic counseling practice areas.

Using Evidence to Inform Your Practice: What Do We Know from Studies That We Can Put to Good Use?

Barbara Biesecker, PhD, MS, National Human Genome Research Institute, NIH; Katie Lewis, ScM, CGC, National Human Genome Research Institute, NIH; Robin Lee, MS, LCGC, UCSF Medical Center; Lori Erby, ScM, PhD, National Human Genome Research Institute, NIH

- Judge the strength of evidence from systematic literature reviews and randomized control trials in genetic counseling.
- Delineate guidance on what may constitute sufficient evidence to inform clinical practice.
- Design solutions to audience-generated common challenges in clinical practice using evidence-based practices in small and large group settings.
- Identify what additional research would help to address common challenges in clinical practice.

Valuating Genetic Counseling: Health Economics and Outcomes Research for Genetic Counselors

Jack Needleman, PhD, FAAN, UCLA, Fielding School of Public Health; Heather Shappell, MS, CGC, Beacon LBS; Karen Lewis, MS, CGC, AIM Specialtyhealth

- Explain health economics outcomes research and its role in the field of genetic counseling.
- Demonstrate how genetic counselors can apply health economics outcomes research in their practice.
- Debate how genetic counselors can improve communication and discussions with health economists, with the goal of forging collaborations that are mutually beneficial, and result in measures of evaluating genetic services.

SESSION SPEAKERS + OBJECTIVES (CONTINUED)

Educational Breakout Sessions (continued)

SATURDAY, SEPTEMBER 16

A Cardiac Crash Course on Metabolic Disease

Dawn Laney, MS, CGC, CCRC, Emory University; Amy White, MS, CGC, Mayo Clinic Biochemical Genetics Laboratory

- Identify lysosomal storage diseases most likely to manifest a cardiac phenotype and their treatments.
- List inborn errors of metabolism that can lead to sudden death and how they are diagnosed or ruled out.

Ethical Principles and Shifting Paradigms for Genetic Testing of Minors for Adult-Onset Conditions

Curtis Coughlin II, MS, MBe, CGC, University of Colorado Denver; Kami Wolfe Schneider, MS, CGC, Children's Hospital Colorado, University of Colorado

- Summarize ethical principles applicable to deciding whether or not a child should be tested for an adult onset condition.
- Identify instances in which children may be tested for adult onset conditions.
- Formulate a clinical approach to pediatric genetic counseling for adult onset conditions, like hereditary breast and ovarian cancer.

Into the Weeds of NIPT: A Survey of Algorithms for Analysis of Aneuploidies, Fetal Fraction, and Microdeletions

Dale Muzzey, PhD, Counsyl; John Tynan, PhD, Sequenom, Inc.

- Differentiate the two most-common NIPS platforms based on their respective input data and analysis algorithms, thereby enhancing interpretation of clinical NIPS reports.
- Inspect the various methods by which fetal fraction can be inferred from NIPS data.
- Recognize that both method and lab-specific differences make fetal-fraction percentile a more informative metric than fetal-fraction percentage.
- Describe the methods by which known and de novo microdeletions are identified with different NIPS techniques, highlighting their strengths and limitations.

Mitochondria: Functions, Genomics and Disease

Marni Falk, MD, Children's Hospital of Philadelphia

- Explain the basics of mitochondrial disease and available diagnostic testing, based on mitochondrial function.
- Recognize the different methods of evaluating patients for mitochondrial dysfunction.
- Identify the variable sensitivity and specificity of some of the testing, along with the benefits and potential pitfalls of genetic testing.
- Summarize the goals of therapy and to present the current treatments available based on the most recent studies presented in the peer-reviewed medical literature.

Pharmacogenetics for Genetic Counselors

Rachel Mills, CGC, Duke University Center for Applied Genomics and Precision Medicine; Jill Davies, MS, CGC, Gene Matters; Tara Schmidlen, MS, LGC, Geisinger Health System; Jennifer Eichmeyer, MS, LCGC, St. Luke's Mountain States Tumor Institute; Adriana Malheiro, MS, NIH/NLM/NCBI

- Review general information including nomenclature, terminology, genotype/phenotype and guidelines regarding clinical pharmacogenetics and pharmacogenetic testing.
- Describe specific roles for genetic counselors in facilitating pharmacogenetic testing.
- Recognize patient and care situations that could benefit from pharmacogenetic testing.
- Identify resources for incorporating pharmacogenetics into practice or supporting other health care professionals.

Workshops *Space is limited. Pre-registration is required.*

A Different Approach: Motivational Interviewing Methods of Information Giving

Erin Ash, MS, CGC, Stamford Hospital

- Identify current challenges for information giving in the genetic counseling encounter.
- Apply Motivational Interviewing (MI) spirit to Reciprocal Engagement Model educational goals in genetic counseling encounters.
- Contrast MI strategies for information giving in genetic counseling encounters.

Deaf-Blindness and Sensory Deficit: The Impact on Individuals with Genetic Syndromes and Strategies and Resources to Aid Families in Obtaining Appropriate Services

Meg Hefner, MS, CGC, Saint Louis University School of Medicine; Emily Fassi, MS, CGC, Washington University School of Medicine; Susan Wiley, MD, Cincinnati Children's Hospital Medical Center; Leanne Parnell, BA, Ohio Center for Deafblind Education; Jennifer Kile; Holly Ward; Sally Strange, RN, CHARGE Syndrome Foundation

- List three examples of genetic disorders associated with major sensory deficits and/or deaf-blindness.
- Identify the four most important features in making a clinical diagnosis of CHARGE syndrome.
- Compare early child development in typical children with development in children with hearing loss, vision loss and other sensory deficits.
- Identify the relevance of state deaf-blind projects to genetic counselors.

FOCUS on You: Highlighting Your Role in Genetic Counseling Outcomes

Heather Zierhut, PhD, MS, CGC, University of Minnesota; Krista Redlinger-Grosse, PhD, ScM, CGC, University of Minnesota; Deborah Cragun, PhD, MS, CGC, University of South Florida; Joy Redman, MS, CGC, Quest Diagnostics; Gillian Hooker, PhD, ScM, CGC, NextGxDx

- Describe the Framework for Outcomes in Clinical Communication Services (FOCUS) and list component domains.
- Identify goals, strategies, process measures and outcomes that are applicable to clinical care, research, education or industry.
- Apply FOCUS by tailoring the framework according to your desired goals or outcomes.

Teaching Genomic Medicine: A Train-the-Trainer Workshop

Richard Haspel, MD, PhD, Beth Israel Deaconess Medical Center; Kate Shane-Carson, MS, LGC, The Ohio State University; Madhuri Hegde, PhD, FACMG, Emory University

- Describe the core components of an introductory genomics curriculum for clinical trainees.
- Demonstrate teaching techniques involved in a team-based learning/ flipped classroom activity.
- Apply the team-based learning and flipped classroom approach including use of online genomics tools.

Tips and Tools for Utilizing Clinical Resources for Variant Evaluation

Erin Riggs, MS, CGC, Geisinger Health System; Danielle Azzariti, MS, CGC, Partners HealthCare Personalized Medicine; Anne O'Donnell-Luria, MD, PhD, Boston Children's Hospital, Harvard Medical School; Karen Wain, MS, LGC, Geisinger Health System

- Describe the elements of variant interpretation and how to gather evidence for evaluation using publicly available resources.
- Perform queries using ClinGen tools, NCBI resources such as ClinVar, and the gnomAD browser for common use cases.
- Determine which tools to use in different clinical scenarios.
- Apply variant evaluation concepts to genetic counseling practice.

Lecture *Concurrent with workshops.*

Are You Ready to Discuss Genetic Discrimination? Your Patients Expect You to Be

Anya Prince, JD, University of Iowa School of Law; Jennifer Wagner, JD, PhD, Geisinger Health Systems; Yann Joly, PhD, (DCL) AdE, Center for Genomics and Policies; Misha Rashkin, MS, CGC, Icahn School of Medicine

- Identify key provisions of Genetic Information Nondiscrimination Act (GINA), including how GINA interacts with other federal laws and legislative gaps that GINA does not cover.
- Distinguish privacy and anti-discrimination laws as well as the varying scopes of the federal anti-discrimination law (GINA) and a model state anti-discrimination law (Cal-GINA).
- Identify key features and challenges of genetic discrimination laws and policies around the world.
- Indicate emerging fields of genetic discrimination, beyond those of insurance and employment.

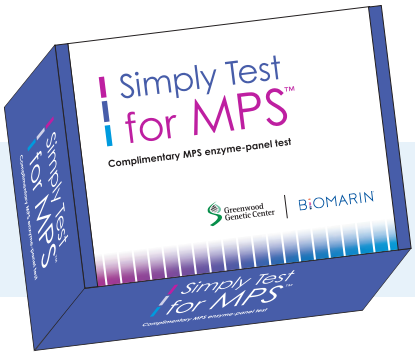
Is Morquio A Hiding in Your Practice?

Help confirm or rule out an MPS disorder with **Simply Test for MPS™**—a **complimentary** MPS enzyme panel

Identifying patients with an MPS disorder can be challenging—especially since it may present similarly to skeletal conditions, such as MED, SED, bilateral Legg-Calvé-Perthes disease, pseudoachondroplasia, and unspecified skeletal dysplasia.[1]

The NEW **Simply Test for MPS™** program may be able to help you with diagnosis. The program streamlines the MPS enzymatic testing process for both you and your patients, and is:

- **COMPLIMENTARY:** This enzyme panel is provided free of charge for eligible patients
- **COMPREHENSIVE:** This MPS enzyme panel determines if your patient has an enzyme deficiency associated with MPS I, II, III A-D, IV A/B, VI, or VII
- **CONVENIENT:** Patients can potentially have blood work done on the same day as their medical appointment



Interested in a Simply Test for MPS™ kit?
Register at whatwouldyoususpect.com.

MED, multiple epiphyseal dysplasia; SED, spondyloepiphyseal dysplasia.

Reference: 1. Hendriksz CJ, Berger KI, Giugliani R, et al. International guidelines for the management and treatment of Morquio A syndrome. *Am J Med Genet A.* 2015;167A:11-25.

BIOMARIN®

TRAVEL + HOTEL INFORMATION

Hotel Reservations

Please do not reserve a hotel room until you have registered for the conference. This will help to ensure availability of rooms for all registered attendees. NSGC reserves the right to contact any non-registered hotel guests booked within the NSGC room block.

Reservations at the Hyatt and Hilton can be made online at **www.nsgc.org/conference** or by calling the hotel directly and mentioning NSGC.

Hyatt Regency Columbus

350 North High Street
Columbus, OH 43215
Phone: 614-463-1234

Check-in time: 3:00 pm ET, **Check-out time:** 12:00 pm ET
NSGC rate: $193/night plus tax, single/double;
$25 per additional person in room

Reservation Deposit and Cancellation Policy
To cancel a reservation at the Hyatt Regency Columbus, please contact the hotel 72 hours prior to your check-in date to avoid a penalty.

Hilton Columbus Downtown

401 North High Street
Columbus, OH 43215
Phone: 614-384-8600

Check-in time: 3:00 pm ET, **Check-out time:** 12:00 pm ET
NSGC rate: $189/night plus tax, single/double;
$25 per additional person in room

Reservation Deposit and Cancellation Policy
To cancel a reservation at the Hilton Columbus Downtown, please contact the hotel 72 hours prior to your check-in date to avoid a penalty.

The discounted room rates will be available until **August 14, 2017**, based on availability.

Room Share

Interested in sharing a room with a fellow attendee? Contact Andrea Harbison at **andrea.harbison@gmail.com**.

Travel Tips

- The Greater Columbus Convention Center and the Hilton and Hyatt are serviced by the John Glenn Columbus International Airport (CMH)
- Both the Hyatt Regency and the Hilton are adjacent to the Greater Columbus Convention Center.
- Taxi Service is available from the airport to the Hyatt and Hilton for approximately $30.

Parking

Hyatt Regency Columbus

- **On-site hotel valet parking:** $28 per night*

Hilton Columbus Downtown

- **Self-parking:** $23/day*
- **On-site hotel valet parking:** $26/day*

Greater Columbus Convention Center

Several parking options are available at the Greater Columbus Convention Center. Visit **www.columbusconventions.com** for more information.

**Prices may be subject to change*

ATTENDEE REGISTRATION FORM

NSGC 36th Annual Conference

September 13-16, 2017 • Greater Columbus Convention Center • Columbus, OH

National Society of Genetic Counselors

Go paperless! Register today at **www.nsgc.org/conference**

FIRST NAME: _____ LAST NAME: _____ CREDENTIALS: _____

ORGANIZATION: _____ JOB TITLE: _____

ADDRESS (CHECK ONE) ☐ HOME ☐ WORK: _____

CITY: _____ STATE/PROVINCE: _____ COUNTRY: _____ POSTAL CODE: _____

DAYTIME PHONE: _____ E-MAIL ADDRESS: _____

Is this your first NSGC Annual Conference? ☐ Yes ☐ No

Please indicate any accommodations needed or any dietary or allergy restrictions: _____

☐ *By checking the box here, you consent to the Terms and Conditions on the backside of the registration form. If you have any questions or concerns, please contact NSGC at nsgc@nsgc.org.*

Registration Fees

Payment accepted in US dollars by check, money order or credit card (online at **www.nsgc.org/conference**).

NSGC 36th Annual Conference	Early Registration (on or before July 19)	Regular Registration (after July 19)
Full Registration*		
NSGC Member	☐ $375	☐ $425
NSGC Student Member	☐ $250	☐ $250
NSGC Emeritus Member	☐ $300	☐ $300
Non-member	☐ $625	☐ $675
Student Non-member	☐ $250	☐ $300
Single-Day Registration*		
NSGC Member	☐ $200	☐ $250
NSGC Student Member	☐ $135	☐ $135
NSGC Emeritus Member	☐ $150	☐ $150
Non-member	☐ $250	☐ $300
Student Non-member	☐ $150	☐ $200

Pre-conference Symposia*	Student	Member	Non-member
See page 3 for full titles and descriptions.			
Addressing Efficiency of the Genetics Workforce: Hiring Genetic Counseling Assistants, Advocating for Genetic Counselor Positions and Implementing Alternate Service Delivery Models	☐ $90	☐ $120	☐ $170
Cascade Testing When the Stakes Are High: Novel Research Findings, Innovative Technological Tools, and Direct Contact to Assist in Family Communication and Evaluation of At-Risk Relatives	☐ $90	☐ $120	☐ $170
The Expanding Genetic Counseling Landscape for Cancers of Childhood, Blood, and Brain	☐ $90	☐ $120	☐ $170
Navigating Variant Interpretation in Cardiovascular Genetics: Current Challenges, Gene-Specific Considerations, and Efforts toward Standardization	☐ $90	☐ $120	☐ $170
Unlocking the Acronyms: Research Genetic Counselors and the NIH Partnering Together to Improve Patient Care	☐ $90	☐ $120	☐ $170
What's Loss Got to Do with It? Working with Grief as a Genetic Counselor	☐ $90	☐ $120	☐ $170

Genome Code Talker Awards**

☐ *Genome* Magazine Code Talker Awards Ceremony
Friday, September 15, 6:30 pm – 8:30 pm

Workshops

Space is limited. Pre-registration is required. For those not attending a workshop, a lecture will be offered concurrently. See page 6 for full titles and descriptions.

☐ A Different Approach: Motivational Interviewing Methods of Information Giving

☐ Deaf-Blindness and Sensory Deficit: The Impact on Individuals with Genetic Syndromes and Strategies and Resources to Aid Families in Obtaining Appropriate Services

☐ FOCUS on You: Highlighting Your Role in Genetic Counseling Outcomes

☐ Teaching Genomic Medicine: A Train-the-Trainer Workshop

☐ Tips and Tools for Utilizing Clinical Resources for Variant Evaluation

Sponsored Sessions**

☐ Thursday, September 14	7:00 am – 7:45 am	*Integrated Genetics*
☐ Thursday, September 14	7:00 am – 7:45 am	*Invitae*
☐ Thursday, September 14	12:15 pm – 1:30 pm	*Baylor Genetics*
☐ Thursday, September 14	12:15 pm – 1:30 pm	*Counsyl*
☐ Thursday, September 14	7:00 pm – 8:15 pm	*Ambry Genetics*
☐ Thursday, September 14	7:00 pm – 8:15 pm	*Natera*
☐ Friday, September 15	7:00 am – 7:45 am	*Illumina, Inc.*
☐ Friday, September 15	7:00 am – 7:45 am	*Boulder Abortion Clinic, PC*
☐ Friday, September 15	12:00 pm – 1:15 pm	*GeneDx*
☐ Friday, September 15	12:00 pm – 1:15 pm	*Myriad Genetics Laboratories*
☐ Saturday, September 16	7:00 am – 7:45 am	*BioMarin Pharmaceutical, Inc.*
☐ Saturday, September 16	7:00 am – 7:45 am	*Eurofins NTD*

* *CEU fee is included in all member and non-member Annual Conference and pre-conference symposium registration fees.*

** *Food and beverage only guaranteed to first 225 registrants. Space is limited and available on a first come, first serve basis.*

Guest Pass: ☐ $120 (Includes access to the Exhibitor Suite and continental breakfast)

Guest Name: _____

Pre-conference Symposia and Conference Recordings
Full session recordings available for the special price of $149 with registration. ☐ $149

TOTAL AMOUNT ENCLOSED $ _____

See Reverse for Payment Information, Cancellation Policy and Registration Terms and Conditions ›››

Payment Information

☐ Check enclosed (payable to NSGC in U.S. dollars)

☐ Pay via credit card (go online to **www.nsgc.org/conference** to pay)

Send payment and registration form on or before August 28, 2017, to:
NSGC Registration, 8348 Solutions Center, Chicago, IL, 60677-8003.
After August 28, 2017, you will need to register online or in Columbus.

Cancellation Policy

Cancellation requests received after **July 20, 2017**, are subject to a $75 cancellation fee. No refunds are issued for cancellations received after **September 4, 2017**.

Terms and Conditions

If any circumstance or event beyond the control of NSGC causes cancellation of all or any portion of the event, NSGC agrees to refund any portion of the registration fee which NSGC is reimbursed by insurance or other third party and shall not be liable for any other refund or payment arising from the cancellation or for other liability or damages arising from the event.

NSGC photographers may take photos or videos of attendees. Please be aware that these photos and videos are for NSGC's use only, and may appear in NSGC materials and on NSGC social media sites. NSGC reserves the right to use personal identifiable information collected for business purposes, such as minimizing potential hotel attrition penalties for the association.

NSGC sends occasional emails from exhibitors prior to the event, informing attendees of giveaways, special events at the Annual Conference and new releases. These exhibitor emails are sent through NSGC. NSGC does not share email addresses with third parties. If you wish to opt-out of these emails, contact NSGC.

NSGC provides reasonable accommodations for our attendees without undue burden. Attendees are asked to specify any requirements or any dietary restrictions or food allergies before August 28, 2017, so any necessary rearrangements may be made. Attendees should submit this information through their registration form. A staff member may contact attendees to discuss accommodations.

Key Dates

- Exhibit and Sponsorship Opportunities: **Now Available**
- Registration: **Opens May 2017**
- Housing Block: **Opens mid-May 2017**