

NHGRI's Inter-Society Coordinating Committee for Practitioner Education in Genomics (ISCC-PEG): Multi-disciplinary Genomics Resource Development

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Education and Community Involvement Branch

Abstract

Formed in 2013, the mission of the Inter-Society Coordinating Committee for Practitioner Education in Genomics (ISCC-PEG), hosted by the National Human Genome Research Institute, is to improve genomic literacy of healthcare providers by facilitating interactions among key stakeholders (genome.gov/iscc). Through ISCC-PEG, members collaborate to identify educational needs and potential solutions and develop resources to promote effective practice of clinical genomic medicine. There are currently 230 members representing over 130 organizations including companies, academic institutions, professional societies and government institutes. Members span the health professional spectrum including physicians, nurses, physician assistants, pharmacists, genetic counselors, and medical educators. Members share expertise and creative educational approaches to provide their colleagues who may not have genomics training with free teaching and self-study resources. Ongoing issues and work in progress are discussed via monthly project group calls, bi-monthly plenary calls, and during an annual meeting.

Members propose and initiate project groups to address specific areas in genomics education. The five current project groups focus on rare diseases, diversity and inclusion, direct-to-consumer genetic testing, obstetrics and gynecology, and pharmacogenomics. These multi-disciplinary teams have developed instructional tools, publications, professional society presentations, and social media campaigns. The ISCC-PEG Scholars program, initiated in 2020, pairs students with an interest in a genetics-related career with an ISCC-PEG member mentor to work on an educational project during a two-year term.

During June 7-11, 2021, 56 organizations collaborated with ISCC-PEG to disseminate healthcare provider genomics education resources through a social media campaign. The campaign hashtag #MedGeneEd21 provided a unifying theme in which contributors could tag their content. Through live engagement events, resource sharing and webpage promotion, the 5-day campaign was effective in disseminating resources and raising awareness with over 3 million impressions on Twitter.

Here we plan to present example resources, including self-study modules and case studies. We will also further describe the ISCC-PEG approach, data analytics of the social media campaign, and the positive impact of the committee to create and disseminate healthcare provider genomics education resources across healthcare communities.

ISCC-PEG Facts:

Began in 2013; now have more than 230 members, including representation from: 59 organizations, 9 government/institute, 13 companies

- 90 individual members, 7 student members
- Project Groups:** Inclusive Genetics, Pharmacogenomics, Direct-to-Consumer Genetic Testing, Obstetrics and Gynecology, Rare Diseases

How to join ISCC-PEG:

Genome.gov/iscc

BACKGROUND: Genomics is changing the medical landscape and improving health outcomes. However, many healthcare providers receive a limited amount of genomics education.

AIM: By convening subject matter experts, healthcare practitioners, medical educators, and representatives from professional organizations, ISCC-PEG aims to upskill the healthcare workforce in genomic medicine by creating and disseminating genomics educational resources.

Resource Creation:

Resources:



G2C2: Searchable resource repository
genomicseducation.net



G3C: Simulated patient self-study tool
genomicscases.net:

Training Residents in Genomics (TRIG):
<https://www.pathologylearning.org/trig/>
-study tool

Method for Introducing a New Competency: Genomics (MINC):
Toolkit for integrating genomics into clinical practice.
<https://genomicsintegration.net/>

Insurers Webinar Series
<https://www.genome.gov/event-calendar/Webinars-for-Health-Insurers-Payers-Understanding-Genetic-Testing>

Initiatives:



Compendium:
Sharing resources



ISCC-PEG Scholars: 2-year Mentoring Program

Dissemination:

Healthcare Provider Genomics Education Week: Social Media Campaign: #MedGeneEd21



#FamilyHealthHistory

#DNADay21

#MedGeneEd21

- #MedGeneEd21 peak ~1,400,000 Twitter impressions vs previous campaigns (~160,000)
- 56 partners; held panels, webinars, Twitter chats
- Set records for NHGRI as well as for our partners.
- Power of collective network through ISCC-PEG resulted in >8-fold # of impressions

Sample Products and Events from Project Groups:

DTC-GT

- "Frequently-Asked-Questions" QR code
- See also ASHG Abstract room 97 poster number 839: Addressing the Direct-to-Consumer Genetic Testing Knowledge Gap for Non-Genetics Healthcare Professionals



Pharmacogenomics

EVENT: American Academy of Family Physician's 2021 Family Medicine Experience ("FMX"), Oct. 2, 2021
TITLE: Pharmacogenetics: Basic Concepts and Practical Application
SPEAKERS: Robert J. Ostrander, MD, AAFP Liaison to ISCC-PEG and Roseann S. Gammal, PharmD, BCPS



Newly forming Project Groups:

- LGBTQI+ Genomic Health
- Nursing Genomics
- Adult Cardiovascular Genomics
- Public Health Genetics for MPH Educators

Inclusive Genetics

- Project Inclusive Genetics: Exploring the impact of patient-centered counseling training on physical disability bias in the prenatal setting. [PLoS One](#).
- [Patient-Centered Prenatal Genetic Counseling resource](#) on the BU/CME website.



Rare Diseases

EVENT: Pediatric Academic Societies Meeting, Sept. 21, 2021
TITLE: Training Next Generation Pediatricians in Genomics: A Case-Study Approach
PRESENTERS: Michelle Snyder, MS, CGC, Luca Brunelli, MD, PhD, John Carey, MD, MPH, Kristen Fishler, MS, CGC, Rich Haspel, MD, PhD, Sabrina Malone-Jenkins, MD, Rachel Palmquist, MS,CGC



CONCLUSIONS: The collaborative network of the ISCC-PEG harnesses the expertise and enthusiasm of healthcare educators to communicate the advances in genetic and genomic research across multiple disciplines. By creating and disseminating genomic educational resources, the ISCC-PEG contributes to improving genomic literacy among healthcare providers and improving health outcomes for patients.