The Inter-Society Coordinating Committee (ISCC) and Pharmacogenomics (PGx)

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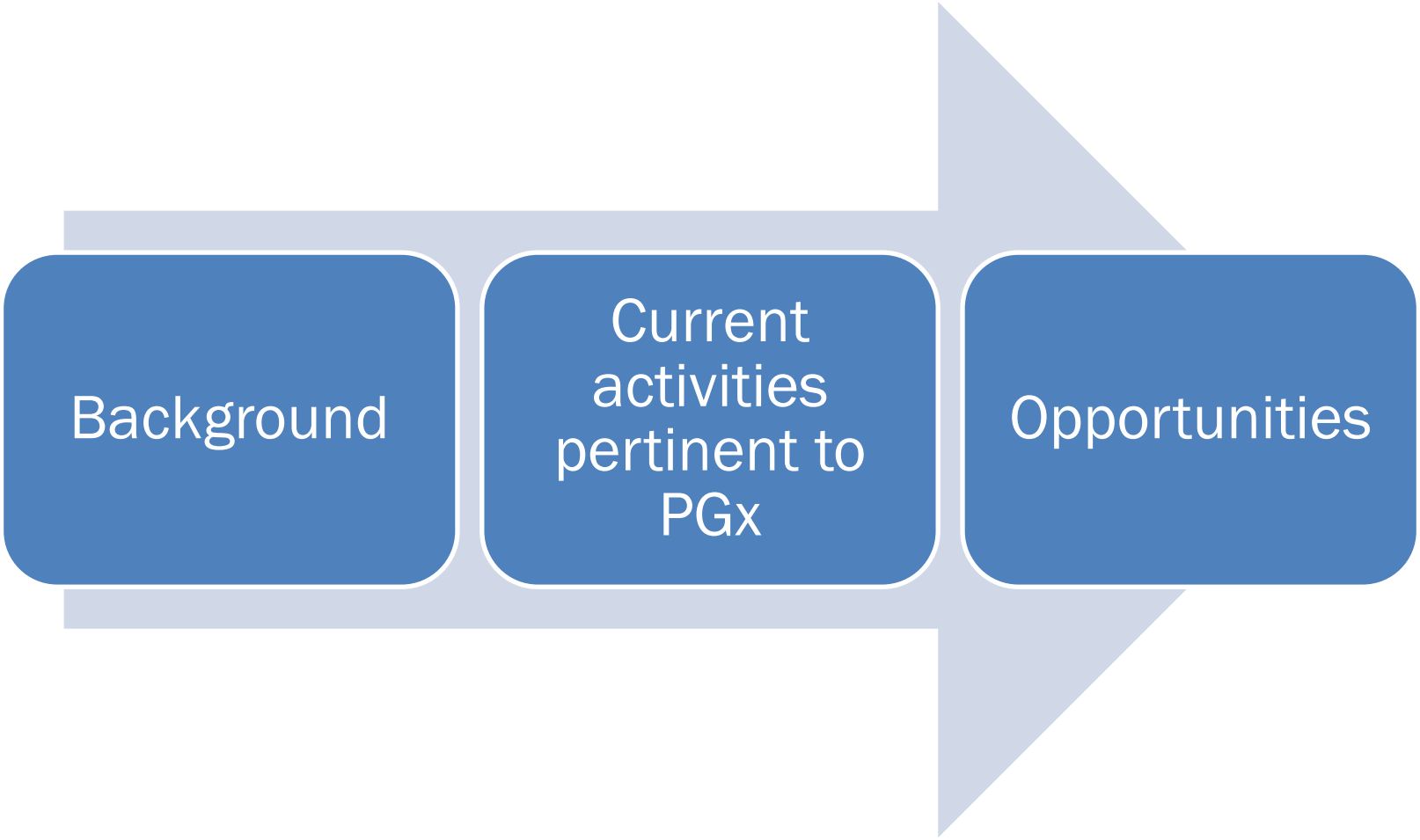
ISCC


Background
Current activities pertinent to PGx
Opportunities

In the beginning….

DHSS - National Advisory Council for Human Genome Research

NHGRI -Genomic Medicine Working Group Meeting IV: *Physician Education in Genomics, Jan. 2013*

Inter-Society Coordinating Committee for Practitioner Education in Genomics (ISCC-PEG)

ISCC Charge

*To improve **genomic literacy** of physicians and other practitioners and **enhance the practice** of genomic medicine **through sharing** of educational approaches and joint identification of educational needs.*

- Facilitate interactions among professional societies
- Initial focus: Physicians and Dentists
- Expand to: Pharmacists, Nurses, others

ISCC Goals

1. Gather and facilitate dissemination of best practices and resources in genomic education and clinical care.
2. Identify advances in genomic science that will require new educational initiatives.
3. Identify needs of societies and clinicians in filling gaps in evidence and knowledge and providing effective educational efforts.
4. Identify foundational educational needs common across professions and specialties.
5. Seek the optimal educational balance between competencies and basic knowledge.
6. Design short- , medium-, and long-term work plans with initial focus on producing tangible outcomes within the first year.
7. Assist societies in jointly and separately publishing papers of common interest.

ISCC Members (>80)

- Professional societies
  - Family practice to specialties
  - Medicine, dentistry, pharmacy, genetic counseling
- NIH Institutes and Centers
- Federal agencies (CDC, HRSA, VA, etc.)
- Hospitals and health systems
- Universities
- Provider education organizations
- Education accreditation organizations (ACCME, ACGME)
- Specialty Board organizations (including ABMS)
- International education programs
- Infrastructure providers
- Patient advocates
- Insurers

PGx related Members

- American College of Clinical Pharmacy
- University of Florida College of Pharmacy
- Vanderbilt

ISCC Operations

NIH-co-chair, non-NIH-co-chair	Administrative support through NHGRI's genomic healthcare branch	No dues or membership costs
1 to 2 in-person meetings per year	Monthly plenary WebEx calls	Working groups by natural aggregation

Genomic Medicine for Health Care Providers
Competency and Curricular Resources
Genetics and Genomics and Patient Management
Genomics in Medicine Lectures
Inter-Society Coordinating Committee
1st In-Person Meeting - September 19-20, 2013
2nd In-Person Meeting - April 23, 2014
4th In-Person Meeting - May 21, 2015
5th In-Person Meeting - January 14, 2016
ISCC Members and Federal Agency Providers
ISCC Sixth In-Person Meeting - January 24, 2017
ISCC: Case Studies

Inter-Society Coordinating Committee for Practitioner Education in Genomics (ISCC)

www.Genome.gov/ISCC

Overview
Members
Working Groups
ISCC Meetings and Activities
Resources and Articles
Contact

Overview

The Inter-Society Coordinating Committee for Practitioner Education in Genomics (ISCC) formed in February 2013 from the Genomic Medicine IV meeting to improve genomic literacy of physicians and other practitioners and to enhance the practice of genomic medicine through sharing of educational approaches and joint identification of educational needs. The group facilitates interactions among medical professional societies and the NIH Institutes & Centers to exchange practices and resources in genomic education and clinical care. By identifying needs of societies and clinicians in filling in gaps in evidence and knowledge and in providing

Genomic Medicine

- using an individual's genomic results in their clinical care

ISCC Working Groups

- Innovative Approaches
- Global Educational Products
- Insurer Staff Education
- Building Bridges
- *Engagement of Specialty Boards*
- *Case Studies*
- *Competencies*
- *Speaking Genetics*

ISCC Case Studies Working Group

Case Studies

Clinicians often best understand the value of new information in context through case-based learning. The genetic and genomic case studies created by the ISCC Case Studies Working Group members represent examples of scenarios physicians are likely to encounter in practice. These cases are designed to present pertinent information, highlight decision points, provide background content about why certain decisions are appropriate, and link to the evidence base of knowledge and guidelines currently available. They incorporate competencies and entrustable professional activities identified by the ISCC's Competency Working Group.

These case studies also include suggestions for practice-based improvement activities that could be used for internal quality improvement activities and ultimately for maintenance of certification based on anticipated work of the ISCC's Specialty Board Working Group.

ISCC members are encouraged to assess their specialty practice and to develop case studies involving genomic medicine that would be highly relevant to their members, in collaboration with the Working Group. A template and an example are provided for getting started.

ISCC Working Group Co-Chairs: Wendy Rubinstein and Reed Pyeritz.

Proposed Use Case Template and Example
An outline to follow for creation of a case study scenario.

The existing case studies are listed at the links below:

Title: HLA-B alleles and adverse events related to use of carbamazepine and allopurinol
Type of Case Study: Genomic-based therapeutics, Pharmacogenomic
In collaboration with the National Human Genome Research Institute

Title: Mitochondrial DNA mutation A1555G and aminoglycoside-induced hearing loss and deafness
Type of Case Study: Gene-Based Intervention for Aminoglycoside Sensitivity Pharmacogenomics/Family History.
In collaboration with American Academy of Pediatrics and the American Academy of Otolaryngology-Head and Neck Surgery

Title: Utilizing family history to identify Lynch Syndrome
Type of Case Study: Family History
In collaboration with the National Cancer Institute

ISCC Competencies Working Group

- **3B. Knowledge for Practice**
  - (4) 3B2. Identify single-gene disorders that may be amenable to targeted pharmacological therapy
- **3D. Interpersonal and Communication Skills**
  - (3) 3D3. Discuss pharmacogenomics implications for future health
- **3F. Systems-Based Practice**
  - (12) 3F1. "Treat the patient who has the disease", i.e., be aware of the patient's needs as an individual who also has a genetic disease or pharmacogenomic variation
- **3H. Personal and Professional Development**
  - (5) 3H2. Be familiar with the available databases and resources relevant to genetic variation, including ongoing clinical trials involving patients with genetic disorders, pharmacogenomics, and patient-oriented Internet resources from reliable organizations

ISCC Educational Products Working Group

Educational Products (Thomas Schultz and Donna Messersmith, Co-Chairs)

- Collect existing educational products from ISCC representatives.
- Identify relevant federally-funded resources and initiatives (such as CRVR, PharmGKB, Genetic Testing Registry) that could assist genomics education efforts and clinical practice.
- Work with use cases group to identify areas of emphasis for educational products (e.g. ordering of genetic tests, counseling, return of results).
- Development of a Competency-Based Genomic Education Resource for Physicians, Weitzel et al. 2015

G2C2 GENETICS / GENOMICS COMPETENCY CENTER

www.GenomicsEducation.net

GHB

Home | About | Competencies | Browse Topics

Genetics/Genomics Education for Your Classroom or Practice

Enter Search Term or Phrase

SEARCH

What is G2C2?

- Online repository of genomics educational materials
- Peer-reviewed collections for genetic counselors, nurses, pharmacists, physician assistants, and physicians
- Professional editorial board curates every resource
- Resources are mapped to discipline-specific genomic competencies

How to use G2C2?

- Search for resources using terms, topics, disciplines, or genomic competencies
- Search for genomics educational resources sponsored by professional societies
- Save resources for easy retrieval
- Submit resources for consideration

Featured Resources

Webinars for Health Insurers and Payers: Understanding Genetic Testing

"Outstanding lecture series featuring renowned genetics professionals covering a broad range of genetic testing issues in depth, including ACCE framework, EGAPP guidance, and CPT coding." --*Megan Doerr, MS, CGC, Principal Scientist, Governance, Sage*

Genetic Testing Methods

"Clear, simple descriptions of genetic testing technologies suitable to introducing students to testing concepts. Also diagrams could be used as visual aids for patient education." --*Angela Trepanier, MS, CGC, Associate Professor, Director, Genetic Counseling Graduate Program - Wayne State University*

G2C2 Genetics and Genomics Competency Center

www.GenomicsEducation.net

'G2C2'

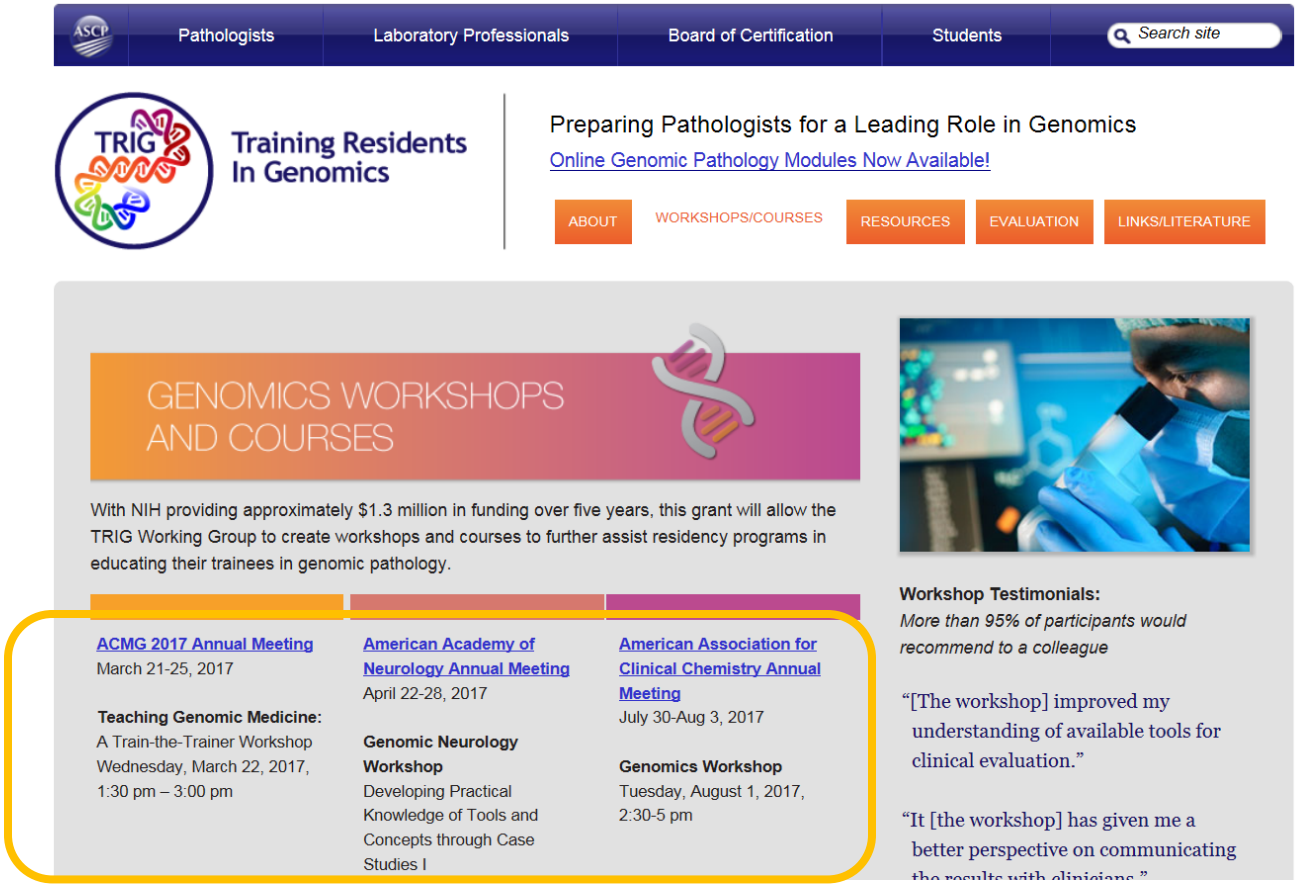
Competencies

Nurse	Physician Assistant	Pharmacist	Genetic Counselor	Physician
COMPETENCIES MAP	COMPETENCIES MAP	COMPETENCIES MAP	COMPETENCIES MAP	COMPETENCIES MAP
Print Version	Print Version	Print Version	Print Version	Print Version
Reference	**Reference**	**Reference**	**Reference**	**Reference**
Essentials of Genetic & Genomic Nursing: Competencies, Curricula Guidelines, & Outcome Indicators, 2nd Edition (2008)	Physician Assistant Genomic Competencies (2016)	Pharmacogenomics Competencies in Pharmacy Practice: A Blueprint for Change (2016)	Practice-Based Competencies for Genetic Counselors (2014)	Framework for Development of Physician Competencies in Genomic Medicine (2014)

ISCC

Innovative Approaches Working Group

- Develop novel ways to teach genomics, building on the highly successful 'Training Residents in Genomics (TRIG)' approach developed through the American Society of Clinical Pathologists



ISCC
Insurer Staff Education Working Group

National Human Genome Research Institute

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Español

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Home › Health › Genomic Medicine for Health Care Providers › **Webinars for Health Insurers and Payers: Understanding Genetic Testing**

- Genomic Medicine for Health Care Providers
- Competency and Curricular Resources
- Genetics and Genomics and Patient Management
- Genomics in Medicine Lectures
- Inter-Society Coordinating Committee

Webinars for Health Insurers and Payers: Understanding Genetic Testing

To address the growing need for medical staff in the insurance industry to understand genetic testing, the National Human Genome Research Institute (NHGRI) has collaborated with the Blue Cross Blue Shield Association to produce this educational webinar series. The goal is to prepare insurers to understand

April 19, 2017 https://www.youtube.com/watch?v=7LbAtShVtWI

Pharmacogenetics

Presenter: Victoria Pratt, Ph.D.
Department of Medical and Molecular Genetics
Indiana University School of Medicine

Video | Transcript | Slides

Pharmacogenetics is the study of how different groups of people respond to drugs, based on their genetic makeup. This session will explore some common drugs and the genetics of their metabolism; will also overview pharmacogenetic nomenclature, and lastly, will review guidelines that support pharmacogenetic testing.

ISCC Engagement of Specialty Boards Working Group

- Determine the extent that specialty boards already have genomics in their examinations.
- Reach out to specialty boards that may not be integrating genomics into exams at this time.
- Link specialty boards with relevant professional societies that are already implementing genomics education or are looking to implement.

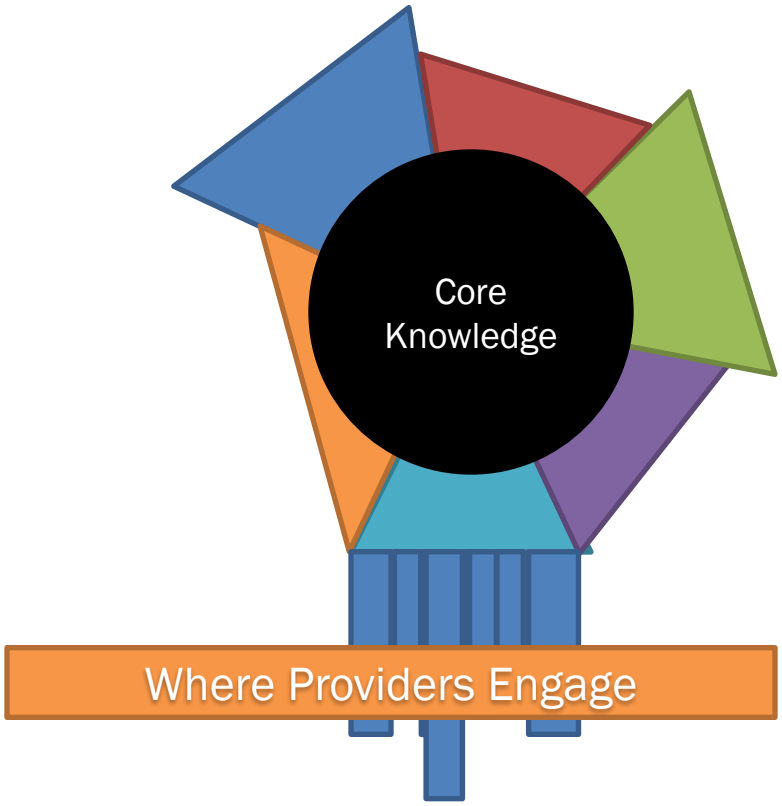
ISCC
Building Bridges Working Group

- This single-task workgroup will develop a simple process for matching members of the ISCC that wish to develop education programs for their specialist constituents but lack the independent capacity to do so with members of the ISCC who have the education capacity but lack the specialty knowledge and connections with society champions.

Other GHB activities

Global Genetics and Genomics Community (G3C)

The anatomy of Usable Knowledge in Healthcare



Practitioner Motivations

- Relevance to *their* practice

Effectiveness *compared with* current methods

Time-neutral or better *in their workflows*

- Insurance coverage
- Counseling streamlined
- Data collection streamlined
- Time to learn

Patient satisfaction *as they perceive it*

Cost-neutral or better *as their system perceives it*

Proposed approach

Disease Group Focus

e.g. Heart Disease

- Familial Hypercholesterolemia
- Familial Cardiomyopathies
- Dysrhythmias
- Pharmacogenomics (selected)

Multiple Specialties

- Cardiology
- Primary Care
- Emergency Medicine
- Sports Medicine
- Pharmacy

Thank You

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