



Educational Products Working Group

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Working Group Task:

- Expand resources in G2C2 to include physician resources.
- Enhance G2C2 usability.
- Collect educational products from ISCC representatives.
- Identify federally-funded initiatives (e.g., CRVR, PharmGKB, Genetic Testing Registry) that could assist genomics education efforts and clinical practice.
- Work with use cases and other groups to identify areas of emphasis for educational products (e.g. test ordering, counseling, return of results).
- Identify new advances that may require education.



Getting Started with G2C2

Use G2C2 to search for Genetics & Genomics Resources for use in Your Classroom or Practice

Find websites, books, articles and more - enhance your class content with peer-reviewed resources.

Search the Genetics/Genomics Competency Center

Text Search

Search By Discipline

Search By Topic

🔍 Enter Search Term or Phrase

Search

Highlights of progress made since last meeting:

- ASHG poster presentation “Development of a competency-based genomic education resource for physicians” (Poster on ISCC Meeting Website: <http://www.genome.gov/27563472>)
- G2C2:
 - Building on foundation created by Jean Jenkins and genomic education experts from 5 disciplines: physicians, nurses, pharmacists, physician assistants, and genetic counselors
 - Now have 10 members on G2C2 Editorial Board: 2 members for each discipline; this year added 2 physicians: Rich Haspel and Lori Orlando



Development of a competency-based genomic education resource for physicians

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OBJECTIVE

To describe the development and initial assessment of a novel repository of peer-reviewed genetic and genomic educational resources for physicians.

METHODS

- Resources were solicited from member organizations of the Inter-Society Coordinating Committee for Practitioner Education in Genomics (ISCC)
- The ISCC Educational Products Working Group evaluated submitted resources for G2C2 inclusion based on ISCC-developed physician competencies in genomic medicine (Figure 2).
- Accepted resources were mapped to these competencies
- Resources became available on G2C2 in June 2014
- Usage data and web analytics for physician resources was collected for a 9-month period post-launch (January–September 2015).

RESULTS

G2C2 Physician Resources

- 89 resources were submitted from ISCC member organizations
- 77 (87%) were accepted and mapped to physician competencies (Figure 3)
- Accepted resources cover all physician competencies
- Resources are available in a range of delivery mechanisms (Figure 4)
- Reasons for declining a resource:
 - limited applicability to patient care
 - limited scope

User Data

- From January to September 2015, 290 users accessed physician resources on G2C2
- 391 sessions
- Viewed average of 10 pages/session
- Users viewing physician resources represented 4% of total G2C2 visitors

THE GENETICS/GENOMICS COMPETENCY CENTER (G2C2) EDUCATION RESOURCE

Background

- Online repository launched in 2008 to facilitate development, access, and dissemination of competency-based educational resources for healthcare providers and educators.
- Supported by NHGRI and a freely available resource.
- Available at: <http://r2-c-2.org/>

Interdisciplinary Resources

- G2C2 was initially created for nursing and physician assistant training programs.
- It was later expanded to include pharmacy and genetic counseling audiences.
- Most recently, G2C2 was expanded to include physician resources.



Figure 1: G2C2 allows clinicians and educators to find resources by disciplines, topics, and competencies.

INTER-SOCIETY COORDINATING COMMITTEE FOR PRACTITIONER EDUCATION IN GENOMICS (ISCC)

ISCC Genomic Medicine Competency Areas

- Family History
 - Elicit, document, and act on relevant family history pertinent to the patient's clinical status
- Genomic Testing
 - Use genomic testing appropriately to guide patient management
- Patient Treatment Based on Genetic Results
 - Use genomic information to make treatment decisions
- Somatic Genomics
 - Use genomic information to guide diagnosis and management of cancer and other disorders involving somatic genetic changes
- Microbial Genomic Information
 - Use genomic tests that identify microbial contributors to human health and disease, as well as genomic tests that guide therapeutics in infectious diseases

Background

- Formed in 2013 from NIH's Genomic Medicine IV meeting
- Purpose: improve genomic practitioner literacy and enhance genomic medicine practice by sharing educational approaches and identifying educational needs.

Collaboration

- G2C2 and ISCC collaborated to develop competency-based criteria and a peer-review process.
- This process was used to identify and evaluate educational resources aligned with physician needs.

Figure 2: ISCC Genomic Medicine Competencies (adapted from Korf B, et al. *Genet Med*. 2014;16(11):804-9.)

G2C2 PHYSICIAN RESOURCES

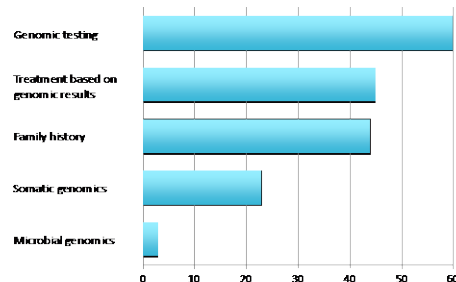


Figure 3: Resources mapped to competency domains (n = 77)

EDUCATIONAL RESOURCE DELIVERY

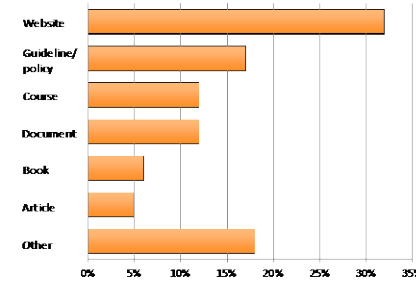


Figure 4: Delivery mechanisms of resources, percentage (n = 77)

CONCLUSIONS

- Using a robust quality assessment process, we developed a peer-reviewed, competency-based repository for curating physician genomic educational resources.
- We identified needs for additional materials, such as in microbial genomics.
- Future efforts will seek to grow the available resources and expand the number of clinicians and educators who use G2C2 to access genetic/genomic education.



Resource Reviews and Additions to G2C2:

- Overall site
 - Pharmacists reviewed/updated >70 resources
 - PAs reviewed/updated >300 resources
- Streamlined review process
 - ISCC work group participated in review/update of 24 resources with 17 new resources added to physician collection

G2C2 enhancements in progress:

- Enhancing searching options, results displays, and filtering displays to allow users to quickly find desired resources.
- Highlighting on the homepage the unique features of G2C2. All resources are:
 - Vetted by health professional experts and educators in different healthcare disciplines
 - Mapped to discipline-specific competencies

Genetics and Genomics Competency Center (G2C2)

Introductory Video

- Introduces the website and its features
- Home page
[Http://www.G-2-C-2.org](http://www.G-2-C-2.org)
- LIVE



Best practices to share / Barriers encountered:

- Getting the word out to the community about the G2C2 resources is an ongoing challenge
- ASHG was an excellent opportunity to connect with other genomics education providers, including international opportunities
- Recommendations for presentations at other genomics education conferences?

Next steps and “Ask”:

- Always interested in collecting more educational products from ISCC representatives.
- Possibility of including a G2C2 “summary page” for organizations with genomic education resources
- Strategies for connecting with other repositories (e.g., MedEdPortal) and integrating with genomics websites being built by education groups within NHGRI consortia including IGNITE, eMERGE, CSER