

# ISCC Innovative Approaches Working Group Update: Creating a Universal Module

**ISCC Face-to-Face Meeting 5/21/15**

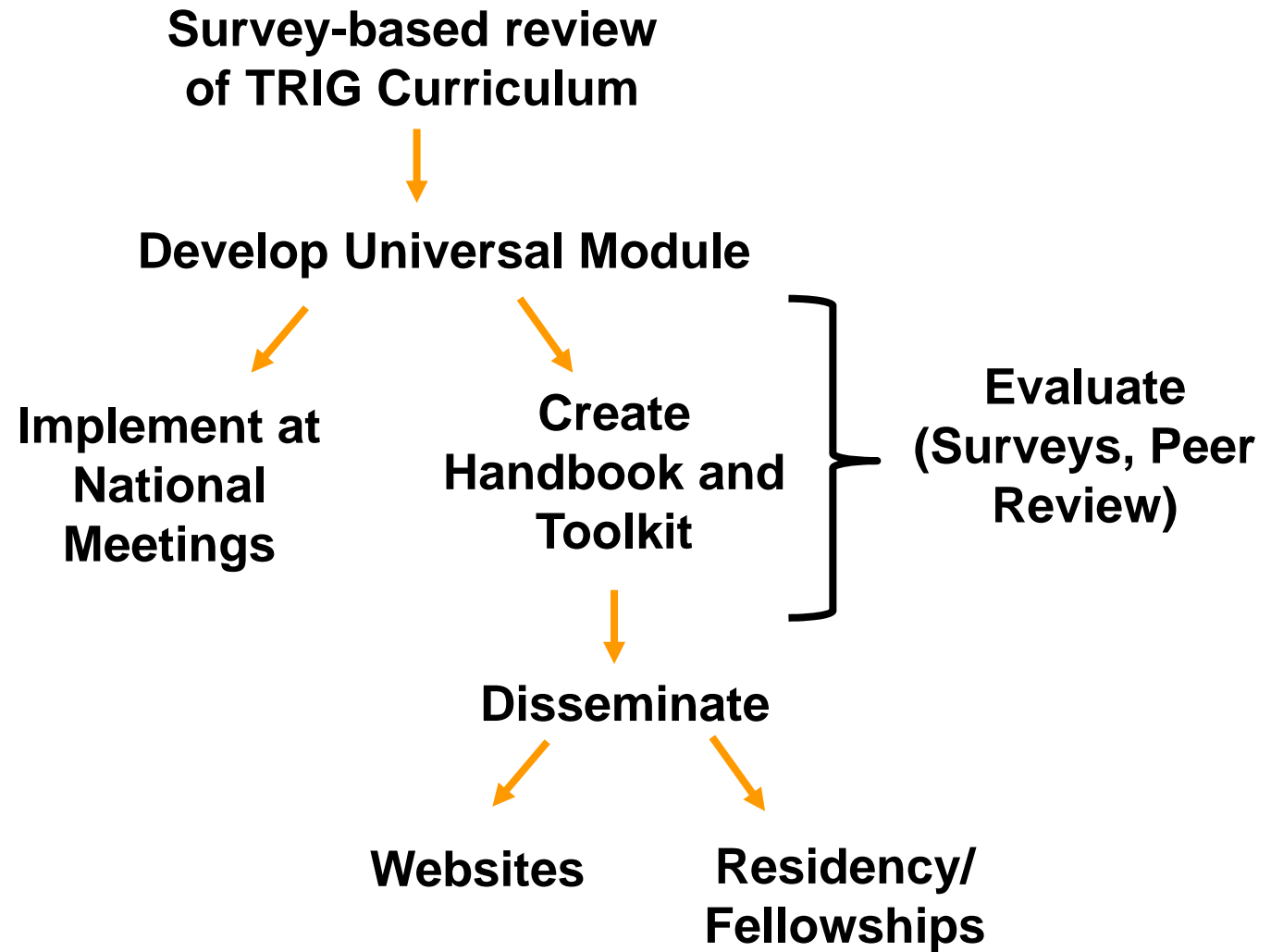
First IAWG Conference Call: February 27, 2015

# What is a “Universal Module?”

- Target: Health care professionals not experts in genetics but may have to deal with genetic issues.
- The needs of these individuals are likely the same regardless of specialty. Examples:
  - Understand “single gene testing” that may come up in current practice (e.g., drug metabolism)
  - How to handle a patient who comes with a variant from genomic testing for an unrelated reason (e.g., whole exome sequencing).
  - Each specialty to then “plug in” the relevant genes of interest.

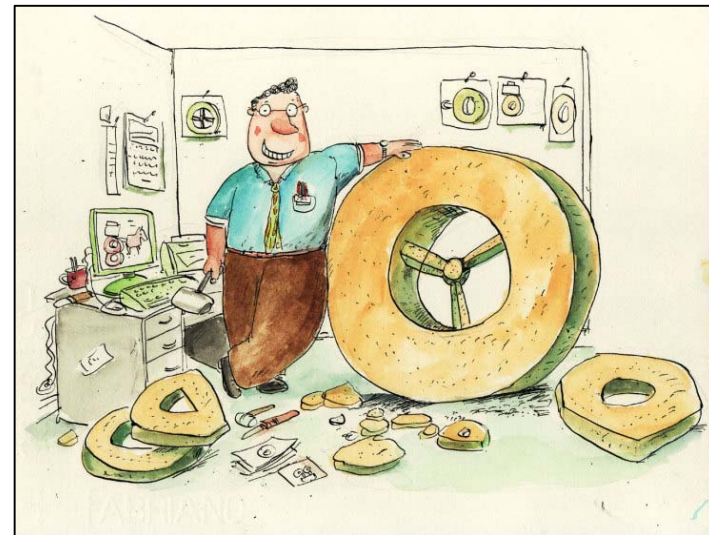


# A Structured Approach to a Universal Module

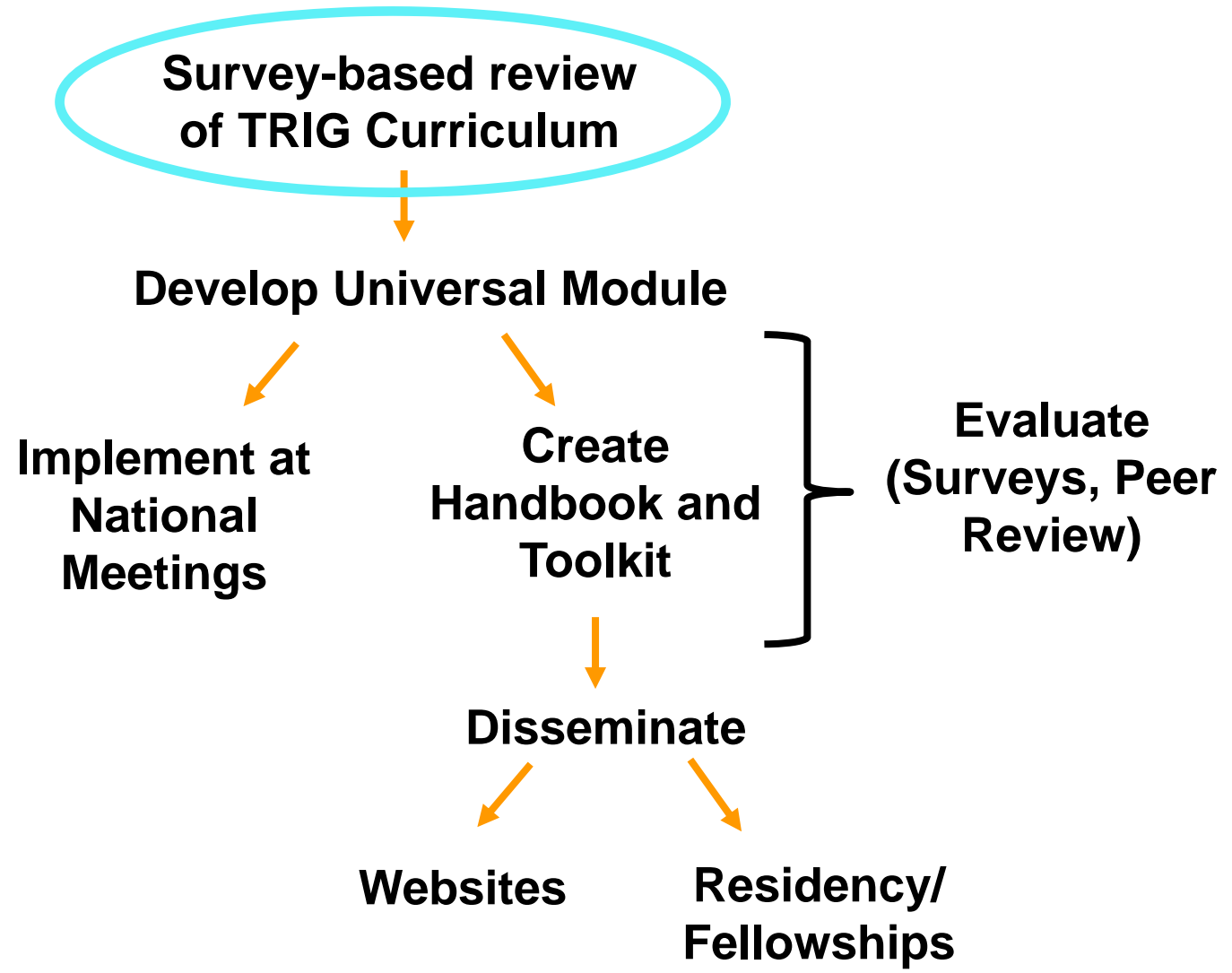


# Making the case...

- We know genomics education is important
- Building on an established approach and curriculum
  - Solid educational principles
  - Innovative format
  - Field-tested
- A collaborative approach makes sense
  - Pooling resources
  - Creating a widespread message
  - Potential grant funding



# A Structured Approach to a Universal Module





# Survey instructions (excerpts)

- As a member of the ISCC IAWG, we are asking for your help translating the TRIG curriculum for pathology residents into a "universal module" that utilizes team-based learning and flipped classroom models.
- Essentially, the module would target health care professionals who are not experts in genetics (e.g., cardiologists, neurologists).
- This survey will allow you to enter comments regarding the TRIG curriculum in a structured format. We will then collate the survey results and discuss as a group to design a "universal module".
- Participants given access to TRIG Curriculum

# Survey format

**Exercise 1 Objectives**

1) List the objectives for this exercise.

2) Determine the learning objectives for this exercise.

**1. Could you adapt this exercise for your specialty?**

Could

Could

**Exercise 1 Case**

The patient is a 39-year-old white, ethnically non-Jewish woman with a new diagnosis of breast cancer, initially discovered on self-examination. The diagnosis was confirmed by biopsy, which showed invasive ductal carcinoma. The patient is currently on tamoxifen.

Given the patient's history and the fact that she is a member of a few female relatives with a history of breast cancer, she is 48.

**2. Could you adapt this exercise for your specialty?**

Could

Could

If

**Exercise 1 Questions**

For each of the following questions from the exercise, indicate whether you think the question could be adapted for your specialty. If yes, please provide a very rough draft of a version that would be appropriate for your specialty including when indicated, and if not requiring too much effort on your part, relevant genes/variants.

**4. List 2 reasons why BRCA testing is not offered to all women.**

Could

Could

Could

**3. This exercise uses the following websites. In the context of this case and objectives, please select those that would be worthwhile for your specialty?**

ClinVar

Polyphen

Please list other websites that would be worthwhile

- 3 exercises reviewed; Single gene testing; Creating gene panels; Whole-exome sequencing
- Also asked: Items to consider adding to each exercise; overall adaptability of curriculum

# Demographics

Specialty	Experience (years)	Organization
Cardiology	20	AHA
Cardiology	4	AHA
Dentistry	0	NIDCR
Family Medicine	37	
Family medicine	17	ABFM
Fp	20	AAFP
Hematology	12	NSGC
Molecular pathology	4	AACC
Neurology	15	AAN
Pediatrics	34	AAP
Psychiatry	26	Int Soc Psyc Gen
Psychiatry	14	NIMH

12 individuals completed the survey out of 34 asked (35%)

Experience mean: 17 years



# Survey Results

- **Adaptable (“yes”) averages:**
  - Exercise 1 = 63%
  - Exercise 2 = 35%
  - Exercise 3 = 55%
- **Exercise topic suggestions**
  - **Cardiomyopathy**
  - **Macro-Thrombocytopenia**
  - **APOE\*<sub>4</sub>**
  - **Question on referring/working with genetics professionals**

	Adaptable	
Question	% Yes	Descriptor
<b>Exercise 1: Single Gene</b>		
Objectives	75	
Case	67	
Question 1	67	Pre-test probability
Question 2	58	Benefits of testing
Question 3	50	Clinvar/Polyphen
Question 4	58	Interpret results/next steps
<b>Exercise 2: Gene Panel</b>		
Objectives	75	
Case	42	
Question 1	42	Selecting genes
Question 2	25	Cosmic
Question 3	8	PCR vs Sequencing
Question 4	17	Mycancergenome
<b>Exercise 3: Whole exome</b>		
Objectives	83	
Case	33	
Question 1	83	Informed consent
Question 2	25	cbioportal
Question 3	47	Interpreting alignment data
Question 4	56	Interpret results/VUS



# Can we adapt curriculum? Yes!

- Yes, with minor modifications (n=4/33%)
  - Cardiology, Clinical Chemistry, Family Medicine, Hematology
- Yes, with major modifications (n=3/25%)
  - Cardiology, Neurology, Dentistry
- No (5/42%)
  - Family Medicine: “Beyond scope of practice”
  - Pediatrics: “Material far too detailed and complex for pediatrics PCPs”
  - Family Medicine: “Conceptually, great idea...may be a place for GME, but, rules surrounding CME”
  - Psychiatry (2): “Evidence base is currently very sparse;” “no clinically actionable genetic findings.”

# A Structured Approach to a Universal Module

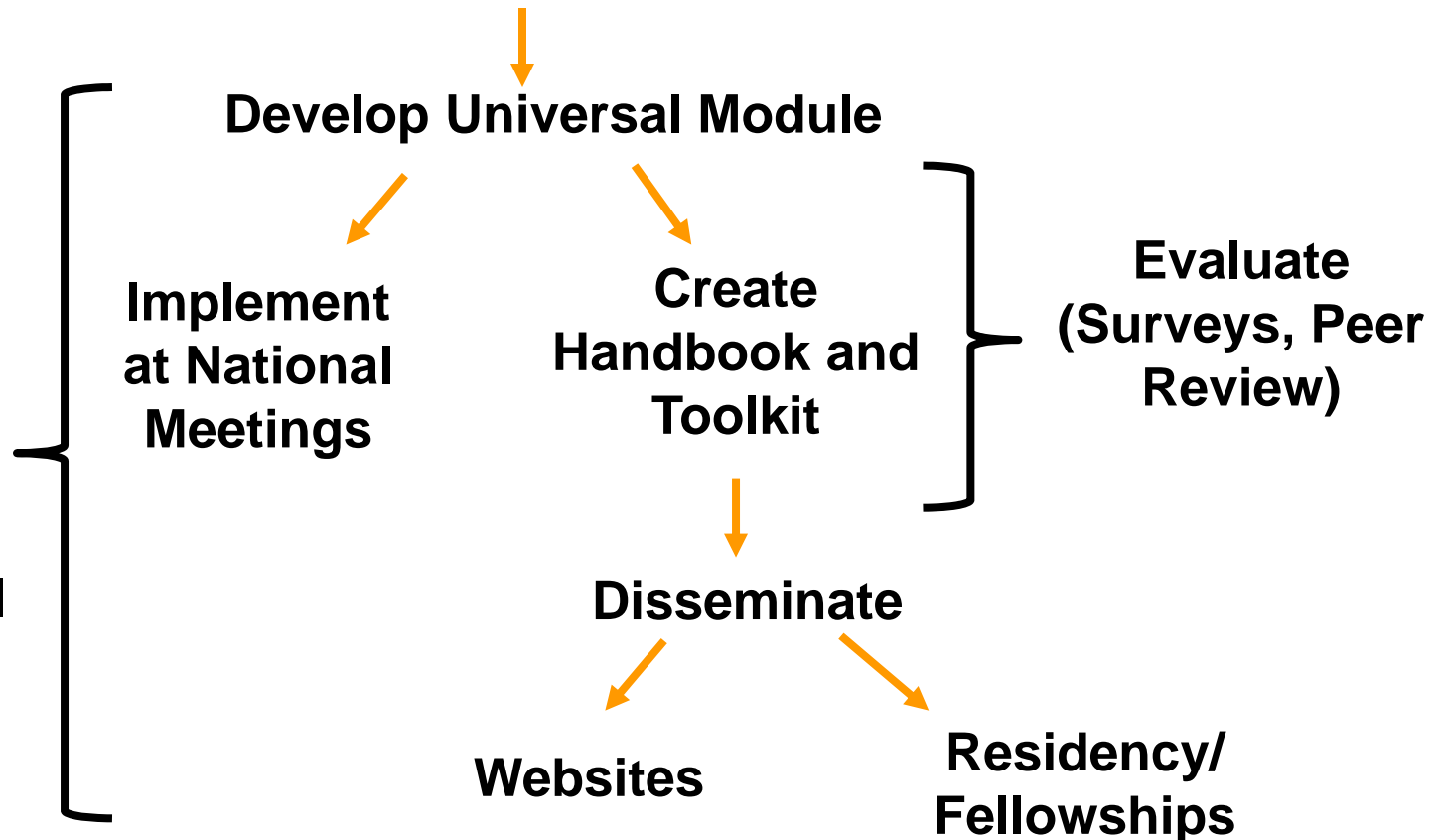
## Innovative Approaches WG

Survey-based review  
of TRIG Curriculum



Possible  
TRIG R25  
“Supplement”  
Funding  
(Instructional  
Design;  
Evaluation;  
Travel; AV;  
Key Personnel  
Support)

Due July 15!!



Expressed potential interest in collaborating: AAO; AAN; AHA; NSGC; AACC; ASCP, NIDCR; Others welcome!