Centre for Genetics Education
NSW Health Australia
Kate Dunlop: Director

A Needs-Based Approach to genomics education
The Centre for Genetics Education NSW Health:

• a state-wide government education program of the NSW Genetics Service
• provides genetic information and education to a wide range of audiences
• current focus is to assist non-genetics health professionals with the skills and knowledge to manage the impact of genetic and genomic technologies on their practice.

www.genetics.edu.au
The Australian Context

• Mix of public (Commonwealth and the states) and private
• Commonwealth funds Medicare (GPs), national screening programs
• States responsible for funding hospitals
• Genetic services relatively consistent across Australia
• States have different priorities eg education
• National Professional Colleges and Associations
• Challenge: state v national organisations/funding/approaches
• Good news: Development of a National Genomic Strategy Framework just commenced
Centre’s Strategy for NSW

• **Program goals:** Assist health professionals manage the impact of genomics on their clinical practice through Continuing Professional Development (CPD) and point of care tools

• **Needs based approach**
  • Identify gaps/needs (2016)
  • Develop resources to provide a foundation for further educational strategies (2017)
  • Implementing programs 2018

• **Genomic expertise:** NSW Clinical Genetics Service, Garvan Institute of Medical Research, Australian Genomic Health Alliance (AGHA) Program 4
Needs of medical specialists ordering genomic testing

• Partnership with the Garvan Institute of Medical research
• Qualitative semi structured interviews early adopters
• Clinical Geneticists (15), Medical Specialist ordering testing(10)
  • Unanimous agreement for need for education
  • Occur through a number of avenues
  • Need for different models of care
  • Spectrum of educational needs
  • “not everyone wants to know the finer details. They just need to know enough to get on and be conversant with their patients”
• Challenges – Interpreting genetic variants
• 2017: Currently deciding on the resource to develop to focus on “interpreting variants”
A typical rare disease filtering pipeline

- 3M variants
- 2.7M good data quality
- 30,000 within genes
- 5,000 nonsilent variants
- 1000 are rare in healthy individuals
- 40 de novo mutations
- 50 predicted pathogenic
- 5 match patient phenotype
- 1 in known disease db
Exploring the educational needs of allied health professionals, nurses and midwives

• Semi-structured interviews
• Recruitment via professional organisations and hospitals in NSW
• Findings—Genomic fundamentals/impact on roles & practice setting
• Consistent with international competencies and programs
• Priority: How to talk to patients about genomics
• Online interactive educational module with cases for HETI (Health and Education Training Institute all online resources NSW) being developed 2017
• Trial before and after knowledge with 6 month follow up of impact on practice
• Hope to influence development of competencies
• Australian Genomic Health Alliance (AGHA)- a national network of clinicians, diagnosticians and researchers led by the Murdoch Children’s Research Institute, Melbourne

• Funded to develop a roadmap for the integration of genomics into clinical care

• Program 4 is currently undertaking a national gap analysis and needs assessment to identify training and education requirements for health professionals
• Australian based
• facilitate education services to pharmaceutical, medical device and biotechnology industry and allied healthcare practitioners
• to support the integration of genomic medicine into clinical practice, clinical research, regulatory and reimbursement activities
• to ensure patients get appropriate and timely access to new treatments
• facilitate patient education and understanding in conjunction with patient advocacy groups

Director: Nicholette Conway
Stage: Developing and planning
Planned Activities:
• Pilot education seminar May with launch of Education Series in August (1 day seminars)
  • Focus on the interpretation of genomic research for use in clinical trials, regulatory and reimbursement (Payer) submissions
  • Hosted by the industry’s key education provider
• Varied services from specific focus (Analyse a genomic journal article/ Case study in a disease state), to broad based “Lunch & Learn” for cross functional corporate groups
• Host a session at Healthcare Industry Conference with focus on educational needs to support regulatory and reimbursement requirements.

Response: Positive – 12 months ago no interest, now strong interest.
Comments: No funding for this, therefore fee for service model. Multiple partners needed to support model – from education specialists to clinical, scientific and regulatory specialists… and a lot of cooperation and good will!
Thank you