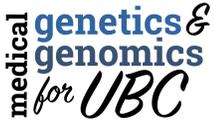


Online Genetics and Genomics Teaching for Nine Health and Social Care Programs at the University of British Columbia (UBC)



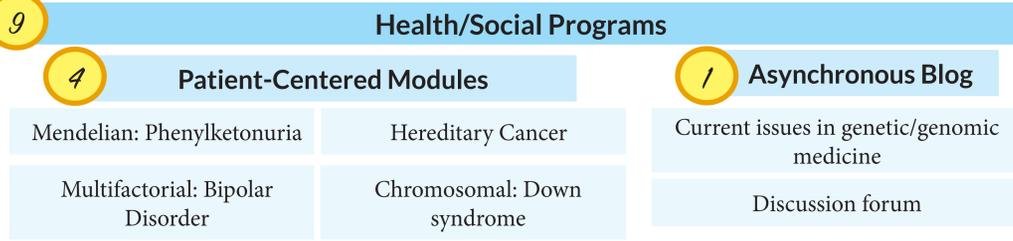
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INTRODUCTION

Genetics and genomics competencies are increasingly relevant to students of health and social care. It was discovered that (a) similar curricula in these areas were being developed in parallel in programs across UBC and (b) these lacked interprofessional collaboration. We brought leaders and students from nine programs together to develop online modules and to create an interprofessional discussion forum. We have used online teaching to enable synergies across the nine programs, thereby aligning learning in genetics and genomics and embedding interprofessional learning. From an instructional perspective, the unique aspects of teaching online are highlighted. From a sustainability perspective, involving student users, patients and community groups in the development was paramount to success.

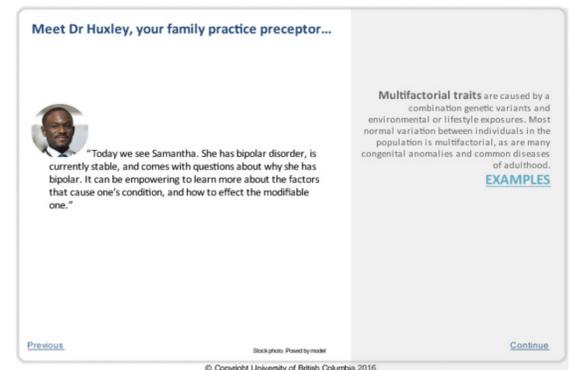


PARTICIPATING PROGRAMS

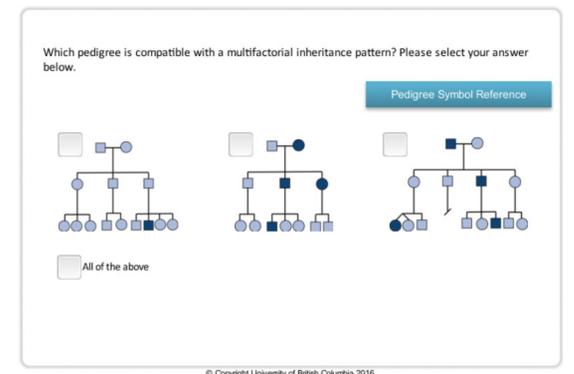
Genetic Counselling, MD Undergrad Program (MDUP), Medical Laboratory Scientist Training Program, Medical Genetics Undergraduate Courses, Midwifery, Nursing, Occupational Therapy, Physical Therapy, Social Work

MODULES

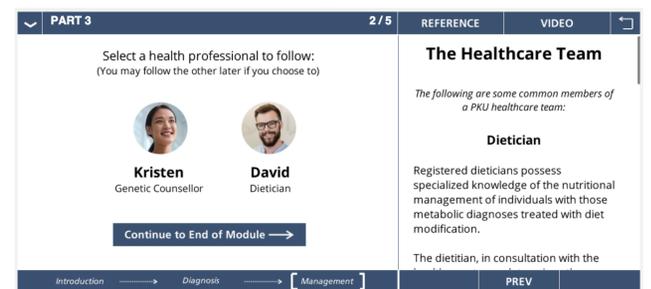
Each module opens with an introduction by the preceptor to the case. The right most box contains “science” material, whereas the main box (left) contains the clinical scenario.



Students are quizzed throughout the modules. If possible, students are given resources to the solve the problems within the slide if they need them .

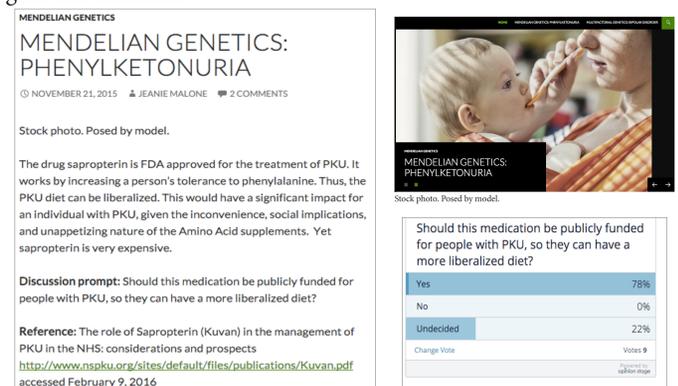


Throughout the modules, students have opportunities to learn about how other professionals interact with the patient.



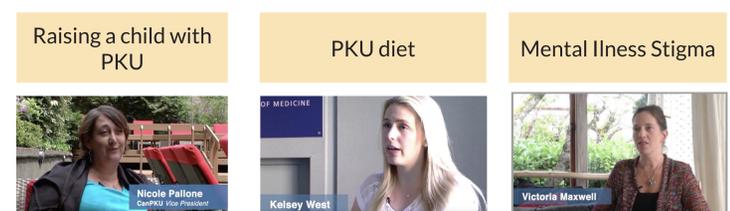
BLOG FOR ASYNCHRONOUS SHARING OF IDEAS BETWEEN LEARNERS, EDUCATORS, AND PATIENTS

<http://blogs.ubc.ca/medgen/> will be an interprofessional space allowing students from various programs to engage with current events in genetic and genomic medicine.



PATIENT VIEWS

Patient views were considered paramount to the success of the modules. We worked with various advocacy groups to connect with individuals directly affected by the genetic module diseases.



PROCESS

All programs meet to develop grant and project goals

- Meet early to allow for the synthesis of a grant application to the Teaching, Learning Enhancement Fund at UBC.
- Share existing course materials from each program.

Identify and share key exit competencies, and yearly objectives

- Revise the current genetics exit competencies.
- Consider how students and graduates will use their genetics knowledge in their careers.
- Divide the milestones necessary on the path to the exit competencies into the four years.
- Take the weeks to which there were genetics/genomics themes components and put those against the milestones, along with the genetics/genomics themes objectives in these particular weeks.

Identify model genetic conditions and storylines that can cover competencies

- Identify genetic conditions or characteristics that could serve as models in teaching necessary topics.
- Identify Phenylketonuria, Bipolar Disorder, Down syndrome, and Cancer as four models.

Seek input from advocacy groups, patients/families, specialists in health/social care community on competencies, objectives, and virtual patient stories

- Work with the BC Down syndrome Research Foundation, CanPKU, BC Newborn Screening Program, mental illness public speaker, and more.

Conduct focus group interviews with students

- Consult with learners.
- Specifically, get student perspectives on a) their medical genetics education and b) what types of online learning they have found to be efficacious.

Create vision for “preceptor” to lead students through the module, with addition of a “notebook”

- Develop our style of module. In particular, pitch the idea of simulating a clinical clerkship scenario to the students, which garnered enthusiasm.
- Have each module led by a virtual preceptor. Each module would be led by the same virtual preceptor.
- Create a resource for students to access throughout module.

Create interactive storylines with space for patient perspectives

- Synthesize patient perspectives, student impact, and the competencies that we had developed to create storylines for each module.
- Incorporate input from a patient/family living with the genetic condition into each module.

Meet with collaborating programs for individual feedback

- Share maps with all programs.
- All programs identify where their programs overlaps, or to identify missed areas.

Create modules using Articulate Storyline

First release to medical students

Evaluate modules within MDUP and iterate

- Conduct student surveys, interviews with faculty, informed quality improvements and adaptations to extend interprofessional content and applicability.

Release to all programs

ACKNOWLEDGEMENTS

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