

Demystifying DNA Down Under for Nurses and Midwives: Australian Research and Teaching

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On behalf of University of Technology Sydney, Australia
Genomics Educational and Research Interest group (GenRE)

Outline

1. Australian Context
2. Australian Strengths and Challenges
3. UTS GenRE-Aim and Purpose
4. Educational Activities
5. Research Activities

Australia- 'Australis' the Great Southern Land

- 6th largest country by area
- Approximately 30 million people
- Over 750 reptile species
- Due to its large size and isolation from the rest of the world, Australia is sometimes known as the 'island continent'.
- The largest cities in Australia are Sydney, Melbourne, Brisbane, Perth and Adelaide.
- A desert area known as the 'outback' covers much of the land.



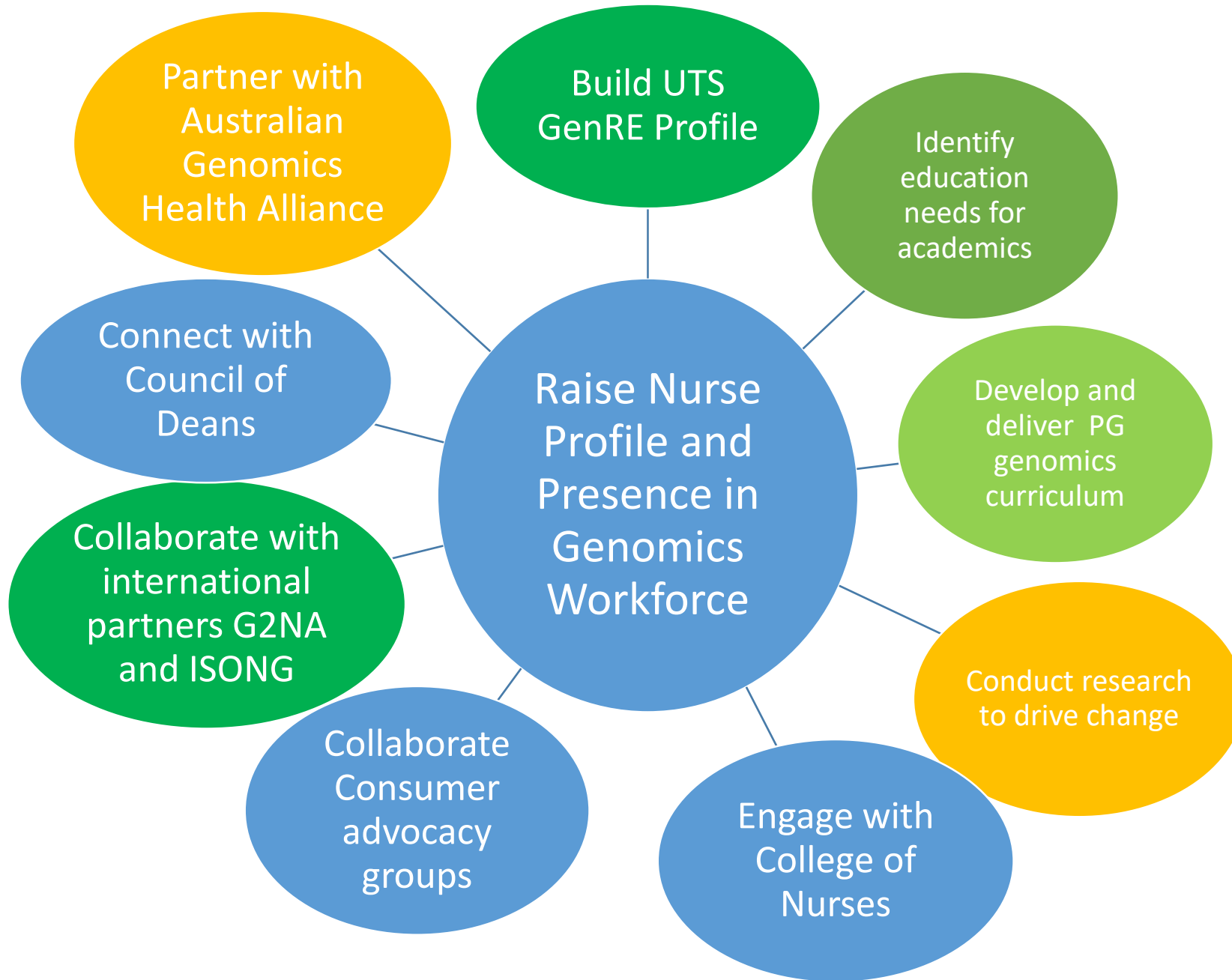
Australian context-Strengths

- National Genomics Health Alliance – funding, government support, Ministry support
- UTS Nursing led research underway (postgraduate, undergraduate)
- Generous International support (G2NA, ISONG)
- Learn from other countries who are a few steps ahead..!



Australian context- Challenges

- Clinical Education (focus on Genetic counsellors, 'spotfires')
- Tertiary level education –gaps identified (technical report)
- Policy/Government
 - Absence of nurse references (workforce planning) Australian Strategic planning documents
 - Absence of nurse references (workforce planning) in NSW Health strategic plans
 - Nurses do not appear to be represented on NSW Genomics committees, minimal engagement with nursing profession, lack of genomics champions in nursing profession



Work to be done to address challenges...



UTS Genomics Education and Research Interest group (GenRE)

2017 Background planning and preparation

- International
 - G2NA/Poster for inaugural G2NA meeting January 2017
 - Training at NIH/NHGRI '*Short Course in Genomics: Nurse, Physician Assistant, Faculty track*' August 2017
 - ISONG
- National networks
 - Australian Genomics Health Alliance, Brisbane 2017
 - Genomics Clinical Educators at local health facility
 - Genetic Counsellors at UTS
 - Garvan Institute
- UTS
 - **Need a team!!**
 - EOI for membership of interested colleagues



GenRE Terms of Reference

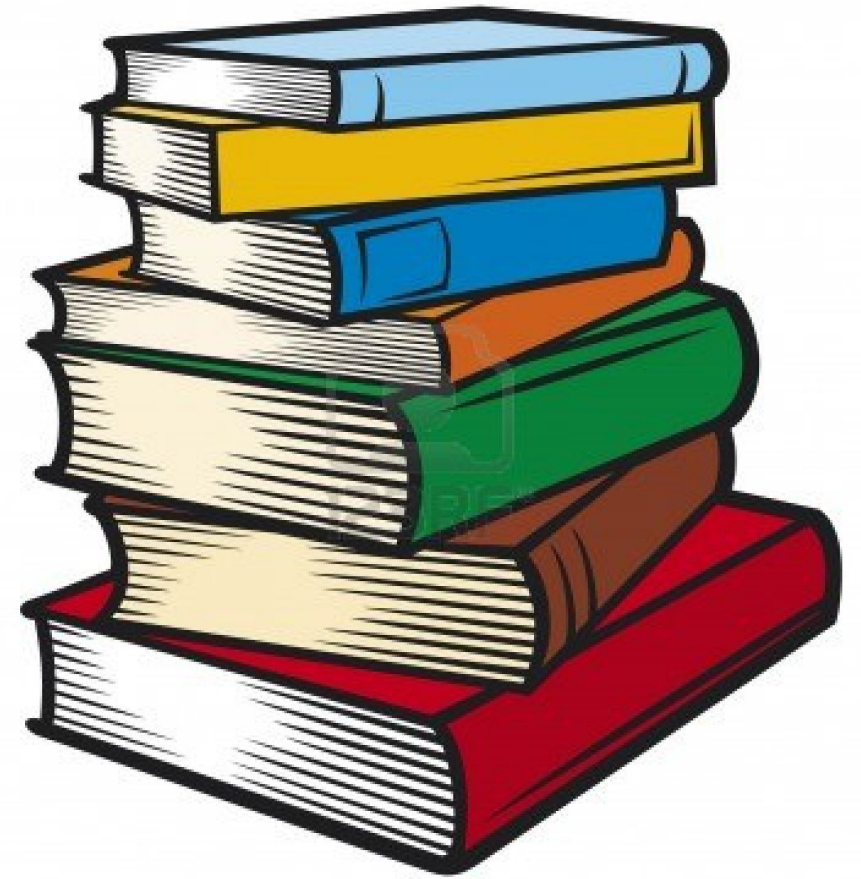
PURPOSE: Increase genomic literacy of UTS Faculty of Health graduates and specifically prepare the UTS nursing workforce to deliver competent genomic focused health care.

OBJECTIVES:

- To raise awareness in UTS FOH academics of the importance and relevance of genomics in healthcare
- To provide UTS FOH academics with current, evidence based, educational resources and provide an invitation and expert support to disseminate to UG and PG students
- To integrate genomics into undergraduate nursing, midwifery, public health and health sciences core subjects and raise genomic literacy in UTS health graduates and encourage potential students to consider the upcoming Masters in Genetic Counselling.
- To integrate genomics into postgraduate public health and health sciences subjects and raise genomic literacy in UTS graduates and encourages potential students to consider the upcoming Masters in Genetic Counselling.
- To develop an innovative, practice-oriented, globally relevant and research-inspired Graduate Diploma “Genomics in health care” suitable for students from a range of healthcare professions, GP, nursing, allied health, midwifery and encourage potential students to consider the upcoming Masters in Genetic Counselling.
- To develop PG short courses and tasters in genomics in response to FOH PG strategy: ‘Developing a health workforce for the future’
- To design and conduct a research project to measure the effectiveness of integration of genomics curricula on genomic literacy levels in graduate nurses.

Educational activity

- Undergraduate
 - Curriculum mapping
 - Program Under Review
 - Identification of core concepts
 - Online content



Undergraduate (pre licensure)

Year 2 S1 92440 Evidence for Nursing	<i>A graduate of this course is a critical thinker who is able to assess a body of evidence and integrate it into practice.</i> <i>Consider the effects of medicines on the health of the individual patient/client (AHPRA 1.1, 1.3, 3.1)</i> <i>Determine the suitability of medicines in relation to starting, adjusting or ceasing them (AHPRA 2.3)</i>	• Pharmacogenomics- assessing likelihood for adverse events • Using Databases, resources, NHGRI
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Postgraduate (post registration, licensed nurses) educational roadmap

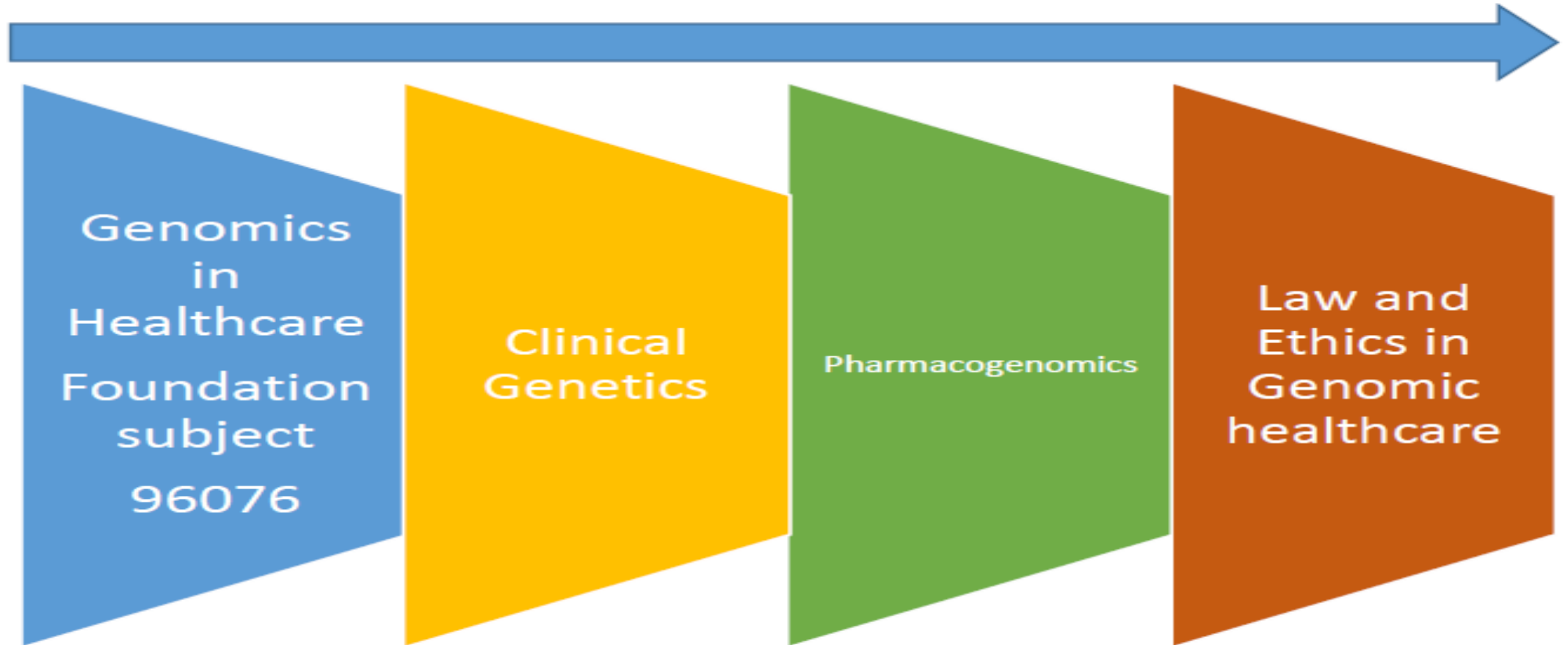
Aim : Post graduate Certification in Genomics

- Maintain UTS, Dean support
- Obtain approvals (Faculty, T&L, University Board etc..)
- Assess readiness (Academic teaching environment)
- Assess interest (free OPEN online Taster subject)
- Assess feasibility of teaching delivery strategies



Postgraduate Certificate Structure: 1 year Program, 4 Subjects

'Genomics in Healthcare'



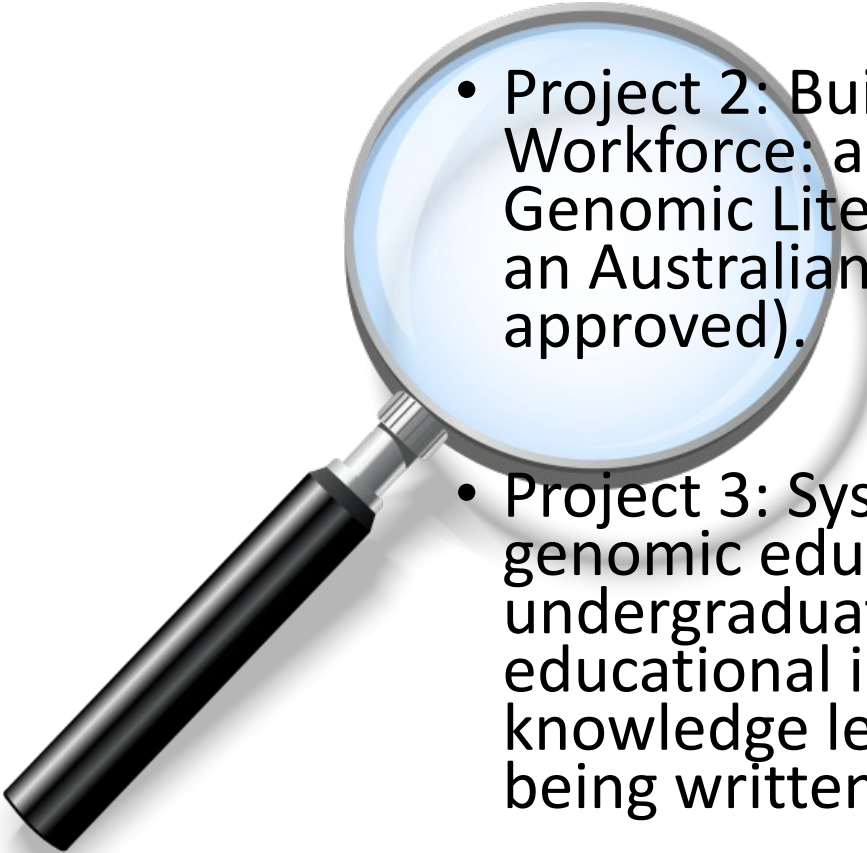
Postgraduate

- Subject 1 Genomics in Healthcare
 - Delivered Autumn, Spring 2019
- Work to be done
 - Subject 2, 3 and 4 under development
 - Due Spring 2020, Autumn 2021



Research activities

- Project 1: A survey to assess academic health staff's genomic literacy and readiness for genomic curricula integration (completed).

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- Project 2: Building a Genomics Ready Nursing and Midwifery Workforce: a Quasi- Experimental Pilot Study to assess Genomic Literacy of Undergraduate Nurses and Midwives in an Australian Tertiary Setting (Human Ethics Committee approved).

- Project 3: Systematic review of evidence that examines genomic educational interventions provided for undergraduate nursing and midwifery students in tertiary educational institutions and assessment of genomic knowledge levels in this same group of students (currently being written up as part of Honours project thesis)

Project 2: Building a Genomics Ready Nursing and Midwifery Workforce: a Quasi- Experimental Pilot Study to assess Genomic Literacy of Undergraduate Nurses and Midwives in an Australian Tertiary Setting.

Purpose:

- To gain a better understanding of nursing and midwifery students' knowledge level and overall genomic literacy.
- Measure the feasibility and effectiveness of delivery of an online genomics education module.



Project 2: Building a Genomics Ready Nursing and Midwifery Workforce: a Quasi-Experimental Pilot Study to assess Genomic Literacy of Undergraduate Nurses and Midwives in an Australian Tertiary Setting.

The Survey:

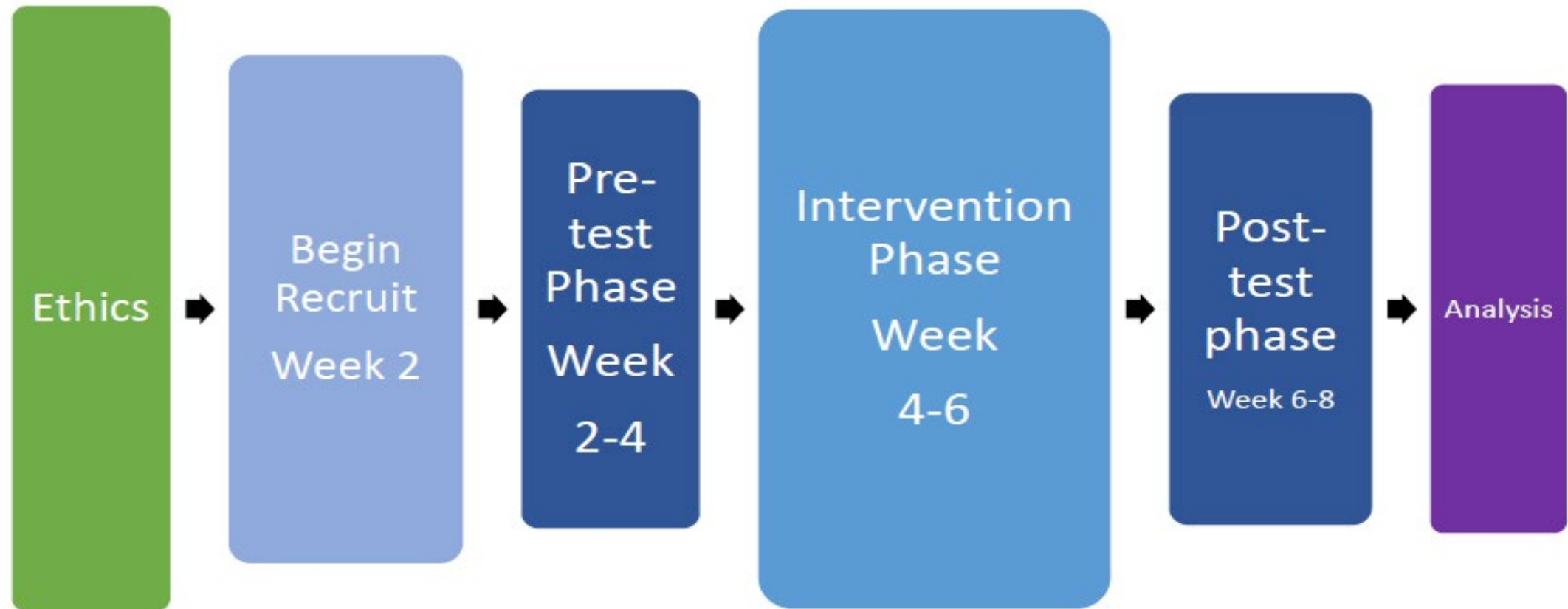
- Online pre-test and post-test survey
- 1st, 2nd and 3rd year UG nurses and midwives (GNCI Ward, L)

Intervention- Online Educational Genomics Module:

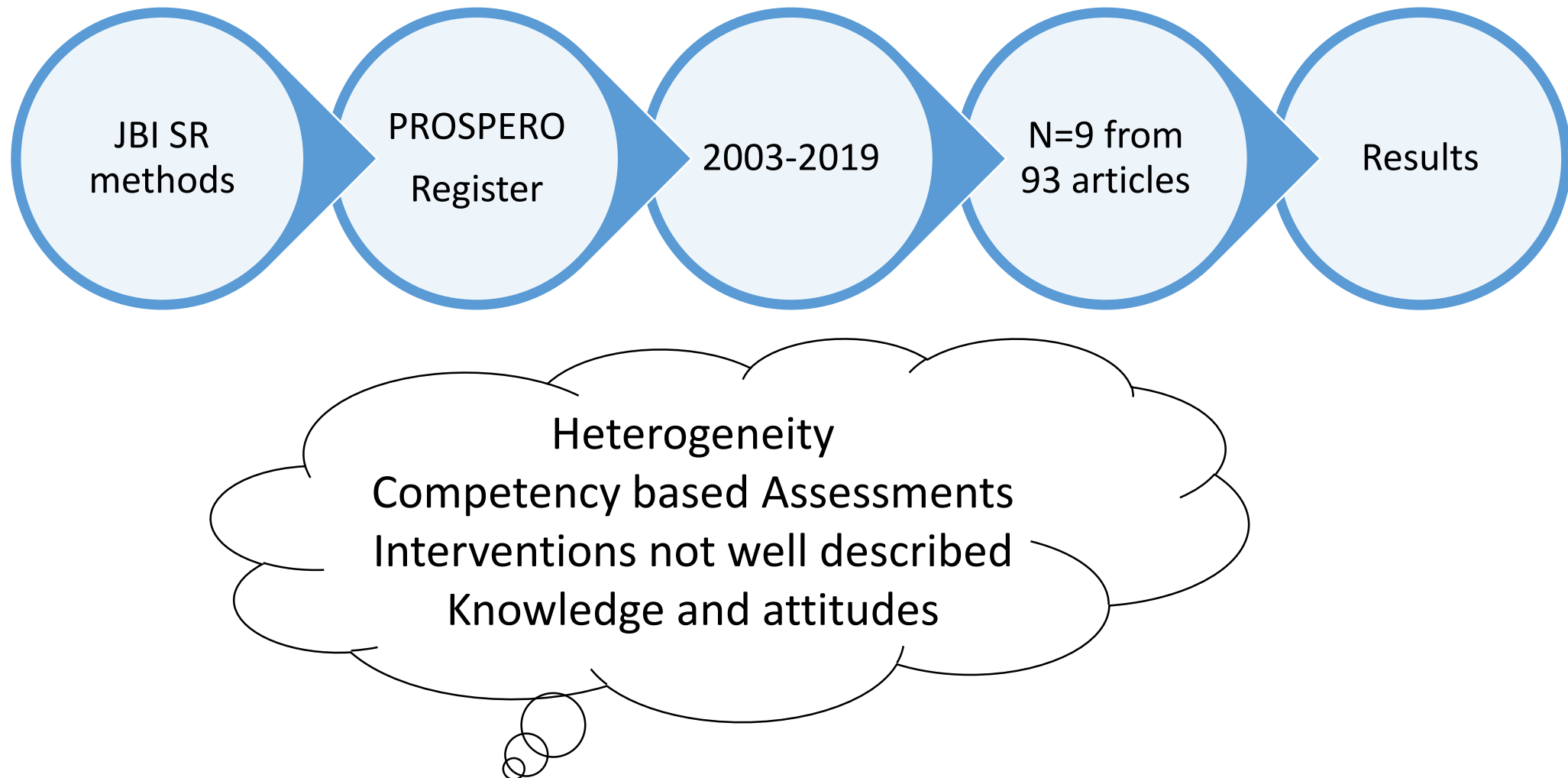
- First year nursing or midwifery student (n=900)
- Online educational module
- 120 minutes



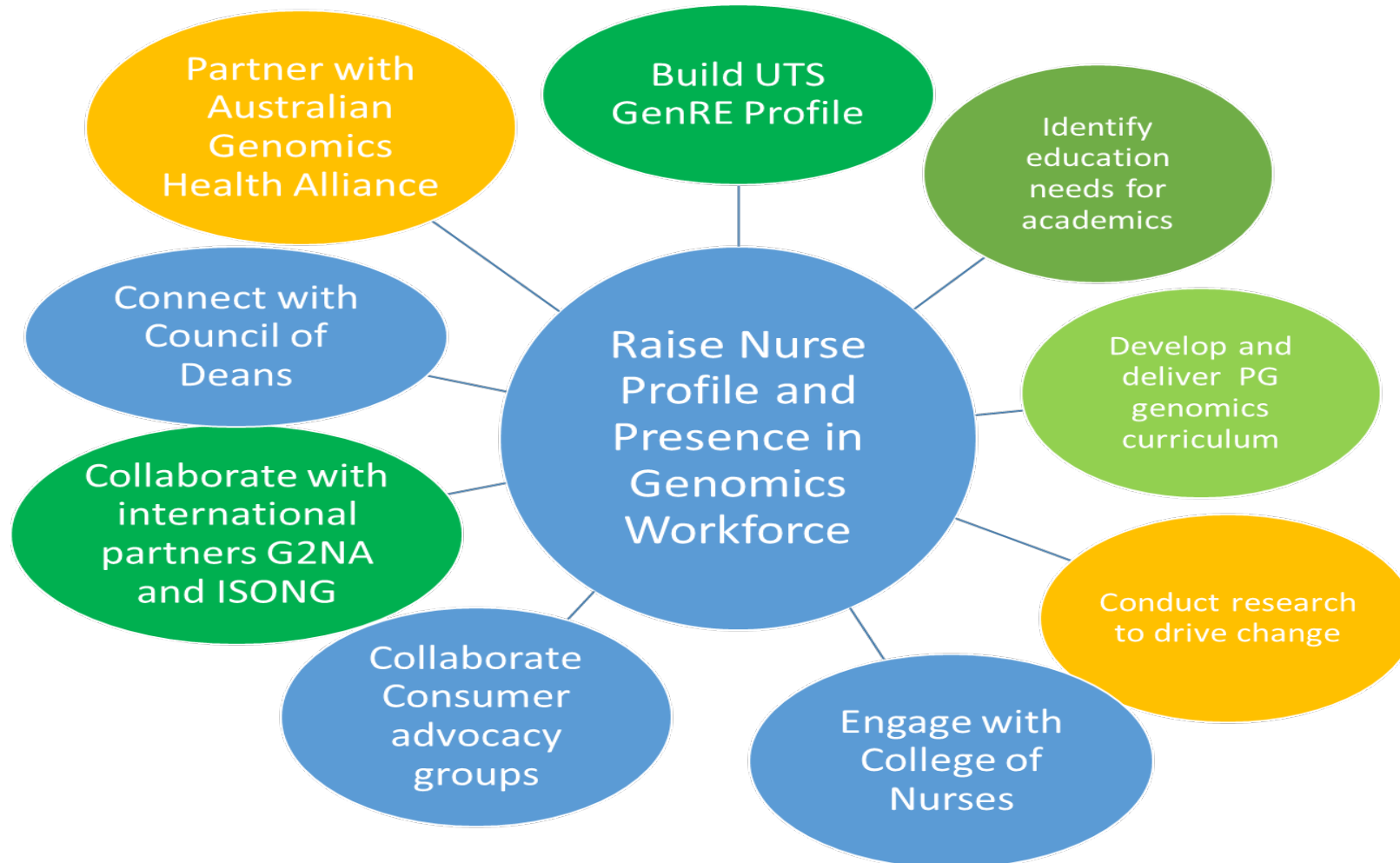
Project 2: Progress to date...



Project 3: Systematic Review



Future directions- turn all of these Go! green...



Thank you for listening!

Any Questions?