

Synopsis of Curricular Change Activities
 Web-Based Genetics Institute
 Winter 2002 WBGI Group

The first Web-Based Genetics Institute (WBGI), a component of the Genetics Program for Nursing Faculty (GPNF), was conducted from January – May, 2002. One of the assignments for Module 3 was to identify curriculum change activities that the faculty would use to facilitate the integration of genetics content into their schools' curricula. Each week, for four weeks, the faculty discussed their ideas for curricular change on the course discussion board. During the fifth week, each faculty summarized her ideas and created a plan for incorporating genetics into her school's curriculum. The productive discussions and well-thought out curricular plans were combined, resulting in a fifty-two page document. The following condensed synopsis is a compilation of this exceptional work done by the nursing faculty who participated in the Winter 2002 WBGI. We would like to acknowledge these faculty and thank them for their outstanding contributions:

Nancy Brauhn, BSN, MA, PhD, RN	Professor	Mt. Mercy College
Jackie Cason, MSN, RNC	Asst. Professor	Georgia Southwestern State University
Loretta Diehl, MSN, RN	Asst. Professor of Nursing	New Mexico State University at Alamogordo
Patricia Gaspar, MN, RN	Asst. Dean and Faculty	Pacific Lutheran University School of Nursing
Jill Hamilton, MSN, WHCNP, RN	Instructor	Cochise College
Anna Marie Hefner, MSN, MA, RN	Asst. Professor	Arizona Pacific University
Virginia Hicks, MS, RN	Asst. Professor	Grambling State University
Elizabeth Leonard, MS, RN	Faculty	MedCentral College of Nursing
Ruth McCaffrey, ND, ARNP, RN	Asst. Professor	Florida Atlantic University
Diane Morey, MSN, RN	Assoc. Professor	College of the Canyons
Ann O'Sullivan, MSN, CNA, RN	Asst. Professor	Blessing-Rieman College of Nursing
Patricia Otsuka, EdD, MSN, BC, APRN	Grad. Nursing Program Coordinator	Hawaii Pacific University
Judith Pollachek, PhD, RN	Asst. Professor	Rutgers University
Mary Quinn Griffin, MEd, MSN, PhD, RN	Lecturer	Case Western Reserve University
Barbara Sands, PhD, RN	Director, Assc. Professor	St. Joseph's College
Stacey Sherwin, MN, RN, CCRN	Curriculum Coordinator	Salish Kootenai College
Christine Vandenhouten, MSN, RN	Nursing Faculty	Bellin College of Nursing
Robin Wilkerson, PhD, RN, C	Asst. Professor	University of Mississippi School of Nursing

This very enthusiastic group of faculty was eager to learn genetics and appreciated the importance of genetics to nursing education and practice. For some, genetics content was already being added to their curricula. In addition, a number of the participants indicated that their schools' curricula were being revised thus providing an excellent opportunity to add genetics content. However, various faculty pointed out that curricular change was complicated and that their curricula were full and finding room for additional content would be difficult. The needs to proceed slowly and gain support from fellow faculty were identified and some participants chose to focus only on the courses that they taught. As a result approaches

included developing an elective/new genetics course and/or integrating genetics into existing/new nursing courses.

Beginning strategies were developed to determine if and/or what (quantity and quality) genetics content their students were exposed to:

1. Survey and/or visit with the faculty who teach each nursing course to determine if genetics content is included in the courses they teach.
 - many participants found that there was little to no genetics content and some of their colleagues assumed that basic genetics was taught in pre-requisite science courses
 - examples of other findings included that genetics content was:
 - primarily taught in pediatric/obstetric nursing courses
 - covered somewhat in pathophysiology, ethics, medical/surgical nursing courses
 - covered quite well in pharmacology
 - general consensus was that the amount/quality of genetics content needed to be improved upon
2. Identify the genetics content that is taught in pre-requisite science courses and build on this content.
3. Determine and/or assist fellow faculty in determining the gaps in genetics content in each nursing course.

The proposed strategies to incorporate/add genetics content segregated into two main categories:

1. Those that would be used to integrate/assist to integrate genetics content into existing/new nursing courses.
2. Those that would be used to develop a genetics course.

Some faculty were planning to employ strategies from both categories and were going to develop a new genetics course and integrate genetics content into existing courses. Regardless of which strategies the faculty were going to use, they thought it was important to introduce their fellow faculty members to incorporating genetics content into nursing courses by presenting the following to their faculty as a group:

1. Information about the need to increase genetics content in the curriculum.
2. Overview of the WBGJ.
 - personal experience with participating in the WBGJ
 - stimulate interest in using WBGJ resource materials and incorporating specific content in courses
3. A plan/recommendations for integrating genetics content and/or developing a genetics course including:

- summary of the results of the faculty survey and the pre-requisite science courses assessment
- examples of:
 - educational methodologies
 - internet resources
 - learning activities that can be adapted for individual courses

The first category of strategies, those to integrate/assist faculty to integrate genetics content, included:

1. To help faculty to become knowledgeable about genetics, provide genetics informational/educational opportunities such as:
 - faculty inservice covering the main elements of the WBGI
 - faculty development series
 - brown bag lunch discussions
 - genetics workshops
 - journal club
 - informal genetics chats
 - a core group of faculty who have genetics expertise/knowledge to be a resource for fellow faculty
 - identify genetic conditions of the week and post on the nursing bulletins board
2. Locate local genetics professionals who would serve as resource persons for faculty and who would guest lecture.
 - provide the following web sites to faculty to assist in locating genetics professionals:
 - National Newborn Screening and Genetics Resource Center <http://genes-r-us.uthscsa.edu/index.htm>
 - GeneTests-GeneClinics <http://www.geneclinics.org/>
 - National Society of Genetic Counselors <http://www.nsgc.org/>
3. WBGI participant would serve as resource person.
 - guest lecture
 - make recommendations as to:
 - appropriate genetics resources
 - appropriate genetics learning activities
 - keeping in mind that most courses are over-extended
4. Identify/assist nursing faculty to identify nursing courses for potential placement of genetics content with recommended topics:
 - target clinical components of nursing courses for discussion of genetics content/topics/issues
 - content - basic human and molecular genetics
 - topics - cell division, chromosomes, DNA, chromosomes, genes, patterns of inheritance, influences on gene expression, protein synthesis, genetic variation
 - courses for possible placement of basic content - pathophysiology; reinforce/review in obstetric, pediatric, medical/surgical, psychiatric nursing courses
 - content - clinical genetics

- topics - history taking, pedigrees, genetic testing, genetic conditions, genetic therapeutics, pharmacogenetics
- courses for possible placement of clinical genetics content - health assessment, pharmacology, obstetric, pediatric, medical/surgical, psychiatric nursing courses
- content - ethical, social issues related to genetic information and technology
 - topics - psychosocial needs; ethical, legal, social implications; ethnic, racial, cultural considerations for providing genetic services; genetic resources
 - courses for possible placement of ethical, social issues related to genetic information and technology content - ethics, professional foundations, community, social/cultural/political, healthcare systems, obstetric, pediatric, medical/surgical, psychiatric nursing courses
- content - nursing roles in genetics
 - topics - various roles and responsibilities Assc.d with different levels and specialty areas of nursing practice
 - courses for possible placement of nursing roles in genetic healthcare content - professional foundations, obstetric, pediatric, medical/surgical, psychiatric, community, ethics nursing courses

Sample activities to integrate/assist faculty to integrate genetics content included:

1. Help faculty to become knowledgeable about genetics.
2. Add genetics concepts and a statement about the role of the nurse in genetics into the college curriculum framework based on:
 - National Coalition for Health Professional Education in Genetics' (NCHPEG) *Core Competencies in Genetics Essential for All Health-Care Professionals*
 - <http://www.nchpeg.org/>
 - International Society of Nurses in Genetics' (ISONG) *Statement on the Scope and Standards of Genetics Clinical Nursing Practice*
 - <http://nursingworld.org/anp/pdescr.cfm?CNum=15>
3. Offer to help faculty on an individual basis to incorporate genetics in their courses.
4. Make the WBGI resources available to faculty.
 - place resources in binders and place them in an area accessible to all faculty
 - distribute to/notify of updates via e-mail, posting, faculty forums/meetings, web site
5. Develop/assist in developing genetics-related objectives for fellow faculty's courses.
 - individual faculty would need to develop teaching strategies to meet these objectives
 - WBGI participant would be available to share resources and guest lecture
6. Collect nursing-oriented genetics articles that could be adapted as lectures.
 - suggest a single lecture
 - augment lecture with an interactive activity
7. Suggest that faculty implement one new genetics learning activity.
 - it will be the faculty member's choice as to which activity would be appropriate for her/his course
 - follow up to determine the student and faculty responses

8. Provide faculty with the NCHPEG *Core Competencies in Genetics Essential for All Health-Care Professionals* and the ISONG *Statement on the Scope and Standards of Genetics Clinical Nursing Practice* to faculty.
 - ask them to determine how and what they could integrate into their courses
9. Explore the possibility of a “voluntary assignment” to see what personal, family or cultural experiences related to genetic variations students are willing to share.
10. Develop criteria for a student presentation of an ethical dilemma related to genetics.

The second category of strategies, those that would be used to develop a genetics course, included:

1. Base elective course on:
 - NCHPEG's *Core Competencies in Genetics Essential for All Health-Care Professionals*
 - ISONG's *Statement on the Scope and Standards of Genetics Clinical Nursing Practice*
2. Proposed foci:
 - WBGJ topics
 - building caring communities/environments of care with a focus on genetics and multiculturalism
 - relationship between environment and genetics factors; social and cultural aspects, i.e. multiple determinants of health
3. Possible course credit:
 - 2 - 3 undergraduate credit hours
 - CE
 - audit
4. Potential students:
 - BSN
 - RN to BSN
 - Faculty
 - Practicing nurses
5. Possible formats:
 - online
 - traditional face-to-face
 - traditional lecture with future plans to convert to online