

California State University, San Bernardino

## CSUSB ScholarWorks

---

Q2S Enhancing Pedagogy

---

Spring 5-19-2020

### Integrating Precision Health in a Nursing Concepts Course

Evangeline Fangonil-Gagalang  
egagalang@csusb.edu

Follow this and additional works at: <https://scholarworks.lib.csusb.edu/q2sep>



Part of the [Curriculum and Instruction Commons](#)

---

#### Recommended Citation

Halamka, J. (2017, November 21) The State of Precision Medicine Today. HIMSS Precision Medicine Channel. Podcast retrieved from: <https://www.himsslearn.org/stateprecision-medicine-today>. Haendel, M. A., Chute C., & Robinson, P. N. (2018). Classification, ontology and Precision Medicine. *New England Journal of Medicine*, 378, 1452-1462. Hickey, K. T., Bakken, S., Byrne, M. W., Bailey, D. W., Demeris, G., Docherty, S. L., Grady, P. A. (2019). Precision Health: Advancing symptom and self- management science. *Nursing Outlook*, 67, 462-475. Hull, S. C. (2018). Are we ready for precision health? *Nursing Management*, 49(7), 9-11. National Institute of Health. (2015). The Precision Medicine Initiative Cohort Program: Building a research foundation for 21st century medicine, September 17. Retrieved from: <https://www.nih.gov/sites/default/files/research-training/initiatives/pmi/pmi-working-group-report-20150917-2.pdf>. National Institute of Nursing Research. (n.d.). Symptom Science: Promoting personalized health strategies. Retrieved from: [www.ninr.nih.gov/aboutninr/ninr-mission-and-strategicplan/themes-symptom-science](http://www.ninr.nih.gov/aboutninr/ninr-mission-and-strategicplan/themes-symptom-science). Pierce, D. J., & Henly, J. S. (2017). Omics in nursing science. *Nursing Research*, 66(2), 61- 62. Price, D. M., Strodtman, L., Brough, E., Lonn, S., & Luo, A. (2015). Digital Storytelling: An Innovative Technological Approach to Nursing Education. *Nurse Educator*, 40(2), 66-70. Zhang, Y., Su, H. C., & Lenardo, M. J. (2015). Genomics is rapidly advancing precision medicine for immunological disorders. *Nature Immunology*, 16, 1001-1005.

This Lesson/Unit Plans and Activities is brought to you for free and open access by CSUSB ScholarWorks. It has been accepted for inclusion in Q2S Enhancing Pedagogy by an authorized administrator of CSUSB ScholarWorks. For more information, please contact [scholarworks@csusb.edu](mailto:scholarworks@csusb.edu).

## TEACHING AND LEARNING PRECISION HEALTH IN A FOUNDATIONAL CONCEPTS COURSE IN NURSING

### ABSTRACT

There is a new and emerging approach to healthcare which is gaining momentum. It is called Precision Health (PH). This approach promises to maximize the benefits of medical interventions for an individual patient to achieve a more precise and safe care. In contrast to providing standardized care protocols (set of medical orders for a patient complaint, e.g. stroke procedures), which is outdated, this new treatment approach uses advances in scientific and technological innovations in patient care. The American Association of Colleges of Nursing (2019) calls on educators to integrate Precision Health in nursing curricula. The Department of Nursing at California State University, San Bernardino acknowledges and supports this national movement by incorporating PH into the BSN curriculum to ensure future nurses are able to provide a highly-individualize care. The DON Curriculum Committee recently approved the infusion of curriculum threads relevant to PH in six courses across the BSN plan of study. The course, NURS 2602: Foundational Concepts, a preliminary subject in the BSN program, is one of the courses chosen to illustrate that fundamental concepts of that will help scaffold student learning in subsequent courses.

### DESCRIPTION OF PEDAGOGY (or teaching-related issue that will be studied)

I plan to use Digital Storytelling, a high impact teaching practice that uses multimedia, movies, videos, animation, and narration to convey a subject (Price, 2019). Since the emerging concept and innovations of Precision Health *are not visible in text print*, online materials will be sought. The digital world can offer an innovative, and cost-effective strategy in presenting the concept to students. Digital storytelling will be used to share multimedia amongst students to illustrate concepts of PH.

Additionally, I plan to conduct a literature review on Precision Health. I have provided a list of scholarly articles that will be read to have a deeper understanding of this highly-personalized care.

### TIMELINE: (at least 24 hours)

| Dates          | Hours | Activities  |
|----------------|-------|---|
| March, 2020    | 2     | Conduct a Literature Review on Precision Health   |
| March, 2020    | 4     | Read the literature on Precision Health & Digital Storytelling  |
| March, 2020    | 3     | Select teaching and learning materials online to use for digital storytelling pedagogy                |
| March, 2020    | 3     | Converse with other nursing colleagues about Precision Health and share best practices and resources. |
| April 2, 2020  | 8     | Attend the Azusa Pacific University Symposium: Population Health Across the Globe                     |
| April 20, 2020 | 8     | Attend the ANA/C 2020 RN Day at the Capitol: To learn legislation pertinent to Precision Medicine     |

|            |   |   |
|------------|---|---|
| May, 2020  | 4 | Prepare a topical outline in the NURS 2602 syllabus by selecting readings, strategizing activities, and curating assignments. |
| May, 2019  | 2 | Collaborate with ATI and/or course designers at CSUSB to post digital media   |
| May, 2019  | 2 | Formulate 1-2 discussion questions for reflection to promote learning of PH   |
| May, 2019  | 1 | Formulate 1-2 test questions to evaluate student understanding of PH  |
| May, 2019  | 4 | Draft lesson plan   |
| June, 2019 | 1 | Present course development to department Curriculum Committee   |

#### LIST OF SCHOLARLY READINGS

Halamka, J. (2017, November 21) The State of Precision Medicine Today. *HIMSS Precision Medicine Channel*. Podcast retrieved from: <https://www.himsslearn.org/stateprecision-medicine-today>.

Haendel, M. A., Chute C., & Robinson, P. N. (2018). Classification, ontology and Precision Medicine. *New England Journal of Medicine*, 378, 1452-1462.

Hickey, K. T., Bakken, S., Byrne, M. W., Bailey, D. W., Demeris, G., Docherty, S. L., Grady, P. A. (2019). Precision Health: Advancing symptom and self- management science. *Nursing Outlook*, 67, 462-475.

Hull, S. C. (2018). Are we ready for precision health? *Nursing Management*, 49(7), 9-11.

National Institute of Health. (2015). The Precision Medicine Initiative Cohort Program: Building a research foundation for 21st century medicine, September 17. Retrieved from: <https://www.nih.gov/sites/default/files/research-training/initiatives/pmi/pmi-working-group-report-20150917-2.pdf>.

National Institute of Nursing Research. (n.d.). Symptom Science: Promoting personalized health strategies. Retrieved from: [www.ninr.nih.gov/aboutninr/ninr-mission-and-strategicplan/themes-symptom-science](http://www.ninr.nih.gov/aboutninr/ninr-mission-and-strategicplan/themes-symptom-science).

Pierce, D. J., & Henly, J. S. (2017). Omics in nursing science. *Nursing Research*, 66(2), 61-62.

Price, D. M., Strodman, L., Brough, E., Lonn, S., & Luo, A. (2015). Digital Storytelling: An Innovative Technological Approach to Nursing Education. *Nurse Educator*, 40(2), 66-70.

Zhang, Y., Su, H. C., & Lenardo, M. J. (2015). Genomics is rapidly advancing precision medicine for immunological disorders. *Nature Immunology*, 16, 1001-1005.

## PRODUCT DELIVERABLES

At the conclusion of this assignment, a four-column model will be delivered which will describe the lessons on PH planned for this course. The column will discuss the course learning outcomes, select readings, the activities, and the assignments in four class sessions. An example of the model is noted below.

| Session Objectives                                 | Topics/Readings | Activities | Assignments |
|--|-----------------|------------|-------------|
| 1. Student will be able to define Precision Health | TBD             | TBD        | TBD         |
| 2. TBD   | TBD             | TBD        | TBD         |
| 3. TBD   | TBD             | TBD        | TBD         |
| 4. TBD   | TBD             | TBD        | TBD         |

## CONCLUSION

Currently, Precision health is *not* covered in the BSN curriculum. There are certain aspects of PH, i.e. genetics and pharmacogenomics that are *discussed in various courses* . However, these topics are not represented in relation to the broader subject of Precision Health and personalized care. Integrating the concept of Precision Health in the BSN program using Digital Storytelling is hoped to enhance students' learning of Precision Health concepts. Consequently, students may apply these concepts in patient care, which are reported to yield good patient outcomes, reduced costs & improved population health measures.