The FUTURE is HERE! Precision Healthcare, Professional Nursing Responsibility

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Purpose: The genomics revolution in health-care is ongoing. Since the unraveling of the human genome in **2003** frequent discoveries and interventions benefiting patients has led to **precision** health-care (National Human Genome Research Institute, 2018). Called precision health-care or personalized medicine, this approach has extended life for oncology and cardiovascular patients and shows promise for treatments **along the life-span** (Cheek & Howington, 2018). **Yet knowledge of this important science has not penetrated nursing practice.**

This poster describes nursing course development to expand competency in nursing **Pharmacogenomics**. American Nurses Association (ANA) genomics/genetics competencies will be reviewed as well as resources for professional development.

Determine Learning Outcomes: The **Knowledge/Skills/Attitude** that are **essential** for the RN in these areas:

The A B C's of DNA

Resources for Nurses

Essential Competencies in Pharmacogenomics

Pharmacogenomic Nursing Care for Various Patient Groups

Ethical Issues Analysis in Pharmacogenomics

ANA Competencies:

Professional Responsibilities:

- Recognize your own attitudes and values related to genetic and genomic science.
- Advocate for client's access to desired services
- Examine competency of practice

Professional Practice Domain:

- Nursing Assessment, Identification of clients who may benefit, Referral Activities

Provision of Education, Care and Support

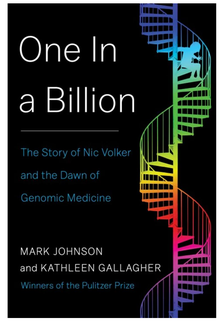
Clinical Examples

Pharmacogenomics involves using an individual's genome to determine whether or not a particular therapy, or dose of therapy, will be effective.

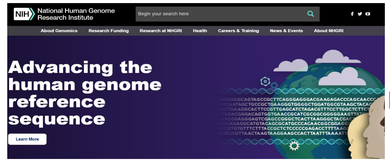
Most of the genetic risk of type 2 diabetes can be attributed **to common, shared genetic variants** - each contributing a small amount to an individual's risk of the disease - rather than many rare variants unique to individuals.

Bioethicists and researchers generally believe that **human genome editing** for reproductive purposes should not be attempted at this time, but that studies that would make gene therapy safe and effective should continue.

A young boy in Wisconsin, was able to be cured of an extreme form of inflammatory bowel disease **after his genome sequence revealed that a bone marrow transplant** would likely be life-saving.



Resources



https://www.genome.gov/

https://www.cdc.gov/genomics/

https://www.cancer.gov/about-cancer/causes-prevention/genetics

https://www.isong.org/

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