Satisfy Your Clinical Curiosities:
Investigate with Your Own Research

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Disclosure Statement

Neither Dr. Howe or Dr. Close have anything to disclose

Learning Objectives

- Discuss how to recognize research opportunities in your own practice
- Describe research design and evidence based practice guidelines
- Identify opportunities for funding and disseminating your research.
PENS Nurses at the Research Table

As clinical experts, we have insight into:

• What’s important for children and families
• Responses to treatment and interventions
• Behavior within families
• Opportunities for innovation
• How to improve care

Start with a CURIOUS mind
Introduction

- Examine everyday practice
- Identify any data you already have
- Form it into a research topic
- Form it into a research question

**TOPIC:** "Metabolic Syndrome in Adolescents"

**RESEARCH QUESTION:** Does Metformin combined with nurse-led monthly telephone counseling reduce weight and improve insulin resistance in adolescents with metabolic syndrome compared to those taking Metformin alone?

What is Your Phenomena of Interest?

- Child as a person
  - Response to dx, motivation, anxiety, adherence to therapy
- Family management of a condition
  - Barriers and facilitators to care
- Environment
  - Family support, peer support
- Nursing practice
  - HT measurement
- Nurse-patient relationship
  - Pt education
- Health care system
  - Access to care, mobile technology

Questions are Everywhere
What Informs Us About What to Believe About a Phenomenon?

What to Do? Unhappy Struggling Poor Control Thinking, I wonder if we could break the power struggle between mom and teenager by placing mentioned responsibility in the hands of the teen?

Thinking: “Wonder if we could break the power struggle between mom and teenager by placing mentioned responsibility in the hands of the teen?

Question: “What could I do to make this better for them and child?”

Research Question: Does a nurse-led weekly phone mentoring program for adolescents improve adherence to glucometer testing and insulin adherence and improve HgA1c compared to adolescents in normal care?

Find the Right Explanation While Ruling Out Alternative Ones!
Can You Do Research?

- Absolutely, you can!
- You already handle data
- You understand your clinical population
- You have unique clinical insights
- Clinical insights lead to research questions
- Research questions lead to how you want to look at the question
- How you look at the question determines the method
- NOW...find a Mentor who can collaborate on the process

Finding a Mentor

- A clinician/scientist who can guide you
- Make a preparatory plan
- Discuss topic areas
- Choose research question
- Plan how to do the project
- Schedule output deadlines
- Proceed!

Two Approaches

- Conducting a study
  - Quantitative
  - Qualitative
  - Mixed Methods

- Synthesizing the literature
  - Integrative Review
  - Systematic Review
  - Meta-analysis

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Mixed Methods

Quantitative
- Things we count: Associate
- Compare
- Explanation in Numbers

Qualitative
- Words we interpret: Associate
- Compare
- Description of explanation

Mixed Methods
- Combination
- Associate
- Compare
- Description explains the numbers

Differences in Approaches for Conducting a Study

Quantitative Studies
- Quantitative: numerical measurement of phenomena (variables)
- Relationships between variables
- Differences in variables
- Data Collection
  - Surveys
  - Questionnaires
  - Medical data from records
- Types of Quantitative Studies
  - Descriptive
  - Correlational
  - Quasi-experimental
  - Experimental (Randomized Controlled Trial)

Qualitative Studies
- Describe peoples' feelings, perceptions, beliefs, expectations
- Explore and describe the "lived experience" of _______ (phenomenology)
- Data Collection
  - Interviews
  - Focus groups
  - Observation
  - Analyze written info
- Types of Qualitative Studies
  - Phenomenology
  - Grounded Theory
  - Naturalistic Inquiry
  - Ethnography
  - Descriptive Interpretation
Synthesizing the Literature

• Begins with a Research Question
• Put your Sherlock Hat on: Find Evidence
• Integrative Review of the literature
• Systematic Review
• Meta-Analysis

Reference Librarian (Medical Informationist)

• Find one and become best friends
• Learn about how to search electronically
• Learn how to use an electronic bibliographic software
• Become collaborators

Research Question Format for Reviews

• P Patients/Population
• I Intervention
• C Comparison Group
• O Outcome

* In adolescents with insulin pumps does parental monitoring of insulin dose improve HbA1c compared with adolescents not monitored by parents?*

*In adolescent girls with PCOS, does metformin combined with OCPs improve body composition compared to metformin alone?*
Filtering the Literature: Your Topic

- Choose literature platform: Ovid, Pubmed, CINAHL, Cochrane
- Keywording: Mesh Terms
- Capture: By topic
- Filter: Inclusion and Exclusion
- Read: Titles, then abstracts, then articles
- Analyze: Assess quality of evidence
- Report: Write your review

18 Articles in Your Review

Timelines are Important

- Idea/Concept Development
- Find Mentors
- Establish Research Question
- Decide on Method of Study
- Develop the Protocol
- IRB Approval
- Funding Applications
- Consenting Process
- Gather Data
- Analyze Data
- Write up Findings
- Present and Publish

January to March
April to July
August to December

Getting it Done

- Without funding
- With funding:
  - Institutional Intramural
  - PENS
    - Research Project $15,000
    - IRB $1,000
  - Sigma Theta Tau
  - AACN

Sigma Theta Tau is the largest international honorary society for nursing students and professionals.
Dissemination

- Posters
- Platform presentations
- Manuscripts
- Journal Columns

Group Activity

- Ideas
- Mentoring
- Imagining the process
- Trying out the ideas on others
- Making a plan
- Getting started