Research Literacy

HIVE mind 11/16/22

With Katie Krebs, MPH

Tonight’s plan

- Intro
- Research Ethics
- Evidence and Ways of Knowing
- Evidence Based Practice
- Critiquing Research

Research Ethics - Is it human subjects research?

Research, defined by DHHS is: *“a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge.”*

Human Subject, defined by DHHS is: *“a living individual about whom an investigator (whether professional or student) conducting research: obtains information or specimens through intervention or interaction with the individual, and uses, studies, or analyzes the biospecimens; OR obtains, uses, studies, analyzes, or generates identifiable private information or identifiable biospecimens.”*

Research Ethics - Is it human subjects research?

***Scenario 1**:* A school conducts a quarterly survey of current students, collecting information about those students and their experience at the school, analyzes the results and uses them to improve school policy and student services.

Is it **Research**?

- ❏ Systematic Investigation?
- ❏ Designed to develop or contribute to generalizable knowledge?

Does it involve **Human Subjects**?

- ❏ Living individuals
- ❏ Information or specimens obtained through intervention or interaction
- ❏ Information or specimens used, studied or analyzed

OR

- ❏ Living individuals
- ❏ Identifiable, private information or identifiable biospecimens are obtained, used, studied, analyzed, or generated

Research Ethics - Is it human subjects research?

Scenario 2: A midwifery student conducts a phone survey of local midwives, analyzes the results, and writes up a report drawing conclusions about how to build a sustainable midwifery practice.

Is it **Research**?

- ❏ Systematic Investigation?
- ❏ Designed to develop or contribute to generalizable knowledge?

Does it involve **Human Subjects**?

- ❏ Living individuals
- ❏ Information or specimens obtained through intervention or interaction
- ❏ Information or specimens used, studied or analyzed

OR

- ❏ Living individuals
- ❏ Identifiable, private information or identifiable biospecimens are obtained, used, studied, analyzed, or generated

Research Ethics - Is it human subjects research?

Scenario 3: An individual opens up a social media app, reads a few posts about folks' experiences and writes an interest piece about how to avoid unnecessary interventions.

Is it **Research**?

- ❏ Systematic Investigation?
- ❏ Designed to develop or contribute to generalizable knowledge?

Does it involve **Human Subjects**?

- ❏ Living individuals
- ❏ Information or specimens obtained through intervention or interaction
- ❏ Information or specimens used, studied or analyzed

OR

- ❏ Living individuals
- ❏ Identifiable, private information or identifiable biospecimens are obtained, used, studied, analyzed, or generated

Research Ethics - Is it human subjects research?

Scenario 4: A midwifery student works with a professor to collect and analyze information about causes of maternal and infant mortality, using medical records.

Is it **Research**?

- ❏ Systematic Investigation?
- ❏ Designed to develop or contribute to generalizable knowledge?

Does it involve **Human Subjects**?

- ❏ Living individuals
- ❏ Information or specimens obtained through intervention or interaction
- ❏ Information or specimens used, studied or analyzed

OR

- ❏ Living individuals
- ❏ Identifiable, private information or identifiable biospecimens are obtained, used, studied, analyzed, or generated

Research Ethics - Is it human subjects research?

Scenario 5: A midwifery practice collects information on infant feeding rates along with health outcome and demographic information about the infant and the feeding parent. This data is used to generate a report with best practice *recommendations for other* midwifery practices

Is it **Research**?

- ❏ Systematic Investigation?
- ❏ Designed to develop or contribute to generalizable knowledge?

Does it involve **Human Subjects**?

- ❏ Living individuals
- ❏ Information or specimens obtained through intervention or interaction
- ❏ Information or specimens used, studied or analyzed

OR

- ❏ Living individuals
- ❏ Identifiable, private information or identifiable biospecimens are obtained, used, studied, analyzed, or generated

Research Ethics - The Belmont Principles

- July 12, 1974 - National Research Act created the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research.
- Tasked with outlining basic ethical principles for research
- They were directed to consider:
  - Difference between research and medicine
  - Role of risk/benefit assessment in determining appropriateness of research
  - Guidelines for selection of research subjects
  - Nature and definition of informed consent

Research Ethics - The Belmont Principles

01	**Respect for Persons**	• Individual autonomy • Special protection for protected classes • Informed consent
02	**Beneficence**	• Do not harm • Maximize potential benefits • Minimize potential harms • Risk/benefit analysis
03	**Justice**	• Burdens and benefits of research are even • Subject selection

Evidence and Ways of Knowing

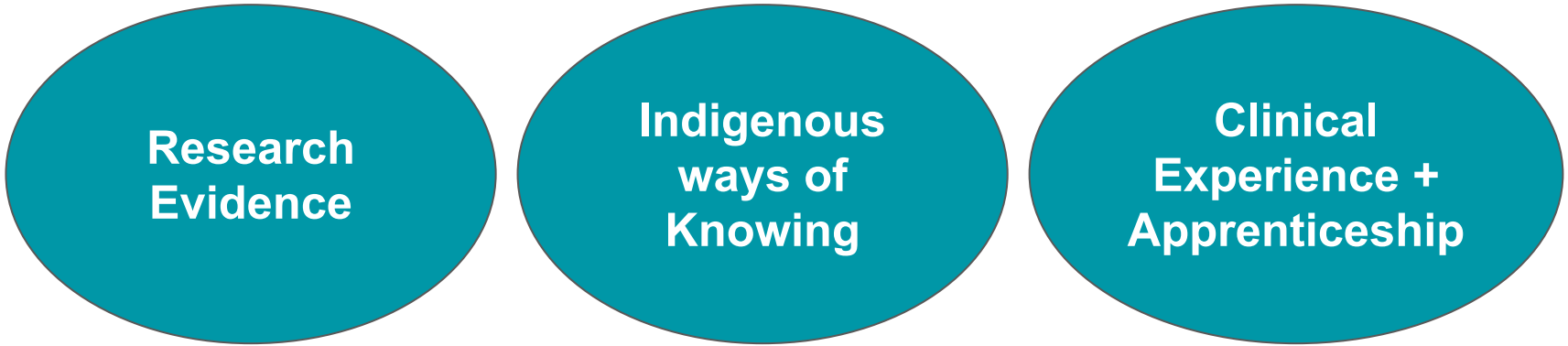
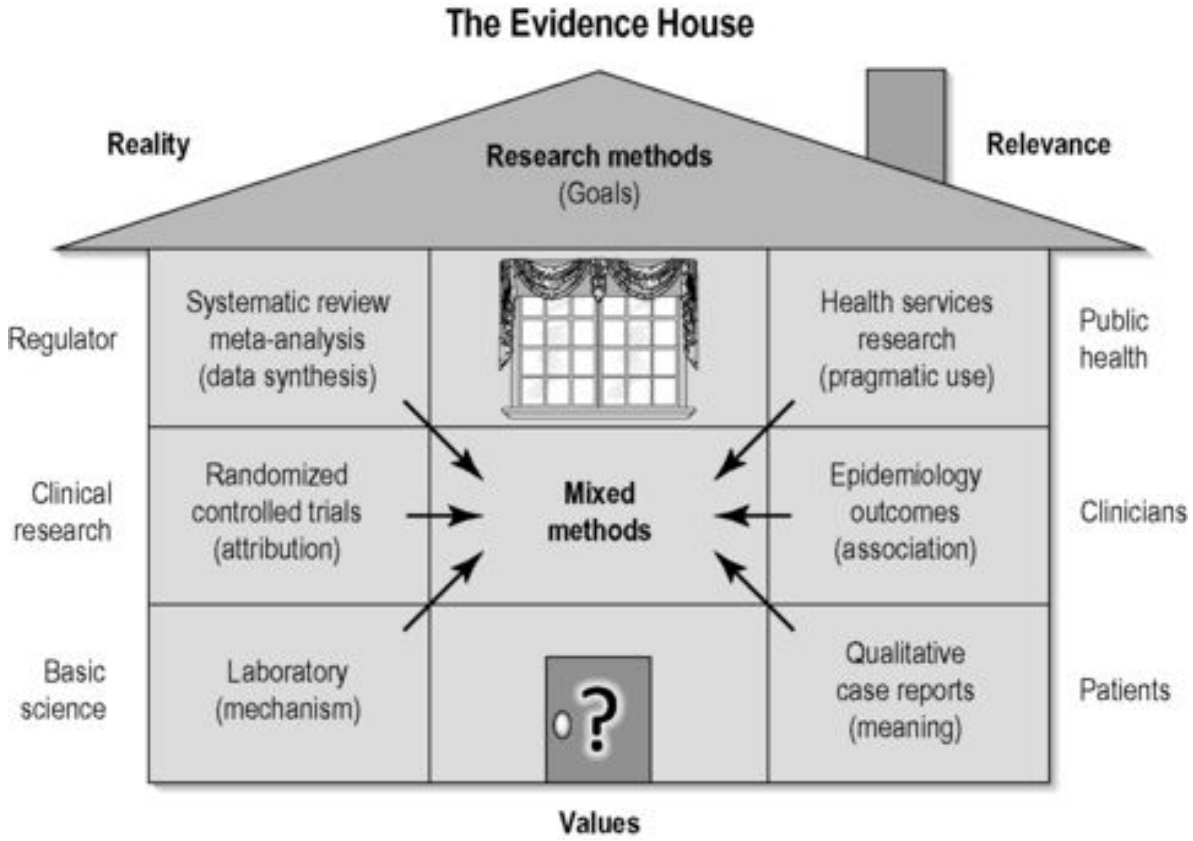


Image credit: Marcie Hopkins - University of Utah Health
Evidencebasedbirth.com, https://accelerate.uofuhealth.utah.edu/improvement/what-is-evidence-based-practice

Evidence - Research



https://clinicalgate.com/toward-standards-of-evidence-for-cam-research-and-practice/

Evidence - Research vs. Clinical Expertise

Clinical Research	Clinical Experience
Population Based (“universal”)	Individualized (“personal”)
Relates to general rules (abstract)	Focused on specific patient (concrete)
Public - available for all to comment	Tacit - passed on through apprenticeship
“Democratic” - allowing scrutiny by all	“Authoritative” - supporting a hierarchy based on experience
“Threat” to physician autonomy	Basis of physician autonomy

Adapted from “Clinical Jazz: Harmonizing Clinical Experience and Evidence-Based Medicine”

Evidence - Challenges to consider

Clinical Research	Clinical Experience
Designed to favor one approach over another and form a recommendation - patients who differ from those in the study may not respond as well	False attribution - lack of control group - “did it work because of what I did, or something else?”
Designed to be objective and free of judgement, but judgement is a critical part of patient care decisions	Forming clinical impressions is often based on estimate - we don’t do the math as we go
Focuses on efficacy - is this drug/procedure more effective, better. Does not account for economics, patient preferences, ethical issues, access, culture	Forming clinical impressions usually happens after consistent experience with a few individuals and then may lead to practice shift
Rigor over Relevance - designed to meet the standards of research, not necessarily to address certain clinical issues or patient types	Rose colored glasses - we see what we hope and expect to see, our patients tell or show us what they believe we want to see

Adapted from “Clinical Jazz: Harmonizing Clinical Experience and Evidence-Based Medicine”

Evidence - POEMs

Patient
Oriented
Evidence that
Matters

Adapted from “Clinical Jazz: Harmonizing Clinical Experience and Evidence-Based Medicine”

Critiquing Research

Reliability	**Validity**	**Bias**	**Rigor**
Accuracy and consistency of measurements	Are we measuring what we think we're measuring	An external factor that erroneously influences our results	How well the study is designed and conducted
● Elastic string to measure length ● Racialized groups	● BMI ● Proxy measures	● Recall bias ● Selection bias	● Collection tools - how are questions asked? By whom

Introduction to Research for Midwives, chapter 2