

**Adopt, Adapt, Advance:
Utilizing Evidence Based Practice,
Quality Improvement and Nursing
Research to Transform Pediatric
Hematology/Oncology Nursing
Practice**



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Disclosures

- Micah Skeens has nothing to disclose
- Mindy Bibart has nothing to disclose
- Misty Evans has nothing to disclose

Objectives

- Describe similarities between nursing research, evidence-based practice and quality improvement essential to pediatric hematology oncology nursing
- Discuss differences between nursing research, evidence-based practice and quality improvement essential to pediatric hematology oncology nursing
- Demonstrate appropriate use of each method of clinical inquiry when applied to a clinical hematology/oncology problem



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Quality Improvement



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What is QI?

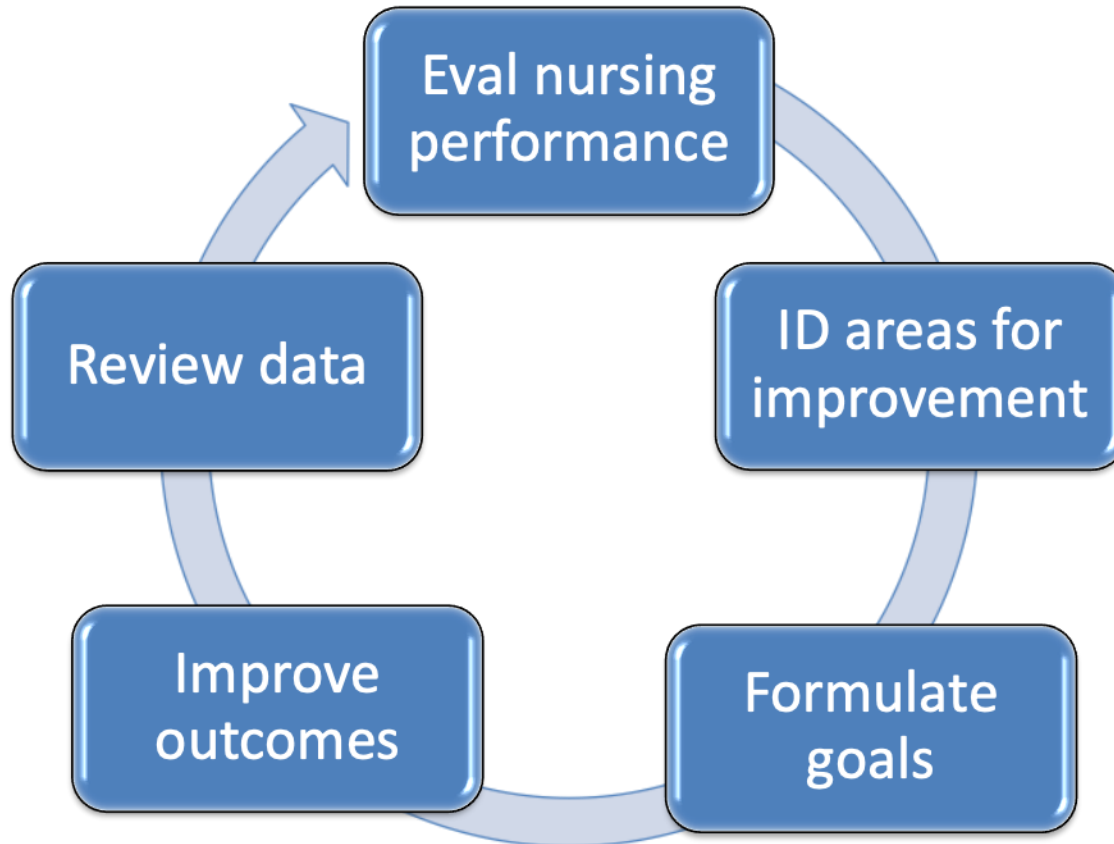
- **Systematic** and **continuous** actions that lead to **measurable improvement**
- Based on manufacturing, transportation principals
- Used when you know what to do – but need to determine **how best to do it.**

4 Principals of QI

- QI work as **systems and processes**
- Focus on **patients**
- Focus on being part of the **team**
- Focus on use of the **data**

**Least restrictive of
3 types of nursing investigation**

QI in Nursing



(American Nurse's Association, 2011)

Common Nursing QI Projects

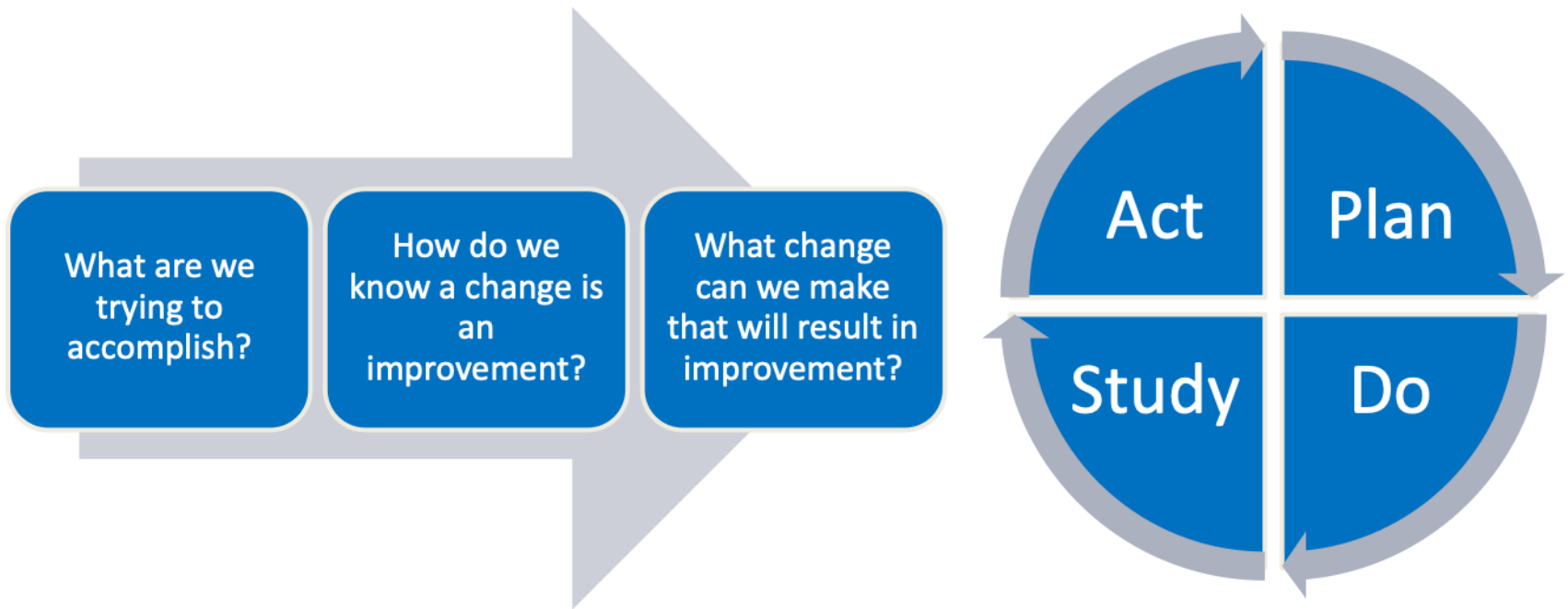
Patient Care	Administrative
Safety	Nurse Ratio
Falls	Engagement
Pressure Injury	Turn Over
Pain	Patient Satisfaction
HAI	Financials
Assessments	MAGNET projects

Clinical Question



How do we implement a lidocaine infusion process for patients with Sickle Cell Disease with opioid-resistant pain crisis?

Institute for Healthcare Improvement Quality Improvement Model



(Langley, G.L., Moen, R., Nolan, K. M., Nolan, C. L., & Provost, L. P., 2009)



It is not enough to do your best; you must know what to do and then do your best.

- W. Edwards Deming

AIM (Goal)

Component	Detail
We will ↑ or ↓ what	↓ pain score
In which patient population	SCD with opioid-resistant pain
From what	≥ 8 of 10
To what	≤ 6 of 10
By when	6 months
For how long	6 months



Outcome

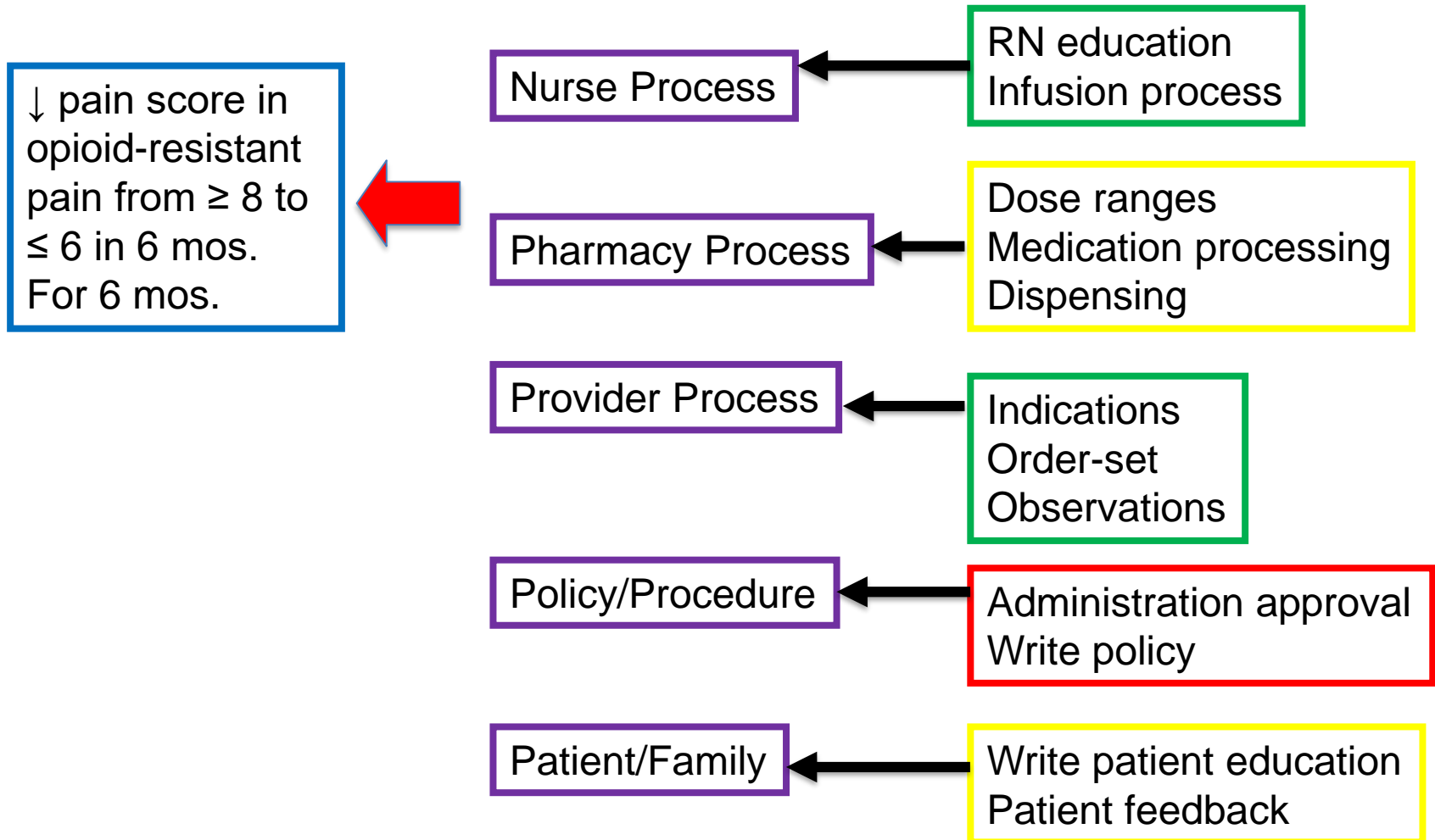


Process

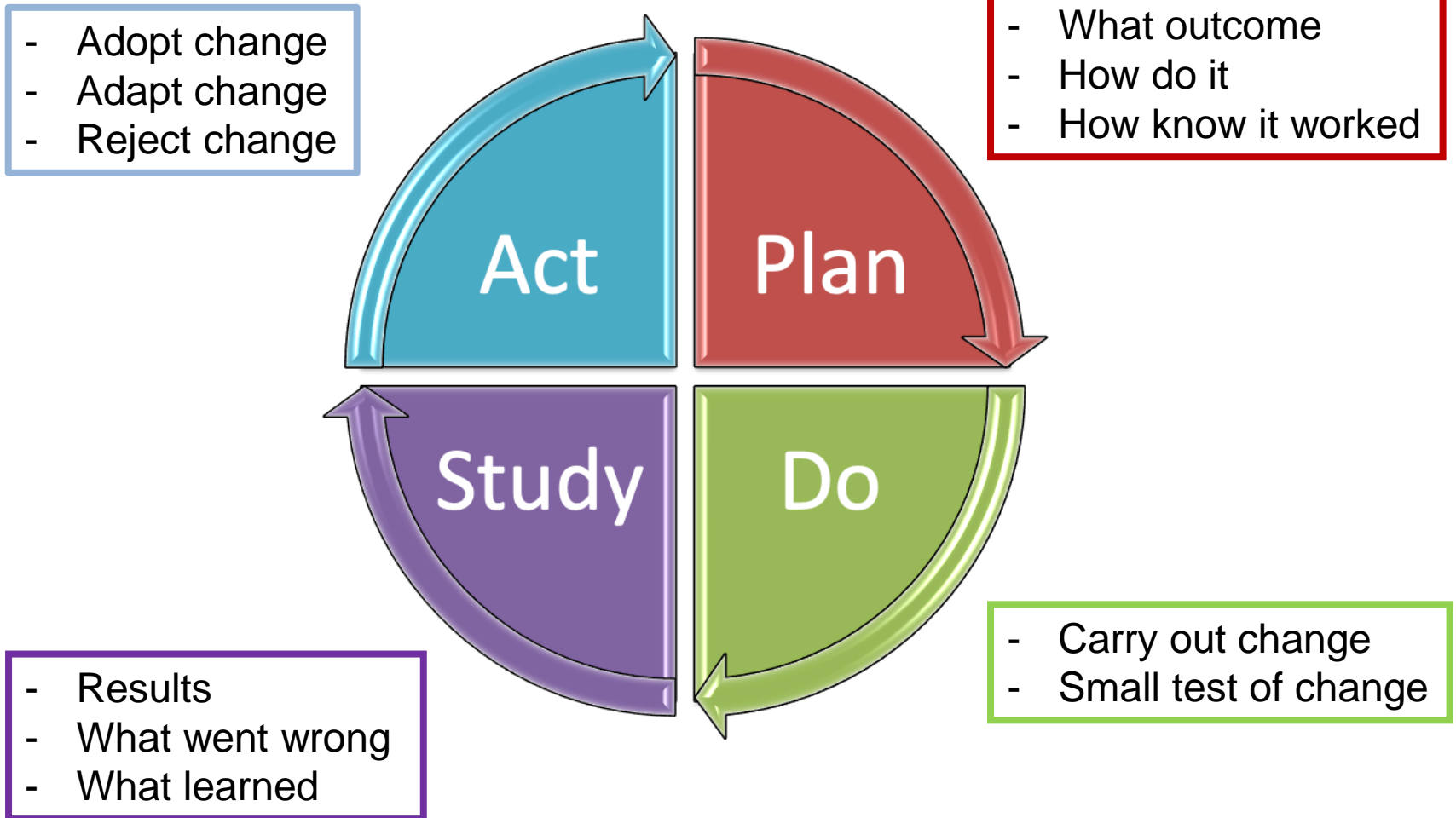


Balance

Key Driver Diagram (KDD)



PDSA

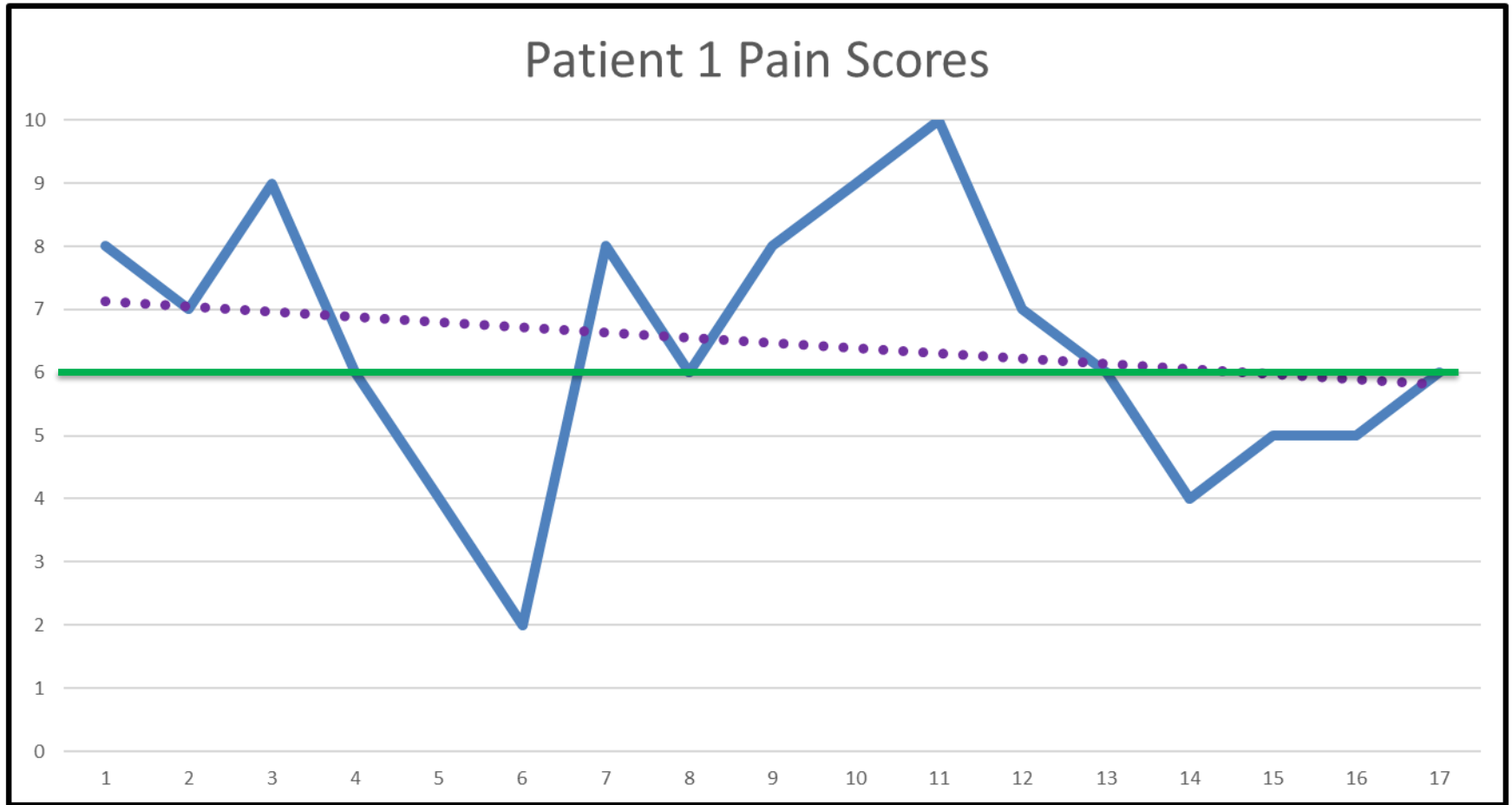




Without data, you are just another person with an opinion.

- W. Edwards Deming

Run Chart



Evidence Based Practice



Misty Evans, DNP, APRN, CPNP-AC, BMTCN

Evidence-Based Practice

“The conscientious integration of best research evidence with clinical expertise and patient values in the delivery of quality, cost-effective health care.”

- Burns & Grove, 2009

Importance of EBP

- Catalyst for translating research into practice
- Nursing Professionalism and interprofessional collaboration
- Improved patient outcomes
- Credentialing: 2019 Magnet revisions

What does research say?

Scientific
Evidence

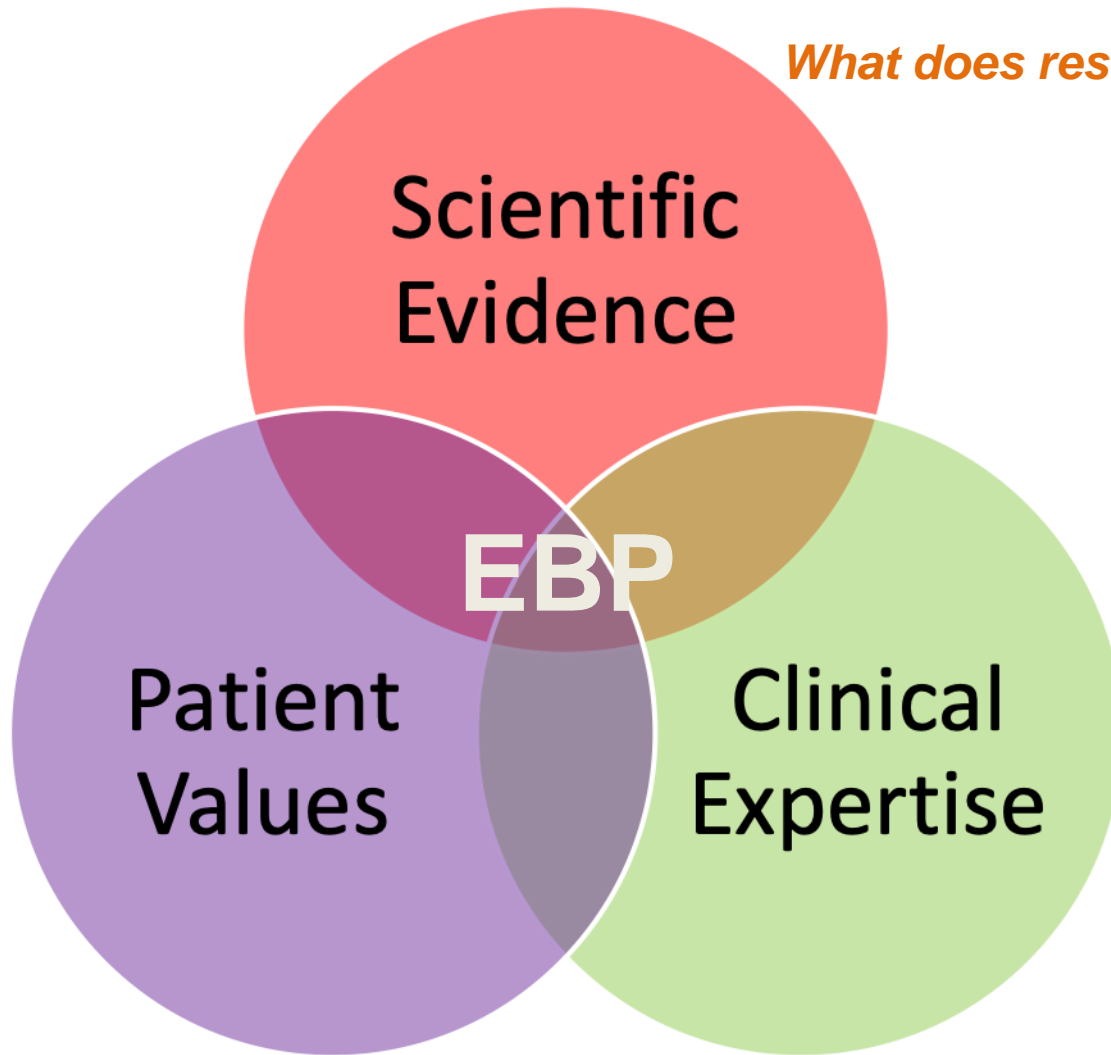
EBP

*What is
important to
your patient?
What is your
patient's
preference?*

Patient
Values

*What does
experience
tell you? What
has been the
experience of
your
colleagues?*

Clinical
Expertise





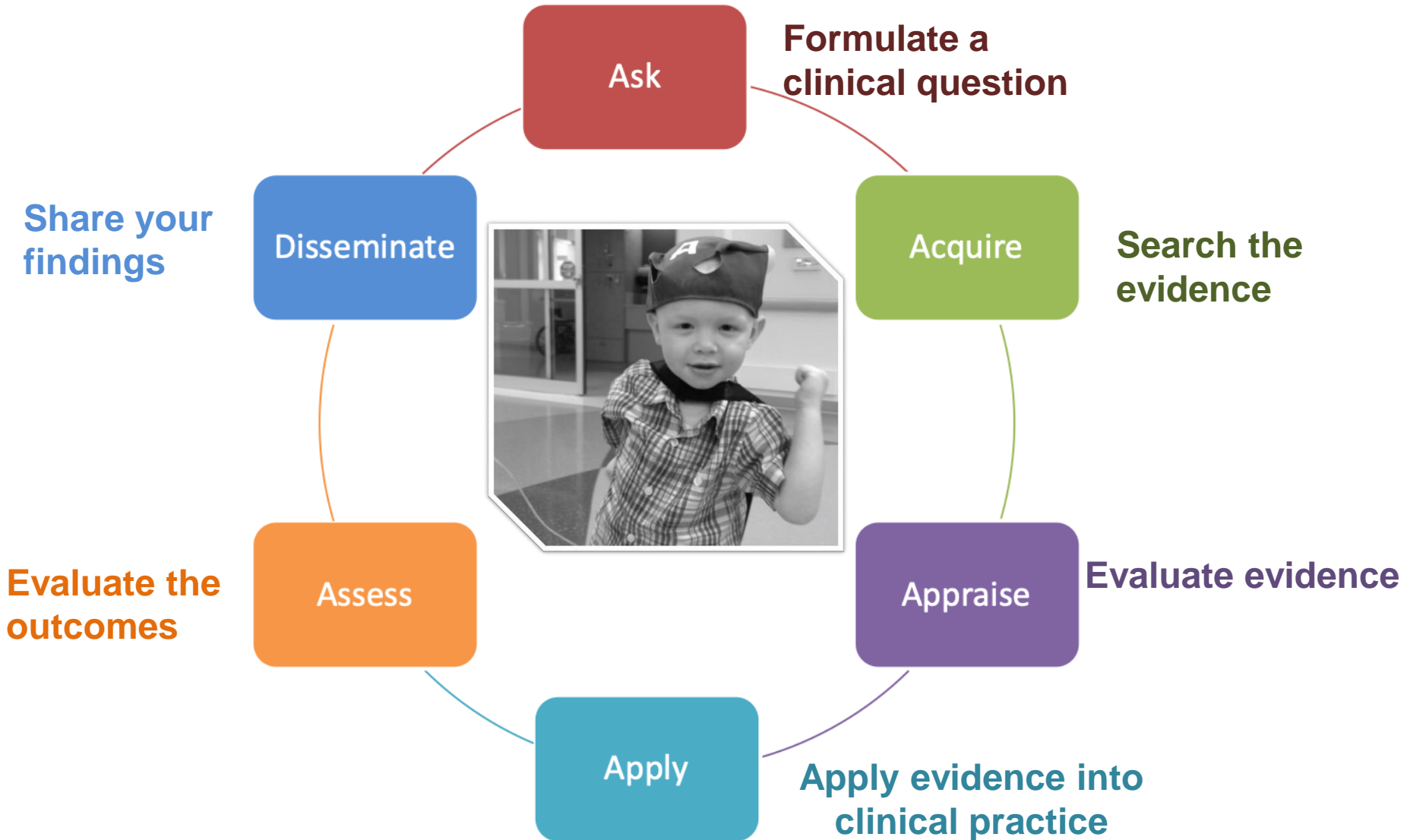
EBP

Evidence

Patient Values

Clinical Expertise

5 6 Step EBP Process



Case Scenario

- Julie is a 4 yo with high risk Neuroblastoma
- She is being admitted for Tandem 2 autologous stem cell transplant with carboplatin, etoposide, melphalan preparative regimen.
- Parents are asking for ways to prevent mouth sores.

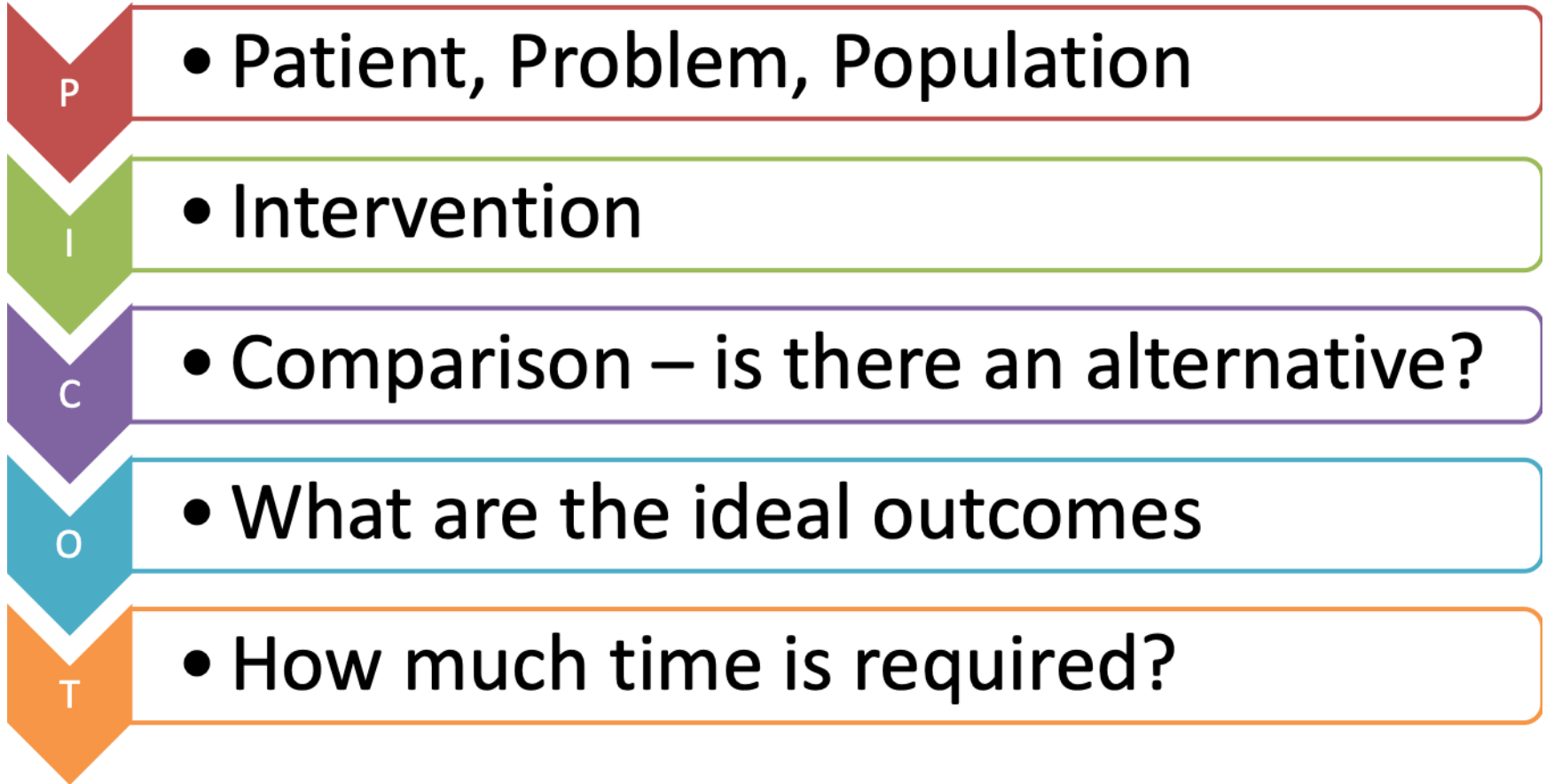


Step 1: Asking the Question

Why PICOT?



PICOT Question



Forming the Question



In _____ (P), how does _____ (I)
compared to _____ (C) influence
_____ (O) over _____ (T)?

Clinical Question

In pediatric cancer patients undergoing stem cell transplant, does the addition of cryotherapy reduce the incidence of oral mucositis compared to sodium bicarbonate rinse alone during the first 30 days following stem cell infusion?

Searching for Evidence



somewhere,
something incredible
is waiting
to be known

**The Cochrane
Library**

MEDLINE

**National
Guideline
Clearinghouse**

National Library of Medicine



**TRIP: Turning
Research into
Practice**

CINAHL

PubMed

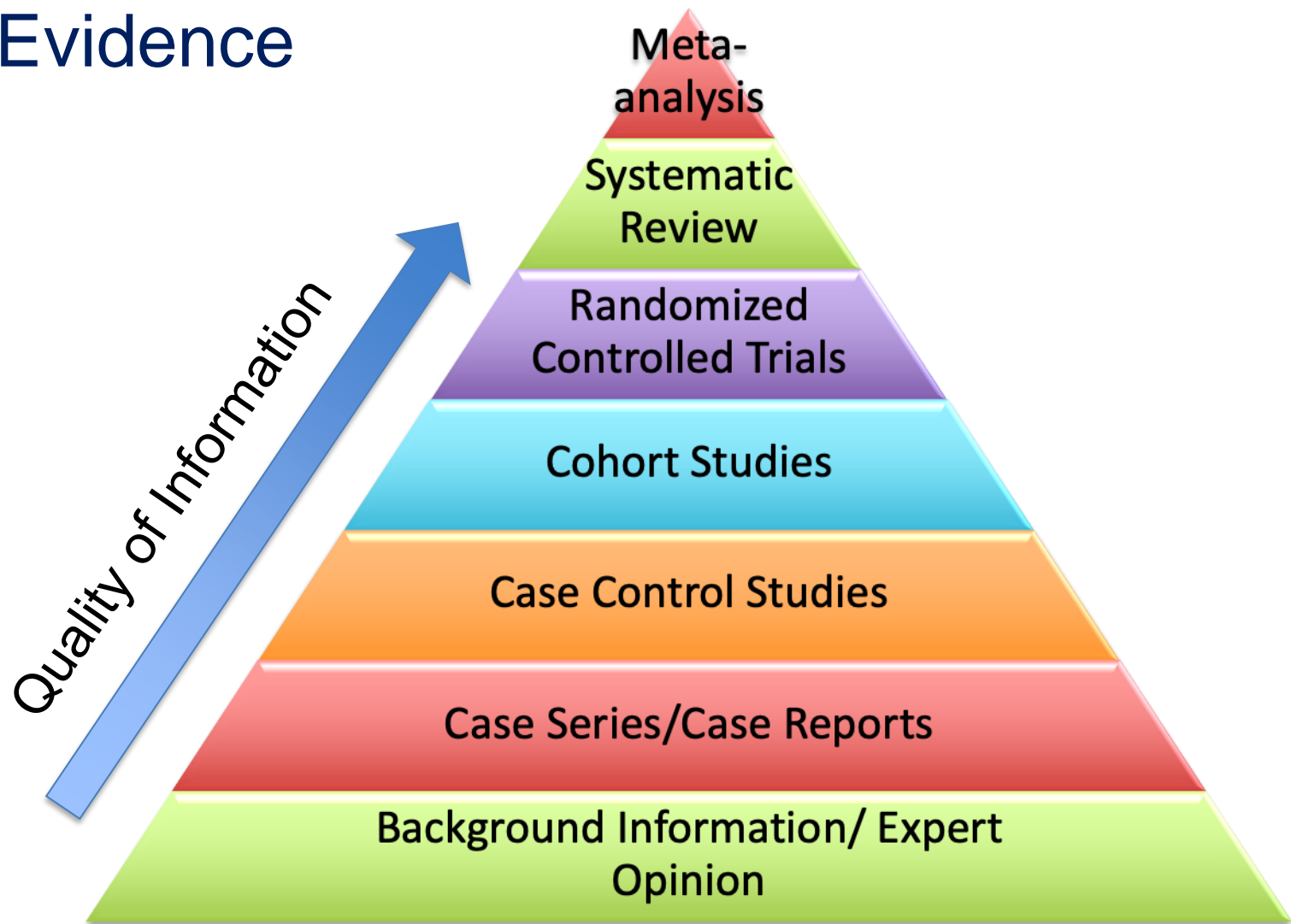
**Agency for
Healthcare
Research and
Quality
(AHRQ)**

Appraisal of Evidence

- Validity
- Clinical significance
- How useful or applicable is it to your patient?



Hierarchy of Evidence



Models for EBP

- Johns Hopkins Nursing EBP Model
- Stelter Model of Utilization Research
- The Iowa Model
- ACE Star Model of Knowledge Transformation
- Evidence-Based Practice Model for Staff Nurses

Application to Practice

Assess current practice (processes and outcomes)

Identify necessary changes to process/practice

Create a plan

Secure support from stakeholders

Implement changes to modify processes/practice

Evaluate outcomes

Communicate Findings



Nursing Research



Micah A. Skeens PhD RN CPNP

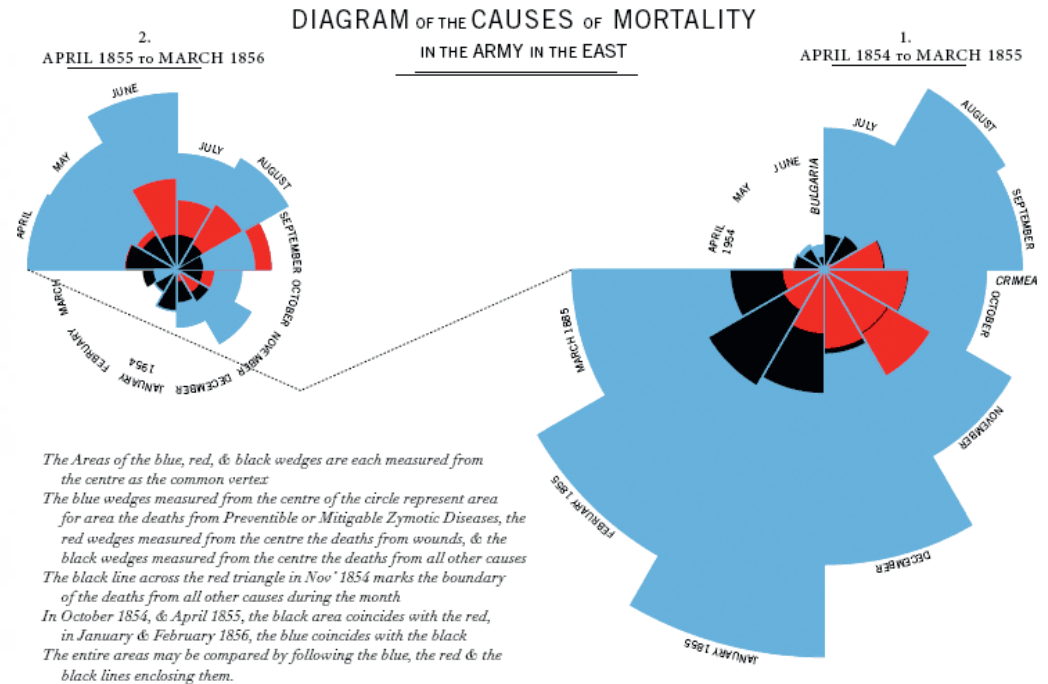
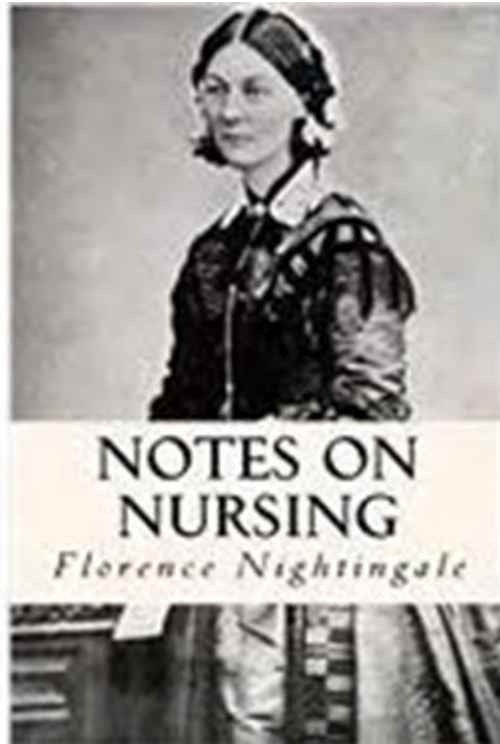
Nursing Research

“Systematic inquiry designed to develop knowledge about issues of importance to the nursing profession, including; nursing practice, education, administration and informatics.”

Polit & Beck (2004)



Nursing Research History



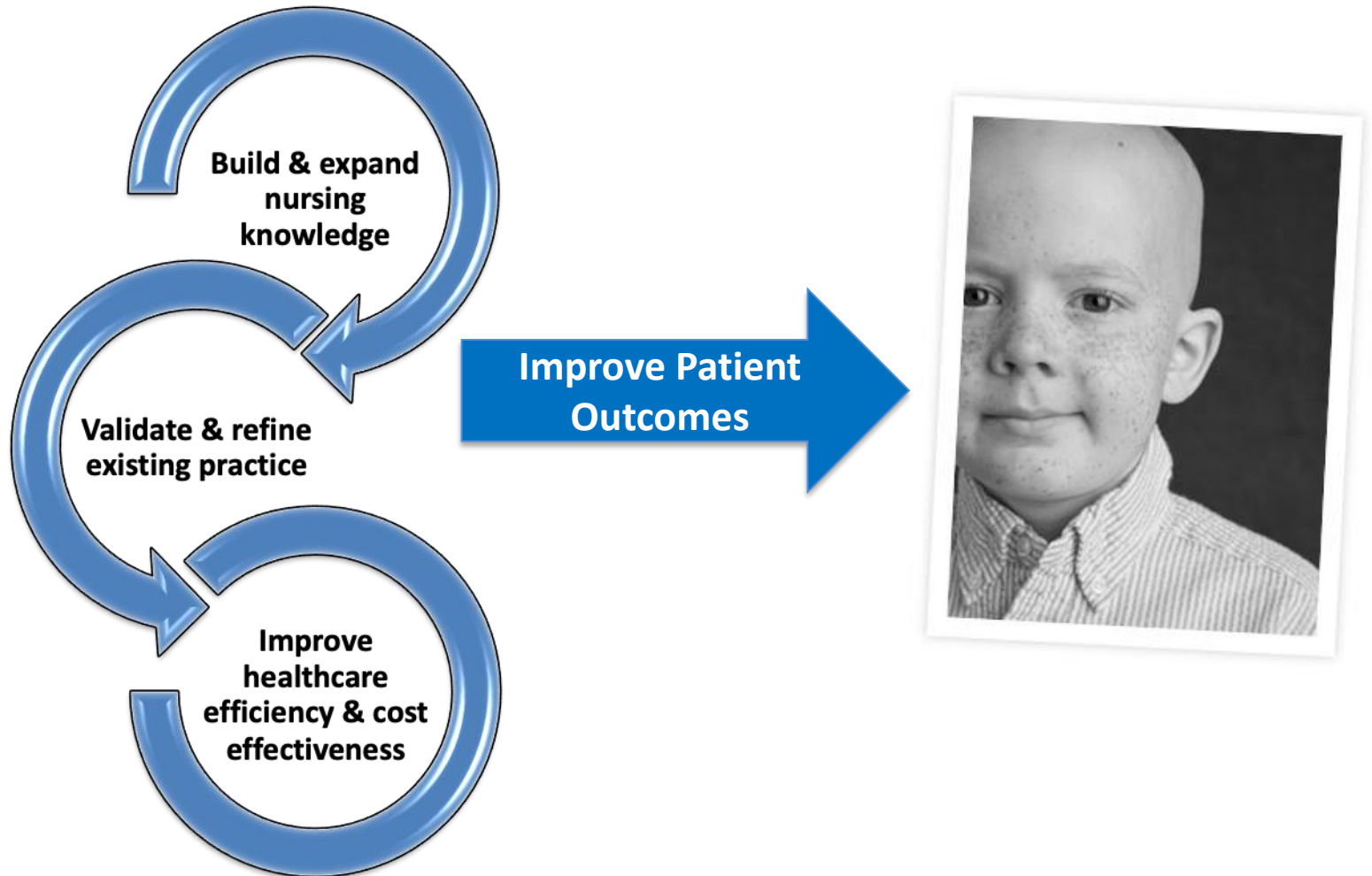
Nieswiadomy, Rose Marie, Bailey, Catherine. (2018). *Foundations of nursing research (7th)*. : Pearson.

Nursing Research

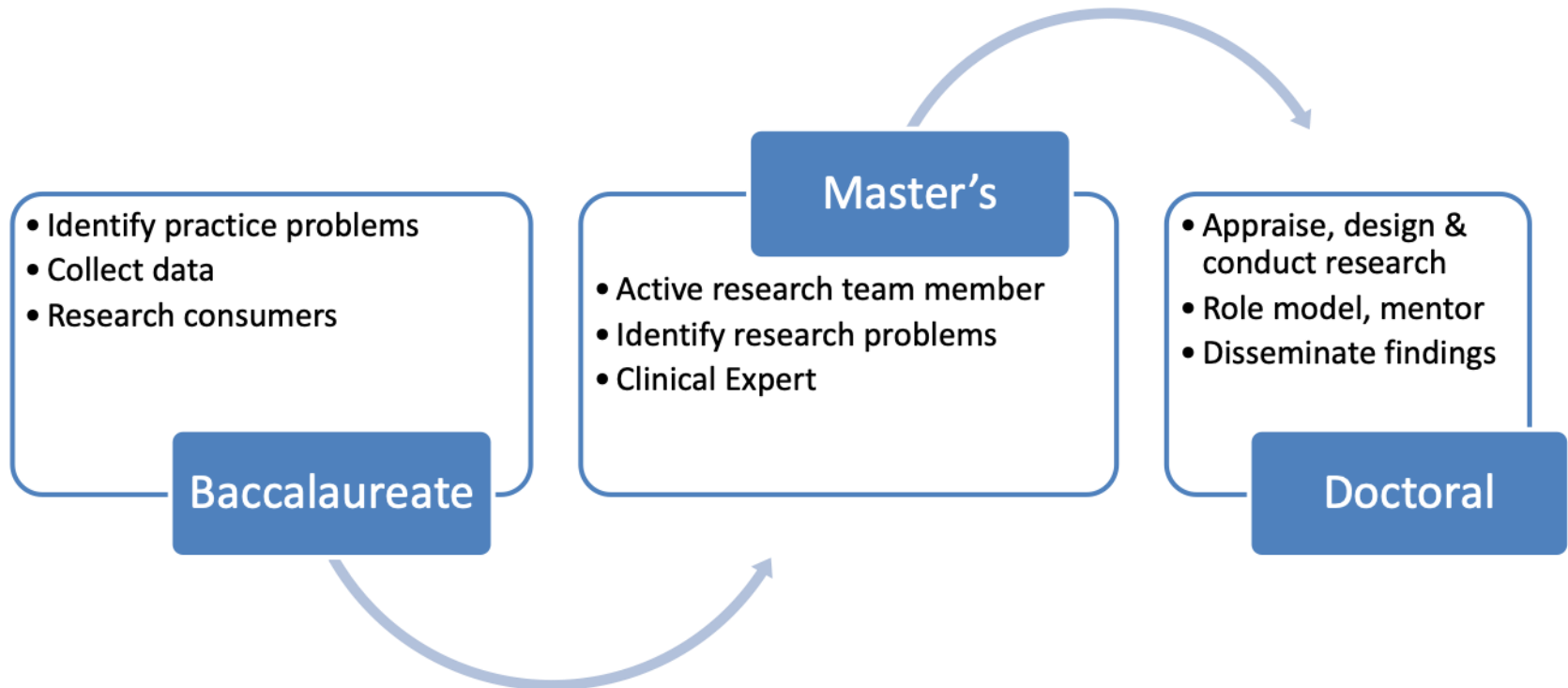
- Provides basis for scientific knowledge that forms the foundation of nursing practice
- Research links education, theory and practice



Why Nursing Research?



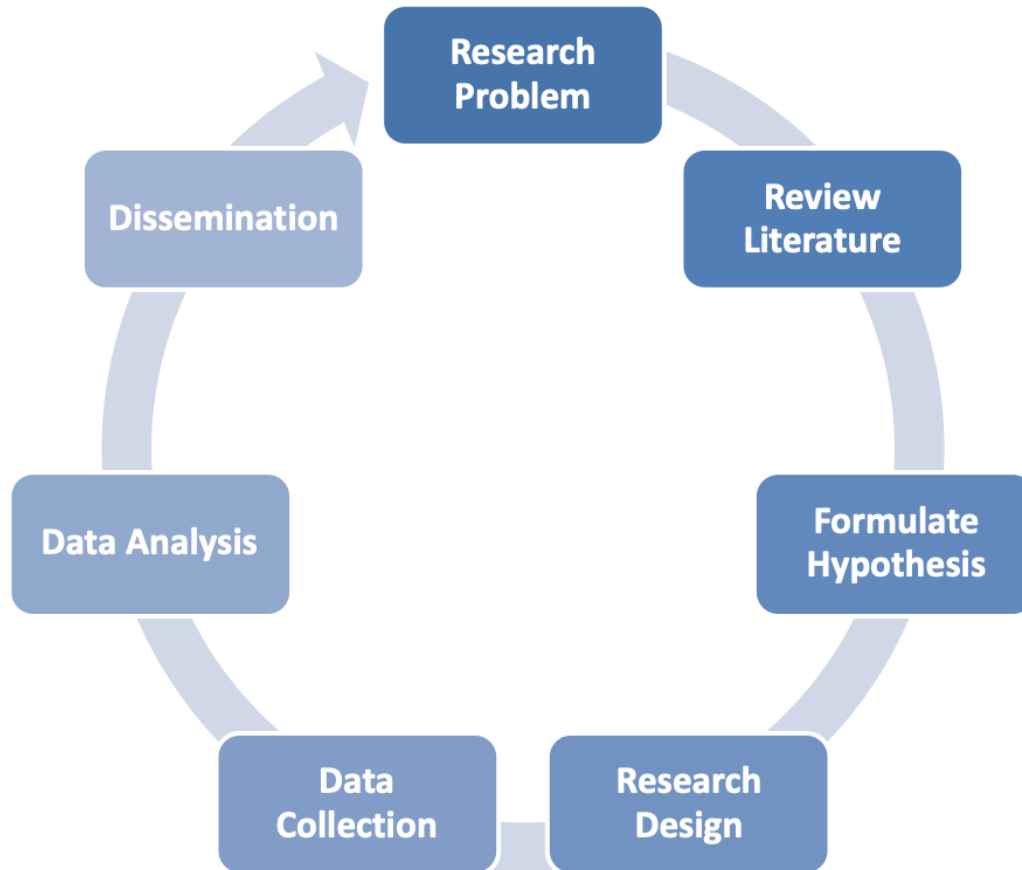
Who in Nursing Research?



Research Methods

	Quantitative	Qualitative
Objective	Quantify and generalize Measure incidence Test hypothesis/theory	Gain understanding Open-ended Hypothesis/theory generating
Approach	Deductive	Inductive
Design(s)	Experimental Quasi-experimental Non-experimental	Ethnography Phenomenology Grounded Theory
Data Collection	Numeric data/precise measurement Structured/ Standardized measures	Interviews Observations Focus groups
Data Analysis	Statistical relationships	Narrative report Coding and themes

Research Process



The Problem

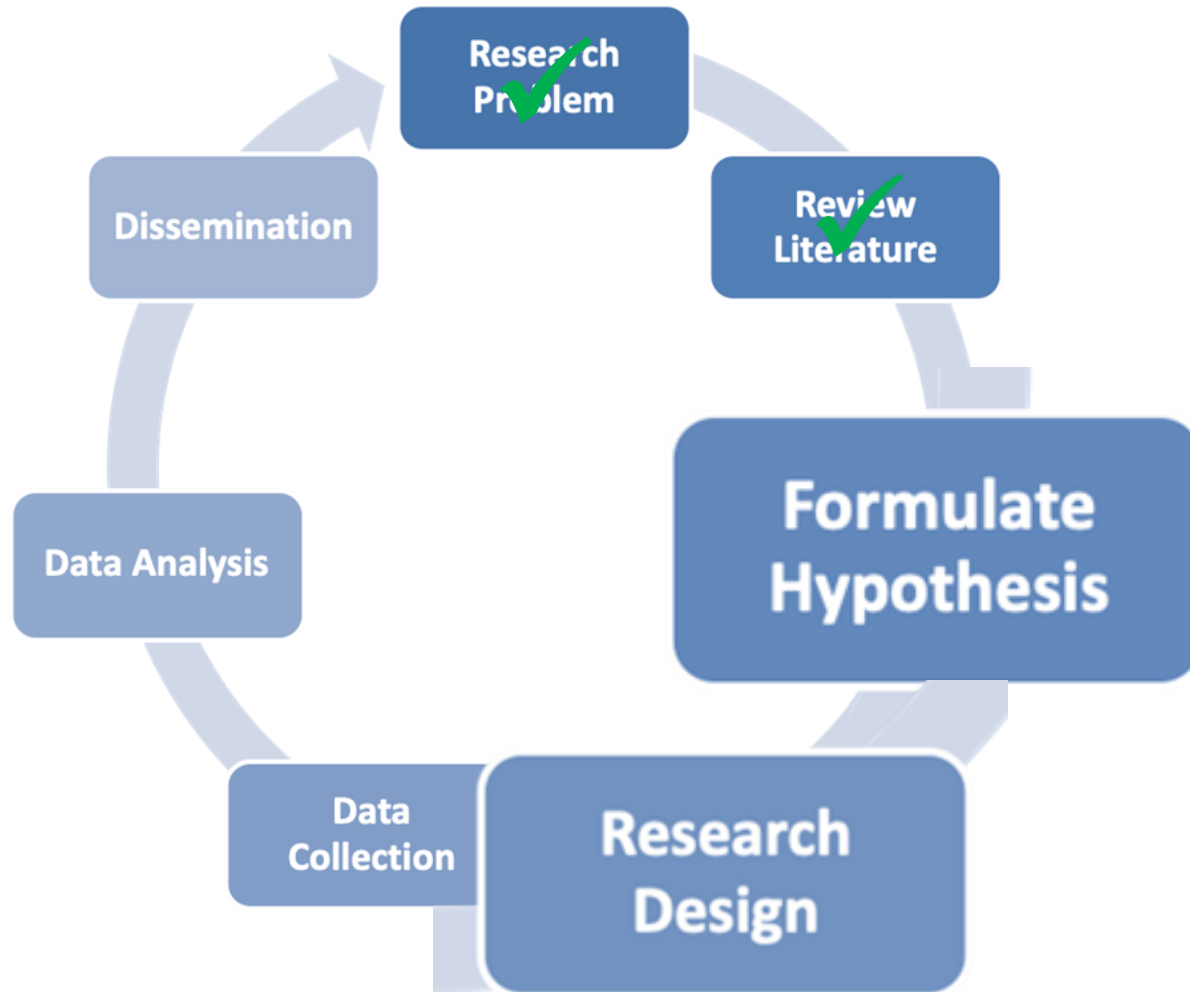
- Julie is now Day + 8 post- transplant
- Severe mucositis
- Receiving PCA and prn pain meds
- Both Julie and mom are distraught



What is the research question

Which non-pharmacologic intervention is most effective in decreasing mucositis pain in transplant patients??



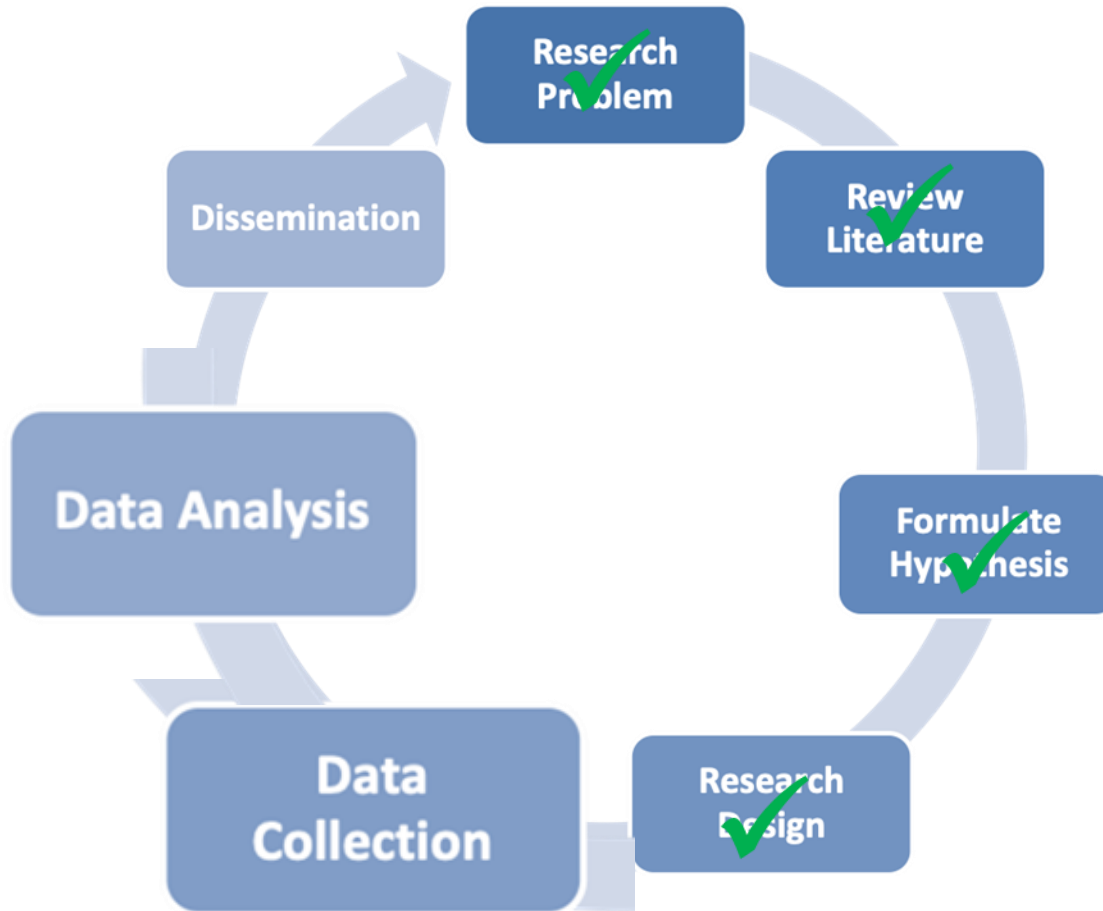


- **Hypothesis**

- H1 Distraction with the iPad or child life will be more likely than aromatherapy to decrease mucositis pain scores in high risk neuroblastoma patients from Days +3 to +10 post HSCT

- **Design**

- Is it randomized? Yes – then experimental
- No, comparing two non-randomized groups? then quasi-experimental



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Data Collection

- Objective
- Systematic
- Consistent
- Standardized measures when possible
- Reliability (consistency) and Validity (accuracy)

Data Analysis

- Descriptive statistics
 - Describe and summarize data
 - Levels of measurement
 - Mean, median
- **Call your friendly statistician!!!!**
 - Hypotheses
 - Statistical processes + logic = test
- Practical vs Statistical Significance

Dissemination



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Ways to Disseminate



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“Research is to see what everybody else has seen, and to think what nobody else has thought.”

~ Albert Szent-Gyorgyi



Comparison

	QI	EBP	Research
Purpose	Improve patient care, workflow, productivity	Change practice using best evidence	Systematic discovery of new knowledge
Question	Are we doing the best thing the right way?	Are we doing the best thing?	What is the best thing to do?
Method	PDSA	Level of Evidence, Iowa Model	Qualitative Quantitative
Sample	Unit/Hospital level	Patient Population	Generalizable
Human Subjects	?IRB	Potentially IRB	Need IRB
Implications	Improve Process	Impact/Change Practice	Understand Process/Change
Dissemination	Unit/Hospital May publish	Practice standards May publish	Scientific Community Expected publication

Discussion



“Let us never consider ourselves finished nurses... we must be learning all of our lives.”

~Florence Nightingale

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