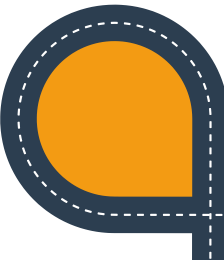


Pulling Out All the Stops for Interdisciplinary Continuous Improvement

Lindsey N. Green
DNP, MN, APRN-CNS, CCNS, RNC-NIC

DISCLOSURES

Relevant relationships



Financial Disclosures
Independent Contractor for Dr. Brown's Medical

Non-financial Disclosures
None

OBJECTIVES

The road ahead will help you...

01
Define implementation science and its considerations for translation of evidence.

02
Relate two key differences in change management and change leadership.

03
Differentiate between at least two methodologies for implementation of change and continuous improvement.



TERMINOLOGY

What are we talking about?

- 01 Research
- 02 Evidence-based practice
- 03 Process improvement
- 04 Quality improvement

A diagram with four colored arrows pointing in different directions: a purple arrow pointing left, a yellow arrow pointing down, a red arrow pointing up and right, and a green arrow pointing up and right. Each arrow has a dashed line along its path. A small yellow diamond icon with a black border is in the bottom left corner.

WHY?

Continuous improvement is important because we aim to deliver...

A diagram showing a winding path that starts from the bottom left and moves upwards. The path is divided into three colored sections: orange at the bottom labeled 'EFFECTIVE CARE', green in the middle labeled 'RELIABLE CARE', and blue at the top labeled 'SAFE CARE'. Each section has a location pin icon. A small yellow diamond icon with a black border is in the bottom left corner.

A diagram with four colored paths (green, orange, red, purple) that curve around a central text. The paths are labeled 'What' (green), 'Why' (red), 'How' (orange), and 'Who' (purple). The central text reads 'IMPLEMENTATION SCIENCE' and 'Adoption of evidence'. A small yellow diamond icon with a black border is in the bottom left corner.

What

IMPLEMENTATION SCIENCE

What is it?

01

02

03

01
methods and strategies

02
uptake of evidence and research

03
regular use by practitioners and policy makers

Implementation science is the scientific study of methods and strategies that facilitate the uptake of evidence-based practice and research into regular use by practitioners and policymakers. [University of Washington, 2023](#)

IMPLEMENTATION SCIENCE

Why

Why is it important?

- Knowledge of what really works
- Tools to use in our own hospital
- Tools that can be used again by other units or other healthcare community members

IMPLEMENTATION SCIENCE

How

How is it used?

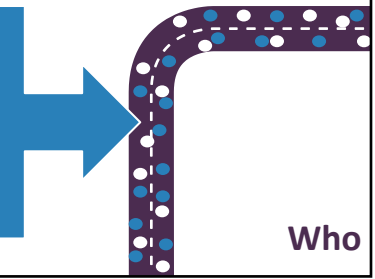
- Aim:** evaluate implementation strategy
- Intervention:** customize for clinician behavior and practice change
- Unit of analysis:** clinician, team, department, organization
- Outcomes:** guidelines for implementing change

IMPLEMENTATION SCIENCE

Who is involved?

Perinatal Stakeholders

- Therapists - OT/PT/SLP
- Nurses
- Respiratory Therapists
- Pharmacists
- Dietitians
- Case Managers/Social Workers
- Advanced Practice Providers
- Physicians
- Leaders
- Interdepartmental partners - perinatal and organizational
- Volunteers
- Parents/Families*



CHANGE STRATEGY

Management and Leadership



CHANGE MANAGEMENT
a set of basic tools or structures intended to keep any change effort under control

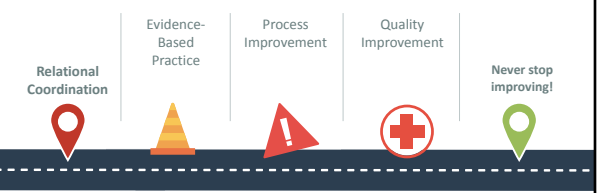
CHANGE LEADERSHIP
the driving forces, visions, and processes that fuel transformation



definitions from Forbes, 2011

METHODOLOGIES

How to continuously improve



Relational Coordination

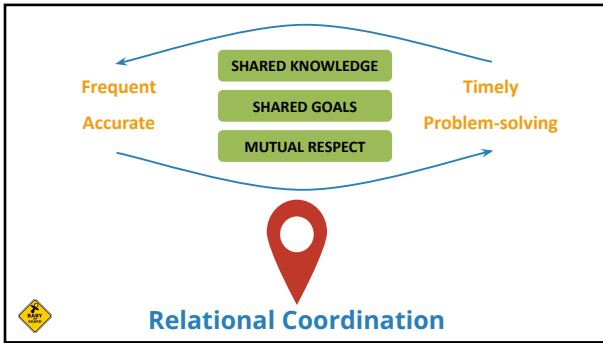
Evidence-Based Practice

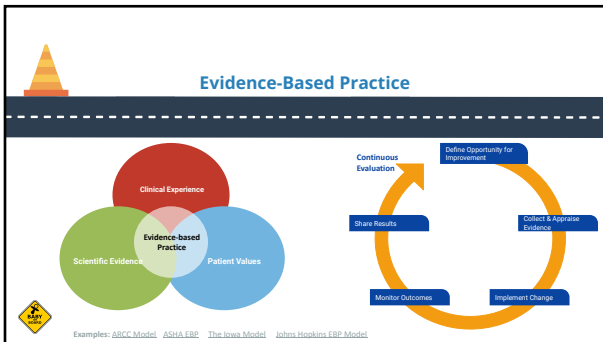
Process Improvement

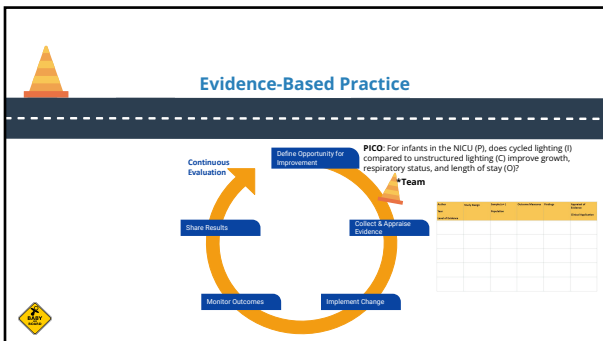
Quality Improvement

Never stop improving!



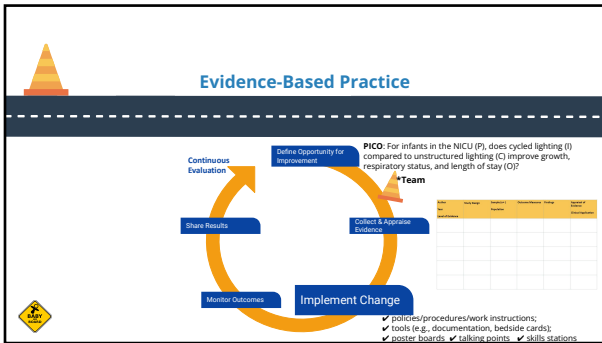






Author Year Level of Evidence	Study Design	Sample (n=) Population	Outcome Measures	Findings	Appraisal of Evidence Clinical Application

Author Year Level of Evidence	Study Design Intervention	Sample (n=) Population	Outcome Measures Collect & Appraise Evidence	Findings	Appraisal of Evidence Clinical Application
Marzouk, et al. 2019 Moderate https://doi.org/10.33540/2864385.2019.v2.i1.a.23	RCT in a single unit Intervention - cycled lighting (12 hr light during day, 12 hr dark during night) Control - 24 h light	n = 40 preterm infants > 20 - cycled lighting > 20 - continuous lighting preterm infants in NICU	<ul style="list-style-type: none"> weight cardiorespiratory function (HR, RR, SpO2) duration of gavage feeding and time to oral feeding length of stay 	improved weight and cardiorespiratory function for infants who received cycled lighting	small study with good potential for replicability cycled lighting should be considered as part of developmental care for preterm infants
Ming & Olsson 2016 High https://doi.org/10.1002/14651858.CD010182.2016	Systematic Review 12 hr light/12 hr dark	9 RCTs and quasi-randomised trials 544 infants	<ul style="list-style-type: none"> weight neurodevelopmental outcomes (e.g., sleep, stress, ROP, etc) length of stay 	minimal statistical significance but findings leaned toward improved outcomes	quality of evidence of the studies included was low overall, but results favor cycled lighting
Vasquez-Ruiz, et al. 2014 High https://doi.org/10.1089/las.2014.0012	RCT light/dark cycles using a helmet	n = 38 infants 2-34 wk infants in NICU	<ul style="list-style-type: none"> weight time to discharge 	Improved physiological development, rapid weight gain, and decreased hospital discharge time	small study with good potential for replicability cycled lighting should be considered as part of developmental care for preterm infants
Zores-Koenig, et al. 2020 Moderate https://doi.org/10.1111/nap.12173	Comprehensive Literature Review neonatal light environment considerations	31 studies	practical recommendations (general principles and application) of neonatal light environment with various outcomes	light should not exceed 100 lux; light changes should be gradual; provide light protection for all infants	achieved aim of identifying practical use of light the light environment can impact the experience of infants, parents, and caregivers



Evidence-Based Practice

PICO: For infants in the NICU (P), does cycled lighting (I) compared to unstructured lighting (C) improve growth, respiratory status, and length of stay (O)?

Step	Start	End	Responsible	Status	Notes

- ✓ policies/procedures/work instructions
- ✓ tools (e.g., documentation, bedside cards)
- ✓ poster boards ✓ talking points ✓ skills stations

process and outcome measures

Evidence-Based Practice

PICO: For infants in the NICU (P), does cycled lighting (I) compared to unstructured lighting (C) improve growth, respiratory status, and length of stay (O)?

Step	Start	End	Responsible	Status	Notes

- ✓ policies/procedures/work instructions
- ✓ tools (e.g., documentation, bedside cards)
- ✓ poster boards ✓ talking points ✓ skills stations

process and outcome measures

Process and Quality Improvement

Plan Do Study Act

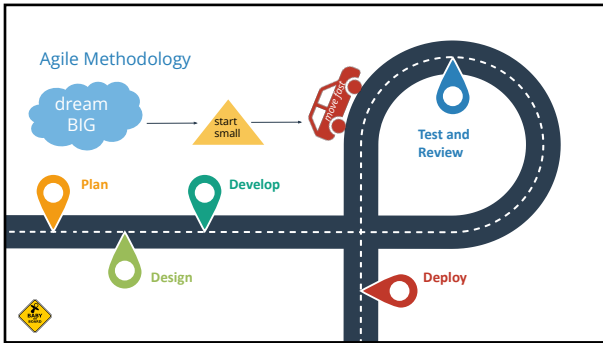
Rapid Continuous Improvement

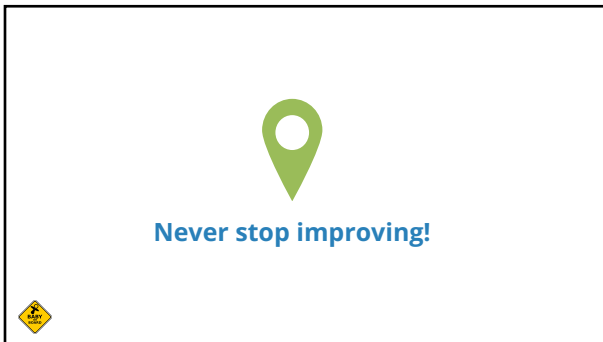
Agile

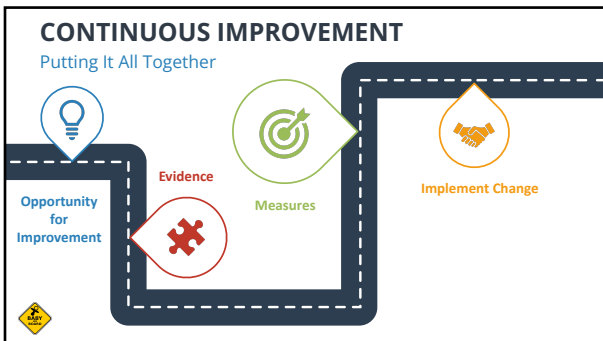
TQM PDSA Quality Assurance and Performance Improvement

Lean Six Sigma RCI

QAPI Kaizen Total Quality Management







REFERENCES

EBP & Implementation Science

- Bauer, M., & Kirchner, J. "Implementation science: What is it and why should I care?" *Psychiatry Research*, vol. 283, 2020.
- Dang, D., Dearholt, S., Bissett, K., Asceri, J., & Whalen, M. (2022). *Johns Hopkins evidence-based practice for nurses and healthcare professionals: Model and guidelines*, 4th ed. Sigma Theta Tau International
- Frankel A, Harnden C, Federico F, Lenox Edwards J. A Framework for Safe, Reliable, and Effective Care. White Paper. Cambridge, MA: Institute for Healthcare Improvement and Safe & Reliable Healthcare; 2017.
- Iowa Model Collaborative. (2017). Iowa model of evidence-based practice: Revisions and validation. *Worldviews on Evidence-Based Nursing*, 14(3), 175-182. <https://doi.org/10.1111/wvn.12223>
- Rapport, F., et al. "The struggle of translating science into action: Foundational concepts of implementation science." *Journal of Evaluation in Clinical Practice*, vol. 24, no. 1, 2018, pp. 117-126.
- Westerlund, A., Nilson, P., & Sundberg, L. "Implementation of implementation science knowledge: The research-practice gap paradox." *Worldviews on evidence-based nursing*, vol. 16, no. 5, 2019, pp. 332-334.



This presentation design is from Showee.com © - Creative & Free PowerPoint Templates

REFERENCES

Change Management and Change Leadership

- Anderson, K. "What is change leadership?" *Business Insights*, Harvard Business School Online, 2022. <https://online.hbs.edu/blog/post/what-is-change-leadership>
- Kotter, J. "Change management vs change leadership - What's the difference?" *Leadership Strategy*, Forbes, 2011. <https://www.forbes.com/sites/johnkotter/2011/07/12/change-management-vs-change-leadership-what-is-the-difference>
- Li, S.A., et al. "Organizational contextual features that influence the implementation of evidence-based practices across healthcare settings: A systematic integrative review." *BMC Systematic Reviews*, vol. 7, no. 72, 2018.
- Shantou, D., et al. "Importance of leadership style towards quality of care measurements in healthcare settings: A systematic review." *Healthcare (Basel)*, vol. 5, no. 4, 2017, pp 73.
- Relational Coordination
"What is relational coordination?" *Brandeis: The Heller School for Social Policy and Management*, 2023. <https://heller.brandeis.edu/relational-coordination/about-rc/index.html>
- Agile Methodology
Boustani, M., Alder, C., & Solid, C. "Agile implementation: A blueprint for implementing evidence-based healthcare solutions." *Journal of American Geriatric Society*, vol. 66, no. 7, 2018, pp. 1372-1376.
- Holden RJ, Boustani MA, Azar J. "Agile innovation to transform healthcare: innovating in complex adaptive systems is an everyday process, not a light bulb event." *BMJ Innovations*, vol. 7, no. 2, 2021, pp. 499-505.



This presentation design is from Showee.com © - Creative & Free PowerPoint Templates

THANK **Y**OU!

Contact Lindsey Green at
GreenNeoCNS@gmail.com
