

Considering Implementation

Learning Health System Series Part 4: Considering Implementation in Learning Health Systems: From Research to Routine Practice

HSPN Monthly Webinar

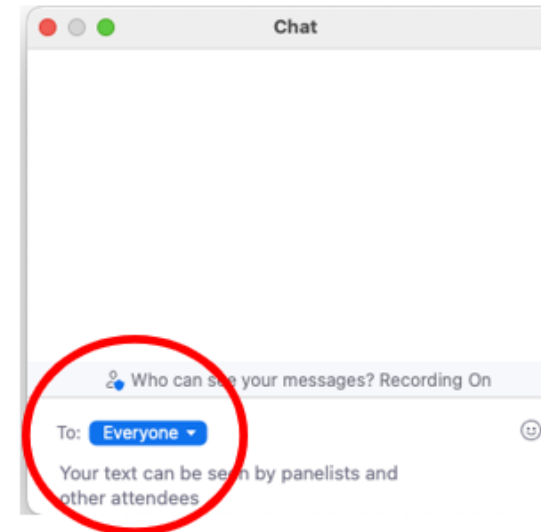
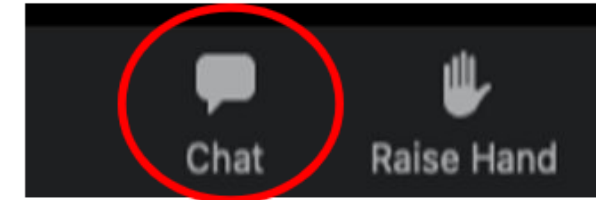
September 24, 2024

Welcome & thank you for joining us!

Please let us know who you are by introducing yourself (name & OHT or other org)

➤ Open Chat

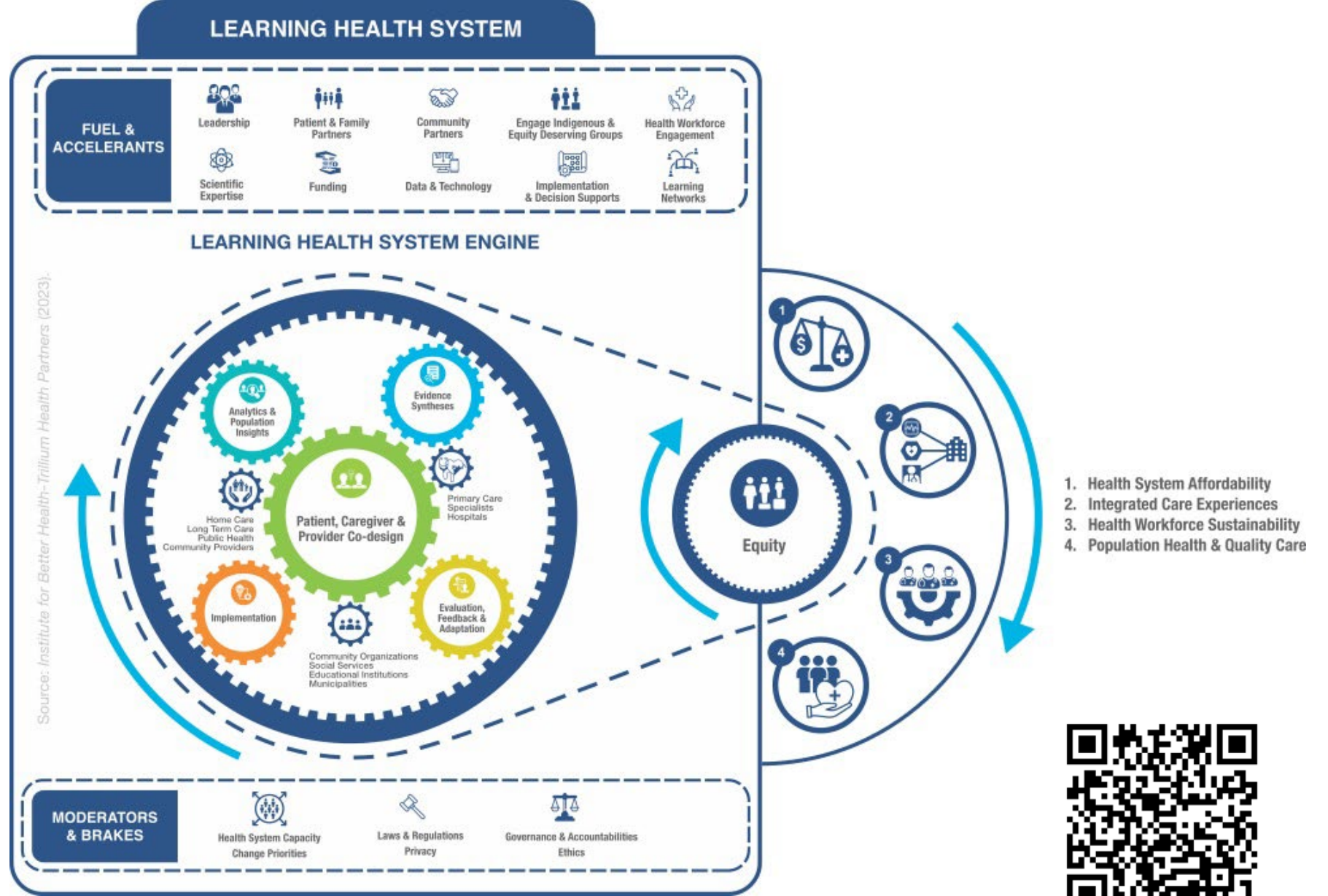
➤ Set response to **everyone** in the chat box



Land Acknowledgement

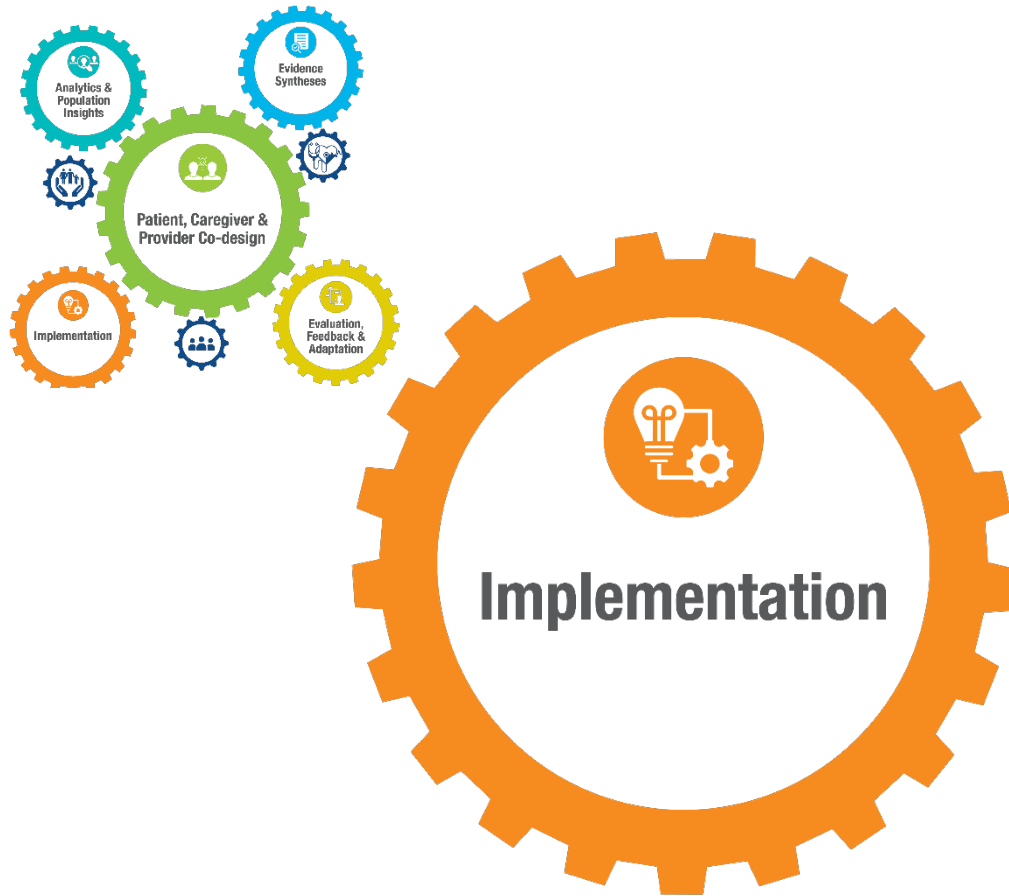
We wish to acknowledge this land on which the University of Toronto operates. For thousands of years it has been the traditional land of the Huron-Wendat, the Seneca, and the Mississaugas of the Credit. Today, this meeting place is still the home to many Indigenous people from across Turtle Island and we are grateful to have the opportunity to work on this land.

LEARNING HEALTH SYSTEM ACTION FRAMEWORK



SOURCE: *Institute for Better Health-Trillium Health Partners* (2023).

Learning Gear 4: Implementation



Description: Systematically converting research findings and other evidence-based practices into routine and “sticky” practices that enhance the quality and impact of health services.

Sample Questions: How to stage implementation? What implementation/change management methods & communication channels should be used? How can behavioral motivation be built? How to best train people for new work, or new ways of receiving care?

Health System Affinities: Quality improvement teams, Lean/Six Sigma leaders, project management teams, health informatics, change management trainings etc.

Poll 1

1. Have you joined us for an HSPN webinar previously? (Single Choice)

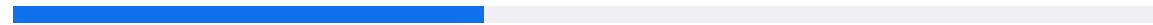
*

92/92 (100%) answered

Yes. I have participated previously. (54/92) 59%



No. This is my first event. (38/92) 41%



Community of Practice

Evaluation and Performance Improvement for OHTs

Who is it for?

- People working on evaluation and performance improvement in OHTs

What can members do?

- Share experience across OHTs
- Access and share evaluation and measurement resources
- Connect at monthly teleconferences
 - Second Tuesday of the month, 12:00 -1:00 pm
 - Past Topics included Using IDS, Evaluating Patient Engagement, Survey Methods

Upcoming CoP meetings

2nd Tuesday
of the month,
12:00-1:00 pm

Oct 8

*Assessing Learning Health System Capabilities:
A Self-Assessment Tool for Continuous Improvement*

Register here: <https://us02web.zoom.us/meeting/register/tZIkfuGorj0sE9BNLn0VwxczhJ80810jdUlc>

(Check the chat for the link)

Nov 12

Analyst Café: Sharing experience and challenges across OHTs

Check the OHT Shared Space for registration after our next meeting

How do I join?

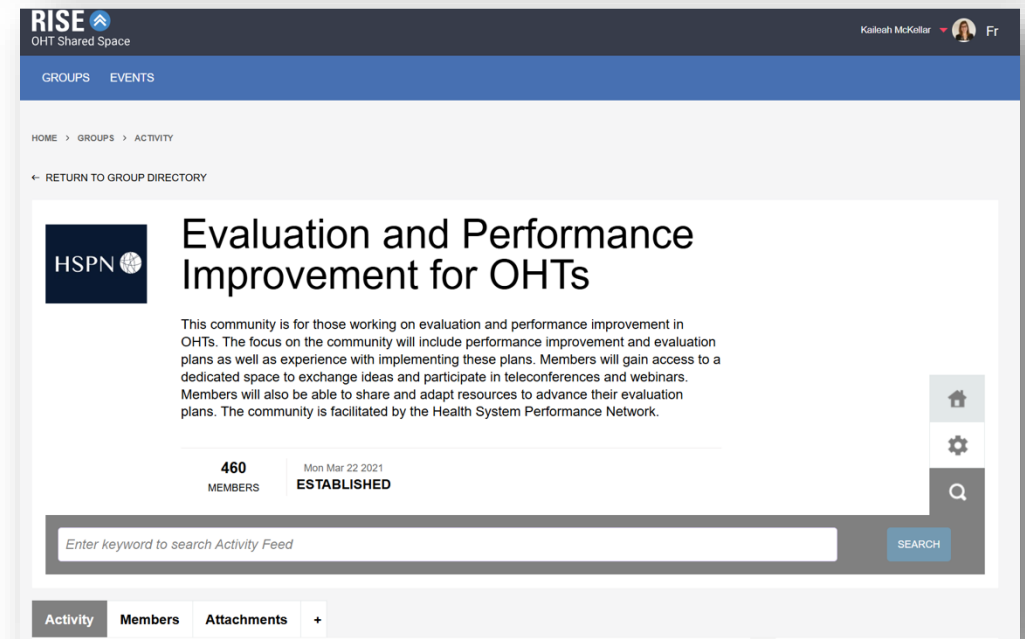
Check the chat box for links

1

Visit the OHT Shared Space and click the “Sign Up” button

2

On the Collaboratives page, look for the **Evaluation and Performance Improvement for OHTs** community of practice and click “Join Group”



Today's event: Implementation: From Research to Routine Practice

Presenters



Dr Tina Fahim
Scientist
Knowledge Translation Program,
St. Michael's Hospital



Marjorie Hammond
Geriatrics Nurse Specialist



Jeanette Cooper
Research Coordinattor
Knowledge Translation Program,
St. Michael's Hospital

Host



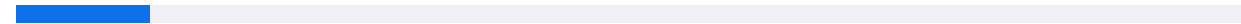
Dr. Walter Wodchis
Principal Investigator
HSPN

Poll 2

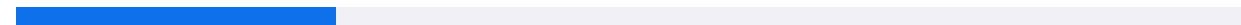
1. What is your knowledge of implementation science? (Single Choice)

95/95 (100%) answered

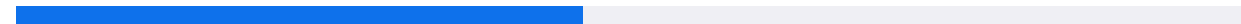
I can talk a lot about implementation science. (10/95) 11%



Good awareness of implementation science. (25/95) 26%



Some/Limited awareness of I.S. (44/95) 46%



I have no idea about implementation science. (16/95) 17%





ST. MICHAEL'S
UNITY HEALTH TORONTO

Considering Implementation in Learning Health Systems: From Research to Routine Practice

HSPN Webinar Series – September 24, 2024
Presented by: Dr. Christine (Tina) Fahim, Marjorie Hammond and
Jeanette Cooper

Agenda

- What is KT?
- How do we design a KT intervention?
 - How can we identify barriers to implementation?
 - How to identify strategies address these?
- Case Study: FI Block Implementation
- Overview of key resources

What is the challenge?



Research Waste



The 'know-do' gap



Home Content Authors & Reviewers Physicians & Subscribers Alerts

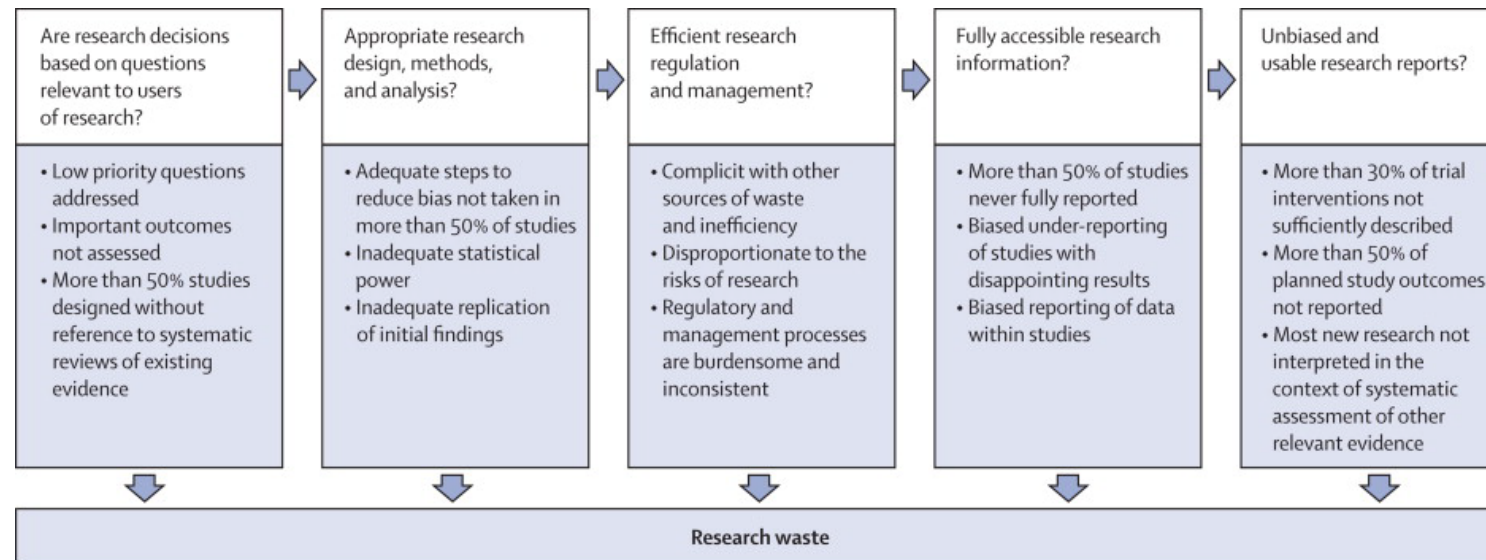
Editorial

A country of perpetual pilot projects

Hon. Monique Bégin, Laura Eggertson and Noni Macdonald
 CMAJ June 09, 2009 180 (12) 1185; DOI: <https://doi.org/10.1503/cmaj.090808>

Article Responses Metrics PDF

When it comes to moving health care practices forward efficiently, Canada is a country of perpetual pilot projects. We seldom move proven projects into stable, funded programs, and we rarely transfer the outcomes of pilot projects across jurisdictions. This approach is not serving our health care system well.



Knowledge translation: A potential solution

- It is a dynamic and iterative process that includes synthesis, dissemination, and implementation of knowledge
- It is about **putting knowledge into action**, at all levels of decision making, to improve health

Integrated KT

*“Doing research with
the people who use it”*
-IKT Research Network



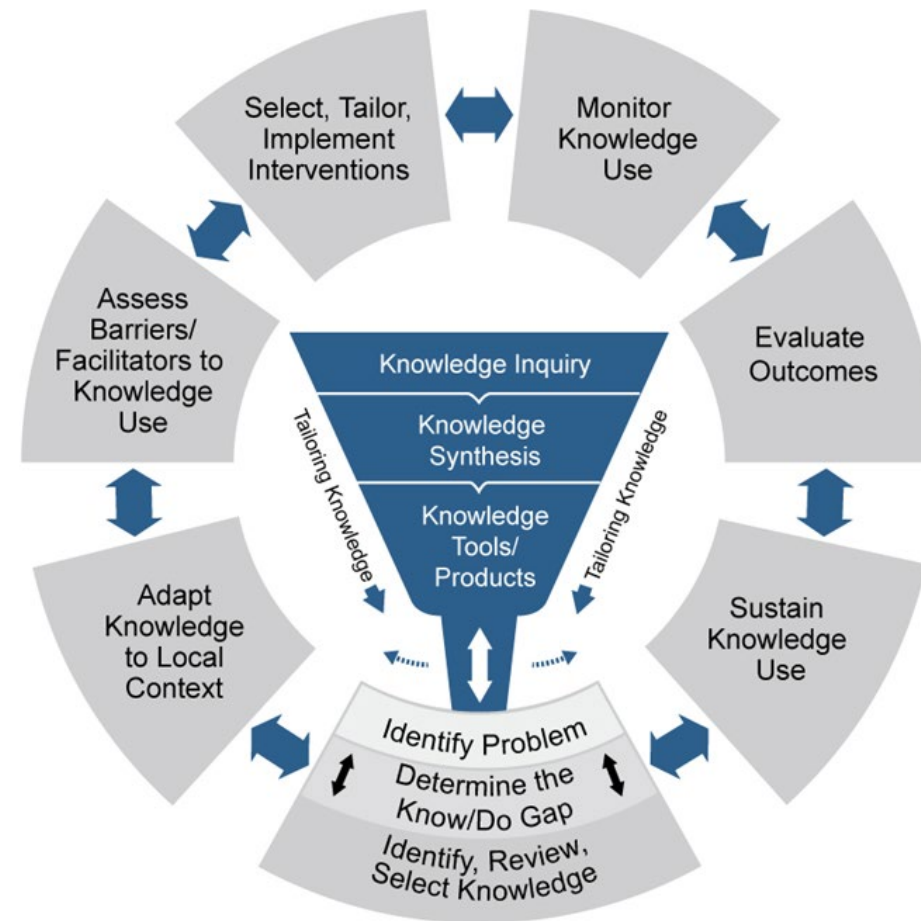
Involving knowledge users



Results in:

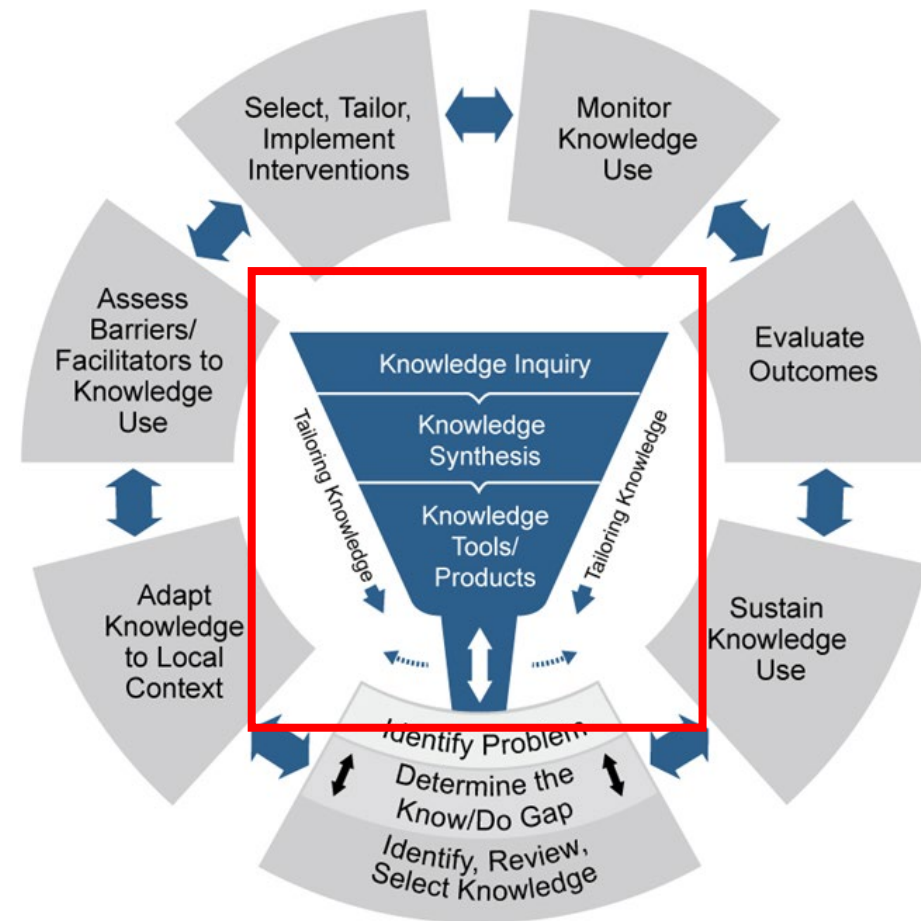
- ✓ More relevant and applicable research
- ✓ Greater capacity for and likelihood of implementation

The Knowledge-to-Action model describes a process for dissemination and implementation of research



Graham ID, Logan J, Harrison MB, Straus SE, Tetroe J, Caswell W, Robinson N. Lost in knowledge translation: time for a map? *J Contin Educ Health Prof.* 2006 Winter;26(1):13-24. doi: 10.1002/chp.47. PMID: 16557505.

How do we get evidence?



Source: Graham ID, et al.
Lost in knowledge
translation: time for a
map? J Contin Educ Health
Prof. 2006;26(1):13-24

The Funnel

First generation knowledge generated from primary studies

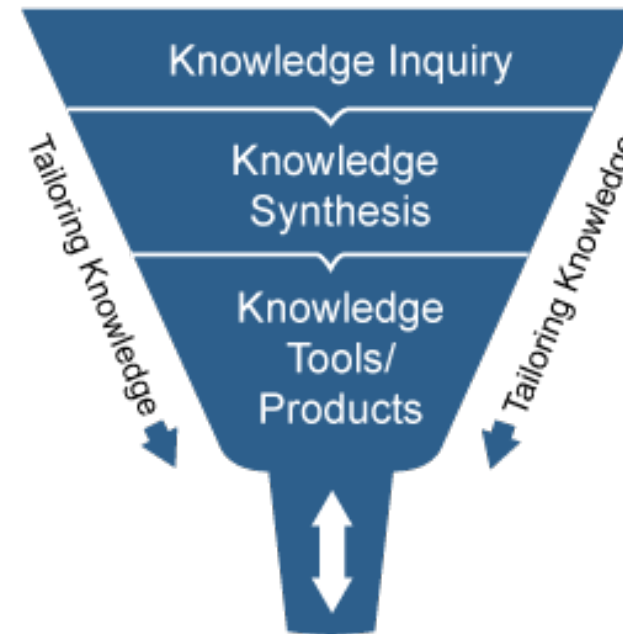
- Examples: randomized trials, interrupted time series

Second generation knowledge includes synthesis of knowledge

- Example: systematic reviews

Third generation knowledge includes tools and products

- Examples: decision aids, policy briefs

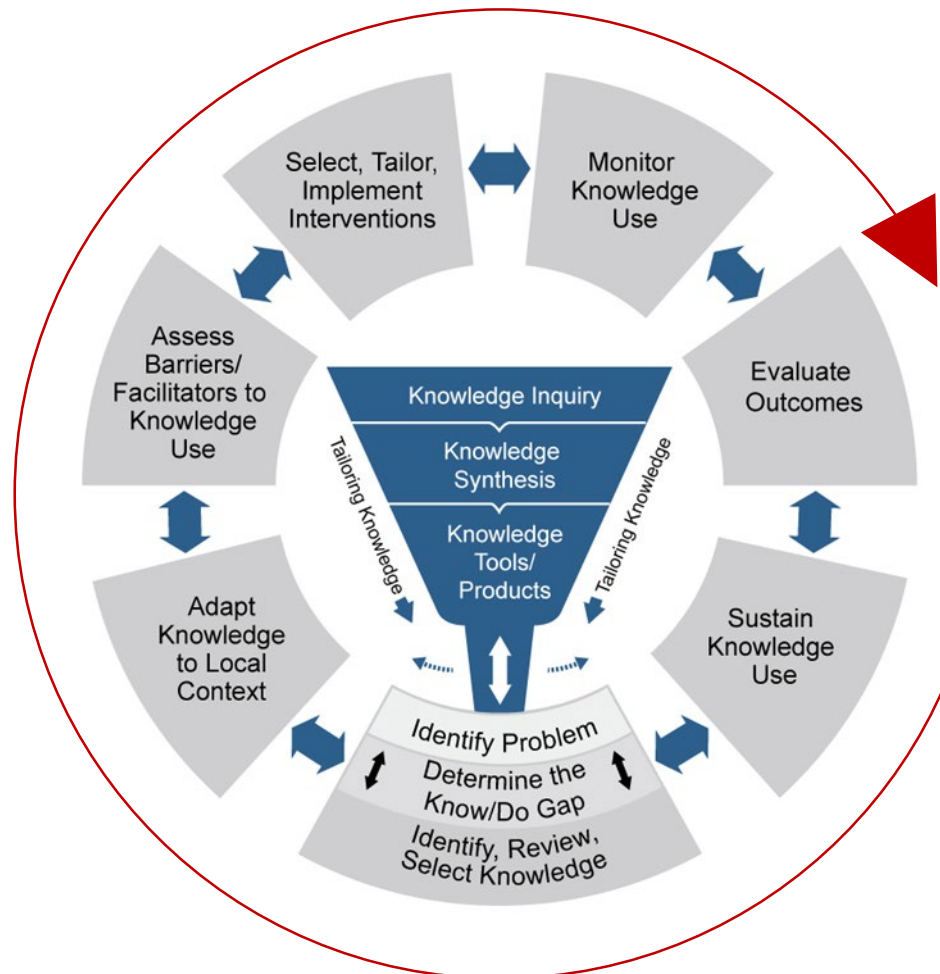




What topic/focus/population are you aiming to improve care for?

Have you identified any evidence-based practices to implement to address the needs of your focus population?

When you have synthesized knowledge



Implementation of knowledge tools/products such as guidelines, decision aids, evidence-based interventions

Key questions for Implementation

- **WHAT** is the evidence-based practice?
- **WHO** needs to do what, differently?
- **WHY** would people change, or not?
- **HOW** can we facilitate implementation of the **WHAT**?

Example



WHAT

- Assess mobility within 24 hours of hospital admittance
- Mobilize patients at least 3x per day
- Use progressive, scaled mobilization tailored to the patient's ability

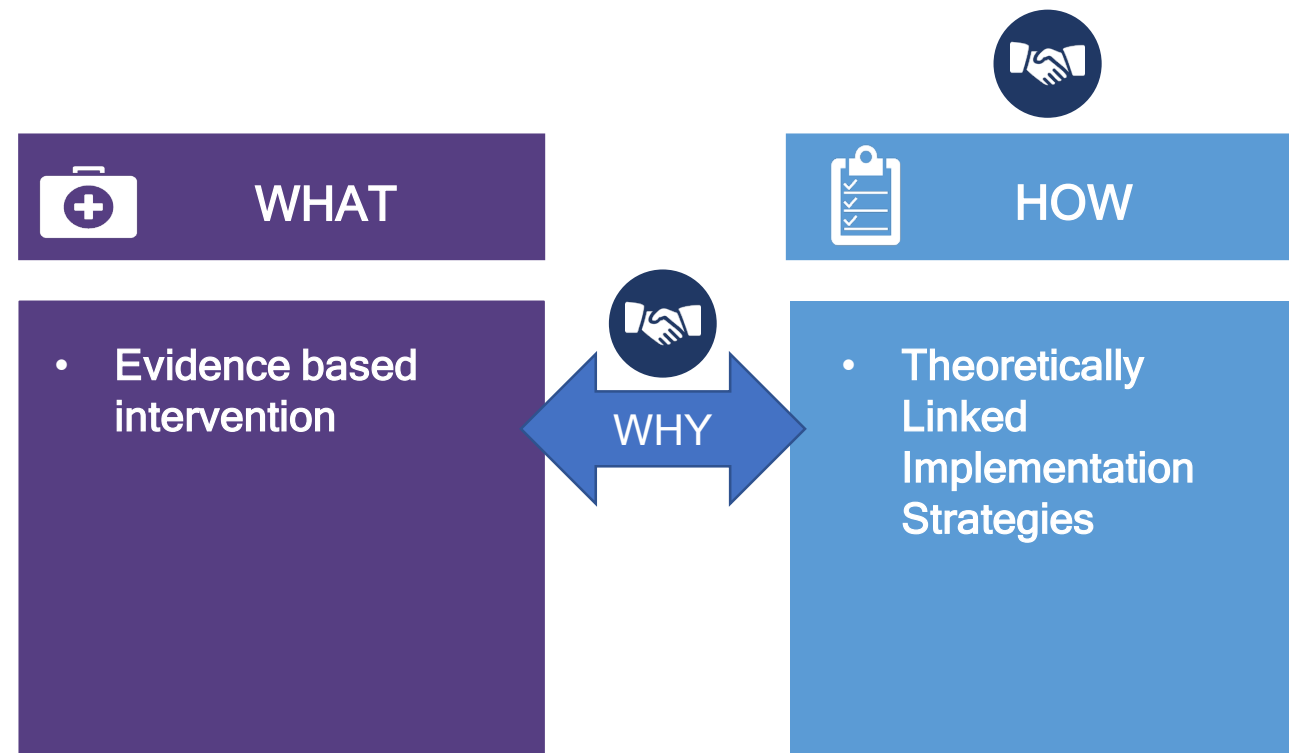
Evidence-Based Intervention

WHO

- Geriatricians
- Nurses
- Therapy Staff
- Patients

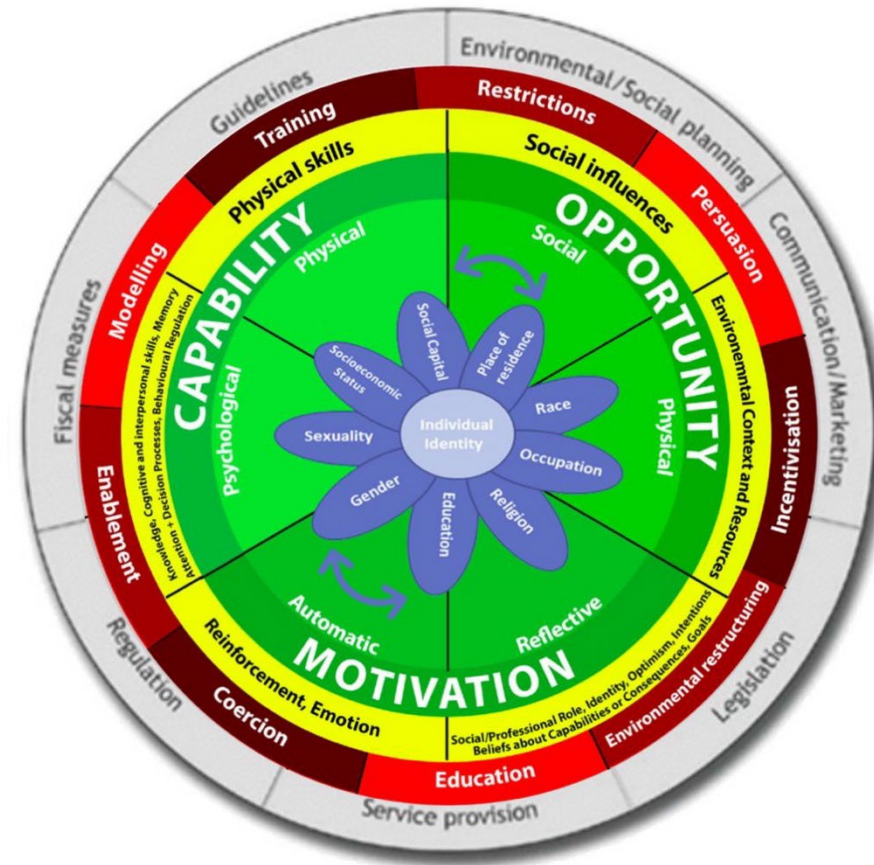


Example



Why would people change (or not)?

- Organize barriers and facilitators using theoretical frameworks
- Use theories and frameworks to LINK barriers and facilitators to corresponding strategies



Source: Michie, van Stralen, & West (2011). Implementation Science; 6(1):42. doi: 10.1186/1748-5908-6-42.



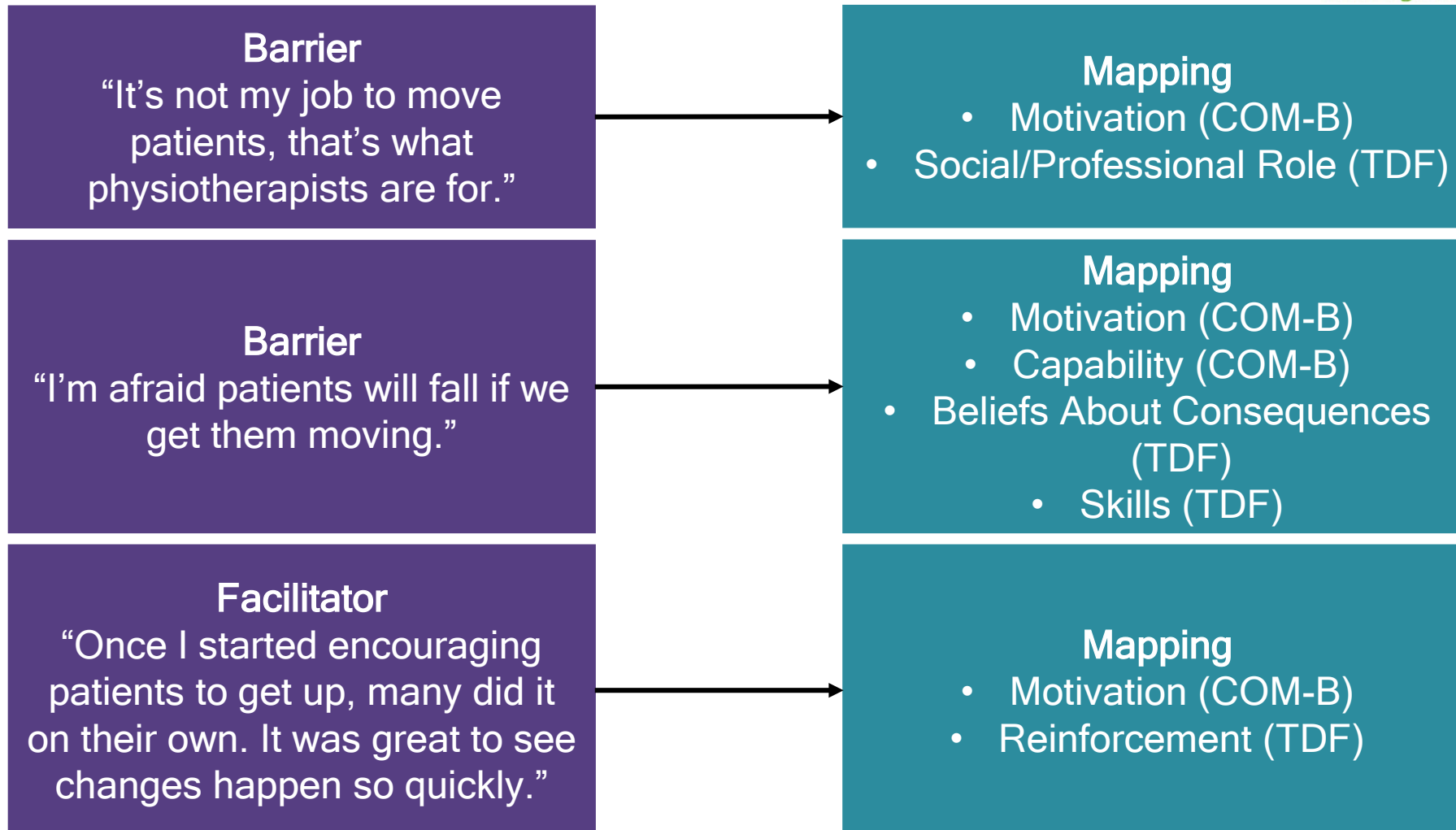
COM-B

Capability	Knowledge, skill or stamina	<ul style="list-style-type: none"> E.g., Knowing the importance of mobilization and how to do it
Opportunity	Opportunity afforded by the environment, time, social factors/cultural norms, etc.	<ul style="list-style-type: none"> E.g., Having the space to mobilize patients
Motivation	Brain processes, plans, desires, impulses, inhibitions, etc.	<ul style="list-style-type: none"> E.g., Perceptions about mobilization benefits, concerns about harms

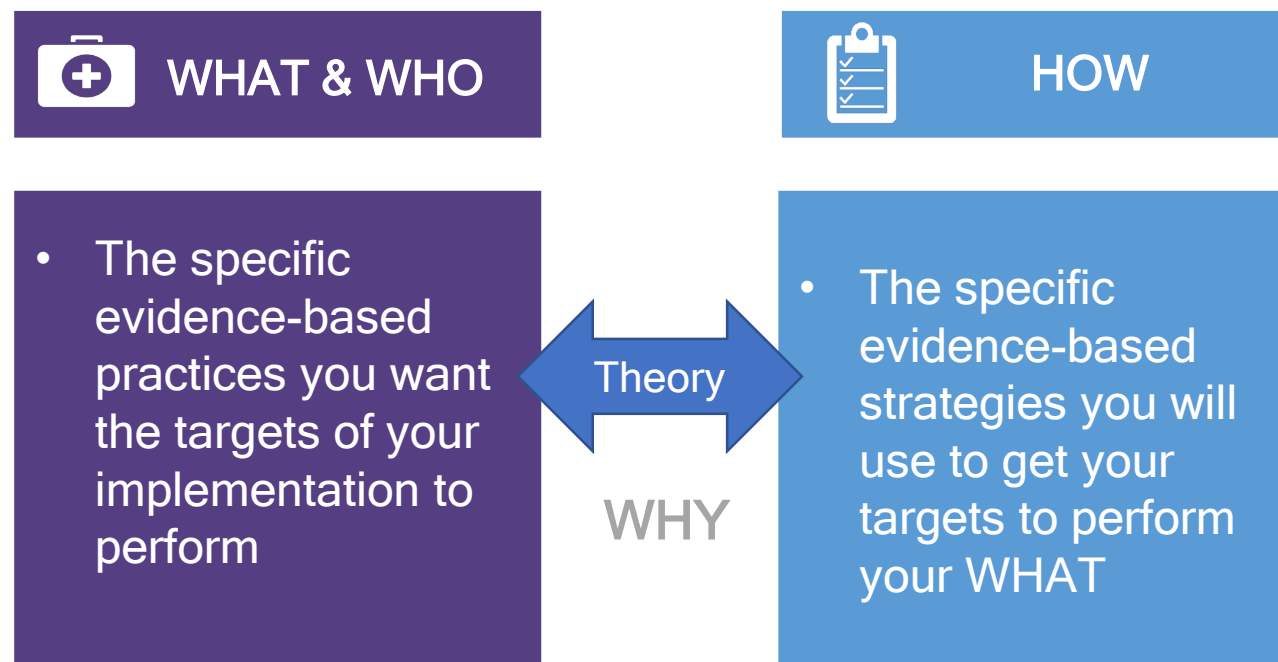


What barriers might you experience when implementing your evidence-based practice?

Example: Individual Barriers and Facilitators



The 'WHAT' and the 'HOW'



Implementation Strategies

- Methods or techniques used to enhance the adoption of a practice
- An art and a science to selecting, tailoring and implementing these

**‘Evidence-based medicine should be complemented
by evidence-based implementation’
- Grol**

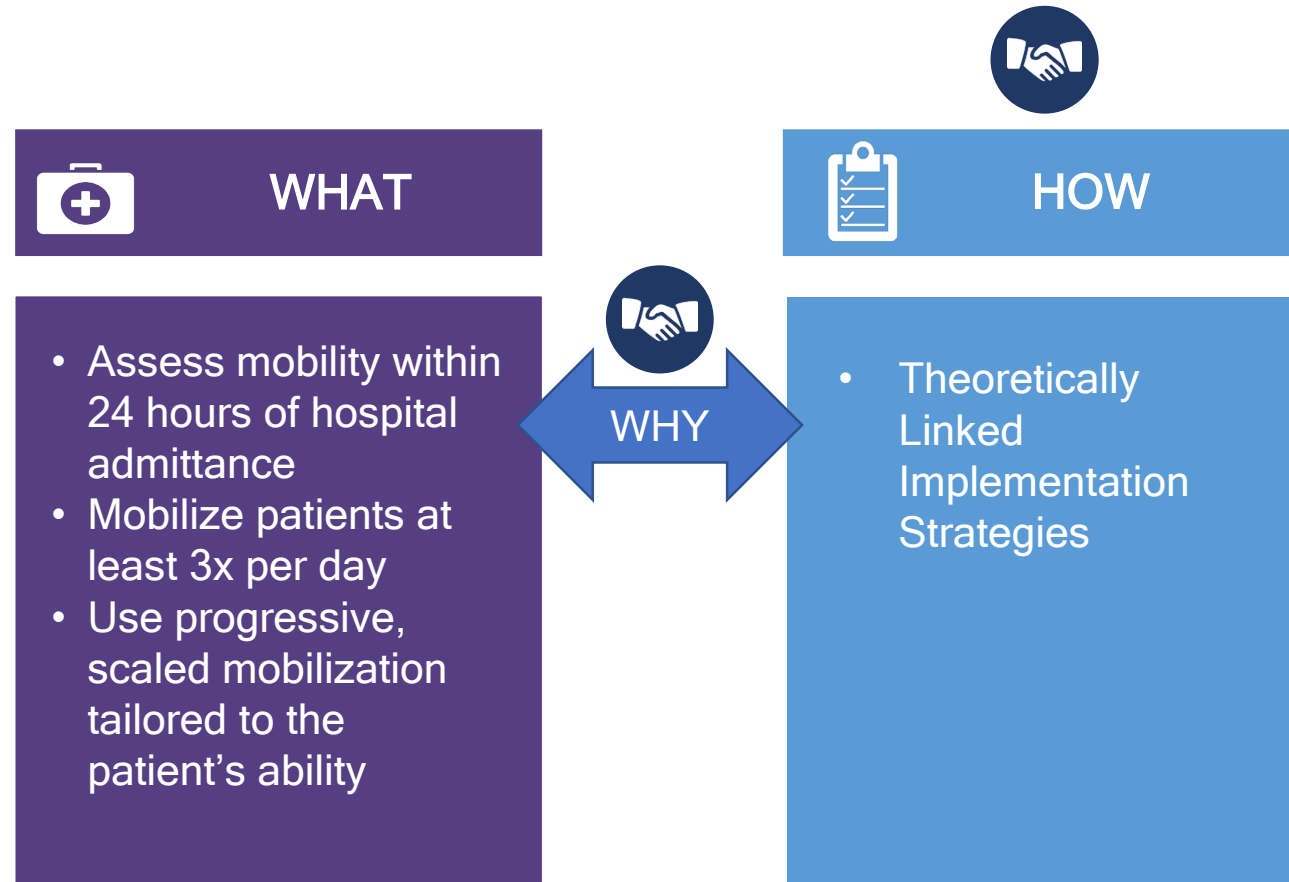
(BMJ:1997; 315:418-21)

Examples of KT strategies

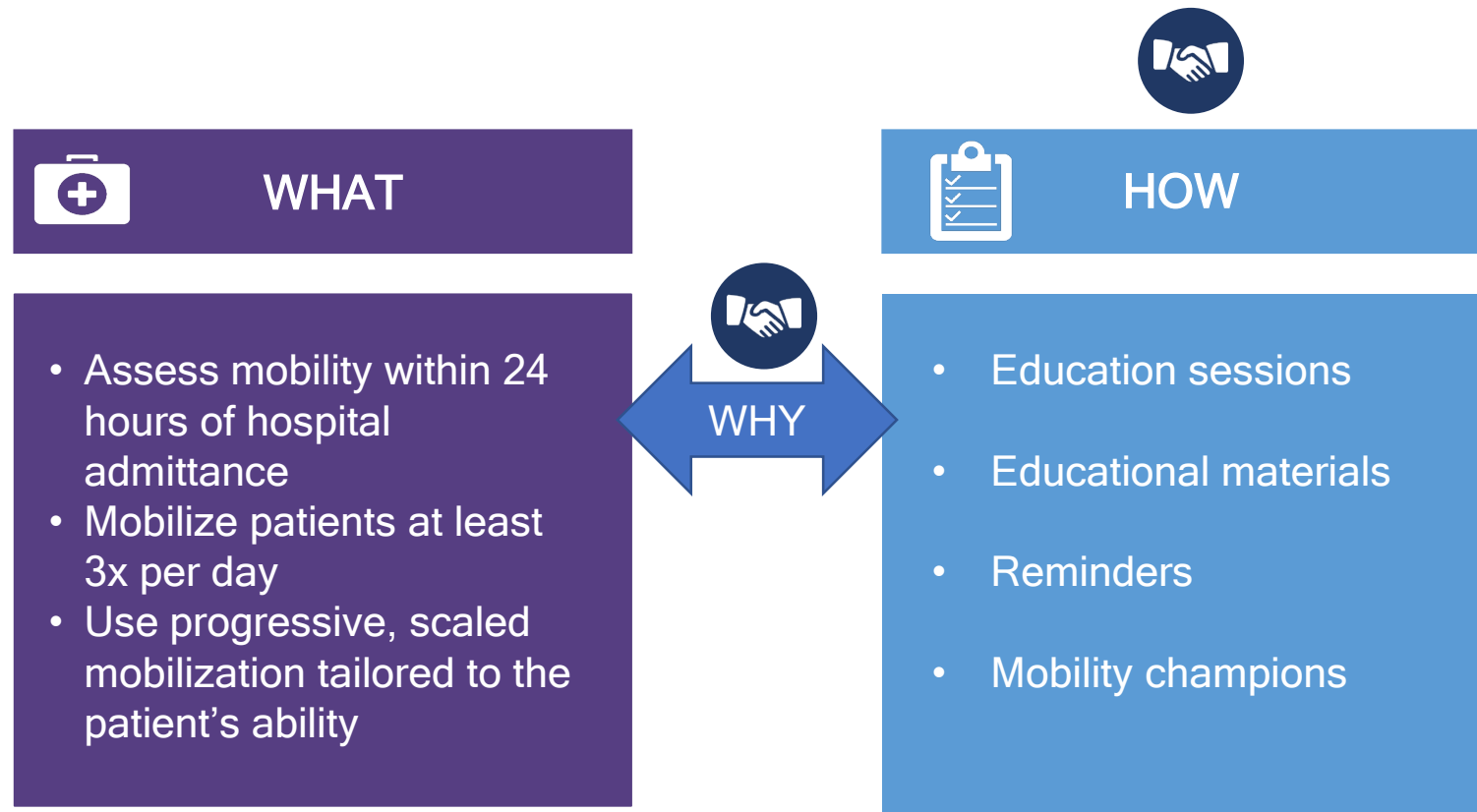
Audit and Feedback	Clinical incident reporting	Monitoring the performance of the delivery of healthcare
Communities of practice	Continuous quality improvement	Educational games
Educational materials	Educational meetings	Educational outreach visits, or academic detailing
Clinical Practice Guidelines	Inter-professional education	Local consensus processes
Local opinion leaders	Managerial supervision	Patient-mediated interventions
Public release of performance data	Reminders	Routine patient-reported outcome measures



Example



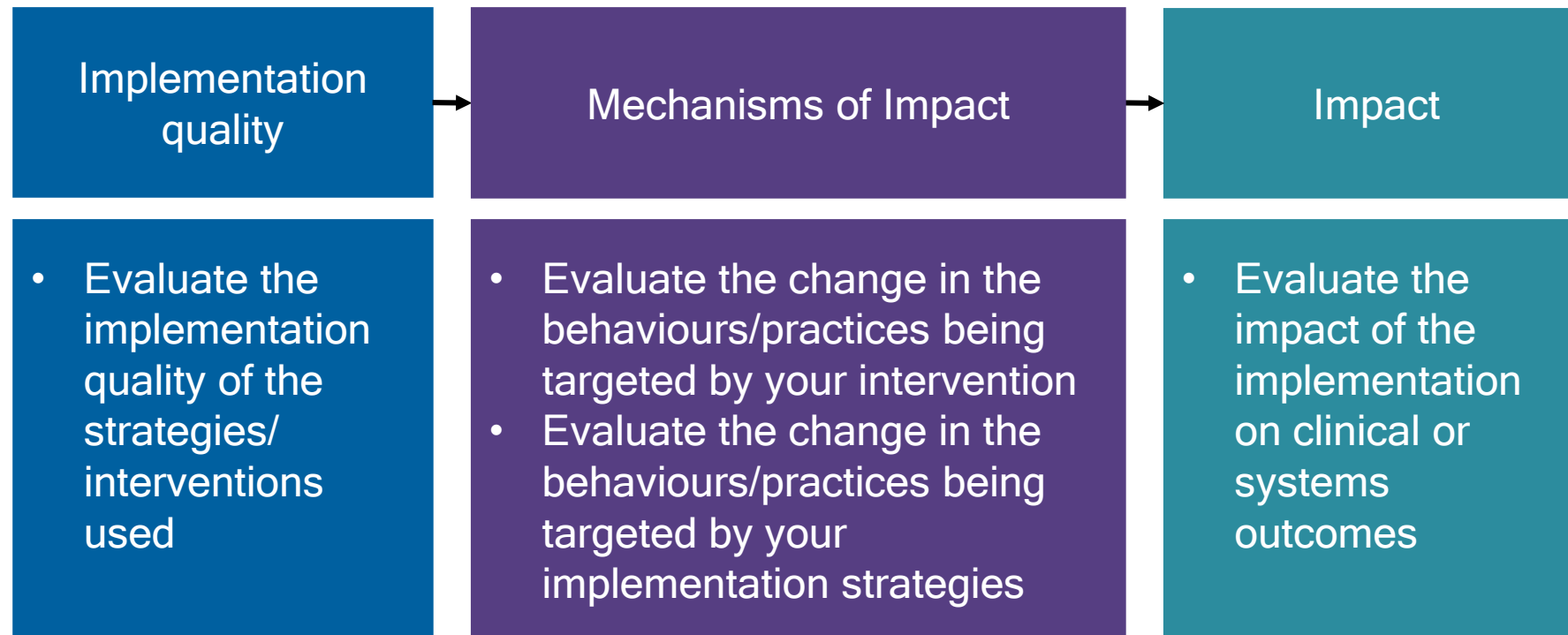
Example



- Strategies must match the barriers!
- The use of theoretical frameworks can help us uncover the domains impacting change and select corresponding, evidence-based interventions to facilitate implementation
- Avoid the ISLAGIATT phenomenon
(Martin Eccles)



Evaluate What Happened



We want to evaluate both 'HOW' we implemented and 'WHAT' we implemented!



Evaluate everything to unpack the 'black box' of implementation

Implementation quality (of WHAT and HOW)	Mechanisms of Impact	Outcomes
Eg. Implementation quality <ul style="list-style-type: none"> • How many clinicians participated in the education sessions? • How well were our reminders implemented? 	Increase in: <ul style="list-style-type: none"> • Knowledge & skills for mobilization • Awareness of benefits and harms of mobilization • Intention and self efficacy to participate in mobilization 	Increase in: <ul style="list-style-type: none"> • Mobilization rates Decrease in: <ul style="list-style-type: none"> • Cognitive decline • Loss of muscle function • Length of Stay Increase in: <ul style="list-style-type: none"> • Patient satisfaction

↑
Evaluates the HOW
or WHAT

↙ ↘
Evaluates the WHAT



ST. MICHAEL'S
UNITY HEALTH TORONTO

Case Study



Case Study

Can J Anesth/J Can Anesth (2024) 71:741–750


<https://doi.org/10.1007/s12630-023-02665-2>



REPORTS OF ORIGINAL INVESTIGATIONS

Using implementation science to promote the use of the fascia iliaca blocks in hip fracture care

Utilisation de la science de la mise en œuvre pour promouvoir l'utilisation de blocs ilio-fasciaux pour le traitement des fractures de la hanche

Marjorie Hammond, RN, MHScN · Vivian Law, PharmD, MSc · Keelia Quinn de Launay, MSc · Jeanette Cooper, MSc · Elikem Togo, HBSce · Kyle Silveira, MPH · David MacKinnon, MD · Nick Lo, MD · Sarah E. Ward, MD, MSc · Stephen K. W. Chan, MD · Sharon E. Straus, MD, MSc · Christine Fahim, PhD, MSc · Camilla L. Wong, MD, MHSc 

Received: 17 February 2023 / Revised: 30 June 2023 / Accepted: 4 July 2023 / Published online: 12 December 2023

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The Knowledge to Translate

HIP FRACTURE

Care for People With Fragility Fractures

Click below to see a list of brief quality statements and scroll down for more information.

Quality Statements in Brief

Resources > **Quality Statements** > Advisory Committee > About >

3

Multimodal Analgesia

Patients with suspected hip fracture have their pain assessed within 30 minutes of arriving at hospital and managed using a multimodal approach, including consideration of non-opioid systemic analgesics and peripheral nerve blocks.

Background

What This Quality Statement Means

01 | Emergency Department Management

02 | Surgery Within 48 Hours

03 | Multimodal Analgesia

04 | Surgery for Stable Intertrochanteric Fractures

05 | Surgery for Subtrochanteric or

- FI Blocks are part of one of 15 quality standards for hip fracture care
- There was suboptimal use of FI Blocks at SMH
- Implementing FI Blocks = Delivering quality care and fostering a culture of quality

Background

- Most hip fractures occur in older adults.
- More than 30% are ≥ 85 yo.
- Medical complexity continues to increase (Brauer CA, Jama 2009).
- Older adults are more vulnerable to adverse events.
- 1 in 5 patient's experience a complication; 1 - year mortality rates $>>25\%$ (Marks R, Ageing Res Rev 2003).
- Pain in hip fractures is severe.
- Pain control is paramount in hip fracture care.

Opioid analgesic are associated with many adverse effects including:

Delirium

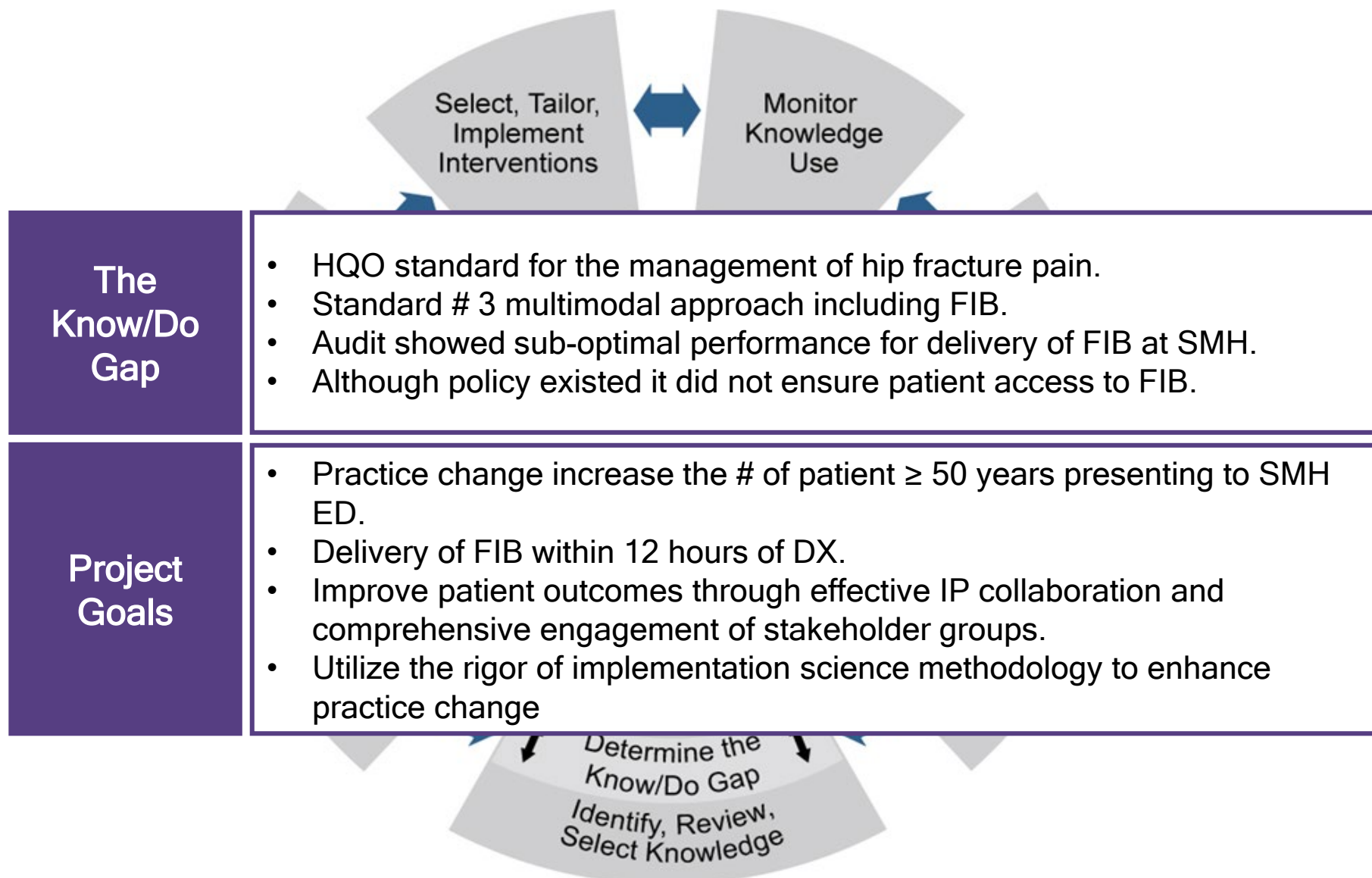
Respiratory depression

Constipation

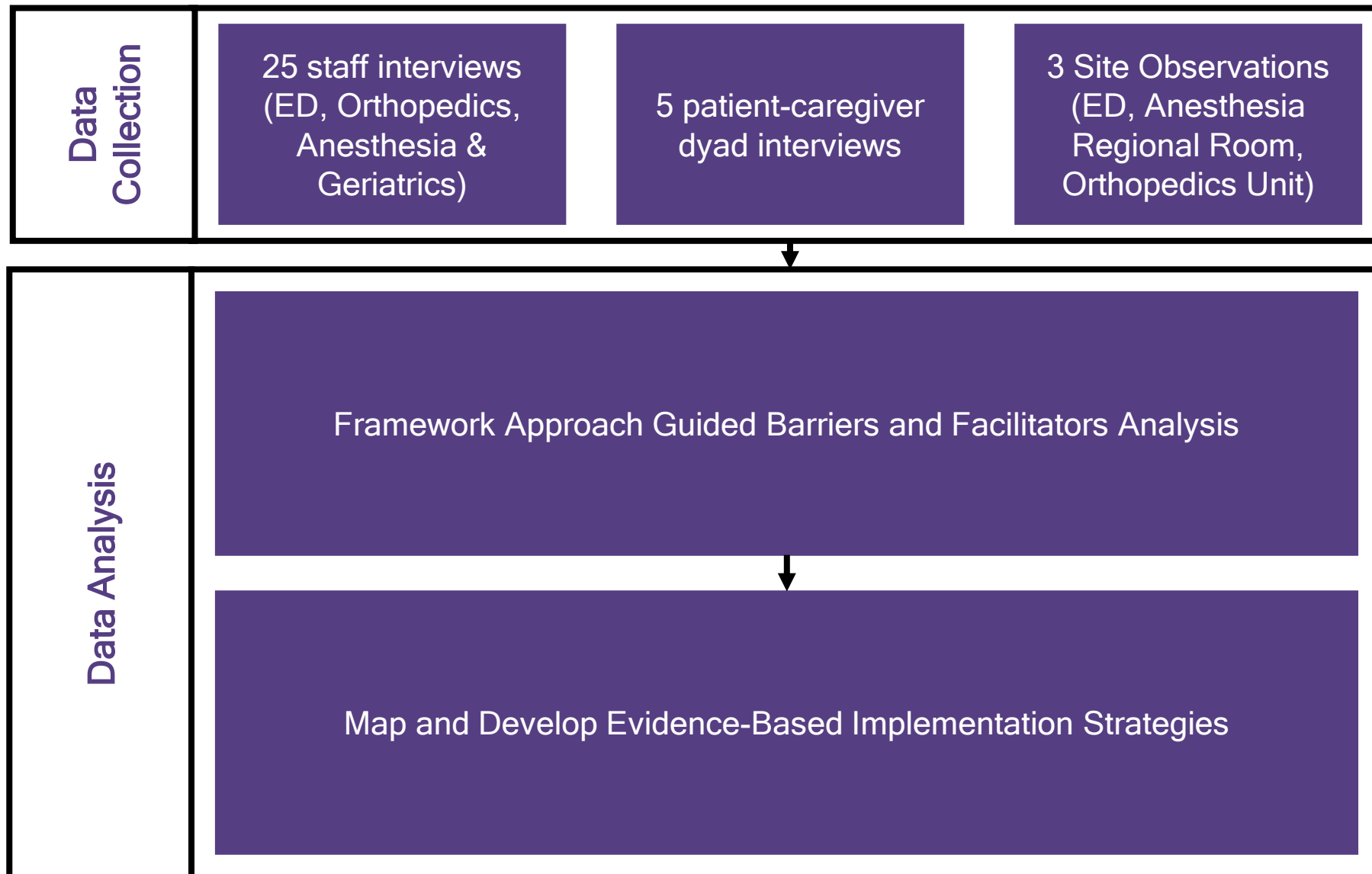
Pneumonia

Ileus

The FI Block Knowledge to Action Journey



Summary of Methods



Barriers and Facilitators: Examples

Staff

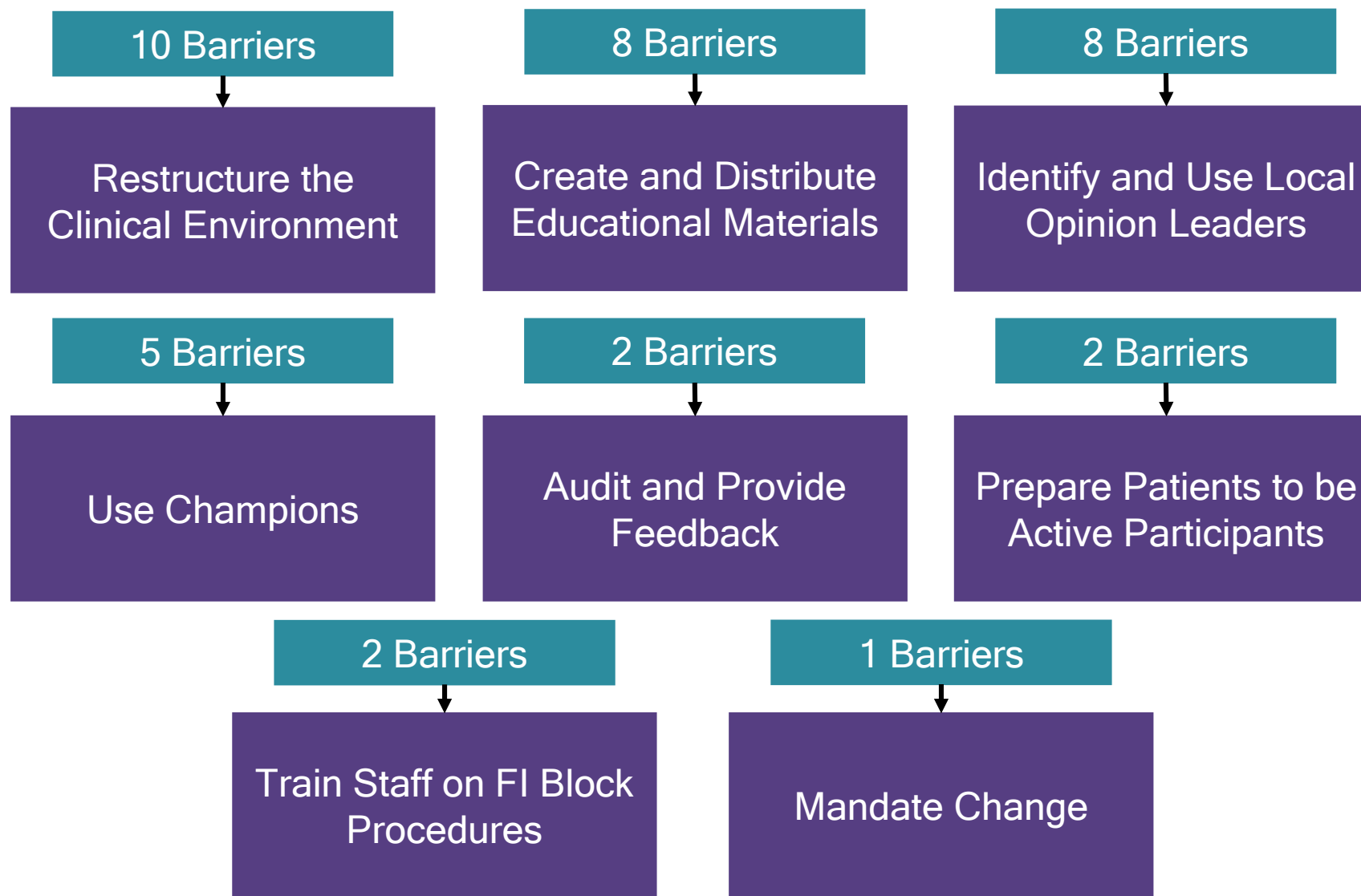
Barrier: Lack of standard process to coordinate delivery of FI Blocks with the Regional Room

Barrier: Delivery of FI Block is reliant on healthcare provider initiative and memory

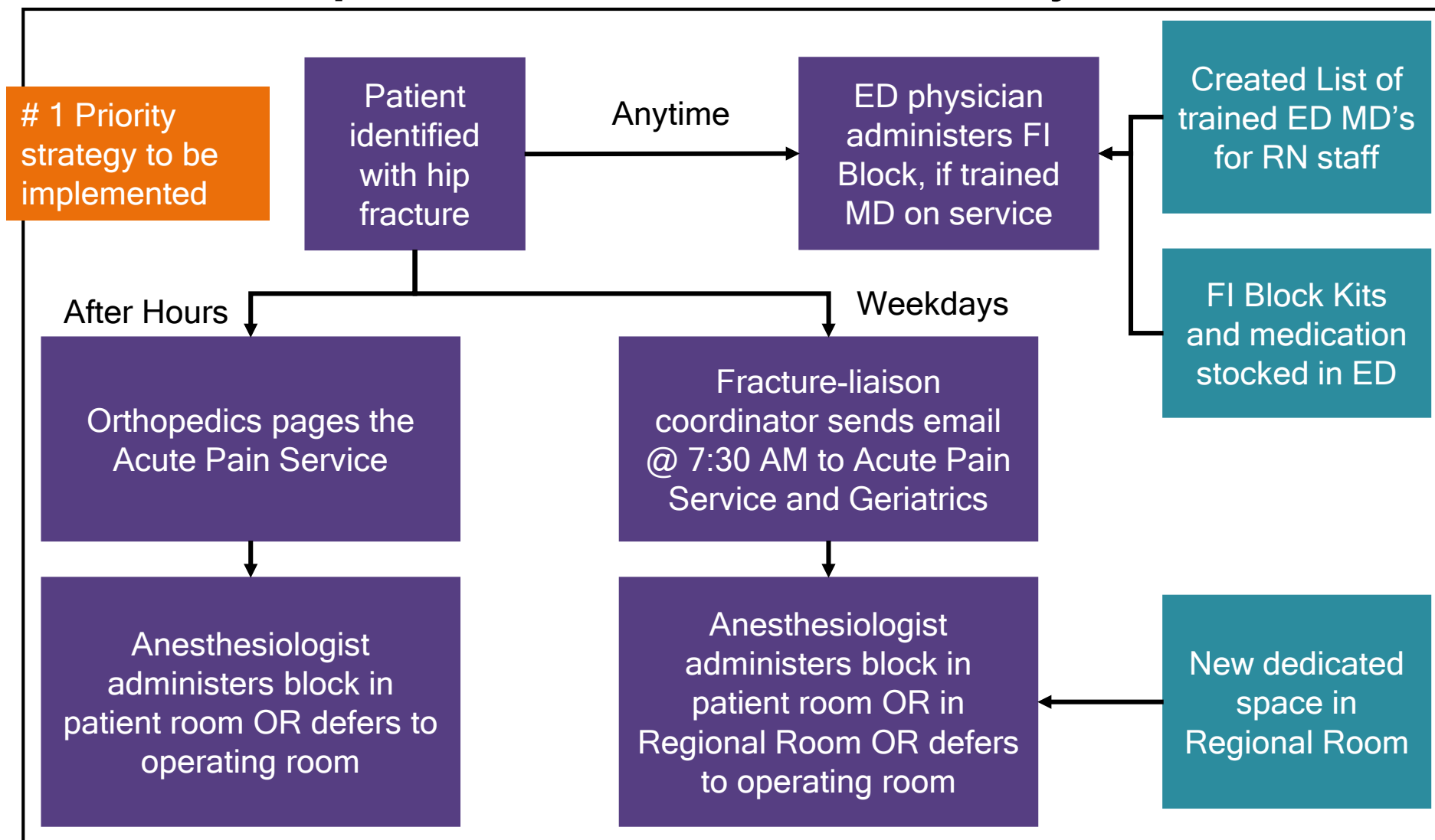
Patients & Caregivers

Barrier: Difficulty making healthcare decisions while experiencing hip fracture pain



Implementation strategies



Process Outcome: Environmental Restructuring/ Clinical Interprofessional Clinical Pathway



Create & distribute educational materials: Staff

Using a Facia Iliac (FI) Block for pain management in pre-operative hip fracture patients

Key points

- Fascia iliac block for pain management is a Quality Standard for hip fracture pain in older adults
- It is a safe, evidenced-based intervention for hip fracture pain.
- Preferred over opioids as older adults are at increased risk of opioid related adverse events (AE).
- It can usually be administered quickly and easily.
- Acute pain service Anesthetists of A Team, and some trained ED physicians can administer an FI block

What is a Facial Iliac Block?


- It is a localized and temporary nerve block for patients experiencing hip fracture pain.
- An evidenced-based intervention to reduce opioids use in older adults with hip fracture pain.

How does this impact my role?

- You would play a key role in advocating for a delivery of a Quality Standard of Care by:
 - Learning more about benefits of FI block as a pain management intervention for older adults with hip a fracture.
 - Communicate information about it to patients and/or their families.
 - Engage in the processes of care that optimize timely access to FI block

How does it work?



- Local anesthetic agents are injected into the facia illica compartment in upper thigh of the fractured hip (see image).
- Onset of pain relief is usually within 30 minutes and lasts up to 12 hours.



Why is it the preferred treatment?

- It can significantly reduce pain resulting in reduced opioid requirements
- Reduces opioid related adverse events such as delirium
- It is a Health Quality Ontario Standard for the management hip fracture pain in older adults.

St. Michael's Hospital - Knowledge Translation Program: Facia Iliac (FI) Block Nurse FAQ
2022

When should it be given to the patient?

- Should be routinely offered to reduce opioid use in older adults with hip fracture pain.
- Optimally within 12 hours of hip fracture diagnosis.
- After the physician providing FI block has obtained consent from the patient, or Shared Decision Making.

Can the patient receive other pain medication along with the FI block?

- Other analgesics agents may be required to optimize pain management.


What can I do?

- Once diagnosis of hip fracture is made, confirm if there is an ED Physician on duty trained to administer FI block to promote timely access.
- Acute Pain Service A Team is routinely notified of new fractured hips for possible FIB during the day but, may not be aware of those most at risk for opioid related adverse events.
- RN Staff can contact TEAM A directly on day shift and notify them when there is a high risk for opioid related AE's (e.g., cognitive impairment) or opioid AE's have been observed (e.g., delirium)
- Assess the patient's ability to provide consent for the intervention, and or ensure shared decision-making contact information is available, and correct.
- Document time of administration, monitor pain relief duration, and observe for FIB related AE's e.g. Bleeding at the injection site.
- Communicate intervention delivery with TOA

Create & distribute educational materials: Patients and Caregivers

Managing your hip fracture pain with a nerve block

Information for patients and families

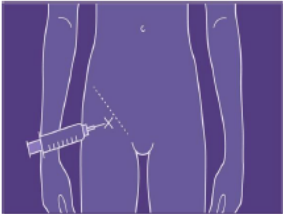


Key points:

- Hip fractures can be very painful, especially when a healthcare provider transfers you to a stretcher to go for X-rays, or moves you for routine nursing care.
- Strong pain medicines called opioids (like morphine) are often used to manage severe pain.
- Opioids can have side effects, especially for older adults. These may include constipation, confusion, nausea, vomiting, dizziness, sleepiness, and slower recovery.
- Another way to manage pain from a fractured hip is to get a nerve block. This type of nerve block is called a fascia iliaca block.
- Health Quality Ontario recommends hospitals provide this type of nerve block to hip fracture patients. They significantly reduce pain and the need for opioids.

What is a fascia iliaca (FI) block?

It is a type of freezing injection similar to what you might get at a dentist. The freezing is injected into the upper thigh, in the area called the fascia iliaca compartment (see image).



This type of freezing blocks pain coming from nerves in the hip area.

We may give you the nerve block in your hospital room or in a special area of the hospital called the anesthesia regional room. It is done with you lying on your back.

Does it hurt?

You will feel some pain briefly from the first needle that numbs the area. You may feel some pressure with the second needle, but it should not be painful.

How fast does it work?

You should start to feel some pain relief within 30 minutes of with a single injection of freezing medicine. Sometimes the doctor may leave in a small plastic tube in the area to add more freezing medicine as needed.

Are there any side effects?

The fascia iliaca block is a very safe procedure. However, with any procedure, there are some risks. These risks are extremely rare and include:

- The block not working
- Temporary weakness in the thigh
- Bleeding where the needle went in
- Injecting too much medicine
- Temporary nerve injury
- Infection

How long does it last?

It should give you pain relief for up to 12 hours. If you continue to experience a lot of pain after the getting the block, ask to speak with the doctor.

What can I expect after?

In the first 30 minutes after you get the fascia iliaca block, we will watch closely for any changes to your oxygen level and blood pressure. Afterwards staff will check you at regular intervals.

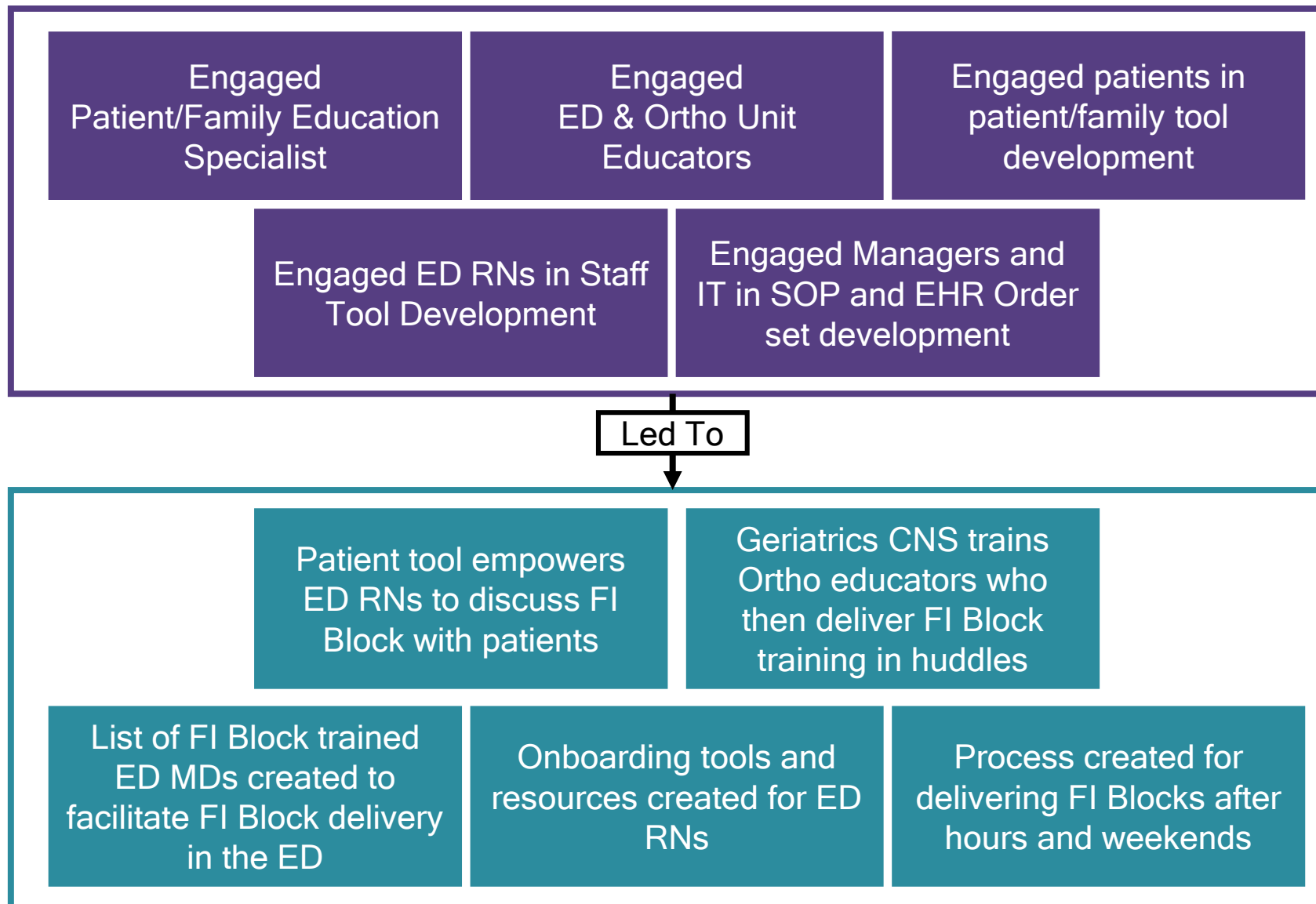
The nerve block may not take away all the pain, but it will reduce it significantly.

Important: While you should have less pain after getting the fascia iliaca block, your leg will be weak and still fractured until you have had your surgery. You should not try to stand up.






Unity Health Toronto cares about your health. For health information you can trust, visit us online at unityhealth.to/learn.

This information does not replace the advice you receive from your health care provider. If you have questions, ask your health care team.





Education, Engagement & Empowerment



Strategies Completed

Strategy	Description	Implemented?
Environmental restructuring	Changed physical Environment & structures.	
Education	Create deliver materials to educate health care providers on FIB.	
Enablement	Prepare patient's to be active participants.	
Persuasion	Collect analyze, and distribute performance data on FIB.	
Training	Train staff on peripheral nerve block/FIB procedures.	

Clinical Outcomes

	<p>Fascia Iliaca Block Administration</p> <ul style="list-style-type: none"> Percent of hip fracture patients receiving a block increased from 48% to 65%
	<p>Time to Block Administration</p> <ul style="list-style-type: none"> Time for a patient to receive an FI Block reduced from 1.63 days to 0.81 days
	<p>Delirium</p> <ul style="list-style-type: none"> Percent of hip fracture patients who experience delirium reduced from 43% to 34%
	<p>Opioid Use & Pneumonia</p> <ul style="list-style-type: none"> No change in opioid use or incidence of pneumonia

Sustainability

Don't drop the ball.



Sustainability:

- Identify your principal champions.
- Educate new learners (e.g., academic teaching facility).
- Routine reinforcement of best practice.
- CQI - Continue to monitor evaluate and modify gaps in practice.



Tools to Support Implementation



What tools do you currently use to support implementation?

Short report | [Open access](#) | [Published: 18 August 2023](#)

Creation of a theoretically rooted workbook to support implementers in the practice of knowledge translation

[Christine Fahim](#) , [Melissa Courvoisier](#), [Nadia Somani](#), [Fatiah De Matas](#) & [Sharon E. Straus](#)

Implementation Science Communications **4**, Article number: 99 (2023) | [Cite this article](#)

909 Accesses | 8 Altmetric | [Metrics](#)

STEP 1: Identify your **WHAT**

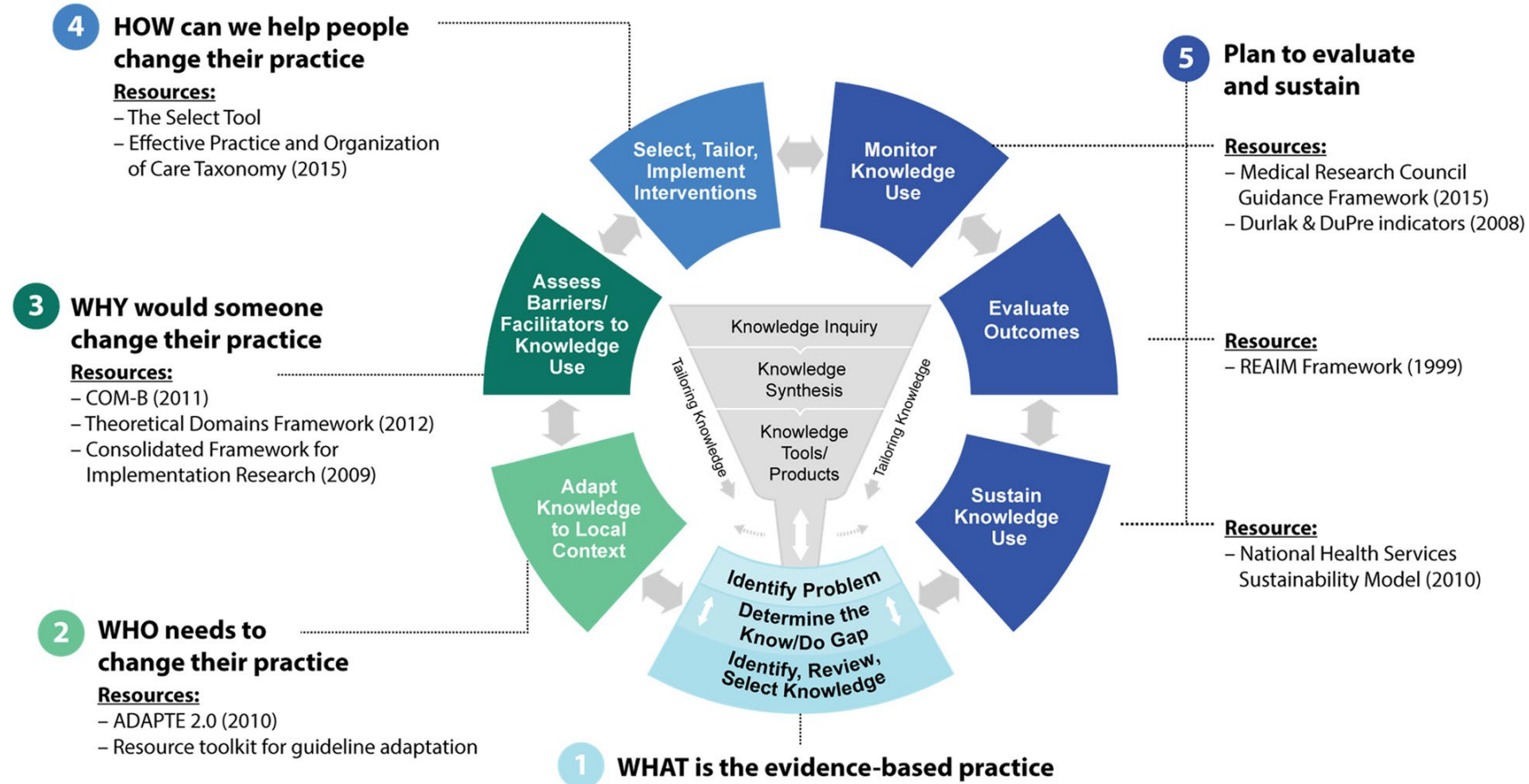
STEP 2: Identify your **WHO**

STEP 3: Understand the **WHY**

STEP 4: Identify your **HOW**

STEP 5: **PLAN for evaluation and sustainability**

Use Frameworks and Tools for Implementation



The SELECT tool

1. Categorize Barriers and Facilitators by TDF domain

TDF domain	Barriers/facilitators	Intervention Function
Social/professional role and identity (A coherent set of behaviours and displayed personal qualities of an individual in a social or work setting)	<i>"It's not my job to move patients, that's what physiotherapists are for."</i>	<ul style="list-style-type: none"> • Education • Persuasion • Modelling
Beliefs about consequences (Acceptance of the truth , reality, or validity about outcomes of a behaviour in a given situation)	<i>"I'm afraid patients will fall if we get them moving."</i>	<ul style="list-style-type: none"> • Education • Persuasion • Modelling
Reinforcement (Increasing the probability of a response by arranging a dependent relationship or contingency between the response and a given stimulus.)	<i>"Once I started encouraging patients to get up, many did it on their own. It was great to see changes happen so quickly."</i>	<ul style="list-style-type: none"> • Training • Incentivisation • Coercion • Environmental restructuring

Identify Implementation Strategies



Intervention Function	Implementation Strategies	Definition	Level	Use Strategy (Yes/No?)	Target Audience 1:	Target Audience 2:
Modelling	Model and simulate change	Have experts/leaders/respected colleagues model or simulate the ideal practice	Organization, Provider	Y		
Modelling	Visit other sites	Visit sites that have been successful in implementing the ideal practice	Provider	Y		
Modelling	Shadow other experts	Provide ways for designated individuals from the target stakeholders group(s) to directly observe other experienced people perform the ideal practice	Provider	Y		
Education	Conduct educational meetings	Hold meetings involving program targets (e.g., providers, administrators, other organizational stakeholders, and community, patient/consumer, and family stakeholders) to improve knowledge about the ideal practice	Patient, Provider	Y		
Education	Distribute educational materials	Distribute educational materials (e.g., guidelines, manuals, and toolkits) in person, by mail, and/or electronically to improve knowledge about the ideal practice	Patient, Provider	Y		

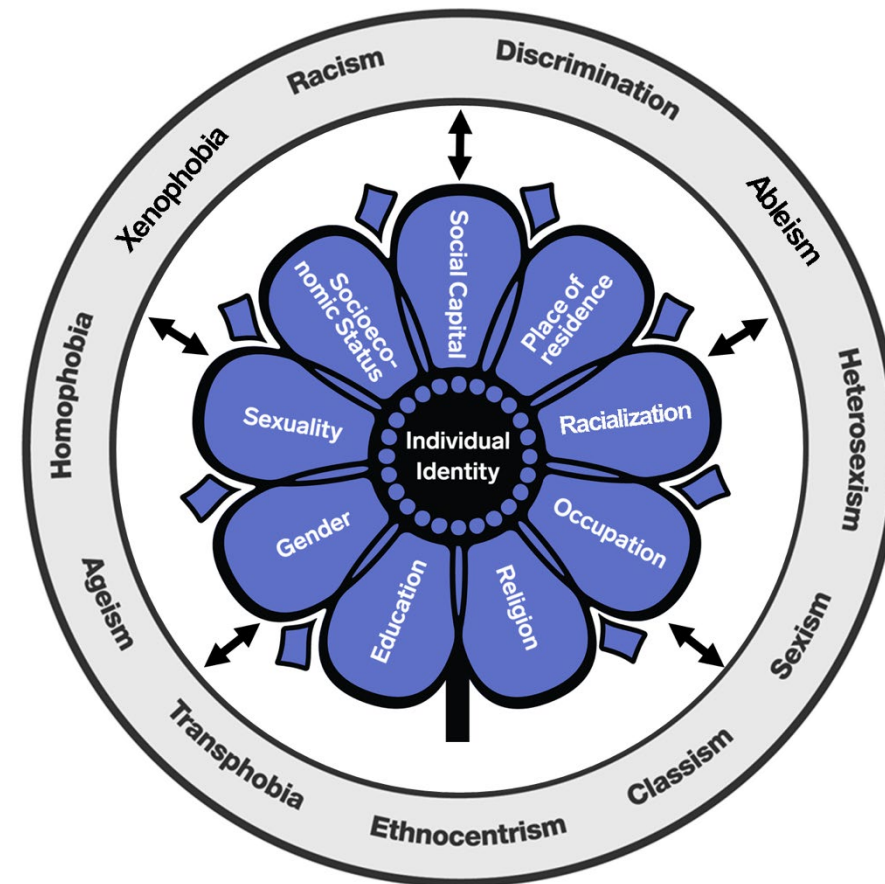
Feasibility & Prioritization



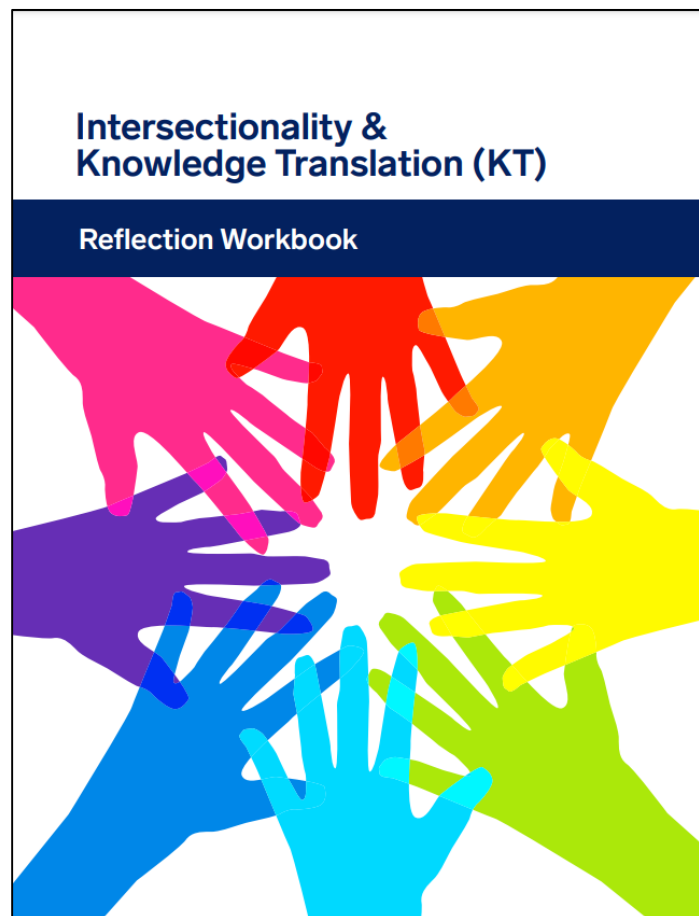
- Criteria can help you decide which strategies to prioritize for your implementation

Consider Intersectionality

Intersectionality & KT



Intersectionality and KT Workbook



Implementation teams

Know the clinical/health systems intervention and KT intervention

- Can promote implementation of the core components

Know and apply implementation science and systems thinking

- Can guide implementation efforts based on best practices

Promote and participate in systems changes

- Can work at multiple levels of the system to create enabling environments and influence change

Know and apply monitoring and evaluation

- Can use data to determine implementation quality/adaptation process and inform improvements

Foundations of Knowledge Translation

Learn the basics of KT

After completing this self-directed, online course, participants will be able to:



- Identify key KT definitions
- Use theories, models, and frameworks for KT activities
- Identify implementation planning considerations
- Outline an implementation evaluation and sustainability plan

Register and join the course at any time!



Practicing Knowledge Translation Course

Learn how to apply implementation science to real-world projects



After completing this virtual course, participants will be able to:

- use theories, models and frameworks to map barriers and facilitators
- select and operationalize implementation strategies to address barriers and facilitators
- plan for implementation, evaluation, and sustainability

Participants will walk away with a ready-to-implement action plan



The bottom line

- When implementing, start with a **strong evidence base**
- Use **theoretically-rooted frameworks** to identify barriers and facilitators and corresponding implementation strategies.
- **When selecting strategies**, consider evidence and whether they will be implementable in your given context.
- **Involve knowledge users** as project partners throughout the research cycle, including identification of barriers and corresponding strategies
- **Evaluate everything** (including implementation quality and intervention impact) to unpack the implementation black box.



Questions?



Christine.Fahim@unityhealth.to



Marjorie.Hammond@unityhealth.to



Jeanette.Cooper@unityhealth.to

Up Next

- HSPN webinar series
 - 4th Tuesday of the Month: 12:00 – 1:30 pm

Upcoming November 2024

Advancing the Learning Health System in
Ontario Part 5 : LHS Evaluation

Can you share some feedback? Scan here! (or click link in chat)



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