

# Activating the Knowledge to Action framework: a five-site implementation case series in rehabilitation settings in the United States

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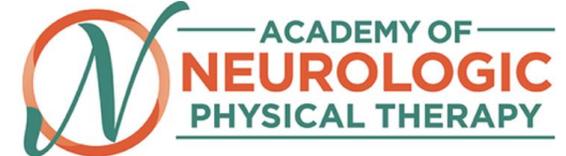


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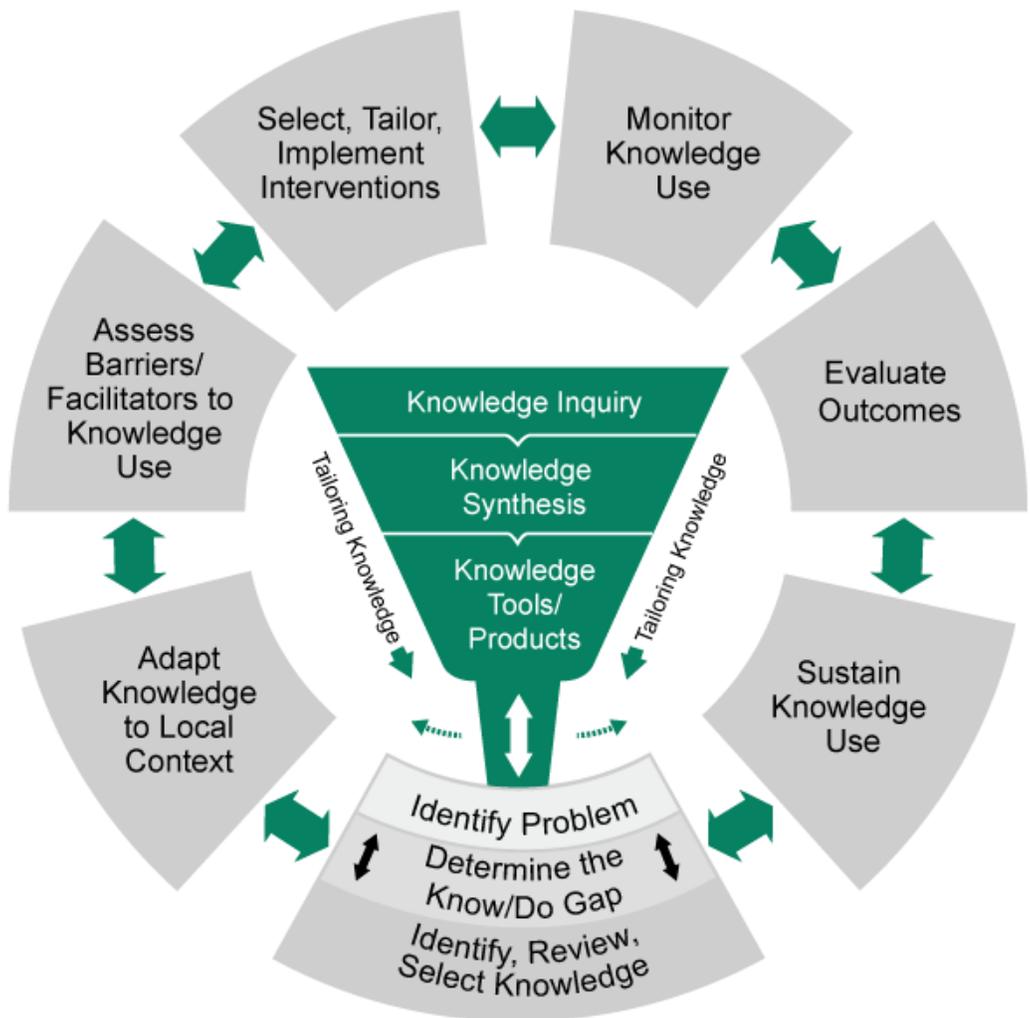


# Aims

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- 1) Use the Knowledge to Action framework in five diverse rehabilitation facilities to implement the same Clinical Practice Guideline (CPG)
- 2) Assess the impact of each site's implementation efforts on therapist adherence to CPG recommendations

# Background



OPEN

## CLINICAL PRACTICE GUIDELINES

# Vestibular Rehabilitation for Peripheral Vestibular Hypofunction: An Evidence-Based Clinical Practice Guideline

FROM THE AMERICAN PHYSICAL THERAPY ASSOCIATION  
NEUROLOGY SECTION

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## ABSTRACT

**Background:** Uncompensated vestibular hypofunction results in postural instability, visual blurring with head movement, and subjective complaints of dizziness and/or imbalance. We sought to answer the question, "Is vestibular exercise effective at enhancing recovery of function in people with peripheral (unilateral or bilateral) vestibular hypofunction?"  
**Methods:** A systematic review of the literature was performed in 5 databases published after 1985 and 5 additional sources for relevant publica-

# Methods

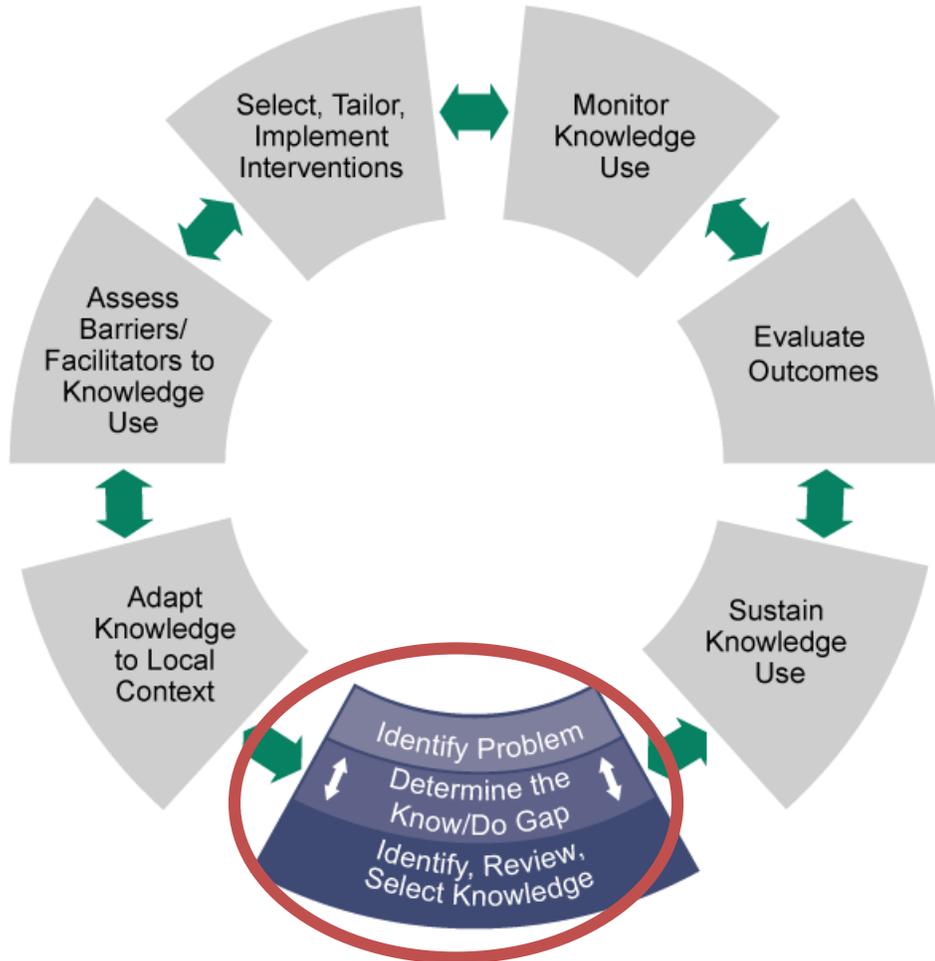
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## **Multi-site Mixed-methods Case Series**

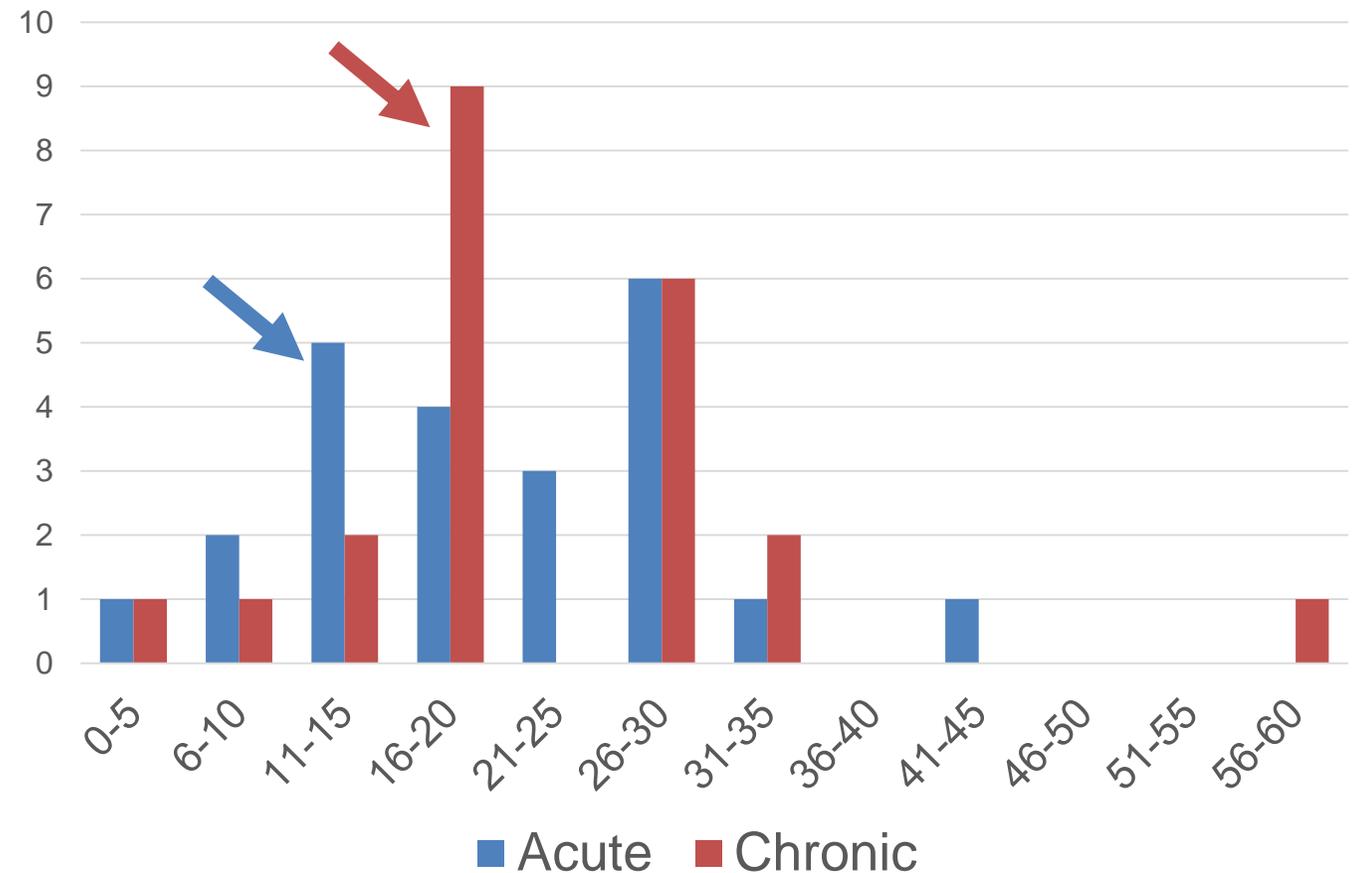
# Five Sites

#	Organizational Structure	Internal Site Lead	Locations	# PTs
1	Small independent practice	✓	1	2
2	Research hospital	✓	1	11
3	Medium independent practice		3	4
4	Large academic institution	✓	1	4
5	Large US government institution	✓	6	20

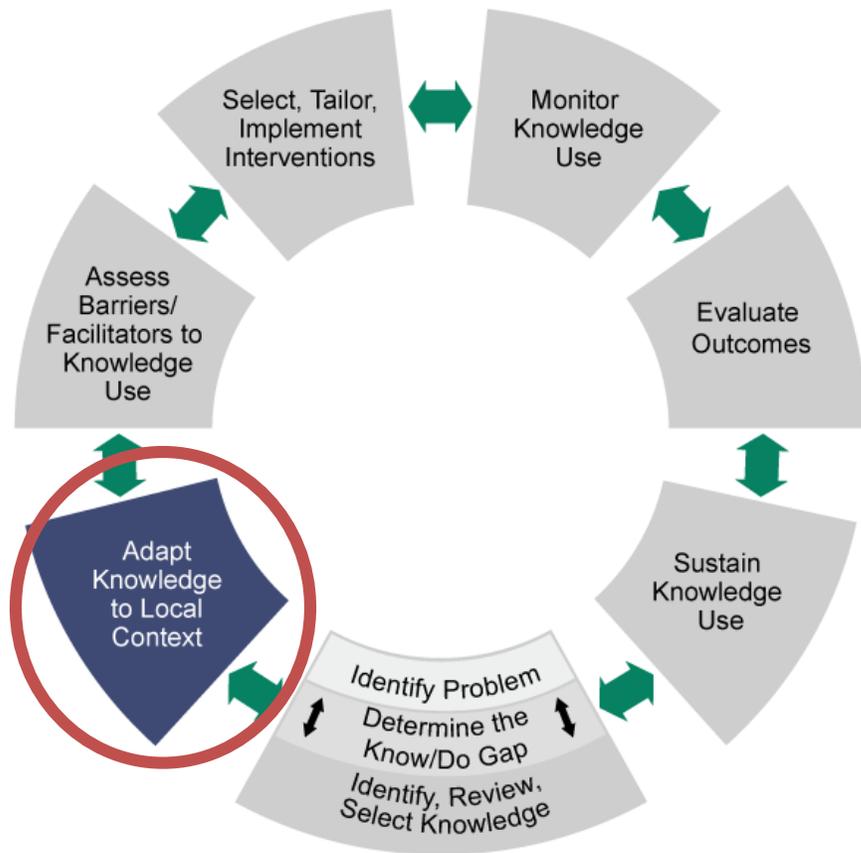
# Identify Problem: Therapist Survey



Home Exercise Program Prescribed Minutes/Day



# Adapt Knowledge: Therapist-generated goals



## Therapist Generated Goal:

Facilitate patient adherence to prescribed exercise program

### Effectiveness of Vestibular Rehabilitation

- **Strong recommendation** (Level I\*) that vestibular rehabilitation should be offered to patients with symptoms due to:
  - Acute, Subacute, & Chronic Unilateral Hypofunction
  - Bilateral Hypofunction, including Pediatrics

### Effectiveness of Different Exercise Types for Unilateral Peripheral Vestibular Hypofunction

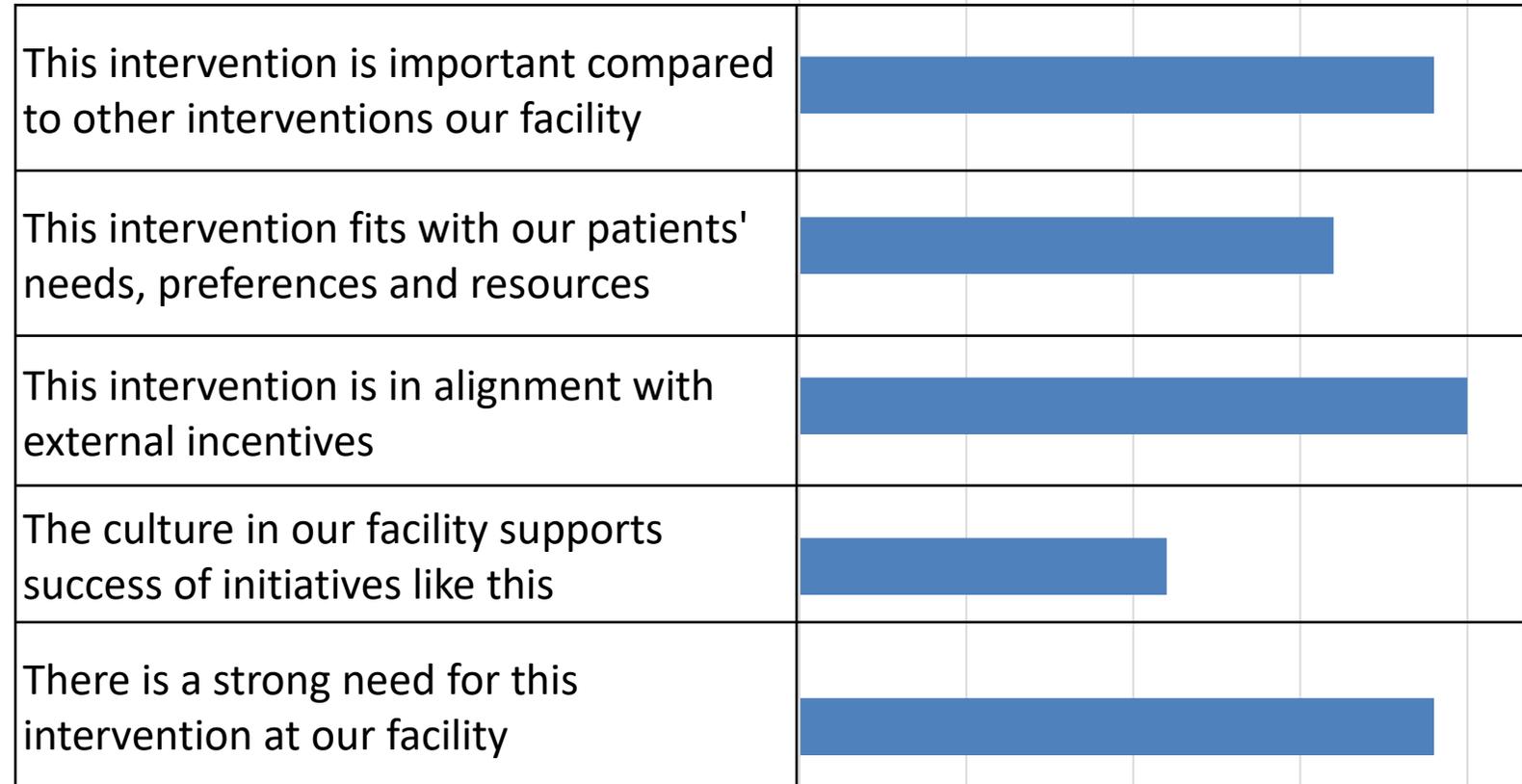
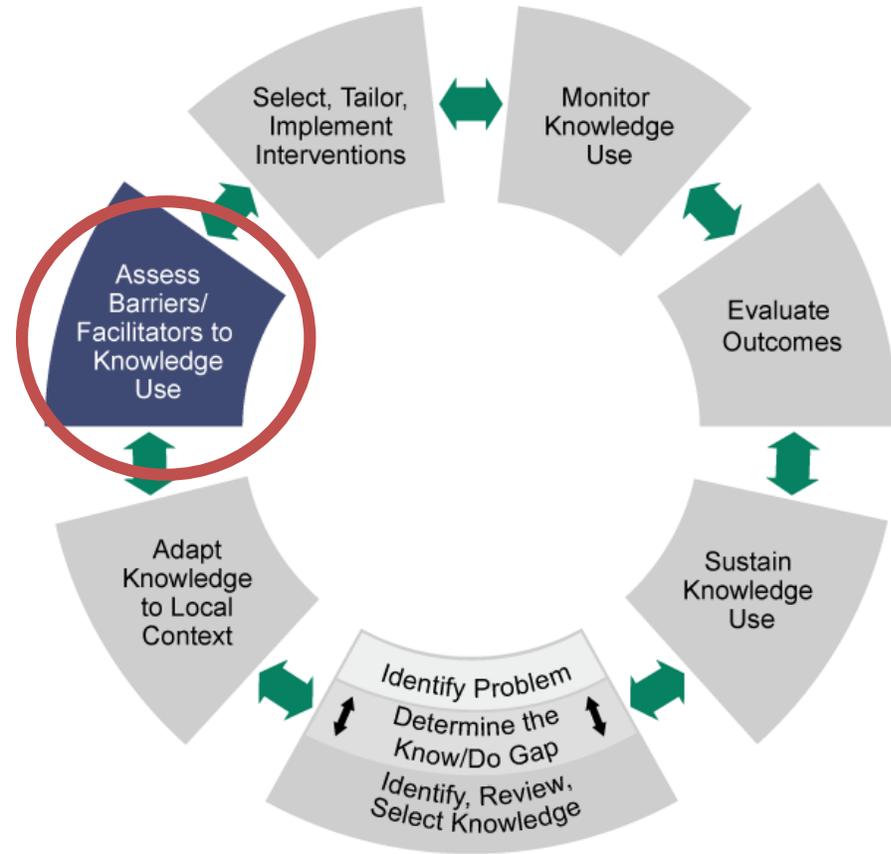
- **Moderate recommendation** (Level II\*) for use of targeted exercise techniques for acute and chronic hypofunction

# Assess Barriers: Therapist Survey

➤ **Consolidated Framework for Implementation Research**

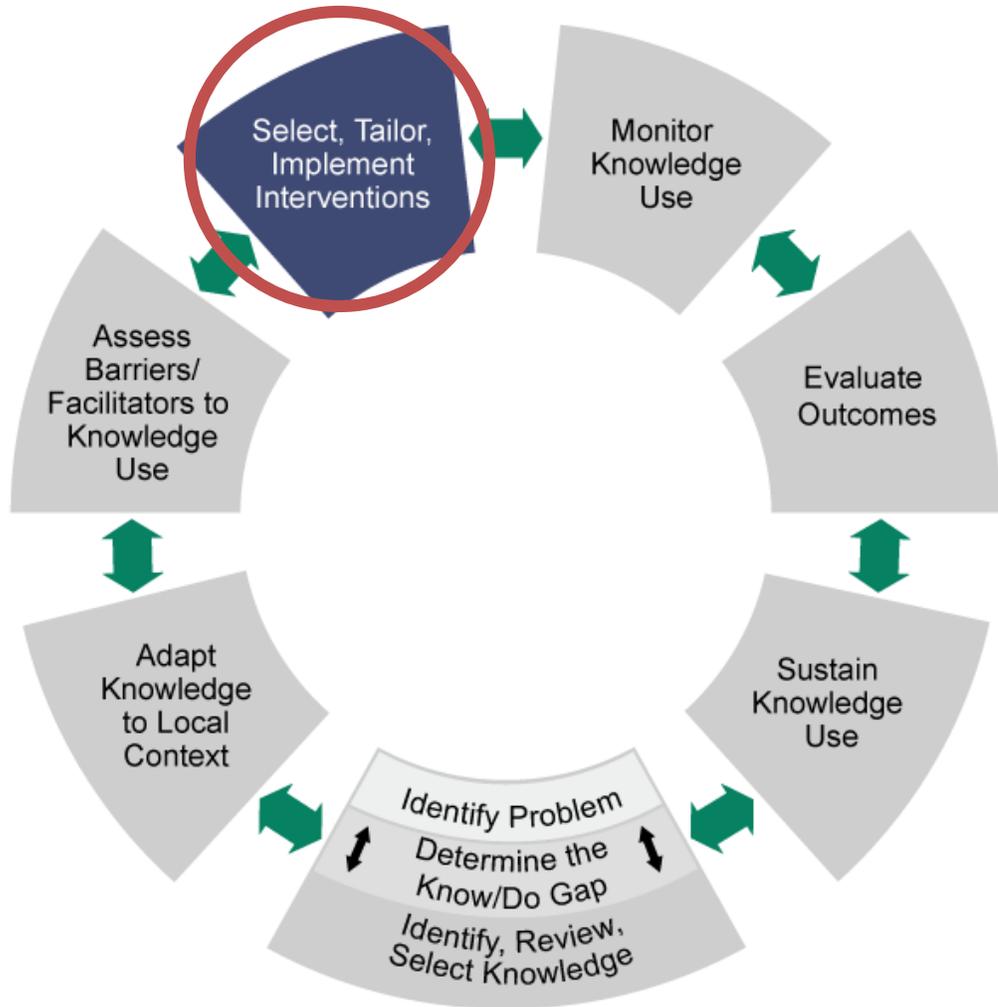
Damschroder LJ *et al. Implement Sci.* 2009;4(1):50.

➤ **Organizational Readiness for Implementing Change**



Shea CM *et al. Implement Sci.* 2014;9:7. 0% 25% 50% 75% 100%

# Tailor Interventions:



## Patient Resources:

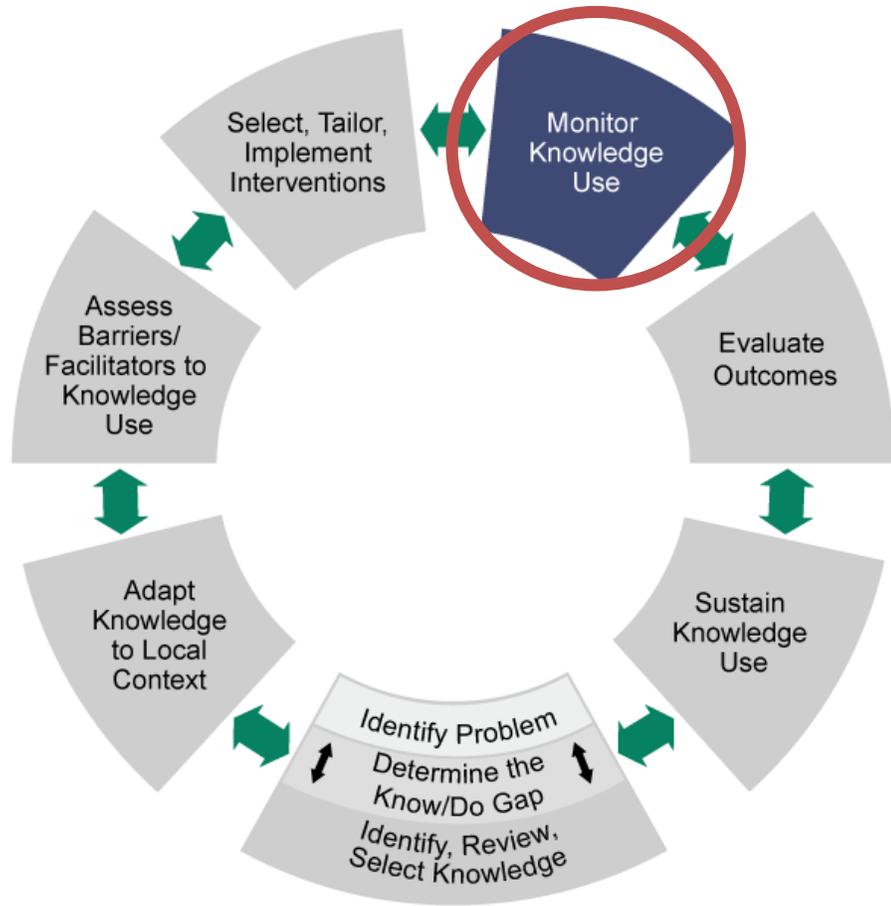
- Educational handouts
- Educational videos
- Text messages
- Communication app
- Timers
- Exercise kits



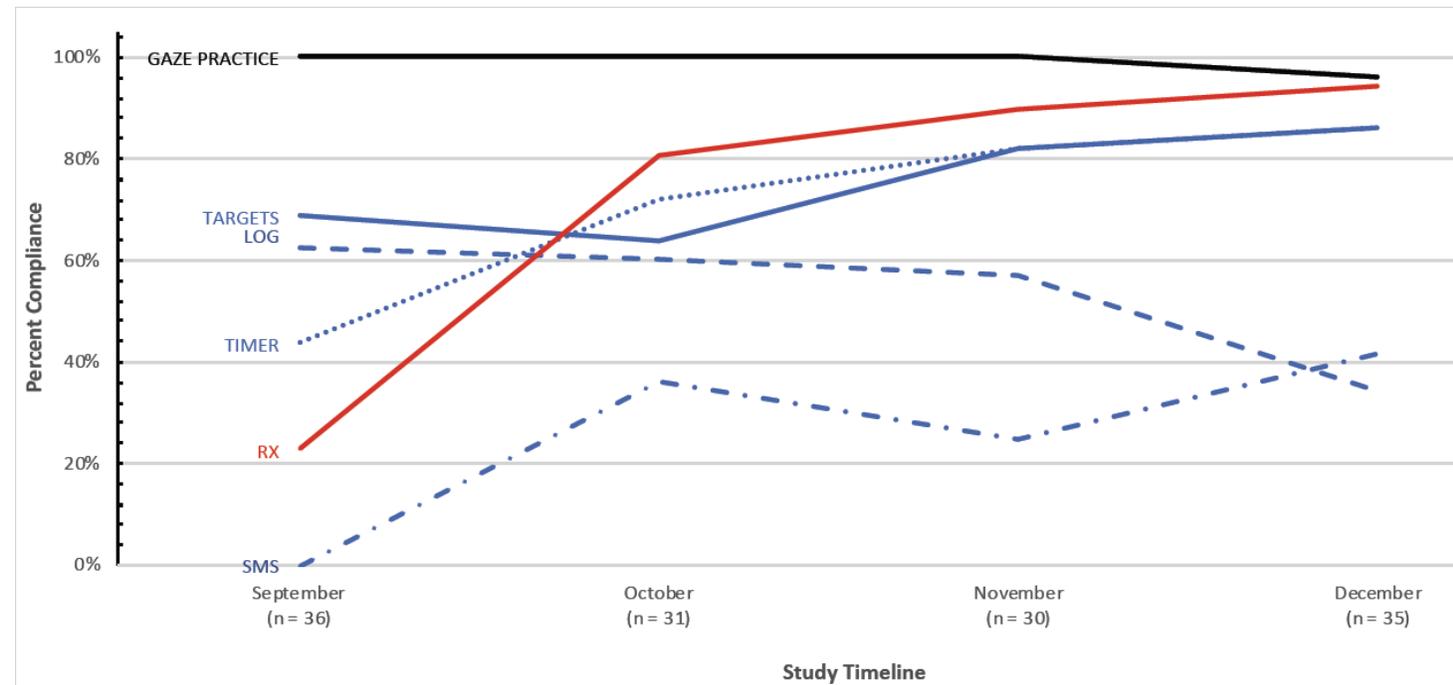
## Therapist Documentation:

- Exercise dose prescribed
- Patient reported compliance

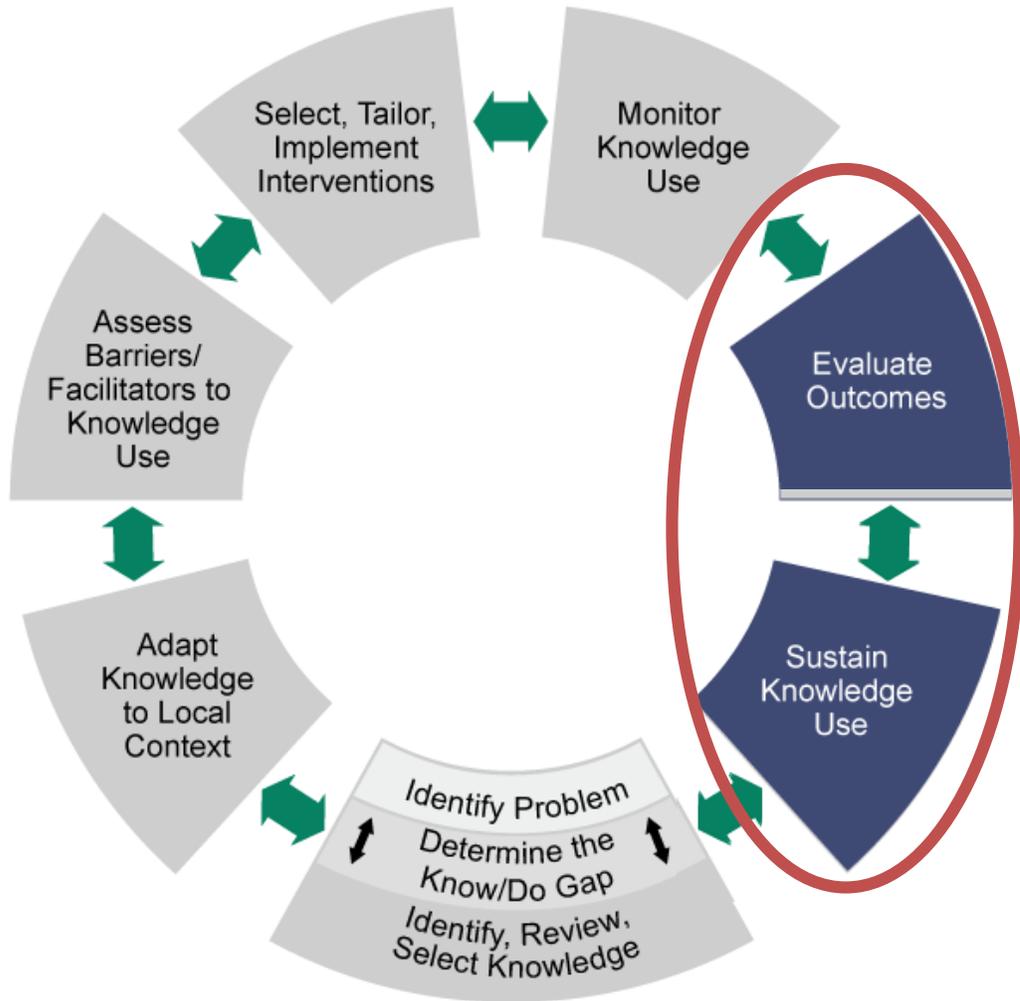
# Monitor Knowledge Use: 6-month intervention



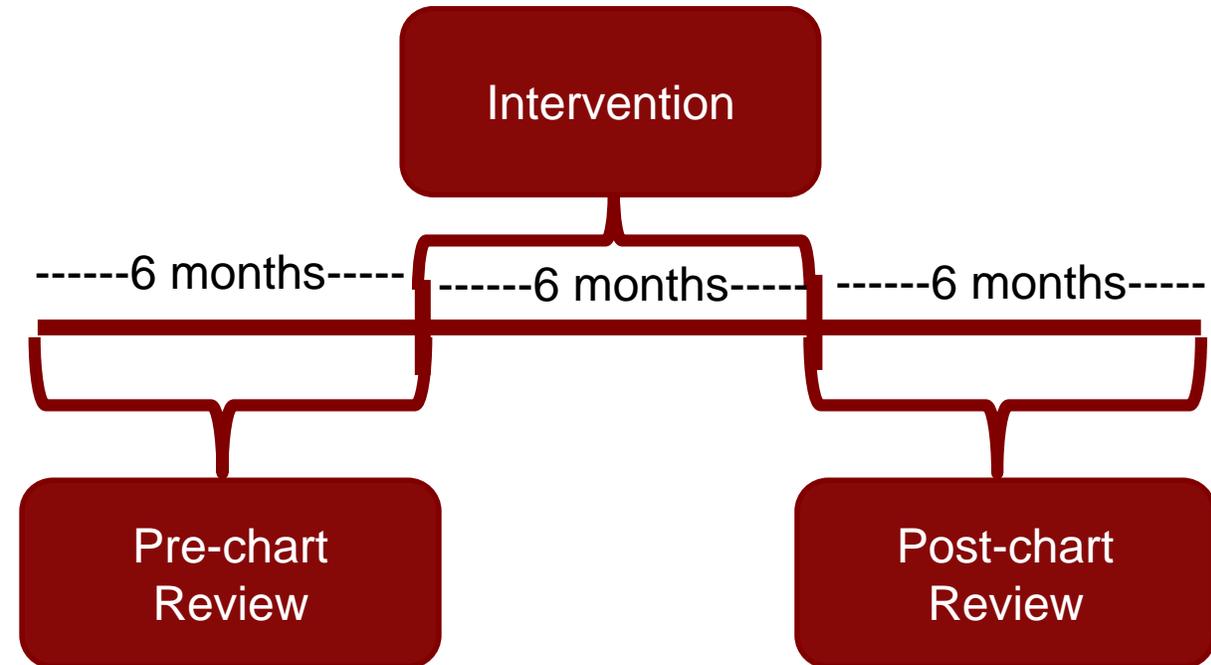
## Monthly Chart Reviews and Team Meetings



# Evaluate Outcomes & Sustain Use



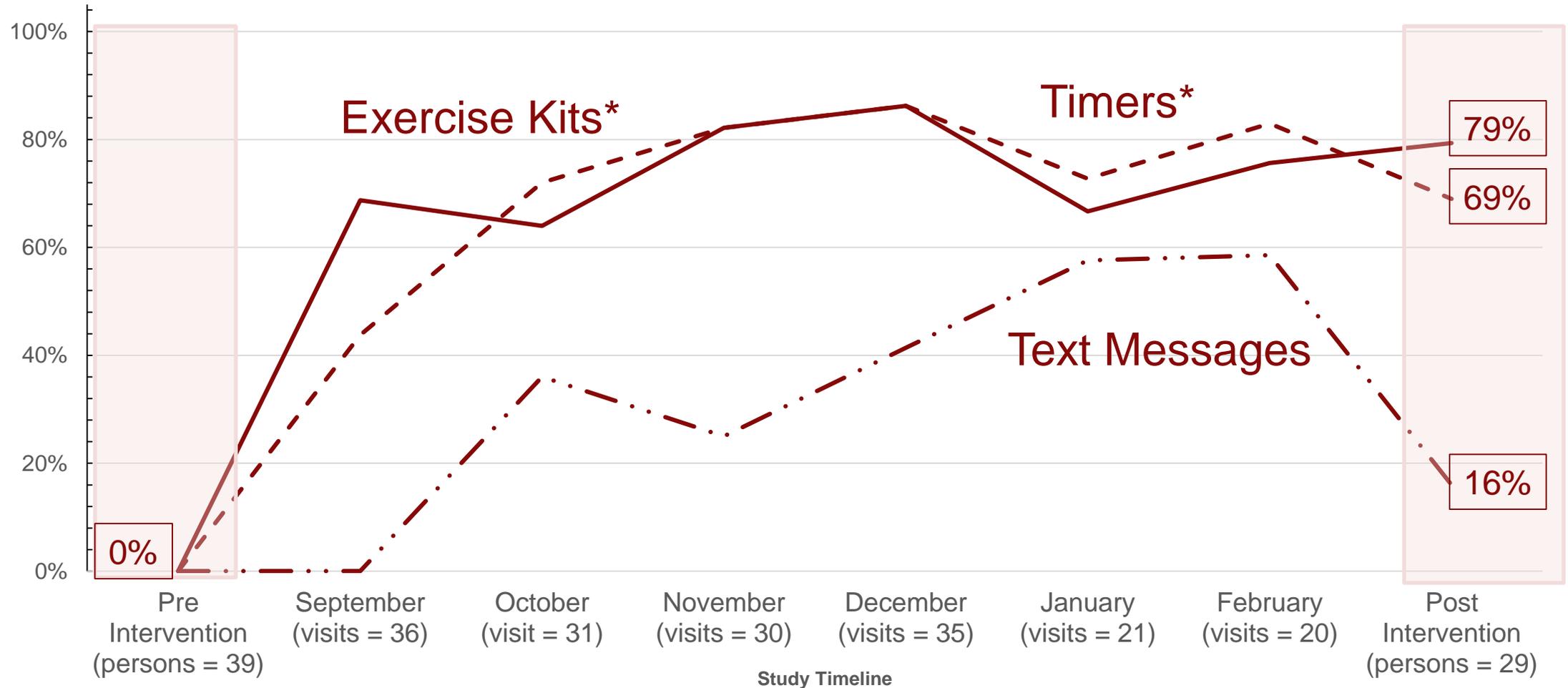
Study outcomes	
<b>Primary</b>	Pre- to post- intervention change in therapist guideline adherence
<b>Secondary</b>	Qualitative analysis from semi-structured therapist interviews <i>Damschroder LJ et al. Implement Sci. 2009;4:50.</i>



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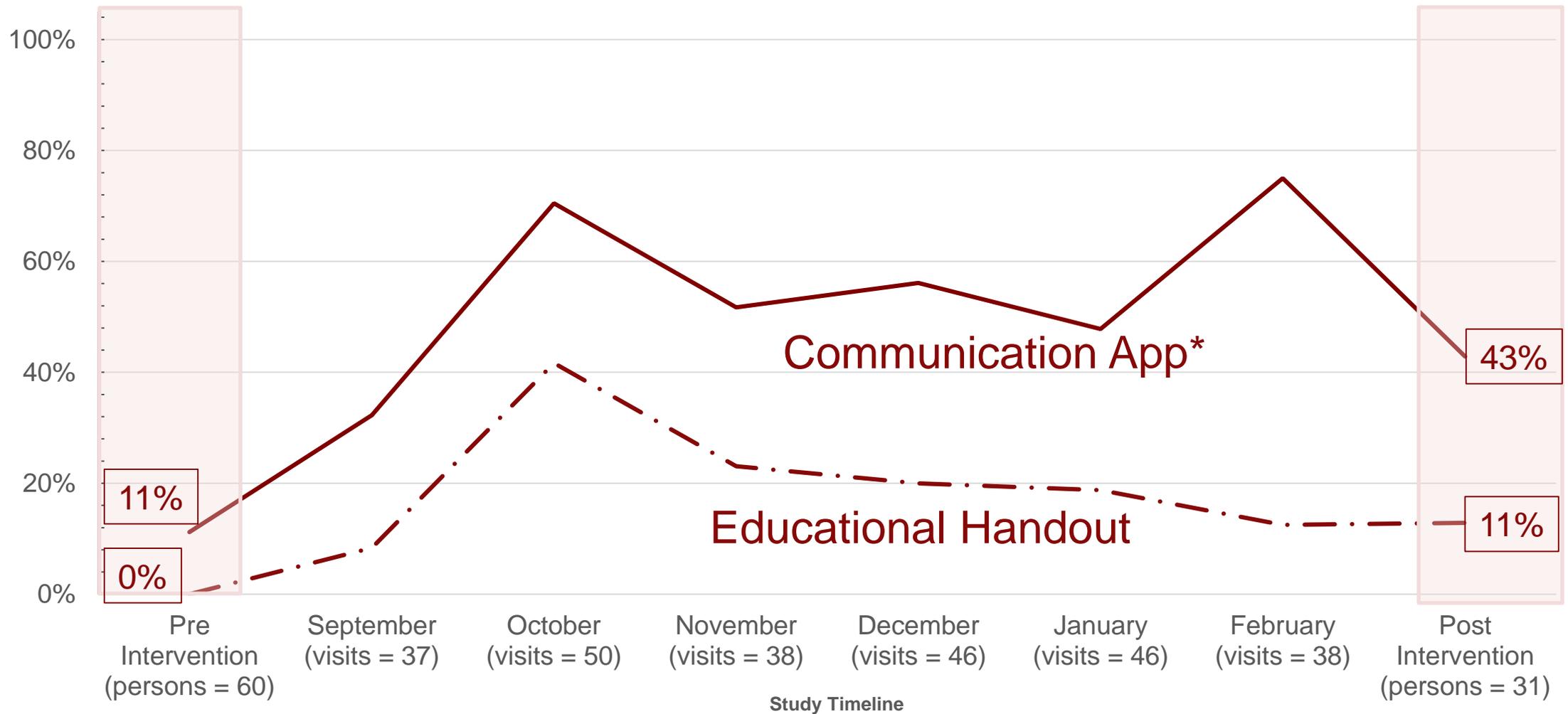
# Results

# Site 1: Texts Messages, Exercise Kits, Timers



\*Statistically Significant  $p < 0.05$  (Bonferroni adjustment for comparisons within site)

# Site 3: Educational Handout, Communication App



\*Statistically Significant  $p < 0.05$  (Bonferroni adjustment for comparisons within site)

# Site 2: Documentation



\*Statistically Significant  $p < 0.05$  (Bonferroni adjustment for comparisons within site)

# Early Qualitative Results

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## **Monthly meetings with audit feedback were important:**

“There was frequent feedback, where if we had just met once ...I think that would have been easy to fall off.” (ID#24)

“I thought [the meetings] were useful ... just giving people a chance to kind of talk through....What issues have come up? Have you been using this? Have you had patients that liked it?” (ID#25)

# Early Qualitative Analysis

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## **Documentation goals promoted accountability:**

“I found myself, because of the project, getting each patient into more specifics of exactly what they're doing at home for their home program, and I saw that to be helpful.” (ID# 21)

“Certainly with the dosing, [I've] definitely been more on top of that with myself and with patients.” (ID# 43)

# Early Qualitative Analysis

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**Simple tools that patients embraced were most successful:**

“So I think the **timers** have been hugely beneficial. And patients love it. [I ask] are you using your timer? Yes, I'm using it. I'm like, okay, then I know you're doing the minutes.”  
(ID# 11)

“I guess I don't know for sure that my patients were using the YouTube **videos** as a resource, part of the challenge with the YouTube video, they would have had to type in this long address from the printed handout.”

# Limitations

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- Small number of therapists per site
- Design prevents aggregate data
- Preliminary qualitative analysis

# Bottomline

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- All sites achieved increased and sustained adherence to the CPG using the Knowledge to Action framework
- Sites with internal leadership had more success
- Simple tools (timers and exercise kits) were more easily adopted
- Therapists valued the improved documentation strategies

THANK YOU!

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