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# Understanding Behavior Change in Clinical Practice Guideline Implementation: A Qualitative Study

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**Background and Purpose:** Growing numbers of clinical practice guidelines (CPGs) are available to neurologic physical therapists to guide and inform evidence-based patient care. Adherence to CPG recommendations often necessitates behavior change for therapists and patients. The purpose of this qualitative study was to gain insight into the experiences, perspectives, and drivers of behavioral change for therapists working to improve adherence to a CPG. We also sought to understand the perspectives of patients impacted by this work.

**Methods:** Five sites participated in a 6-month implementation study integrating a CPG into local practice using the Knowledge to Action model. At the conclusion of the intervention, therapists and patients were recruited to participate in semi-structured interviews or focus groups. An inductive phenomenological approach was used for data analysis. Two authors coded data to generate primary themes. A secondary analysis used the Capability, Opportunity, Motivation, Behavior (COM-B) model to explain the drivers of behavior change for therapists and patients.

**Results:** Perspectives from 16 therapists generated 6 themes around feedback/accountability, teamwork/belonging, complexity/adaptability, leadership/prioritization, engagement/benefit, and motivation/growth. Twelve patients' perspectives generated 2 themes around communication/personalization and support/recovery. Drivers for behavior change associated with the COM-B model are highlighted.

**Discussion and Conclusions:** Therapist adherence to CPG recommendations was supported by inclusive and goal-directed teams, regular quantitative audit and feedback, opportunities for learning, and a sense

of accountability to their coworkers, patients, and themselves. Patients' engagement in rehabilitation was supported by personalized education, objective measures of progress, and a strong therapeutic relationship.

**Video Abstract available** for more insights from the authors (see the video, Supplemental Digital Content 1, available at: <http://links.lww.com/JNPT/A491>).

**Key words:** *behavior change, clinical practice guideline, implementation, knowledge translation, vestibular rehabilitation*

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## INTRODUCTION

Providing evidence for care of patients with neurological conditions is a multistep process culminating in clinical practice guideline (CPG) implementation. The Academy of Neurologic Physical Therapy (ANPT) supports patient care through CPG development,<sup>1</sup> publication,<sup>2-6</sup> and updates<sup>7</sup> and by establishing knowledge translation (KT) task forces to promote CPG dissemination and implementation. Little is known about the experiences of therapists and patients involved in, or impacted by, CPG implementation work. Given the complex and context-specific nature of implementation interventions, qualitative evaluation of neurologic physical therapists and patient experiences is important to inform future work.<sup>8,9</sup> This secondary analysis describes the experiences of therapists and their patients

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involved in a previously reported CPG implementation study<sup>10</sup> funded by the ANPT.

In 2016, the first ANPT KT task force was formed in conjunction with the publication of a CPG addressing care for persons with peripheral vestibular hypofunction.<sup>2</sup> The task force engaged in multiple activities to facilitate awareness and uptake of the CPG's recommendations<sup>11,12</sup> and received funding to conduct an organizational case series to evaluate CPG implementation in 5 organizationally and geographically diverse practice settings.<sup>10</sup> In this study, leaders at each clinical site used the Knowledge to Action model<sup>13</sup> to guide the implementation process. Each site selected target behaviors to better align their teams' clinical practice with the CPG and used the Consolidated Framework for Implementation Research (CFIR) to identify local barriers and facilitators that would impact target behavior adherence.<sup>14</sup> Each site designed a 6-month multimodal intervention to improve therapist CPG adherence founded on evidence-based tools for effective KT,<sup>15</sup> including audit and feedback, communities of practice, local opinion leaders, and fatigue-resistant reminders.<sup>10</sup> The primary outcome of interest was intra-site change in therapist adherence to target behaviors between the 6 months preceding the intervention and the 6 months following the intervention. The primary analysis showed mixed results for pre-to-post change in therapist adherence: 3 sites showed substantial improvement in adherence to most, but not all, target behaviors, 1 site experienced limited success, and another showed a trend toward meaningful change.<sup>10</sup>

Because KT inherently involves behavior change, from old habits to new, qualitative interviews with therapists involved in this study and their patients may provide insight into factors that contribute to variable behavior change outcomes, as were found in this study. The Capability, Opportunity, Motivation, Behavior (COM-B) model can be used to interpret behavior change in the context of implementing new evidence into health care practice.<sup>16</sup> The use of this model facilitates the interpretation of therapists' and patients' perspectives and experiences by exploring how capacity, opportunity, and motivation create necessary and sufficient prerequisites for behavior change. Capabilities are defined as an individual's physical and psychological capacities to engage in an activity by having the necessary knowledge and skills to behave in a certain way.<sup>16</sup> Opportunities are the physical and social factors external to the individual that make a behavior possible. Motivation is defined as the brain processes that energize and direct behavior.<sup>16</sup> The COM-B model has been applied in diverse settings to gauge medical providers' receptiveness and willingness to adopt behavioral changes, such as encouraging physical activity, engaging in research endeavors, and altering perspectives on antibiotic use.<sup>17,18</sup>

The purpose of this qualitative study was to gain insight into the experiences, perspectives, and drivers of behavioral change for therapists working to improve adherence to recommendations from a newly published CPG. Additionally, we sought to understand the perspectives of patients impacted by this effort. The CFIR provided a comprehensive framework for understanding implementation in the complex and multilevel organizational contexts in which therapists were working to achieve change. The COM-B model facilitated the interpretation of therapists' and patients' determinants for behavior change, the

ultimate goal of implementation work, and to inform recommendations for future work.

## METHODS

### Primary Study Design

Five sites with physical therapy services for patients with peripheral vestibular hypofunction participated in a 6-month implementation effort to integrate a newly published CPG<sup>2</sup> into practice. The Knowledge to Action model<sup>13</sup> was used to guide the implementation of therapist-selected target behaviors. Site leaders engaged therapists in monthly meetings that included chart audit, feedback on therapist adherence to targeted interventions, educational resources, and case-based discussions supporting best practice strategies throughout the 6-month intervention. Reminders were built into therapists' electronic medical record (EMR) systems to facilitate CPG-aligned medical record documentation. Many therapist-selected target behaviors were designed to facilitate patient adherence to home exercise prescriptions aligned with CPG recommendations. Intervention details and site-specific quantitative outcomes were reported previously.<sup>10</sup>

### Qualitative Approach

#### Sample Strategy

Purposive recruitment was used to identify therapists and patients for individual interviews or focus groups.

All therapists who participated in the implementation study were invited to participate, except for Site Leads. Site Leads were not included due to their regular communication with the primary investigator conducting the interviews. A minimum of 2 therapists were sought from each site, except for one site that had only 1 eligible therapist.

Patients were recruited based on having received care from a therapist actively involved in the implementation study during the 6-month intervention period. Two to four patients were recruited from 4 of 5 participating sites. One site was not able to provide patient participants because patient identifiable information was not collected in the quantitative phase of the study.

#### Context

Participants (both therapists and patients) selected either the focus group or individual interview format based on comfort and convenience. Focus groups were limited to either therapists or patients from the same site to promote reflection around a common experience and clinical context and to allow topics of interest to be fully explored.

Therapists were interviewed by phone within 6 months of completing the implementation intervention, except for Site E therapists who were interviewed 11 months after the intervention due to COVID-19 interruptions. Patients were interviewed by phone or in person, based on their preference and comfort, within 9 months after their site completed the intervention.

#### Researcher Characteristics and Reflexivity

Participants were interviewed by individuals whom they did not have direct interaction with during the study.

Interviewers recognized that there was risk for participants not wanting to report negative perceptions of the study and worked to minimize this risk by actively encouraging honest and thorough feedback from interviewees with the purpose of supporting improvement in future implementation work. Therapists were interviewed by the principal investigator (J.K.T.), who led a previous mixed-methods study with therapist interviews, had training in qualitative interview techniques, and engaged in intentional reflection before and after each interview or focus group to maintain a focus on curiosity about therapists’ authentic experiences over any personal biases about the project. Patients were interviewed by local Site Leads, except site B, which employed a research assistant. Patient interviewers were all new to qualitative interviewing. Patient interview quality and fidelity were addressed by providing interviewers with a 1-hour qualitative interview skills training session, a reference website,<sup>19</sup> and written instructions provided by the principal investigator. Training included addressing the risk for personal bias in qualitative interviews and the importance of assessing personal biases, asking open-ended questions, maintaining neutrality in interview interactions, and reflecting on and addressing biases that might emerge during the interview process.

**Data Collection Instruments**

Semi-structured interviews and focus groups were used to explore each of the major areas of interest while allowing space to explore unanticipated perspectives and thoughts. The semi-structured therapist interview template (Appendix 1) was developed by J.K.T. and C.M. to address study-relevant components of the 5 CFIR domains (innovation characteristics, implementation process, outer setting, inner setting, and process) that are believed to impact implementation success.<sup>14</sup> The semi-structured patient interview template (Appendix 2) was developed by having Site Leads (L.J.D., R.H., S.M., and H.R.R.) submit target behavior-specific, open-ended questions that were coalesced by J.K.T. into a common, universal template. The template was reviewed and iterated by the study team until agreement was reached. Questions were open-ended, and interviewers ensured that all participants had the opportunity to share in each major area of discussion. Audio-recorded interviews were transcribed, de-identified, and sent to participants for member checking. Data were imported into SocioCultural Research Consultants, LLC, Dedoose Software version 9.0.83<sup>20</sup> for coding and analysis.

**Data Analysis**

An inductive phenomenological approach<sup>21</sup> was used to analyze transcribed interviews. Two authors (J.K.T. and C.M.) coded all transcripts independently, followed by a consensus process whereby discrepancies were discussed and resolved. Codes for therapist interviews were based on the major domains and subdomains of the CFIR Index Manual 3.1.<sup>22</sup> No additional coding options were required for coding therapist interviews. Codes for patient interviews were generated by J.K.T. and C.M. reading all transcripts and identifying common topics of discussion, followed by collaborative iteration to comprehensively capture patient interview data.

Resolved coded data were collaboratively reviewed, first by each code, then between codes to identify dominant themes and any disconfirming evidence. Themes were generated separately for therapist and patient data. Themes between the 2 sources were then triangulated to identify similarities and differences in therapist and patient experiences and perspectives. A secondary inductive analysis involved a third author (S.M. with J.K.T. and C.M.) using the COM-B model to explore therapists’ and patients’ behavioral determinants for change.

**Human Subjects**

Institutional review board (IRB) approval was obtained for all sites (Site A: Northwestern University STU00207654; Site B, Franciscan Missionaries of Our Lady University 2018-076; Sites C and D, University of Southern California HS-18-00439; and Site E, University of South Florida Pro00035158). IRB review determined that the study did not involve any procedures for which written consent is normally required outside the research setting. Participants were provided with an information sheet outlining the study and their rights as participants. This information was verbally repeated prior to interviews, and participants verbally confirmed agreement to participate.

**RESULTS**

Sixteen therapists (Table 1) and 12 patients (Table 2) participated in the study; thematic saturation was achieved after the initial recruitment stage. The mean duration of the 5 therapist focus groups was 46 minutes (range: 42-49 minutes), while the one therapist interview was 30 minutes in duration. The mean duration of the 8 patient interviews was 19 minutes (range: 12-24 minutes), while the one patient focus group was 45 minutes in duration. None of the participants provided corrections to or comments about the transcripts of their interview/focus groups.

**Therapists’ Themes**

Six themes emerged from therapist data analysis. Figure 1 illustrates thematic elements described as supporting CPG implementation, as they were coded across the 5 CFIR domains. Table 3 illustrates quotes representing each theme.

**Table 1. Therapist Participant Characteristics<sup>a</sup>**

Characteristic	Therapists
Therapist participants	16
Site A	5
Site B	1
Site C	4
Site D	4
Site E	2
Attended individual interview	1
Attended focus group	15 (5 focus groups)
Gender	
Female	14
Male	2
Other	–

<sup>a</sup>Therapist interviews were conducted in July and August 2019 (sites A-D) and September 2020 (site E).

**Table 2. Patient Participant Characteristics<sup>a</sup>**

Characteristic	Patients
Total patient participants	12
Site A	2
Site B	4
Site C	4
Site D	2
Site E	0
Attended individual interview	8
Attended focus group	4 (1 focus group)
Age in years, mean (SD)	66.2 (14.0)
Gender	
Female	7
Male	5
Other	–
Peripheral vestibular disease (bilateral vs unilateral)	
Unilateral PVH	9
Bilateral PVH	2
Unclear/Mixed	1
Timing in episode of care	
Concurrent with physical therapy care	2
After physical therapy care ended	10

Abbreviations: PVH, peripheral vestibular hypofunction; SD, standard deviation.  
<sup>a</sup>Patient interviews were conducted in October 2019 (sites A, B, and D) and September 2020 (site C—delayed due to COVID-19 pandemic). Site E did not interview patients.

**Theme 1: Feedback and Accountability**

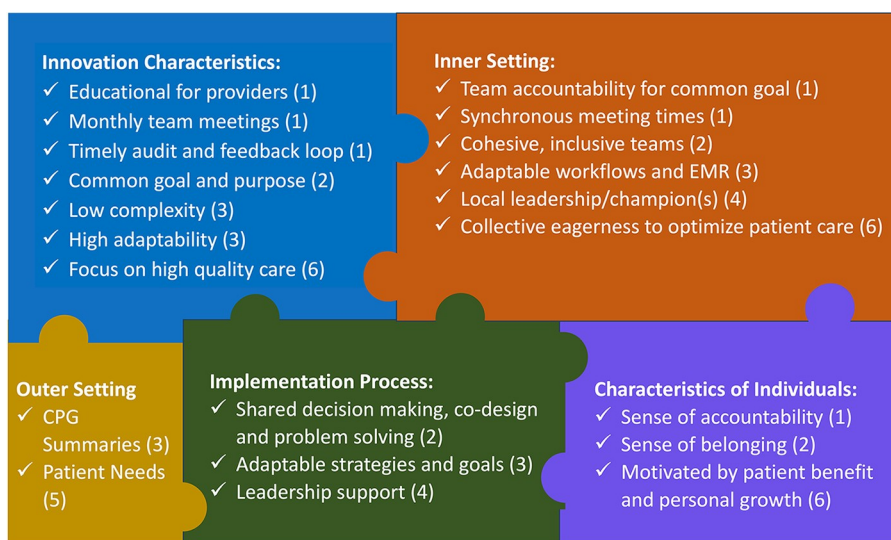
Monthly team meetings, built around the audit and feedback process, nurtured a sense of accountability. Therapists valued monthly meetings that integrated timely feedback from the month’s chart audit, brainstorming to address barriers to adherence, and participating in case-

based educational discussions. They reported that addressing their target behavior adherence in supportive team meetings was essential to implementation. Reviewing meaningful data with peers reinforced a sense of accountability to their teams, their patients, and themselves as care providers. Therapists appreciated that Site Leads scheduled, organized, and led monthly meetings. These sessions were described as engaging, collaborative, motivating, and beneficial for standardizing patient care.

**Theme 2: Teamwork and Belonging**

A cohesive and inclusive team, focused on a common goal, created a sense of belonging and common purpose. Most therapists expressed an enhanced sense of belonging with their team because of the implementation efforts. Involving therapists in decision-making (eg, selecting action statements and target behaviors and designing patient resources and documentation templates) facilitated a sense of cohesion and inclusion. Therapists also appreciated target behaviors that enhanced their team’s competence and consistency in providing excellent patient care.

Therapists identified that meeting as a full team was ideal. When therapists were not able to gather due to work or personal schedules, it could lead to a sense of disengagement. This was particularly difficult at a site where therapists were in multiple locations and did not have the ability to create a common protected time to meet with the Site Lead. Likewise, a structure that could integrate new people into the team was appreciated. While some therapists felt that the structure provided by the implementation effort made it easier to join the team, others described joining the team late leading



**Figure 1.** Thematic elements described by therapists as foundational for supporting CPG implementation. Thematic elements are associated with the relevant CFIR domain (innovation characteristics, inner setting, outer setting, implementation process, or characteristics of individuals), represented by puzzle pieces. The source theme number is indicated in parentheses: (1) Feedback and Accountability, (2) Teamwork and Belonging, (3) Complexity and Adaptability, (4) Leadership and Prioritization, (5) Engagement and Benefit, and (6) Motivation for Growth. This figure is available in color online ([www.jnpt.org](http://www.jnpt.org)).

**Table 3. Example Quotes From Six Themes From Therapist Interviews and Focus Groups****Theme 1: Feedback and Accountability**

“...getting that concrete feedback helped me because I don’t like to see zero percent on any feedback. So that helped me remind myself and to be able give the reassessment [forms].” (Th10)

“...the meetings were just a great reminder to kind of bring me back on track with documentation and just keeping all the different aspects of the project in mind too for these patients.” (Th7)

**Theme 2: Teamwork and Belonging**

“I think more beneficial than anything else was the large group meetings that we had where we had the representative from each clinic there and we could really talk about the different things that we’ve seen.” (Th6)

“I think we all had a part in deciding on the project, deciding how we wanted to carry out the project. So I think there was a lot of buy in from that perspective too.” (Th3)

**Theme 3: Complexity and Adaptability**

“I think our documentation system makes that pretty easy because we can create smart phrases, we can change smart phrases, and things like that. So from my perspective at this clinic [the project] was very adaptable.” (Th15)

“I felt like the handouts that [our Site Lead] wanted us to give out weren’t really appropriate for some patients. And so I didn’t give those out a whole lot.” (Th5)

**Theme 4: Leadership and Prioritization**

“I don’t know how Site Lead’s going to keep those medical record audits going, but we’ve found it helpful so far.” (Th 4)

“We had support from the management team... It was about how do you become a better clinician. Having support from them, from that perspective, I think was huge in making sure we were communicating well.” (Th 1)

**Theme 5: Engagement and Benefit**

“...the educational handout that we updated...got a lot of good feedback from patients...I think empowering them with that information, a lot of people appreciated, and I felt like it ended up with better [patient] buy-in.” (Th14)

“I think patients really appreciate the education and handouts. And a lot of them really like timers and metronomes as well...it makes it easier for them and a little easier to see progress.” (Th 9)

**Theme 6: Motivation for Growth**

“I think that our staff has just really been very passionate about gaining this extra knowledge.” (Th6)

“I think that just the drive to better myself as a therapist so that my patients will benefit more, I think that has a lot to do with it.” (Th15)

to feeling out of the loop and incongruent with implementation goals, which was demotivating and frustrating.

**Theme 3: Complexity and Adaptability**

Therapists’ perception of the complexity and adaptability of resources and target behaviors impacted implementation. When target behavior complexity was low and adaptability was high, therapists felt a sense of confidence for successful behavior change. For example, therapists reported that 1-page CPG summaries turned the complex CPG document into something easy to understand and implement. Likewise, some therapists reported that their EMR was adaptable and supported implementation. The more a target behavior synced with therapists’ existing workflow, the less complex it felt, and the more likely they were to feel successful.

In contrast, systems perceived as highly complex or insufficiently adaptable led to disappointment and frustration. Many therapists reported that their EMR limited their ability to adjust how they documented patient encounters, making adherence to

target behaviors more difficult. Text-message patient reminder systems were universally found to be both highly complex (technologically, logistically, and administratively) and insufficiently adaptable to justify the time and resources required to implement them. Therapists who did not have control over their patients’ schedules, care policies, or volume of referrals were more likely to feel frustrated about the implementation project. Likewise, some therapists reported low motivation for distributing patient handouts that they did not feel they could adapt and that had a complex distribution schedule.

**Theme 4: Leadership and Prioritization**

Local leadership with prioritized time for implementation was viewed as important to sustainability. Many therapists expressed that their Site Lead was key to their sites’ success. Therapists valued Site Leads as opinion leaders who understood the value of the CPG for improving practice in the context of their specific organization and clinical setting. Successful Site Leads were described as those who involved therapists in decision-making, handled many of the implementation logistics, and invited others to join in shared leadership. In contrast, the lack of physical presence by a Site Lead was described as a limiter to communication and implementation. As therapists considered implementation sustainability, they emphasized the importance of Site Leads having sufficient time and support from organization leadership to continue their work. As the study finished, teams were actively discussing adjustments to their Site Leads’ workflow to make long-term audit and feedback sustainable.

**Theme 5: Engagement and Benefit**

Therapists who felt engaged in the implementation project perceived benefit to their patients. Most therapists reported a relative advantage of this project compared to other projects in which they had participated. They perceived better patient outcomes secondary to improved consistency of quality care and visit documentation. For example, therapists who felt the educational handouts fit patient needs reported strong benefits for patients, observing better patient buy-in, empowerment, and agency. In contrast, a therapist who was not enthusiastic about the project reported not using resources because they did not anticipate a benefit to patients.

**Theme 6: Motivation for Growth**

Individual therapists described having strong motivation and commitment to personal growth to benefit their patients. Therapists described a love for learning, motivation to grow, and passion for patient care as drivers for their commitment to adhere to the CPG. Overall, therapists were driven to meet adherence goals and described being energized by the implementation study. They also described a positive feedback loop: gaining confidence and consistency in adherence to target behaviors, perceiving benefits to patients from that change, and thus, being more committed to adhering to target behaviors.

**Patients’ Themes**

Two themes emerged from patient interviews. Table 4 illustrates quotes representing each theme.

**Table 4. Example Quotes From Two Themes From Patient Interviews and Focus Groups**

**1: Communication and Personalization**

“She kept pushing me. She made it a point to ask how much I had been doing...paid attention to what kind of progress I was making.” (P7)  
 “They matched [the exercise handout] to what we did that day...they specialized it for me specifically which was really nice.” (P1)  
 “I had time, but I also had enough backing from [therapists] that I was willing to do this stuff.” (P12)

**2: Support for Recovery**

“I was faithful. Basically, because I was afraid I was going to have these symptoms the rest of my life. So I was anxious for them to go away. So I was very faithful.”(P8)  
 “...you know, I think the biggest was [my therapist is] very encouraging, ‘look, we can make this better’. This is something you can work with and make better.” (P3)

**Theme 1: Communication and Personalization**

Patients identified that therapists’ actions impacted their ability to adhere to their home exercise program. Patients valued when therapists explained the patient’s condition, clarified expectations for recovery, and emphasized the importance of home exercise adherence. They particularly valued when therapists adhered to the target behavior of asking details about home exercise program adherence each visit. Patients described anticipating their therapists’ inquiry

about home exercise adherence and feeling motivated by the sense that therapists cared about their adherence. Patients valued updated, personalized handouts explaining home exercises, with pictures. They also found value in discussing personal outcomes data with their therapist as it helped them see their progress more clearly and built motivation to continue their efforts.

**Theme 2: Support for Recovery**

Patients identified that a supportive relationship with their therapist impacted their emotional health and functional recovery. Patients shared that their emotional health was impacted by their condition and their experience in therapy. They described symptoms of anxiety and depression associated with functional loss, coping with a new diagnosis, not knowing what to expect, and not progressing as well or as quickly as they hoped. Patients expressed that their emotional health improved when they understood their condition, could set realistic goals, saw progress, and had a meaningful therapeutic relationship with their therapist.

**COM-B Secondary Analysis**

Table 5 highlights strategies that therapists and patients found effective for promoting behavior change. Some participants described factors that supported behavior change while others described a contrasting experience as hindering

**Table 5. COM-B—Explanation of What Facilitated Therapists’ and Patients’ Capability, Opportunity, and Motivation for Behavior Change**

	Therapist Summary	Patient Summary
Capability	<p><i>What:</i> Therapists developed necessary knowledge and skills to implement the CPG.</p> <p><i>How:</i> Therapists described the value of monthly team meetings to receive audit feedback and engage in team discussions. Meetings supported group reflection on feedback from the monthly audit, knowledge growth, and monitoring implementation progress.</p>	<p><i>What:</i> Patients developed knowledge and skills to understand and participate in their rehabilitation program.</p> <p><i>How:</i> Patients described learning from their therapists about their condition and the importance of exercise adherence. They worked with therapists to set appropriate expectations and navigate successes and disappointments.</p>
Opportunity	<p><i>What:</i> Therapists adapted physical resources for themselves and their patients while collaborating in cohesive teams to support implementation efforts.</p> <p><i>How:</i> Site Leads had time and authority to create logistical and social conditions for regular team meetings. Teams with a common goal and purpose engaged in shared decision-making and co-design of implementation materials and processes.</p>	<p><i>What:</i> Patients used individualized physical resources in conjunction with a meaningful therapeutic relationship to engage in their rehabilitation program.</p> <p><i>How:</i> Patients valued resources and reminders customized by their therapists to meet their needs. Patients’ therapeutic relationship with their therapist allowed them to interpret personal progress and navigate challenges.</p>
Motivation	<p><i>What:</i> Therapists were motivated to improve adherence to team-selected goals to: improve patient care, align with the CPG, and adhere to a personal value of commitment to quality care.</p> <p><i>How:</i> Therapists described a sense of accountability to their teams to provide high quality care at their institution. Monthly quantitative feedback provided a direct measure of team success and motivation to adjust to make improvements the next month. Therapists were motivated by seeing individual patients benefit. This fed a reinforcing feedback loop that enhanced therapist adherence to implementation goals and patient adherence to prescribed exercise programs.</p>	<p><i>What:</i> Patients were motivated to adhere to their prescribed home exercise program to optimize their recovery from vestibular dysfunction.</p> <p><i>How:</i> Patients’ motivation was enhanced when they anticipated that their therapist would ask about the home exercise adherence and by seeing objective measures of their functional improvements.</p>

Abbreviations: COM-B, Capacity, Opportunity, and Motivation Model of Behavior; CPG, clinical practice guideline.

behavior change. Table 5 presents the supportive cases for future implementation and testing.

## DISCUSSION

This study offers new insights into therapists' CPG implementation experiences across 5 sites in distinct geographical and organizational settings. Six emergent themes provide a broad perspective about what therapists valued, what worked, and what didn't while implementing a CPG for managing patients with peripheral vestibular hypofunction. Our COM-B informed analysis provides a deeper understanding of the drivers of therapist behavior change. We also provide complementary patient perspectives, highlighting what they valued from their therapist and what factors supported their motivation to adhere to their rehabilitation program.

### Therapists' Capabilities For Behavior Change

Capability for change exists when an individual possesses the necessary knowledge and skills to engage in a new behavior. Therapists in our study described audit and feedback as a primary contributor to their capability for change. Audit and feedback needs to be provided in an appropriate social context, including a meaningful relationship between auditors and clinicians, sufficient resources to react and respond to audit results, and flexibility and respect for clinician expertise.<sup>23</sup> Most, but not all, therapists in our study described a setting consistent with these criteria. Further, therapists described capability for change consistent with Crawshaw and colleagues<sup>24</sup> findings that audit and feedback supports goal setting, action planning, problem solving, reviewing and revising goals, self-monitoring, social support, education, and social reward.

### Therapists' Opportunity For Behavior Change

Opportunity for change is generated when physical and social factors external to an individual make a new behavior possible. Therapists described opportunities for change through local leadership. Leadership culture can promote or detract from implementation success.<sup>25-28</sup> For example, local opinion leaders, individuals perceived by their peers to be credible, trustworthy, and influencers of local practice<sup>29</sup> can support CPG implementation through modeling and direct support for their peers.<sup>30</sup> The Site Leads in our study often served as local opinion leaders, valued for leading team meetings and educational sessions, facilitating the logistics of implementation, including peers in decision-making, and advocating for institutional resources to support implementation.

Therapists also described enhanced opportunities through local team collaboration, which may have helped overcome previously reported challenges related to lack of expert and peer support for CPG implementation.<sup>31,32</sup> A team-based educational approach may have also facilitated opportunities through multidimensional interventions, regular feedback, and broad organizational support, all shown to support implementation<sup>27,33-36</sup> and outpacing the lesser impact of education alone on behavior change.<sup>15,33,34,37</sup>

Finally, adaptability of resources impacts opportunities for behavior change.<sup>38</sup> Interestingly, therapists found "mobile device application"-based home exercise reminder systems to be insufficiently adaptable for sustained use, despite success in other contexts.<sup>39,40</sup>

### Therapists' Motivation For Behavior Change

Motivation for change is driven by an internal drive that galvanizes and produces behavior. It is important for an individual to want to do a particular behavior more than other possible behaviors and for their regular habits to incorporate the new behavior. Therapists in our study identified motivation as being derived from a belief that patients would benefit from improved adherence to the CPG, a commitment to personal growth, and a sense of accountability to their team.

Helping others is a core value for many who choose physical therapy as a career.<sup>41,42</sup> The opportunity to benefit patients through CPG implementation appears to have created a positive motivational feedback loop. This complements previously identified barriers including insufficient monitoring of provider behavior<sup>28,43</sup> and deficiencies in therapists' ability to self-assess adherence to CPG recommendations.<sup>44</sup>

### Patient Capability, Opportunity, And Motivation For Behavior Change

Patients linked capability, opportunity, and motivation for change to patient-centered care and a strong therapeutic alliance. The therapeutic alliance supports patients' understanding of their condition, facilitates collaboration toward personal goals, and improves home exercise adherence.<sup>45-50</sup> Consistent with other rehabilitation settings,<sup>48,51</sup> patients described gaining capability for change from enhanced knowledge and skills for understanding and participating in their rehabilitation. Further, the opportunity to adhere to their home exercise program was associated with personalized exercise programs tailored to their specific goals.

Patients also reported enhanced motivation from emotional support and collaboration with their therapist. This reinforces the value of patient-centered care, where therapists serve as trusted guides, helping patients navigate rehabilitation with confidence.<sup>52</sup> Therapists also impacted patient motivation when they asked detailed questions about exercise program adherence and provided objective measures to support insight into individual progress. The impact of communication and education on patients' sense of motivation to engage in rehabilitation underscores the importance of the therapeutic alliance.<sup>52</sup>

### Limitations

The main limitation of this study is the small sample of therapists and patients reporting their experiences. As with any qualitative study, we gained insight into the experiences and perceptions of a select group and must maintain caution in extrapolation. Transferability was increased by including therapists and patients from distinct sites and organizational settings, and through our secondary analysis to understand the fundamental drivers of behavior change.



## CONCLUSION

Therapists' capability, opportunity, and motivation to better align practice with newly published CPG recommendations were particularly supported by regular, quantitative auditing, with feedback provided in supportive monthly team meetings. When Site Leads provided feedback in a collaborative, educational setting at a common time, teams experienced a positive environment for behavior change. Patient engagement in rehabilitation was supported by education, personalized resources, objective measures of progress, and a strong therapeutic alliance with their therapist. We expect that these findings can be used to inform future KT efforts by the ANPT, neurologic physical therapists in small and large organizations, and health care providers of similar disciplines globally.

## REFERENCES

1. ANPT Clinical Practice Guidelines. Academy of Neurologic Physical Therapy. Accessed January 12, 2024. <https://www.neuropt.org/practice-resources/anpt-clinical-practice-guidelines>
2. Hall CD, Herdman SJ, Whitney SL, et al. Vestibular rehabilitation for peripheral vestibular hypofunction: an evidence-based clinical practice guideline: from the American Physical Therapy Association Neurology Section. *J Neurol Phys Ther.* 2016;40(2):124-155.
3. Moore JL, Potter K, Blankshain K, Kaplan SL, O'Dwyer LC, Sullivan JE. A core set of outcome measures for adults with neurologic conditions undergoing rehabilitation: a clinical practice guideline. *J Neurol Phys Ther.* 2018;42(3):174-220.
4. Hornby TG, Reisman DS, Ward IG, et al. Clinical practice guideline to improve locomotor function following chronic stroke, incomplete spinal cord injury, and brain injury. *J Neurol Phys Ther.* 2020;44(1):49-100.
5. Johnston TE, Keller S, Denzer-Weiler C, Brown L. A clinical practice guideline for the use of ankle-foot orthoses and functional electrical stimulation post-stroke. *J Neurol Phys Ther.* 2021;45(2):112-196.
6. Osborne JA, Botkin R, Colon-Semenza C, et al. Physical therapist management of Parkinson disease: a clinical practice guideline from the American Physical Therapy Association. *Phys Ther.* 2022;102(4):pzab302. doi:10.1093/ptj/pzab302.
7. Hall CD, Herdman SJ, Whitney SL, et al. Vestibular rehabilitation for peripheral vestibular hypofunction: an updated clinical practice guideline from the Academy of Neurologic Physical Therapy of the American Physical Therapy Association. *J Neurol Phys Ther.* 2022;46(2):118-177.
8. Munce SEP, Graham ID, Salbach NM, et al. Perspectives of health care professionals on the facilitators and barriers to the implementation of a stroke rehabilitation guidelines cluster randomized controlled trial. *BMC Health Serv Res.* 2017;17(1):440.
9. Skivington K, Matthews L, Simpson SA, et al. A new framework for developing and evaluating complex interventions: update of Medical Research Council guidance. *BMJ.* 2021;374:n2061.
10. Tilson JK, Martinez CA, MacDowell S, et al. Use of the knowledge to action model improved physical therapist adherence to a common clinical practice guideline across multiple settings: a multisite case series. *BMC Health Serv Res.* 2022;22(1):1462.
11. Academy of Neurologic Physical Therapy. Peripheral vestibular hypofunction clinical practice guideline. Accessed January 12, 2024. <https://www.neuropt.org/practice-resources/anpt-clinical-practice-guidelines/vestibular-hypofunction-cpg>
12. Academy of Neurologic Physical Therapy Education Center. Evidence into practice: the updated clinical practice guideline for vestibular rehabilitation for peripheral vestibular hypofunction. Accessed January 12, 2024. <https://anpteducationcenter.org/products/evidence-into-practice-the-updated-clinical-practice-guideline-for-vestibular-rehabilitation-for-peripheral-vestibular-hypofunction>
13. Graham ID, Logan J, Harrison MB, et al. Lost in knowledge translation: time for a map? *J Contin Educ Health Prof.* 2006;26(1):13-24.
14. Damschroder LJ, Aron DC, Keith RE, Kirsh SR, Alexander JA, Lowery JC. Fostering implementation of health services research findings into practice: a consolidated framework for advancing implementation science. *Implement Sci.* 2009;4:50.
15. Johnson MJ, May CR. Promoting professional behaviour change in healthcare: what interventions work, and why? A theory-led overview of systematic reviews. *BMJ Open.* 2015;5(9):e008592.
16. Michie S, van Stralen MM, West R. The behaviour change wheel: a new method for characterising and designing behaviour change interventions. *Implement Sci.* 2011;6:42.
17. Clark RE, McArthur C, Papaioannou A, et al. "I do not have time. Is there a handout I can use?": combining physicians' needs and behavior change theory to put physical activity evidence into practice. *Osteoporos Int.* 2017;28(6):1953-1963.
18. Wenke R, Weir KA, Noble C, Mahoney J, Mickan S. Not enough time for research? Use of supported funding to promote allied health research activity. *J Multidiscip Healthc.* 2018;11:269-277.
19. McNiff K. Are you really listening? Tips for conducting qualitative interviews. Accessed September 18, 2019. <https://lumivero.com/resources/tips-for-conducting-qualitative-interviews/>
20. Dedoose. Version 9.0.83 Cloud application for managing, analyzing, and presenting qualitative and mixed method research data. SocioCultural Research Consultants, LLC; 2021.
21. Azungah T. Qualitative research: deductive and inductive approaches to data analysis. *Qual Res J.* 2018;18(4):383-400.
22. Mehret Assefa MM. The Consolidated Framework for Implementation Research (CFIR) Index Manual. *Stanford Univ School Med.* 2019:1-91.
23. Sarkies M, Francis-Auton E, Long J, et al. Audit and feedback to reduce unwarranted clinical variation at scale: a realist study of implementation strategy mechanisms. *Implement Sci.* 2023;18(1):71.
24. Crawshaw J, Meyer C, Antonopoulou V, et al. Identifying behaviour change techniques in 287 randomized controlled trials of audit and feedback interventions targeting practice change among healthcare professionals. *Implement Sci.* 2023;18(1):63.
25. Dryden-Palmer KD, Parshuram CS, Berta WB. Context, complexity and process in the implementation of evidence-based innovation: a realist informed review. *BMC Health Serv Res.* 2020;20(1):81.
26. Nixon-Cave K, Kaplan S, Dole R, Schreiber J. Pediatric physical therapists' use of the congenital muscular torticollis clinical practice guidelines: a qualitative implementation study. *Pediatr Phys Ther.* 2019;31(4):331-336.
27. Stander J, Grimmer K, Brink Y. Factors influencing clinical practice guideline uptake by South African physiotherapists: a qualitative investigation of barriers and facilitators. *J Eval Clin Pract.* 2020;26(3):728-737.
28. Miao M, Power E, O'Halloran R. Factors affecting speech pathologists' implementation of stroke management guidelines: a thematic analysis. *Disabil Rehabil.* 2015;37(8):674-685.
29. Mittman BS, Tonesk X, Jacobson PD. Implementing clinical practice guidelines: social influence strategies and practitioner behavior change. *QRB Qual Rev Bull.* 1992;18(12):413-422.
30. Flodgren G, Parmelli E, Doumit G, et al. Local opinion leaders: effects on professional practice and health care outcomes. *Cochrane Database Syst Rev.* 2011;8(8):CD000125.
31. Salbach NM, Jaglal SB, Korner-Bitensky N, Rappolt S, Davis D. Practitioner and organizational barriers to evidence-based practice of physical therapists for people with stroke. *Phys Ther.* 2007;87(10):1284-1303.
32. Dannappel P, Peolsson A, Nilsen P. What supports physiotherapists' use of research in clinical practice? A qualitative study in Sweden. *Implement Sci.* 2013;8:31.
33. Cormican A, Hirani SP, McKeown E. Healthcare professionals' perceived barriers and facilitators of implementing clinical practice guidelines for stroke rehabilitation: a systematic review. *Clin Rehabil.* 2023;37(5):701-712.
34. Forsetlund L, O'Brien MA, Forsén L, et al. Continuing education meetings and workshops: effects on professional practice and healthcare outcomes. *Cochrane Database Syst Rev.* 2021;9(9):CD003030.
35. Villarosa AR, Maneze D, Ramjan LM, Srinivas R, Camilleri M, George A. The effectiveness of guideline implementation strategies in the dental setting: a systematic review. *Implement Sci.* 2019;14(1):106.



36. Guerra-Paiva S, Lobão MJ, Simões DG, et al. Key factors for effective implementation of healthcare workers support interventions after patient safety incidents in health organisations: a scoping review. *BMJ Open*. 2023;13(12):e078118.
37. Tilson JK, Mickan S, Howard R, et al. Promoting physical therapists' use of research evidence to inform clinical practice: part 3—long term feasibility assessment of the PEAK program. *BMC Med Educ*. 2016;16:144.
38. Kirk MA, Moore JE, Wiltsey Stirman S, Birken SA. Towards a comprehensive model for understanding adaptations' impact: the model for adaptation design and impact (MADI). *Implement Sci*. 2020;15(1):56.
39. Lambert TE, Harvey LA, Avdalis C, et al. An app with remote support achieves better adherence to home exercise programs than paper handouts in people with musculoskeletal conditions: a randomised trial. *J Physiother*. 2017;63(3):161-167.
40. Lang S, McLelland C, MacDonald D, Hamilton DF. Do digital interventions increase adherence to home exercise rehabilitation? A systematic review of randomised controlled trials. *Arch Physiother*. 2022;12(1):24.
41. Park JR, Coombs C, Wilkinson AJ, Loan-Clarke J, Arnold J, Preston D. Attractiveness of physiotherapy in the National Health Service as a career choice: qualitative study. *Physiotherapy*. 2003;89(10):575-583.
42. Harman K, Sim M, LeBrun J, et al. Physiotherapy: an active, transformational, and authentic career choice. *Physiother Theory Pract*. 2021;37(5):594-607.
43. Jolliffe L, Hoffmann T, Lannin NA. Increasing the uptake of stroke upper limb guideline recommendations with occupational therapists and physiotherapists. A qualitative study using the Theoretical Domains Framework. *Aust Occup Ther J*. 2019;66(5):603-616.
44. Lemmers GPG, Bier JD, van Lankveld W, Westert GP, Staal JB, van der Wees PJ. Guideline adherence of physiotherapists in the treatment of patients with low back pain: a qualitative study. *J Eval Clin Pract*. 2022;28(6):1147-1156.
45. Babatunde F, MacDermid J, MacIntyre N. Characteristics of therapeutic alliance in musculoskeletal physiotherapy and occupational therapy practice: a scoping review of the literature. *BMC Health Serv Res*. 2017;17(1):375.
46. Essery R, Geraghty AWA, Kirby S, Yardley L. Predictors of adherence to home-based physical therapies: a systematic review. *Disabil Rehabil*. 2017;39(6):519-534.
47. Hush JM, Cameron K, Mackey M. Patient satisfaction with musculoskeletal physical therapy care: a systematic review. *Phys Ther*. 2011;91(1):25-36.
48. Cridland K, Pritchard S, Rathi S, Malliaras P. "He explains it in a way that I have confidence he knows what he is doing": a qualitative study of patients' experiences and perspectives of rotator-cuff-related shoulder pain education. *Musculoskeletal Care*. 2021;19(2):217-231.
49. Zhang Y, Qiu X, Jin Q, et al. Influencing factors of home exercise adherence in elderly patients with stroke: a multiperspective qualitative study. *Front Psychiatry*. 2023;14:1157106.
50. Khalil H, Quinn L, van Deursen R, Martin R, Rosser A, Busse M. Adherence to use of a home-based exercise DVD in people with Huntington disease: participants' perspectives. *Phys Ther*. 2012;92(1):69-82.
51. Tierney-Hendricks C, Miller J, Lopez RP, Conger S, Vallila-Rohter S. "It's been an extraordinary journey": experience of engagement from the perspectives of people with post-stroke aphasia. *Int J Lang Commun Disord*. 2023;58(6):2008-2021.
52. Wijma AJ, Bletterman AN, Clark JR, et al. Patient-centeredness in physiotherapy: what does it entail? A systematic review of qualitative studies. *Physiother Theory Pract*. 2017;33(11):825-840.

## Appendix 1: Therapist Interview Template

Welcome!

Thank you so much for taking the time to chat with me about the Vestibular Hypofunction CPG Knowledge Translation project you have been engaged in! My name is [] and the goal of our conversation today is to learn from you about your experiences participating in the project. We want to understand what worked and what didn't from the 5 sites that participated so that we can make the best possible recommendations to others who might want to replicate what we have done. A couple of reminders—this interview is being recorded and will be converted into anonymous data (your name replaced with a participant ID). While I hope that the questions are all comfortable you are free to answer only the questions that you are comfortable with and can, of course, stop participating at any time. The plan, unless you ask me otherwise, will be to send you a copy of the transcript so that you can let us know if we got all of the information correctly. Any questions before we start?

Great! OK, so at your clinic the goals, as I understand them, to better align practice with the CPG's recommendations for [site specific]

[List Site-Specific Goals]

Do I have that right? Any corrections or clarifications?

OK, so my questions are going to focus on:

- (1) What you thought of the intervention and the project in general
- (2) External influences on how the project went
- (3) Internal influences on how the project went
- (4) Any therapist-specific insights into what worked for you or didn't work for you with your patients
  1. Let's first talk about the project overall? What did you think of it? (innovation characteristics; implementation process)
    - a. How it was developed? (innovation sources)
    - b. By whom? Did you feel involved? (innovation source)
    - c. Use of the CPG? (evidence strength and quality)
    - d. Comparison to any other similar projects or initiatives (relative advantage)
    - e. Adaptable?
    - f. Complex?
    - g. Cost?
    - h. What would you change if you were to do it again?
  2. Let's talk now about the value of this in the broader context of your practice. (outer setting; needs and resources of those served by the organization)
    - a. Was this valuable for patients do you think? Why or why not?
    - b. What magnitude of impact did this project have for patients?
    - c. Did the fact that this was being done by other clinics in the country influence how you felt about it? (cosmopolitanism)

3. Let's talk about how the project fit, or didn't fit, with your organizational setting (social architecture, age, maturity, size, or physical layout). What worked well, what didn't, what would you change if you were to do it again? (inner setting)
  - a. Tell me a little bit about your organizational culture. Is this type of thing something that is common? (structural characteristics)
  - b. How do you communicate? (communication)
  - c. Are people generally receptive to change? (culture/implementation climate)
  - d. How important was this project to the needs of your organization? (compatibility)
  - e. How would you describe it on your priority list of issues? (relative priority)
  - f. Did it change how you think peripheral vestibular hypofunction is viewed in your setting?
  - g. How did your group respond to the monthly feedback? (goals and feedback)
  - h. Is there something about your setting that would need to be replicated in others to make this work? (presumes it did)
    - i. Do you have plans to keep up the intervention? What are they?
    - j. Were you ready for this project? What would you do differently if you were going to do another, similar project? (readiness for implementation)
4. Let's consider each of you individually (characteristics of individuals). Are there characteristics that you recognize in yourselves that made you feel more or less connected to this project?
  - a. Did the project impact how you view evidence based practice and knowledge translation? (knowledge and beliefs about the innovation)
  - b. Did the project impact your feelings about treating people with VH (e.g. efficacy, enjoyment, etc) (self-efficacy)
  - c. Motivation (individual stage of change)
  - d. Connection to organization (individual identification with organization)
  - e. Are there things that could have been done differently to make the project feel more directly useful or interesting to you? What was done that make this project work for you?

## Appendix 2: Patient Interview Template

Thank you so much for taking the time to chat with me about your physical therapy experience! My name is {} and I am {} and I'm looking forward to our conversation about the therapy that you received at {}.

I see that you have signed the informed consent/reviewed the information sheet. I'll just give you a couple of reminders—this

interview is being recorded and will be converted into anonymous data (your name replaced with a participant number) that will be used to generate a written report. We won't share the recording with others who are not involved in this study. All information we collect is confidential as to who provided it. For example, we will not disclose who actually participated in this interview nor will our final report use your voice. We hope this encourages you to speak freely. While I hope that the questions are all comfortable, you are free to answer only the questions that you are comfortable with and can, of course, stop participating at any time. The plan, unless you ask me otherwise, will be to send you a copy of the transcript so that you can let us know if we got all of the information correctly. Any questions before we start?

The reason for this interview is to gather information that helps us understand your perspective on the care that you received here at [clinical site]. The therapists at [clinical site] have been working to make sure that patients benefit from the best available research about care for conditions like yours. We want to know about your perspective on the care that you received. Our focus is specific to certain aspects of your care so we may not touch on everything that you experienced. If there are aspects of your care that you feel need more discussion after we talk, we will refer you to a supervisor here to address those issues. [Ensure that the patient understands that we are talking about care for their vestibular hypofunction... figure out what word they use to describe their condition]

I'm going to ask you questions in 3 areas: (1) About your understanding of the care you received (what it was for, why it was done); (2) Whether or not some of the things that were done felt helpful to you; and (3) How you feel about your progress in therapy.

#### **Site-Specific Interview Topics Lists**

Site A—educational handouts, YouTube instructional videos, text message reminders, home exercise program provided with specific dose, and therapist asking about home exercise adherence at each visit.

Site B—home exercise program provided with specific dose, exercise log, exercise support (targets and timers

offered), text message reminders, and therapist asking about exercise adherence at each visit.

Site C—educational handouts, exercise support (targets and timers offered), mobile device application offered, home exercise program provided with specific dose, referral resources provided for patients with anxiety, and therapist asking about exercise compliance at each visit.

Site D—home exercise program provided with specific dose, home exercise program practiced at each visit, therapist asking about exercise compliance at each visit, and screening for anxiety and depression

#### **Semi-Structure Open-Ended Interview Questions:**

##### ***Understanding Why:***

- (1) Do you have a good understanding of your vestibular diagnosis? Was the handout helpful? Did you read it?
- (2) Why do you think your therapist prescribed the exercises that they did?
- (3) Did you understand how to do the exercises? Did you use the paper handout? Did you use the video? Why/why not?

##### ***Helping With Care:***

- (1) Did the therapists' strategies for helping you remember to do your exercises help you remember to do them?
- (2) Did the therapists' strategies for helping you remember to do your exercises help you feel motivated to do them?
- (3) Did the timer help you do your exercises? How about the metronome/ mobile phone application? Did you use these tools? Why/why not?

##### ***Impacting Outcomes:***

- (1) Do you feel like you did your exercises as they were prescribed? Why/why not?
- (2) Vestibular conditions can impact patients' emotions; did the program help you address any emotional issues that were associated with your condition?

##### ***Finish:***

Is there anything I didn't ask you about that you think we should discuss or that you want to share?