Clinical Interventions in Aging

ORIGINAL RESEARCH

Healthcare Providers' Perception of Implementing the Bedside Exercises for Hospital Fitness (BE-FIT) Patient-Led Rehabilitation Program for Older Patients: A Qualitative Descriptive Study

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Background: Delayed mobilization in older surgery patients is a major risk factor for postoperative complications, including functional decline, prolonged hospital stays, and a higher risk of hospital readmission. Although postoperative mobilization is a foundational nursing intervention, it is not consistently performed due to competing demands such as staffing shortages and high patient acuity. The Bedside Exercises for hospital FITness (BE-FIT) program is a patient-led rehabilitation initiative that shifts the traditional model of care by positioning patients as active participants in performing exercises after surgery, rather than relying on healthcare providers to carry out the exercises with them.

Objective: This study aims to explore healthcare providers' experiences and perceptions of the delivery of the BE-FIT program to older postoperative patients in acute care surgical units and to identify strategies to improve program acceptance and sustainability.

Methods: A qualitative descriptive design was implemented. Semi-structured in-person interviews were conducted with 14 healthcare providers who participated in BE-FIT implementation across four surgical units. Interviews were audio-recorded and data were analyzed using an inductive content analysis approach.

Findings: Three themes emerged: (A) barriers and (B) facilitators for the implementation of the BE-FIT program, and (C) recommendations to enhance BE-FIT exercise uptake. Participants recognized the program's value in promoting early postoperative mobilization for older patients and appreciated the program's flexibility, simplicity, and patient-centred approach. However, operational barriers and patient resistance to mobilization affected implementation in clinical practice. Recommendations emphasized interdisciplinary engagement, integration into routine clinical workflows, family involvement, and leveraging technology.

Conclusion: Healthcare providers perceive BE-FIT as a useful and adaptable tool to support early mobilization in older surgical patients. Insights gathered from frontline healthcare providers will inform strategies to improve the program's implementation, enhance adherence and support long-term sustainability.

Plain Language Summary: Patients over the age of 65 often have multiple health conditions that put them at high risk for complications after surgery, such as longer stays in the hospital and loss of the ability to take care of themselves when released from the hospital. Starting to exercise early after surgery has been shown to lessen complications.

The Bedside Exercises for hospital Fitness (BE FIT) program supports exercises early after surgery while in the hospital. Its three exercise levels: bed-based, chair-based, and standing-based allow for various patient strengths and post-surgical abilities.

We have implemented the BE-FIT program on four surgical units in a teaching hospital to evaluate its performance. It has been shown to improve recovery but was not followed by all patients and not on a daily basis. In this study we asked healthcare staff about their experience with the BE-FIT program. In the interviews, they described program challenges and promoters, and provided suggestions for improvements, including:

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- integrate BE-FIT into routine clinical care on the units
- make it a multidisciplinary approach, including other healthcare providers such as physiotherapists, health educators, clinicians
- incorporate BE-FIT in patient care teaching for new employees and students
- involve visiting family members
- use in-room hospital television and cell phone apps to demonstrate exercises and remind patients to do them
- let patients know before surgery about the BE-FIT exercise to do after the surgery

The knowledge and suggestions from healthcare providers with experience of the BE-FIT program is essential for the long-term success of the program.

Keywords: older adult recovery, rehabilitation, postoperative exercise, healthcare providers, patient-led exercise, early mobilization

Introduction

Early mobilization following surgery is a critical component of recovery, particularly for older adults who are at heightened risk of frailty and functional decline during hospitalization.[1,2] Early mobilization refers to performing exercises in or out of bed such as sitting upright, transferring from bed to chair, rising from a chair, exercises in or out of bed, and walking in the room or hallway after surgery within at least 24 to 72 hours.[3,4] At first, these activities are performed with the assistance of a physical therapist or nurse, with the goal of progression toward independent mobilization throughout the hospital stay.[4] Functional decline refers to a reduction in the ability to perform usual activities of daily living as a result of weakness, decreased muscle strength, and diminished exercise capacity.[1] Prolonged immobility during postoperative hospitalization can result in up to 5% loss of muscle mass and is associated with an increased risk of dehydration, pressure ulcers, delirium, sensory deprivation, skin shearing, and urinary incontinence among older patients.[1] Without adequate mobilization or exercises, older adults become more susceptible to hospital-acquired complications, including infections, sepsis, and pressure injuries, which increase the likelihood of prolonged hospitalization and poorer recovery outcomes.[2,5]

Early mobilization, which can be initiated a few hours after surgery depending on the surgical procedure, has been shown to improve functional outcomes, enhance recovery, reduce postoperative complications, and shorten the length of hospital stay among older adults.[6,7] However, despite its well-documented benefits, early mobilization has often not been implemented fully in surgical care hospital units due to various systemic and logistical barriers, including high patient volumes, checklist-driven workflows, competing clinical demands, and limited staffing.[5,8]

To address these challenges, patient-led exercise interventions have emerged as a promising strategy to promote early mobilization by empowering patients to take an active role in their own recovery.[9] One such initiative is the Bedside Exercises for hospital FITness (BE-FIT) program, a patient-led rehabilitation program designed to improve postoperative mobility among older adults.[9] The BE-FIT program was first introduced as part of the Elder-Friendly Approaches to the Surgical Environment (EASE) model, a broader initiative that also included comprehensive geriatric assessments, elder-friendly practices, and early discharge planning.[10] Notably, patients who engaged in the BE-FIT program demonstrated superior postoperative function compared to those receiving usual care.[11]

The program, formerly known as BEdside reconditioning for Functional ImprovemenTs, was renamed in 2024 to emphasize its focus on hospital-based exercise and functional recovery. It includes three adaptable exercise modalities, bed-based, chair-based, and standing-based, tailored to accommodate varying levels of patient strength and postoperative recovery.[11] After an initial assessment and education provided by nurses or Healthcare Aides (HCAs), patients are encouraged to independently perform exercises at their bedside as part of their daily hospital routine. These exercises go beyond traditional physiotherapy protocols by focusing on building core strength and endurance to enhance functional mobility in older patients after surgery. Visual illustrations of the BE-FIT exercises are available online.[12]

Nurses and HCAs play a pivotal role in supporting patient mobility as they provide most direct postoperative care and are closely involved in patients' recovery and discharge preparation.[13] Existing literature has demonstrated the positive outcomes of early mobilization in intensive care units, stroke units, and cardiac care settings.[14–16] However, limited research has examined the effectiveness of post-surgical mobilization programs specifically for older surgical patients, or the role of nurses and HCAs in empowering older adults to engage in early mobilization following surgery.

The aim of this study was to explore the experiences and perceptions of health care providers (HCPs), particularly nurses and HCAs, in delivering the BE-FIT program to postoperative older adults and evaluating its usage. Given the central role of nurses and HCAs in educating patients and caregivers on the importance of early mobility, distributing exercise materials, and reinforcing program adherence, it is critical to understand the challenges they encountered in implementing BE-FIT and the facilitators that promoted this program. Ultimately, this study sought to identify strategies to integrate BE-FIT into routine hospital care across surgical units and enhance the feasibility and acceptability of patient-led mobilization as a sustainable clinical practice.

Methods

Study Design

The BE-FIT program was formally implemented in four surgical units including Otolaryngology, Urology, and two General Surgery units, within a single acute care hospital in Canada in 2022 as a quality improvement initiative. The length of stay for surgical patients can vary greatly depending on the procedure and individual condition.

We used a qualitative descriptive design by interviewing various HCPs involved in implementing the BE-FIT program in the surgical units. This approach enabled a rich understanding of participants' perceptions, ensured findings remained close to the data, and yielded actionable results to improve program outcomes.[17–19] Data generation and analysis took place from April 2023 to November 2024. The study was reviewed and approved by the University of Alberta Health Research Ethics Board 3 (HREB 3) (Pro00093032) and complies with the Declaration of Helsinki. All participants provided written informed consent prior to their interviews. The participants' informed consent included permission to publish anonymized responses and direct quotes. We followed the consolidated criteria for reporting qualitative research (COREQ) checklist to improve the reporting rigor of our study.[20]

Research Team and Reflexivity

The research team consisted of five investigators and one study coordinator. Three team members were experienced in the clinical care of older postoperative patients: a surgeon-scientist and critical care specialist as the lead researcher, a geriatric medical specialist, and a PhD trainee/registered nurse. The other two investigators were trained in qualitative research: a senior nursing professor, serving as the study co-lead, and a health research associate. The co-lead provided the team with additional training in qualitative research methods, including data collection, inductive content analysis and coding strategies to ensure rigor and consistency throughout the study.

The team engaged in reflexive journaling throughout the study and independently documented assumptions, impressions and sensible perceptions that could influence data collection and interpretation. The reflexive notes and observations were shared in monthly team debriefs to maintain transparency and challenge potential biases during analysis.

Participant Recruitment

A purposive sampling method was used as it enables the selection of participants with relevant knowledge and expertise, thereby enhancing understanding of the research phenomenon.[21] We focused in this study on nurses (licensed practical nurses and registered nurses in direct clinical roles as well as nurse managers and nurse educators), HCAs, and unit clerks (unit receptionists) as they were directly involved in the day-to-day implementation of the BE-FIT program. Participants were recruited using a combination of face-to-face invitations and recruitment pamphlets displayed on the surgical units. Eligible participants were those who

(a) worked in at least one of the four surgical units of the teaching hospital where the BE-FIT program had been implemented,
(b) had at least 6 months of experience working in their respective units,
(c) had experience using BE-FIT in their practice,
(d) were able to communicate in English and could provide informed consent,
(e) and were willing to volunteer in the study and participate in an approximate 40-minute interview.

All recruited participants were informed about the goals of this research study and were willing to report on their BE-FIT experience; none of the personnel approached refused to participate in an interview.

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The sample size was determined based on analytic redundancy. While we considered interviewing 10–12 participants, we adopted an iterative approach in which data collection and analysis were intertwined. In qualitative research, emphasis is placed on the richness and depth of the data required to address the research questions and study aims rather than on achieving a predetermined sample size, which may mislead data interpretation.[19,22.] We ceased participant recruitment once data saturation was achieved, that is, when no new information emerged and subsequent interviews began to confirm previously collected data, and we had sufficient rich data to answer the research questions.[23,24] To protect participant confidentiality, we do not indicate participants' roles or positions alongside quotations used in reporting the results. Participants were given a study ID number for quotation purposes, ie P (= participant) 01, P02, P03, etc.

Data Collection

We conducted in-depth semi-structured interviews with HCPs. We scheduled face-to-face individual or group interviews, with no more than three participants, during workdays, depending on the interviewees' availability and preference. An interview guide, available in Supplementary File 1, was specifically developed for this study by the research team based on previous patient-focused data from the broader BE-FIT study and a review of the literature on early mobilization, nursing roles, and postoperative care (Supplementary File 1, Interview guide). The guide was pilot tested with two participants, and iterative revisions were made throughout the data collection process to reflect and pursue emerging insights and to improve question clarity.[23] All interviews were held in private meeting rooms at the hospital to ensure confidentiality and minimize disruption to participants' workflow. The co-lead qualitative researcher and the study coordinator facilitated the majority of the interviews. Interviews were audio-recorded with participant consent and lasted between 40 and 60 minutes.

The interviews explored participants' experiences with the BE-FIT program, focusing on identifying barriers and facilitators to implementation and gathering recommendations to refine the program. We introduced verification questions at the end of the interviews to affirm our emerging interpretations and ideas.[23] After each interview, the research team engaged in debriefing discussions to document key observations and reflect on the interview process. Team members shared reflexive memos, field notes, and observations of nonverbal behavior, which offered valuable contextual insights and contributed to a deeper understanding of participants' responses. These activities also enhanced the transparency and rigor of the research process and helped mitigate potential researcher bias through critical reflection. The interviews were transcribed verbatim by a professional transcriptionist, cleaned, de-identified and imported to the qualitative data analysis software Quirkos Cloud for data management, coding and analysis.[25]

Data Analysis

Participant demographic characteristics were analyzed using descriptive statistics.[18,21] Continuous variables were summarized using means and standard deviations; categorical variables were summarized using frequencies and percentages.

Interview data were analyzed using inductive content analysis, following the approach by Elo and Kyngas (2008). This method was selected to allow categories and themes to emerge from the data without the use of predetermined coding frameworks.[24] Open coding was used to label and categorize segments of data. Coding was carried out independently by three members of the research team, followed by joint coding sessions and regular team meetings to compare interpretations, ensure consistency, and resolve any discrepancies in the data analysis process through discussion and consensus. Similar codes were subsequently grouped into higher-order categories based on shared meaning and conceptual similarity. Categories were further refined and synthesized into overarching themes. Each category and subcategory was named to reflect its core content, and analytic descriptions were developed to capture their underlying meaning. Final themes were organized under three main categories: (A) barriers, (B) facilitators, and (C) recommendations for improvement. Reflective memos and field notes were integrated into the analysis to provide context and deepen interpretation.

Results

Participant Characteristics

A total of 14 participants were recruited for this study (Table 1), including 6 nursing leaders (nurse manager, nurse educators) to ensure representation of leadership perspectives, as well as the frontline nursing staff, comprising three

Table 1 Participant Characteristics

Characteristics	N = 14 [%]
Role	
Unit Manager	3 [21.4]
Nurse Educator	3 [21.4]
Registered/Charge Nurse	3 [21.4]
Licensed Practical Nurse	1 [7.1]
Healthcare Aide	3 [21.4]
Unit clerk	1 [7.1]
Experience in Profession	
Mean±SD [years]	19.6 ± 12.4
Range in years: [min to max]	2.7 to 37
Experience in current unit	
Mean±SD [years]	10.1 ± 6.9
Range in years: [min – max]	0.7 to 23
Unit worked in [a]	
Otolaryngology	6 [42.9]
General Surgery	5 [35.7]
Urology	4 [28.6]
Trauma	1 [7.1]

Notes: [a] Could provide more than one answer.

registered nurses (RNs), a licensed practical nurse (LPN), three HCAs and a unit clerk. Some participants were informally identified as "BE-FIT champions" due to their active involvement in promoting and delivering the program within their respective units. Implementation approaches varied among the units with some relying on designated champions and others adopting a shared responsibility model. Most participants had substantial experience in surgical care and many played leadership or facilitative roles in implementing BE-FIT (Table 1).

Outcomes

Themes and subthemes are summarized in Table 2.

Barriers to Implementing BE-FIT

Two subthemes emerged from the data in this category: operational barriers and patient and staff resistance.

Table 2 Themes and Subthemes Related to the Implementation of BE-FIT

Main Themes	Subthemes
Barriers to Implementing BE-FIT	• Operational barriers • Resistance from patients and staff
Facilitators to Implementing BE-FIT	• Enhanced recovery and early discharge • Engagement through verbal and visual cues and encouraging language • Universal involvement and site champions
Participant Recommendations for Enhancing Future Uptake of BE-FIT	• Embedding BE-FIT into clinical workflow and electronic systems • Involving family caregivers • Involving allied health professionals, students, and new employees • Pre-surgery awareness of BE-FIT • Leveraging technology for patient engagement

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Operational Barriers

Participants identified several operational barriers to successfully implementing the BE-FIT program in the hospital. Operational barriers included insufficient time, inadequate staffing levels, high staff turnover, low morale, the dual responsibility of managing surgical and off-service patients, and the strain of high baseline workloads.

> I think there's been so much in the last two years, and I've had a lot of staff overwhelmed with the workload and the patient population. I think it's just something extra that they have to do… (P03)

Although they acknowledged that asking a patient if they had done the BE-FIT exercises was simple, they stated that this was just one of many other questions and tasks they had to do in a day. In addition, they stated that effective implementation required additional time and effort to explain, motivate, encourage, and remind patients to do their BE-FIT exercises.

> They [nurses] have fifty-sixty questions they already have to ask that patient. So that one more question is… significant… everyone is just adding one more question, every single person is adding one more thing (P02)

Participants often said the BE-FIT program was valuable for improving patient outcomes after surgery, but they reported difficulty integrating it into their daily practice routines due to the many other important tasks they had to manage each day. This problem appeared more concerning in units without designated BE-FIT champions. Some participants reported that they were already mobilizing patients soon after surgery and that they felt "BE-FIT" was just a new name for what they already did; others acknowledged it was a different approach to mobilization that complemented previous practices.

Resistance from Patients and Staff

Some participants expressed that, although BE-FIT was described as a patient-led exercise initiative, it still required significant staff involvement, including clinical assessments, patient education, motivation, and regular reminders, as this manager noted:

> They [nursing staff] were not accepting one more thing on their plate—especially post-COVID and capacity issues, and the acuity on the unit has been quite high (P01)

This lack of clarity about their role, especially during program introduction and early encouragement, may have contributed to resistance among some staff. Staff also found it challenging to motivate patients who were frightened, demotivated, or hesitant to move following surgery; designated champions reported this difficulty less often than staff responsible for implementing the program for their own patients.

> There are some patients that are very motivated to do exercises and be active… and then the patients who are the opposite are like, 'No, I'm going to stay in bed for three days after I get an operation' They are the patients that maybe need it the most (P10)

Facilitators in Implementing BE-FIT

Facilitators of implementing the BE-FIT program were grouped into three themes: enhanced recovery and early discharge, engagement through verbal and visual cues and encouraging language, and universal involvement and site champions.

Enhanced Recovery and Early Discharge

All participants stated that the BE-FIT program is an important and essential part of care and should not be optional. Staff noted that the BE-FIT exercise sheets are well-designed and tailored to meet patients' needs, making them an excellent resource for promoting enhanced recovery and patient-focused care.

Staff observed that most older patients responded positively to the program and valued the inclusion of three distinct types of exercise sheets, which provided variety and flexibility to meet individual needs.

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> I like that it's setup with the three different activity levels… that's really helpful and easy to show patients… it helps them see that they're improving… (P10)

Participants highlighted that they believed the BE-FIT program helped expedite recovery for patients across all age groups not only older adults. Several participants emphasized that regular use of the BE-FIT program appeared to contribute to faster recovery and quicker discharge home.

> We gave him [surgical patient] the BE-FIT program, he's out faster, he recovers faster, he doesn't have to come back to the hospital… so it's better for the nurses, better for them… (P14)

Engagement Through Verbal and Visual Cues and Encouraging Language

Participants emphasized the importance of consistently reminding both staff and patients to adhere to the BE-FIT exercise program. While some patients were self-motivated, others needed additional encouragement, guidance, and support to engage in post-surgical exercise due to factors such as pain, sedation, fatigue, medical equipment, or a belief that they needed to recover more before exerting themselves as this BE-FIT champion stated:

> I give them [surgical older patients] words of encouragement in order for them to boost up their exercise routine…I see our patients the next day or right after I give them this [Be-FIT exercise flyer]- they look at it, they get interested, and then they start to move…; you need to really encourage them to do this (P11)

Using encouraging and motivational language helped patients engage in cognitive reasoning, weigh the pros and cons of exercise, and recognize the benefits of performing BE-FIT exercises for post-surgical recovery and raise motivational energy to attempt the exercises. Through this approach, HCPs successfully influenced patients' attitudes and improved their participation and acceptance of BE-FIT exercises.

> Change the language [and] the way you are approaching the patient… As opposed to, "Did you get up?" Cause that's the general asked question, [ask] "Have you done your exercises…? (P03)

Participants emphasized that providing visual aids and clear instructions and directions significantly improved patients' ability to perform BE-FIT exercises independently. Additionally, visual cues such as hallway posters and colourful, laminated handouts were identified as effective tools for promoting engagement and encouraging both staff and patients to incorporate BE-FIT exercises into care routines.

> I think there's value to having something on the wall that they can look at or be reminded of or even just simple pictures of the exercises… (P10)

Universal Involvement and Site Champions

There were two main strategies used when implementing the BE-FIT program in the units: appointing specific champions to lead, organize, and coordinate implementation, or expecting all staff to assist in implementing the BE-FIT program for their patients. In units where designated champions were primarily responsible for implementation, it was believed that patient adoption and outcomes were improved, as the champions facilitated patient learning through effective communication, used motivational phrases and strategies, and integrated BE-FIT into their daily routine. As one champion stated:

> I am doing it [with patients] 'Move your arms up. Come on, raise them up. Or move your legs.',…so my role in the unit is helping and assist nurses and for the BE-FIT program I am the one who is actually handing out all the flyers and kind of try to explain as much as I can to the patients and their relatives (P07)

However, relying on a few champions often led patients to miss out on the BE-FIT exercises when the designated champion was unavailable.

Participants believed that BE-FIT is a team effort and if everyone in the unit conveys the same message and encourages the program, the patients may be more inclined to participate.

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> I think it's better for everybody to participate… it makes everybody enveloped into that team effort so we're all trying the same thing … to get everybody [patients] out the door in the best possible way. (P14)

Participant Recommendations for Enhancing Future Uptake of BE-FIT

This theme included practical recommendations to improve the uptake of the BE-FIT program at both the patient and staff levels. These suggestions focused on enhancing reminders, integrating BE-FIT into routine clinical workflows, involving families, other HCPs, new employees and students in patient care, and leveraging technology.

Embedding BE-FIT Into Clinical Workflow and Electronic Systems

To promote consistency in BE-FIT implementation, participants emphasized the importance of incorporating reminders into existing documentation systems. Suggestions included integrating BE-FIT prompts into the hospital's electronic charting system and including BE-FIT tasks in daily team huddle sheets and nursing worksheets.

> I can see that if they add this [Be-FIT exercises] to the X [Electronic Charting system], it will be a big help. So, we can work out whether nurses are doing it or not (P11)

Participants also recommended adding BE-FIT as a standing reminder on the nursing census board or at the start of each shift, encouraging staff to follow up with patients regularly throughout the day, especially during quieter times such as evenings.

> It's just probably … adding it to my daily checklist, where when I do my team huddles, I'll ask…Have they done their bed exercises?" That's something maybe I could just add to my worksheet. (P03)

Involving Family Caregivers

Several participants highlighted the potential value of involving family members during hospital visits to support and motivate patients in performing BE-FIT exercises. Family caregivers could serve as informal reminders and active participants in the exercises, fostering familiarity and shared accountability.

> Especially if they [patients] have any family who might be coming with them to appointments, getting them involved just for some extra accountability to the patient because we are [Nursing Staff] busy, other stuff happens, we do not always have the time to be constantly checking back in… (P09)

Involving family members in performing or reminding patients to complete their BE-FIT exercises can help motivate and encourage post-surgical older adult patients. It also provides visitors with a meaningful way to engage with their loved ones during hospital visits, fostering connection and purposeful interaction.

Involving Other Allied HCPs, Students and New Employees

Some staff felt that the responsibility for mobilization within the BE-FIT program should be universal, involving physiotherapists, occupational therapists, nurse educators, and residents. Additionally, staff suggested introducing the program to nursing and medical students and new employees during their training and incorporating it into the yearly certification process for other staff.

Pre-Surgery Awareness of BE-FIT

Participants also suggested introducing the program in the pre-admission surgery clinics, so patients are aware of the program and mobility expectations after their surgery.

> I think especially for patients who are having planned surgery I really think starting the teaching and setting the expectation in pre-admission clinic would be really good. (P13)

Leveraging Technology for Patient Engagement

Participants highlighted the value of leveraging technology to improve the accessibility and delivery of BE-FIT exercises.

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Participants suggest using mobile apps or in-room hospital television channels that can visually demonstrate the exercises, allowing patients to follow along independently during their free time. Visual demonstrations were particularly recommended for older adults with limited English literacy, as they could observe, demonstrate to the HCPs and participate in the exercises without relying on written or verbal instructions. Participants suggested that seeing the exercises performed visually can increase patients' confidence and curiosity, ultimately improving their engagement and adherence to performing BE-FIT exercises and incorporating them into their routine practice.

> I think there are highly creative ways that we can utilize some of the technology that we have, whether it be having access to an app on a phone that the patients could potentially download… because even the patients that do not want to get out of bed are still looking at their phones. (P01)

These recommendations underscore the need for system-level integration, creative engagement strategies, and a collaborative approach that involves both staff and family members to promote sustained use of BE-FIT among hospitalized older adults.

Discussion

This study aimed to explore the experiences of nurses, HCAs and unit clerks with the implementation of the BE-FIT program and identify strategies to improve its future uptake across surgical units. Specifically, we focused on perceived barriers and facilitators and acknowledged recommendations to enhance patient engagement, particularly among older adults undergoing surgery. Our findings highlight both the potential of BE-FIT to improve post-surgical recovery and the practical challenges HCPs face when integrating mobilization into routine care.

Our findings on nurses' and HCAs' perceptions of BE-FIT's operational acceptance and use are key to a successful and sustainable integration of BE-FIT into clinic care, given their primary role in its implementation. Participants recognized the BE-FIT program as a valuable intervention to promote early mobilization and improve physical strength in older adult patients following surgery. The structured, patient-led design of BE-FIT was seen as particularly helpful, enabling patients to engage at their own pace and feel more accountable for their recovery. These observations are consistent with prior research indicating that individualized and accessible exercise programs can improve functional mobility among older adults following surgery.[14]

Our study identified the presence of designated BE-FIT champions as crucial for BE-FIT integration. Participants described these individuals as essential in supporting both patients and staff through education, encouragement, and hands-on guidance. Champions acted as change agents, helping to normalize mobility practices and integrate BE-FIT into the care culture of the unit.[26] Our findings suggest that these champions provided critical reinforcement for patients while also supporting nurses by sharing expertise and reducing uncertainty about exercise safety and effectiveness.

However, reliance on champions also introduced challenges. When staff depended too heavily on one or two individuals to lead BE-FIT efforts, implementation became inconsistent, particularly when those champions were absent. This reliance risked reducing the program's sustainability and broader integration across the care team.

Although no adverse events were reported when BE-FIT was introduced to older patients by HCPs without specific training in patient exercise, participants emphasized the importance of conducting clinical assessments by nurses and trained HCPs to ensure mobilization is safe and appropriate for each patient.[27] While the introduction of BE-FIT to patients has been mostly the task of nurses, HCAs, and unit clerks, a more integrated approach involving all HCPs, including nurses, therapists, educators, doctors, students and even family visitors, was recommended to mitigate dependency and enhance sustainability. This collaborative model could help embed BE-FIT into routine care, while champions continue to serve as supportive facilitators.

Participants reported on several structural barriers hindering the successful implementation of BE-FIT. Staff cited heavy workloads, time constraints, staffing shortages, high turnover, and change fatigue as significant challenges. Change fatigue can negatively affect healthcare professionals' physical and psychological well-being and reduce their capacity to adopt changes in clinical practice.[28] These findings are consistent with previous studies indicating that, despite recognizing the importance of early mobilization, HCPs often struggle to implement it due to limited time and inadequate training.[5,14,29] Participants reported that while reminding and teaching the use of BE-FIT exercises was simple, it became

challenging to prioritize due to various other tasks, prioritizations and workloads. This sentiment aligns with the broader literature, which shows that mobilization is often deprioritized in busy acute care settings.[5,14]

Staff resistance emerged as a barrier to BE-FIT implementation with some expressing uncertainty about the program's purpose or feeling it added to their already overwhelming responsibilities. A lack of understanding of the clinical significance of early mobilization may contribute to this resistance, echoing findings from previous literature.[14,29] Participants highlighted the importance of structured education and training, especially for new staff and students, to ensure that all care providers understand the goals and value of BE-FIT. Investing in in-service training and ongoing professional development may help foster a care culture in which early mobilization is viewed as a core clinical priority, rather than an optional or extra task.[4,5]

Patient resistance also posed a barrier. Some older adult patients were reluctant to engage in BE-FIT exercises after surgery due to fear of pain, complications, or reinjury, which aligns with previous research studies as key obstacles to early mobility.[9,30] These fears, often grounded in misconceptions or insufficient information, made it challenging for HCPs to motivate older adult patients to participate in exercises early after surgery. Participants emphasized that consistent reassurance, education, and encouragement were essential in addressing these fears and helping these patients understand the benefits of early mobilization.[13]

Strengths of the Study

A key strength of this study is its in-depth exploration of the barriers and facilitators in implementing the BE-FIT program from the perspectives of nurses and HCPs, who are directly involved in the day-to-day care of post-surgical older adults. These frontline HCPs are uniquely positioned to provide valuable insights into the practical realities of implementing the BE-FIT program, and capturing their perspectives is essential to endeavor meaningful improvements for BE-FIT. The findings from this study will directly inform refinements to the BE-FIT program, making it more user-friendly, sustainable, and aligned with the real-world clinical environment.

Study Limitations

This study has several limitations that should be considered when interpreting the findings. First, the research was conducted at a single academic hospital site and included a relatively homogeneous sample of 14 participants, all of whom were female, which may reduce the generalizability of the findings to other hospital settings or surgical units. In this study, we focused on nurses, HCAs and unit clerks who were directly involved in the initial rollout of BE-FIT and many acted as key champions and change agents. This study did not include members of the broader interdisciplinary care team, such as physicians, physiotherapists, occupational therapists, or social workers and their exclusion might limit a more holistic understanding of the team-based dynamics needed to integrate BE-FIT into routine surgical care. Future research should include a broader range of healthcare professionals to better understand interdisciplinary collaboration and shared responsibility in the use of BE-FIT exercises to enhance post-surgical patient mobilization. Furthermore, the study took place during a period of staff shortages and strain to the healthcare system following the COVID-19 pandemic, which may have influenced staff perceptions and implementation experiences, particularly in terms of change fatigue. These contextual factors should be considered when applying findings to other care environments.

Conclusions

This study is the first of its kind to explore the integration of a patient-led exercise initiative in the post-surgical recovery process for older adults. The BE-FIT program was perceived by study participants as meaningful and promising for supporting postoperative recovery. Nevertheless, participants highlighted that its successful implementation requires addressing operational barriers, such as time constraints, resource limitations, and resistance from some patients and staff. Despite the ease of learning and performing the self-directed exercises, the brief time required to introduce and educate patients presented a challenge within the existing care processes.

Hospitals should prioritize comprehensive BE-FIT program training for frontline clinicians and formally integrate the program into postoperative care pathways and electronic health records to facilitate its adoption and consistent use in

clinical practice. The findings from this study will inform healthcare organizations in overcoming existing challenges and operationalizing early self-directed mobilization, ultimately improving functional recovery for older surgical patients.

Abbreviations

BE-FIT, Bedside Exercises for hospital FITness; HCA, Healthcare Aide; HCP, Healthcare Provider.

Data Sharing Statement

Data from this analysis cannot be made publicly available for ethical and legal reasons. However, the anonymized dataset used and analyzed in the study is available from the corresponding author upon reasonable request.

Ethics Approval and Informed Consent

The study was reviewed and approved by the University of Alberta Health Research Ethics Board (Pro00093032) in line with the declaration of Helsinki. All participants provided informed written consent.

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Author Contributions

All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

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Disclosure

Rachel G Khadaroo and Jude A Spiers share senior authorship for this study. The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

References

1. Kleinpell RM, Fletcher K, Jennings BM. Reducing Functional Decline in Hospitalized Elderly. In: Hughes RG, editor. *Patient Safety and Quality: An Evidence-Based Handbook for Nurses*. Agency for Healthcare Research and Quality (US). 2008.
2. Pashikanti L, Von Ah D. Impact of Early Mobilization Protocol on the Medical-Surgical Inpatient Population: an Integrated Review of Literature. *Clin Nurse Spec*. 2012;26(2):87–94. doi:10.1097/NUR.0b013e31824590e6
3. Aprisunadi NN, Mustikasari M, Ifadah E, Hapsari ED. Effect of Early Mobilization on Hip and Lower Extremity Postoperative: a Literature Review. *SAGE Open Nurs*. 2023;9:23779608231167825. doi:10.1177/23779608231167825
4. Tazreean R, Nelson G, Twomey R. Early mobilization in enhanced recovery after surgery pathways: current evidence and recent advancements. *J Comp Eff Res*. 2022;11(2):121–129. doi:10.2217/cer-2021-0258
5. Crooks E, Rampley T, Weeks DL, Billings C, Stengem D, Rangel T. Perceived Barriers to Patient Mobilization Among Therapy and Nursing Acute Care Staff: a Multi-Site Survey Study. *Arch Phys Med Rehabil*. 2024;105(2):243–250. doi:10.1016/j.apmr.2023.06.018
6. Huang J, Shi Z, Duan F, et al. Benefits of Early Ambulation in Elderly Patients Undergoing Lumbar Decompression and Fusion Surgery: a Prospective Cohort Study. *Orthop Surg*. 2021;13(4):1319–1326. doi:10.1111/os.12953
7. Tang JH, Wang B, Chow JLJ, et al. Improving postoperative mobilisation rates in patients undergoing elective major hepatopancreatobiliary surgery. *Postgrad Med J*. 2021;97(1146):239–247. doi:10.1136/postgradmedj-2020-138650
8. Herzog PJ, Herzog-Zibi RDL, Mattmann M, et al. Perspectives of patients and clinicians on older patient mobility on acute medical wards: a qualitative study. *BMC Geriatr*. 2023;23(1):558. doi:10.1186/s12877-023-04226-0
9. Horsley P, Khadaroo R. Patient-led therapy in acute care: a novel approach to improve mobilization. *Can Geriatr Soc J CME*. 2024;13(1):1–7.

10. Khadaroo RG, Warkentin LM, Wagg AS, et al. Clinical Effectiveness of the Elder-Friendly Approaches to the Surgical Environment Initiative in Emergency General Surgery. *JAMA Surg*. 2020;155(4):e196021. doi:10.1001/jamasurg.2019.6021
11. McComb A, Warkentin LM, McNeely ML, Khadaroo RG. Development of a reconditioning program for elderly abdominal surgery patients: the Elder-friendly Approaches to the Surgical Environment–BEdside reconditioning for Functional ImprovemenTs (EASE-BE FIT) pilot study. *World J Emerg Surg*. 2018;13(1):21. doi:10.1186/s13017-018-0180-7
12. Khadaroo R. EASE-BEFIT. Available from: https://sites.google.com/ualberta.ca/drkhadarooresearch/research/ease/ease-befit. Accessed July 14, 2025.
13. Liew SM, Mordiffi SZ, Ong YJA, Lopez V. Nurses' perceptions of early mobilisation in the adult Intensive Care Unit: a qualitative study. *Intensive Crit Care Nurs*. 2021;66:103039. doi:10.1016/j.iccn.2021.103039
14. Anekwe DE, Koo KKY, De Marchie M, Goldberg P, Jayaraman D, Spahija J. Interprofessional Survey of Perceived Barriers and Facilitators to Early Mobilization of Critically Ill Patients in Montreal, Canada. *J Intensive Care Med*. 2019;34(3):218–226. doi:10.1177/0885066617696846
15. Horne M, Thomas N, McCabe C, et al. Patient-directed therapy during in-patient stroke rehabilitation: stroke survivors' views of feasibility and acceptability. *Disabil Rehabil*. 2015;37(25):2344–2349. doi:10.3109/09638288.2015.1024341
16. Hung L, Phinney A, Chaudhury H, Rodney P, Tabamo J, Bohl D. "Little things matter!" Exploring the perspectives of patients with dementia about the hospital environment. *Int J Older People Nurs*. 2017;12(3):e12153. doi:10.1111/opn.12153
17. Bradshaw C, Atkinson S, Doody O. Employing a Qualitative Description Approach in Health Care Research. *Glob Qual Nurs Res*. 2017;4:2333393617742282. doi:10.1177/2333393617742282
18. Doyle L, McCabe C, Keogh B, Brady A, McCann M. An overview of the qualitative descriptive design within nursing research. *J Res Nurs*. 2020;25(5):443–455. doi:10.1177/1744987119880234
19. Sandelowski M. What's in a name? Qualitative description revisited. *Res Nurs Health*. 2010;33(1):77–84. doi:10.1002/nur.20362
20. Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *Int J Qual Health Care*. 2007;19(6):349–357. doi:10.1093/intqhc/mzm042
21. Robinson OC. Sampling in Interview-Based Qualitative Research: a Theoretical and Practical Guide. *Qual Res Psychol*. 2014;11(1):25–41. doi:10.1080/14780887.2013.801543
22. Kim H, Sefcik JS, Bradway C. Characteristics of Qualitative Descriptive Studies: a Systematic Review. *Res Nurs Health*. 2017;40(1):23–42. doi:10.1002/nur.21768
23. Morse JM, Barrett M, Mayan M, Olson K, Spiers J. Verification Strategies for Establishing Reliability and Validity in Qualitative Research. *Int J Qual Methods*. 2002;1(2):13–22. doi:10.1177/160940690200100202
24. Elo S, Kyngäs H. The qualitative content analysis process. *J Adv Nurs*. 2008;62(1):107–115. doi:10.1111/j.1365-2648.2007.04569.x
25. Quirkos. Quirkos 2.5.3 Computer Software. 2023. Available from: https://www.quirkos.com. Accessed July 15, 2025.
26. Tewari P, Sweeney BF, Lemos JL, et al. Evaluation of Systemwide Improvement Programs to Optimize Time to Surgery for Patients With Hip Fractures: a Systematic Review. *JAMA Netw Open*. 2022;5(9):e2231911. doi:10.1001/jamanetworkopen.2022.31911
27. Gabele D, Mendez S, Giuliano KK. Early and progressive mobility in a community hospital: a new interdisciplinary safe patient handling and mobility model. *Nurs Manag*. 2023;54(3):22–27. doi:10.1097/01.NUMA.0000919068.76409.b2
28. Beaulieu L, Seneviratne C, Nowell L. Change fatigue in nursing: an integrative review. *J Adv Nurs*. 2023;79(2):454–470. doi:10.1111/jan.15546
29. Silcox J, Doucette JN. Perceived nursing barriers to early mobilization of hospitalized patients. *Nurs Manag*. 2023;54(11):23–29. doi:10.1097/nmg.0000000000000064
30. Huang J, Li P, Wang H, Lv C, Han J, Lu X. Exploring elderly patients' experiences and concerns about early mobilization implemented in postoperative care following lumbar spinal surgery: a qualitative study. *BMC Nursing*. 2023;22(1):355. doi:10.1186/s12912-023-01510-7

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