Clinical Question: "What is the quality, quantity, and consistency of the nurse role in prescreening mobility tools for the adult hospitalized patient in the acute care setting?

To answer the clinical question, PubMed, CINAHL, Clinical Key, Cochrane Reviews, and Google Scholar databases were searched in addition to having a Librarian independently search for articles. There was no evidence found that addresses specifically to the nurse role in prescreening mobility tools. Our search results are supported by Krupp et al. (2019) systematic review identifying the significant gap in describing the role of the nurse in early mobility interventions and Constantin & Dahlke (2017) integrative review reveal little is known about how frequently nurses are mobilizing and more research is needed to better understand the essential information nurses need about mobilization and how workplace contexts affect nurses' ability to mobilize hospitalized older patients. In conclusion, there is no evidence to support the nurse role of a prescreening mobility tool on evaluation for inpatient physical therapy referrals and outcomes is unknown from an evidence, a-priori standpoint. Although not part of answering the clinical question, there were noteworthy articles related to *interdisciplinary* approach on early mobility assessment tools on, AM-PAC '6-Clicks' and BMAT provided in this report that can align with safe patient handling mobility programs. Additionally, KPSC related nursing research evidence review on mobility tools, scale, psychometrics for adult hospitalized inpatient units, and the HER-Mobility Ambulation Tool article are included for future mobility tools decision making.

Interdisciplinary approach on early mobility

Krupp et al. (2023) findings from this systematic review on evaluating literature around early mobilization in the ICU setting showed most studies involved an interdisciplinary team approach. There is significant need for future study of interdisciplinary models and how physical therapists and nurses work together to support functional outcomes. Less is known at the systems level how nurses and physical therapists work together to maintain functional outcomes for the unit, specifically it is not known how nurses make decisions about providing mobility standard of care and then identify high-risk patients that require physical therapy interventions. The role of the nurse during mobility in these models was not clearly described. There is evidence of the role of nurses in preparing patients for mobility such as managing pain and sedation, but none is known how nurses prioritize mobility within a complex shift. Additional research is needed to learn how nurses make decisions about initiating mobility and increasing the role of activity with increasingly complex populations.

Constantin & Dahlke (2017) integrative review had 13 articles identifying themes on frequency of nurse mobilizing patients, nursing characteristics of perceptions about their responsibility for mobility, facilitators of nurse-initiated mobility on NICHE units. Little is unknown about the frequency of nurses mobilizing patients and more





research is needed to examine contexts or how unit culture influences nurses' perceptions about their role in mobility.

Interprofessional approach using AM-PAC '6-Clicks' and Johns Hopkins Highest Level of Mobility (JH-HLM)

.pdf

Hoyer et al. (2018) study evaluated the reliability and construct validity of The Johns Hopkins Hospital, the Activity Measure for Post-Acute Care (AM-PAC) Inpatient Mobility Short Form also called '6-Clicks' and the Johns Hopkins Highest Level of Mobility (JH-HLM) when being used by both nurses and physical therapists and provides reliable values and interrater reliability values. These findings support the use of these tools as a common language for interprofessional assessment of patient mobility and functional limitation in the hospital setting. Although psychometrics were

included, this study limitation is not generalizable beyond the

neuroscience units.

Hoyer_2018_JohnsHopkins_Reliability_V

Sutton et al. (2022) retrospective data only were evaluated by nurses and PTs using the AM-PAC evaluation in a 24-hour post-surgery unit. Findings reveal mobility scores agreement between nursing and PT yielded low correlations for each mobility score. The interrater reliability absence could be attributed to training inconsistently between PT and nursing staff regarding AM-PAC scoring and timing within postoperative period. PT and nursing mobility scores did predict 90-day readmission or post-op complications. However, PT and nursing scores were predictors of less than 2 days or less hospitalization and fewer non-home discharges. Overall, the study failed to determine that nursing AM-PAC did not substitute PT scoring among this sample (hip/knee arthroplasty). Even though nursing driven mobility assessments have potential to improve patient discharge planning and cost reduction.



Interdisciplinary approach using AM-PAC '6-Clicks' and the BMAT tools

In the hospital setting, PTs, OTs, and nurses appear to be using tools to measure a similar construct of patient mobility by administering both the AM-PAC '6-Clicks' and the BMAT, yet the psychometric properties of these two instruments have not been simultaneously assessed. The purpose of the study conducted by Lininger et al. (2021) was to determine the level of convergent validity between the two mobility instruments. A high convergent validity would suggest that



both instruments do not need to be administered and, therefore, elimination of one tool may add to the efficiency of routine functional assessments of the health care providers utilizing them. The study outcomes revealed that both tools were statistically significant and moderately correlated, but do not have identical constructs. Lininger et al. concluded that moderate levels of convergent validity exist between the '6-Clicks' and the BMAT in study sample. These findings demonstrated that the construct of patient mobility is not being assessed similarly between the two instruments and that the continued use of both instruments will allow interdisciplinary assessment of patient mobility status during a hospital stay. In Boynton et al. (2020), quality report of a pilot study summarizes the elements of BMAT consisting of four assessments, see Table, p. 222. BMAT version 2.0 clarifies new knowledge in identifying the patient's mobility status and choosing the right safe patient handling mobility equipment, thus decreasing nurse injuries, article does not specify psychometrics of BMAT tool. There five tools highlighted in the Boynton et al. (2020) article. These included: Barthel Index of Activities of Daily Living (BI) (Mahoney 1965), Timed Up and Go Test (TUG) (Mathias- 1986), Physical Examination (PPME) (Winograd 1994), Elderly Mobility Scale (EMS) 1994; updated in 2012 (Elderly Mobility Scale. Ver 2 2012), Hierarchal Assessment of Balance and Mobility (HABAM) (MacKnight 2000) that were also mentioned in the nursing evidence review below.



Additionally, Rose et al. (2022), a continuous quality improvement was completed to decrease staff injuries due to patient handling and inconsistent documentation of mobility assessments. The project concluded BMAT use promoted early mobilization and decreased staff injuries, improved communication among staff, decreased falls. Essential to have staff commitment and interpersonal involvement with BMAT. Although the article meets inclusion, it does not address psychometrics of the BMAT tool.



KPSC Nursing Research Evidence Review and article:

Attached is the KPSC 2014 review on Mobility Strategies for Adult Hospitalized Patients on Medical/Surgical and Critical Care Units *Mobility Tools, Scales, and Instruments from the Evidence* (Crawford, 2014).



There are twenty-two mobility Tools/Scales with psychometrics and key discussion points for each in the review.

Kawar et al. (2021), this multisite mixed methods research study validated the HER-Mobility Ambulation Tool and sustainability. Results showed that the 5 levels/15 scores tool is valid (r=0.624),

Quincyann Tsai, MSN, RN; Lina Najib Kawar, PhD, RN, CNS, Emma Aquino-Maneja, DNP, MEd, RN, CCRN, Kristyn M. Gonnerman, MLS. Juli McGinnis, PhD, MSN, RN, NEA-BC;

© Kaiser Permanente Southern California and Hawaii, Regional Nursing Research Program, June 9, 2023

reliable (Cronbach's α =0.761), and stable tool. This tool provides updated continuous patients' mobility levels and scores based on nurses' assessment/documentation from admission to discharge. This HER-Mobility Ambulation Tool can assist the interdisciplinary team including Physical therapy and physicians in care planning, provide suitable interventions to maintain/increase hospitalized patient's mobility, and determine discharge planning. Other potentials could include safe patient handling and mobilization; decrease patients' length of stay, complications, and 30-day readmission; as well as care transition.

"The inspirational motto of the mobility program is simple: the human body was designed to move. With the EHR-Mobility Ambulation Tool as the linchpin of this innovative program, frontline nurses can ensure that promise is fulfilled. (P. 73)" Further testing is encouraged.



Validity_and_Useful

See table 3 in article for detailed levels and scores

Evidence Search Strategies: An evidence review on the selected clinical question was conducted in May 2023. The search was to examine the evidence for the quantity, quality, and consistency of the evidence for the nurse role in prescreening mobility for adult patients hospitalized in the acute care setting.

Search terms were broad and included search terms mobility screening tool, mobility prescreening tool, nurse mobility prescreening tool, mobility and nurse and prescreening, (Inpatient OR hospital) mobility screening tool entered independently or in combination to ensure an exhaustive search for relevant literature that will answer the clinical question. Electronic databases included PubMed, Clinical Key, CINAHL, Cochrane Libraries, and Google Scholar. Searches were individualized for each database. After evaluation for inclusion and exclusion criteria, and relevance to the question, no articles were found that answer the role of the nurse prescreening mobility tool on evaluation of inpatient physical therapy referrals and outcomes for this clinical question.

Searchable Question

Key Search Terms: mobility screening tool, mobility prescreening tool, nurse mobility prescreening tool, mobility and nurse and prescreening, (Inpatient OR hospital) mobility screening tool

Inclusion Criteria: inpatient hospital, med/surg/telemetry, <u>ICU</u>, FCC, adult, nurse prescreening mobility tool, psychometrics, BMAT and AM-PAC aka (6-Click)

Exclusion Criteria: COVID-19 pandemic, not adult, ambulatory, home health, skilled nursing facility, independent only physical therapy, occupational therapy

Limitors (Open year or year ranges, age ranges, and language, etc.): 2018-2023; English, human, U.S. only

Databases: PubMed, CINAHL, Clinical Key, Cochrane Library, Google Scholar

Quincyann Tsai, MSN, RN; Lina Najib Kawar, PhD, RN, CNS, Emma Aquino-Maneja, DNP, MEd, RN, CCRN, Kristyn M. Gonnerman, MLS. Juli McGinnis, PhD, MSN, RN, NEA-BC;

©Kaiser Permanente Southern California and Hawaii, Regional Nursing Research Program, June 9, 2023

Respectfully submitted,

Quincyann Tsai, MSN, RN Regional Nursing Research and EBP Practice Specialist

Lina Najib Kawar, PhD, RN, CNS | Nurse Scientist Regional Nursing Research Program

Emma Aquino-Maneja, DNP, MEd, RN, CCRN Practice Specialist, Patient Care Services

Kristyn Gonnerman, MLS Library Services Mgr., San Gabriel Valley & Orange County

Juli McGinnis, PhD, MSN, RN, NEA-BC Regional Director, Nursing Professional Practice/Magnet

LEGAL NOTICE

This summary document (referred to generally as an "Evidence Review") was created and is presented by Kaiser Foundation Hospitals Nursing Research, on behalf of the Kaiser Permanente Medical Care Program. **The following notices and provisions apply to all use of this Evidence Review for any purpose.**

Purpose/intended Audience

Because we want everyone in our communities to have the healthiest lives possible, we are making our Evidence Reviews available to the communities we serve to help Californians and others lead healthier lives. Evidence Reviews (also called "integrative reviews" and "evidence summaries") may include any and all of the following methodologies: integrative, scoping, systematic, rapid and literature reviews.

Evidence Reviews are provided as a community service for reference purposes only and are presented for use solely as specified in this disclaimer. The information presented is intended and designed for review by trained clinicians with experience in assessing and managing healthcare conditions. The information contained in the evidence reviews is not intended to constitute the practice of medicine or nursing, including telemedicine or advice nursing.

Limitations On Use

These documents have been developed to assist clinicians by providing an analytical framework for the effective evaluation and treatment of selected common problems encountered in patients. These documents are not intended to establish a protocol for all patients with a particular condition. While Evidence Reviews provide one approach to evaluating a problem, clinical conditions may vary significantly from individual to individual. Therefore, clinicians must exercise independent professional judgment and make decisions based upon the situation presented.

Kaiser Permanente's documents were created using an evidence-based process; however, the strength of the evidence supporting these documents differs. Because there may be differing yet reasonable interpretations of the same evidence, it is likely that more than one viewpoint on any given healthcare condition exists. Many reviews will include a range of recommendations consistent with the existing state of the evidence.

All of the Evidence Reviews were developed from published research and non-research evidence and do not necessarily represent the views of all clinicians who practice on behalf of the Kaiser Permanente Medical Care Program. These Evidence Reviews also may include recommendations that could differ from certain federal or state health care regulations or recommendation.

Intellectual Property Rights

Unless stated otherwise, the Evidence Reviews are protected by copyright and should not be reproduced or altered without express written permission from Kaiser Foundation Hospitals Nursing Research. Permission is granted to view and use these documents on single personal computers for private use within your hospital or hospital system. No portion of these materials in any form may be distributed, licensed, sold or otherwise transferred to others.

Kaiser Foundation Hospitals retains all worldwide rights, title and interest in and to the documents provided (including, but not limited to, ownership of all copyrights and other intellectual property rights therein), as well as all rights, title and interest in and to its trademarks, service marks and trade names worldwide associated with any entity of the Kaiser Permanente Medical Care Program, including any goodwill associated therewith.

No Endorsement or Promotional Use

Any reference in these documents to a specific commercial product, process, or service by trade name, trademark, or manufacturer, does not constitute or imply an endorsement or recommendation by Kaiser Foundation Hospitals or any other entity of the Kaiser Permanente Medical Care Program. The views and opinions expressed in these documents may not be used for any advertising, promotional, or product endorsement purposes.

Disclaimer of All Warranties and Liabilities

Finally, specific recommendations presented in Evidence Reviews derive from combining the best available evidence. Although Kaiser Foundation Hospitals has sought to ensure that its Evidence Reviews accurately and fully reflect its view of the appropriate combination of evidence at the time of initial publication, Kaiser Foundation Hospitals cannot anticipate changes and take no responsibility or assume any legal liability for the continued currency of the information or for the manner in which any person who references them may apply them to any particular patient. Neither Kaiser Foundation Hospitals nor any entity of the Kaiser Permanente Medical Care Program, assumes any legal liability or responsibility for the completeness, clinical efficacy or value of any apparatus, product, or process described or referenced in the documents. The entities of the Kaiser Permanente Medical Care Program make no warranties regarding errors or omissions and assume no responsibility or liability for loss or damage resulting from the use of these documents.