



## Topic Brief: Rehabilitation Options for Post-acute Care Diagnoses

**Date:** 10/28/2020

**Nomination Number:** 0934

**Purpose:** This document summarizes the information addressing a nomination submitted on July 17, 2020 through the Effective Health Care Website. This information was used to inform the Evidence-based Practice Center (EPC) Program decisions about whether to produce an evidence product on the topic, and if so, what type of product would be most suitable.

**Issue:** Patients discharged from acute care settings are faced with several options for post-acute care ranging from inpatient rehabilitation to skilled nursing facilities and home-based post-acute rehabilitation programs. Rehabilitation care provided within each setting varies widely and has a significant impact on patients' functional recovery and overall health outcomes. The American Academy of Physical Medicine and Rehabilitation (AAPMR) has requested a systematic review of the comparative effectiveness of different post-acute care (PAC) rehabilitation options and how patient and facility level characteristics may impact clinical outcomes.

**Program Decision:** While the nomination fulfilled all criteria, it was not selected for funding as a new evidence review for the EPC Program. The evidence base was small and the identified studies did not appear to address questions posed in the nomination.

**Key Findings:** We found a sufficient but small number of primary studies to develop a new systematic review. Many systematic reviews and some practice guidelines address small aspects of the key questions (KQs), but do not focus on the overarching issue of the choice of PAC settings. In addition, most systematic reviews focus on stroke patients rather than complex medical patients, or patients with traumatic brain injuries (TBIs), or spinal cord injuries. A new review that compares the settings comprehensively and emphasizes functional outcomes would be more useful to decision-makers. The cost of care is also a key outcome, especially for comparisons of inpatient versus outpatient rehabilitation. Analysis of cost-of-care outcomes was sparse and limited to a select few PAC rehabilitation interventions.

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**Background:** Recovery from some injuries and illnesses requires a period of closely supervised, multidisciplinary rehabilitation. Rehabilitation “aims to maximize recovery by addressing specific impairments (e.g., weakness), activity limitation (e.g., difficulty walking), restricted social participation (e.g., less contact with friends), and overall quality of life.”<sup>1</sup> Rehabilitation should be personalized, taking into account not only problems resulting from the injury in question, but also considering the patient's views, preferences, and comorbidities. Inpatient rehabilitation units deliver occupational and physical therapy, psychological services, social services, assistance with orthotic or prosthetic devices, and, when appropriate, specialized

services such as neurological therapies. Settings for inpatient rehabilitation include skilled nursing facilities (SNFs) and inpatient rehabilitation facilities or units. Alternative settings for delivering PAC include home health (often combined with remote monitoring and telehealth), outpatient facilities, or long-term care hospitals (LTCHs).

Payment policies, particularly from Medicare, have strongly influenced the criteria for admission, content, length of stay, and other aspects of rehabilitative care. The practices, outcomes, and costs of inpatient rehabilitation have been scrutinized repeatedly since the 1990's and 2000's. The second evidence report ever published by the EPC program (1998) concerned rehabilitation for persons with traumatic brain injury. In 2012, AHRQ published a comprehensive comparative effectiveness review on rehabilitation for brain injury. Before the EPC program began, AHRQ (then AHCPR) published a clinical practice guideline titled *Post-Stroke Rehabilitation*.

The state of evidence differs widely for the different indications for rehabilitation. Stroke rehabilitation is the most developed area. In 2016, the American Heart Association and American Stroke Association published a clinical practice guideline for stroke rehabilitation. Some of their findings are pertinent to the current nomination. In particular, the guideline group noted that rehabilitation services were heterogeneous, “varying in the type of care settings used; in the duration, intensity, and type of interventions delivered; and in the degree of involvement of specific medical, nursing, and other rehabilitation specialists”.<sup>2</sup> The group also noted that the main drivers of change in the organization and content of rehabilitation services were “repeated changes to the federal reimbursement fee structure (specifically, Centers for Medicare & Medicaid Services), which is the central driver of much of the system’s organization and structure.” With respect to the specific components of rehabilitation care, most interventions recommended in the guideline were based on mixed or incomplete evidence.<sup>3</sup> In 2019, the VA published updated guidelines for stroke rehabilitation based on systematic reviews of literature through 2016. These reviews were conducted by the ECRI Institute.

Over the past two decades, an increasing proportion of inpatient rehabilitation patients are admitted after hospital admissions for medical conditions other than stroke. Evidence about the content and effectiveness of rehabilitation is less well-developed for this population than for stroke.

### **Nomination Summary:**

The American Academy of Physical Medicine and Rehabilitation (AAPMR), is interested in a new evidence review of the comparative effectiveness of different post-acute care rehabilitation settings for adults recovering from acute stroke, traumatic brain injury, spinal cord injury or other complex medical conditions and the impact of different patient and rehabilitation facility level factors on patient health outcomes.

### **Key Questions (Table 1):**

1. What is the comparative effectiveness of skilled nursing facilities, inpatient rehabilitation facility, and other post-acute care (PAC) settings?
2. What are the impacts of different patient- and facility-level factors, and geographic and economic variables, on patient care outcomes in PAC rehabilitation programs?

2(a). What is the impact of patient characteristics, including demographics (e.g., age, gender, race/ethnicity), discharge diagnosis, pre-existing comorbidities, and history of disability on patient outcomes in PAC rehabilitation programs?

2(b). What is the impact of rehabilitation facility level factors (e.g., facility size, types of services provided, adequacy of clinician staffing etc.) on patient outcomes in PAC rehabilitation programs?

2(c). What is the impact of geographic variables (e.g., urban or rural location, population income level, proximity to home health and other PAC agencies etc.) on patient outcomes in PAC rehabilitation programs?

2(d). What is the impact of economic variables (e.g., availability of health insurance coverage, presence or absence of prior authorization requirements, treatment costs etc.) on patient outcomes in different PAC rehabilitation settings?

**Table 1.** Key Questions and PICOS (population, intervention, comparator, outcome, and setting)

<b>Questions</b>	1. What is the comparative effectiveness of different PAC rehabilitation options referred to by the physician?	2. What is the impact of patient and facility level factors and geographic and economic variables on health outcomes in different PAC rehabilitation settings?
<b>Population</b>	Adults requiring post-acute rehabilitation after acute stroke, brain or spinal cord injury, or other complex medical conditions	Adults requiring post-acute rehabilitation after acute stroke, brain or spinal cord injury, or other complex medical conditions
<b>Interventions/ Factors</b>	Different PAC rehabilitation settings, including: (a) Inpatient rehabilitation facilities (IRF) (b) Long-term care hospitals (LTCH) (c) Skilled nursing facilities (SNF) (d) Home-based post-acute rehabilitation (HPR) (e.g., home healthcare, home health agencies)	Patient level, facility level and other factors that affect patient health outcomes: (a) Patient level factors: (1) demographic characteristics, (2) nature and severity of medical condition, (3) comorbidities, history of disability. (b) Facility level factors: (1) facility size/volume of services provided, (2) adequacy of provider staffing, (3) nonprofit/for-profit financing. (c) Geographic factors: (1) urban/rural areas, (2) median income in the area, (3) availability of home health and other agencies in the area. (d) Economic factors: (1) availability of health insurance coverage, (2) presence or absence of prior authorization requirements, (3) treatment costs
<b>Comparators</b>	One PAC rehabilitation setting compared to another	None
<b>Outcomes</b>	<ul style="list-style-type: none"> <li>• Functional status<sup>a</sup> (including mobility, cognitive functioning, and self-care)</li> <li>• Health related quality of life<sup>b</sup></li> <li>• Cost outcomes<sup>c</sup></li> <li>• Harms</li> </ul>	<ul style="list-style-type: none"> <li>• Functional status (including mobility, cognitive functioning, and self-care)</li> <li>• Health-related quality of life</li> <li>• Cost outcomes</li> <li>• Harms</li> </ul>
<b>Setting</b>	Different PAC settings (IRF, LTCH, SNF, HPR)	Different PAC settings (IRF, LTCH, SNF, HPR)

Abbreviations: HPR= Home-based post-acute rehabilitation; IRF=inpatient rehabilitation facilities; LTCH=long term care facility; PAC=post-acute care; SNF=skilled nursing facility.

<sup>a</sup> Functional status as assessed by functional outcome instruments validated by different post-acute care settings, including Functional Independence Measure (FIM, used for inpatient rehabilitation facilities), the Minimum Data Set (MDS, used for skilled nursing and subacute rehabilitation programs), the Outcome and Assessment Information Set for Home Healthcare (OASIS) and Short Form-36 (SF-36), the latter two instruments used for ambulatory care programs.

<sup>b</sup> Health and Quality of Life outcomes as assessed by the following metrics: Mortality at 14, 90 and 365 days, Rehospitalization within 60 and 120 days, Length of Stay (e.g., IRF Days, LTCH Days, SNF Days, HHC Days), Independence at Home at 60, hundred 20 and 180 days etc.

<sup>c</sup> Cost outcomes as assessed by Per Member Per Month (PMPM) Payment by Setting and other validated instruments

**Contextual questions (Table 2):**

1. What are the clinical and nonclinical factors that influence the decision for the site of PAC rehabilitation?
2. What are the different PAC rehabilitation settings available to patients?
3. What are the characteristics (complexity of care offered, staffing, cost, types of therapy offered) of the different settings?

**Table 2.** Contextual Questions

<b>Contextual questions (for the Background and Discussion)</b>	<ol style="list-style-type: none"> <li>1. What are the clinical and nonclinical factors that influence the decision for the site of PAC rehabilitation?</li> <li>2. What are the different PAC rehabilitation settings available to patients?</li> <li>3. What are the characteristics (complexity of care offered, staffing, cost, types of therapy offered) of the different settings?</li> </ol>
<b>Population</b>	Adults following hospitalizations with acute stroke, brain injury, spinal cord injury or management of complex medical conditions
<b>Factors influencing PAC referral</b>	<ul style="list-style-type: none"> <li>• Patient characteristics (age, gender, race, marital status, functional status, history of disability, medical condition, severity of the medical condition, comorbidities)</li> <li>• Hospital level factors (number of Medicare patients served, hospital size, percent low income patients, hospital ownership, teaching versus non-teaching hospital)</li> <li>• Geographic factors (higher versus lower income communities, availability of home health agencies in the area etc)</li> <li>• Health insurance coverage (e.g., restrictions on insurance coverage of particular PAC rehab settings)</li> <li>• The method used to determine PAC referral (e.g., the use of particular algorithm tools, consultations with physiatry or rehabilitation medicine specialist)</li> </ul>
<b>Comparators</b>	None
<b>Outcomes</b>	None
<b>Setting</b>	None

Abbreviations: PAC=post-acute care.

**Assessment Methods**

See Appendix A.

**Summary of Literature Findings**

Thirteen systematic reviews and four primary studies partially addressed KQ 1<sup>4-16</sup>. Eight reviews assessed different PAC rehabilitation programs and services for acute stroke patients.<sup>4-6, 8, 9, 14, 15, 16</sup> Five of these reviews, including three Cochrane reviews,<sup>14-16</sup> evaluated the effectiveness of a broad range of post-acute rehabilitation settings in patients with acute stroke, including intensive multidisciplinary inpatient rehabilitation programs and inpatient rehabilitation programs coupled with early supported discharge services; and compared patient outcomes in hospital-based versus skilled nursing facility based rehabilitation programs and among rehabilitation services

administered through telehealth compared to exclusively in-person services. Three systematic reviews<sup>5, 6, 16</sup> evaluated the effectiveness of specific physical rehabilitation interventions among patients recovering from acute stroke.

Two systematic reviews evaluated the effectiveness of inpatient and outpatient rehabilitation services using a range of interventions and the effects of timing and intensity of multidisciplinary neural rehabilitation on outcomes in patients with TBIs.<sup>7, 13</sup> Three systematic reviews examined the effectiveness of transitional care models and home-based restorative rehabilitation programs for older adults with multi-morbid conditions, including frailty and dementia.<sup>10-12</sup>

Four additional primary studies evaluated patient outcomes across four innovative post-acute stroke rehabilitation programs.<sup>17, 18</sup> Two primary studies, one in progress clinical trial and one published feasibility study, assessed the effectiveness of a PAC physician home visit program and an integrated transitional care rehabilitation program for older adults recovering from acute stroke complicated by comorbidities.<sup>19, 20</sup> Two secondary randomized controlled trial (RCT) analyses evaluated the effectiveness of dedicated post-hospitalization residential brain injury rehabilitation programs compared to residential supported living programs and inpatient rehabilitation programs with different interventional intensity depending on treatment phase.<sup>21, 22</sup>

Four evidence reviews<sup>23-26</sup> and 12 primary studies<sup>21, 22, 27-36</sup> partially addressed KQ 2(a-d). Four systematic reviews evaluated the impact of patient-level factors, including patient demographics, discharge diagnosis, and disease severity on patient-care outcomes in post-acute rehabilitation.<sup>23-26</sup> One review examined the variation in post-acute rehabilitation outcomes by cultural and linguistic factors.<sup>24</sup> Another review assessed whether patient functional status assessments affected clinicians' decisions regarding PAC referrals.<sup>25</sup> Another review examined a range of psychosocial and logistical variables that affect patient outcomes in early supported discharge programs.<sup>23</sup> Finally, one review assessed whether guideline-concordant PAC rehabilitation referral practices are associated with better patient outcomes for functional and overall health compared to referrals that did not comport with guideline recommendations.<sup>26</sup> Nine additional primary studies evaluated the impact of patient- and facility-level factors, as well as geographic and economic variables on patient outcomes in post-acute care rehabilitation.<sup>21, 22, 27-31, 33, 36</sup>

None of the evidence reviews or primary studies evaluated the effectiveness of different PAC rehabilitation settings in patients with brain and spinal cord injuries other than those with complex medical conditions, stroke, or TBI. Additionally, we found no reviews evaluating the comparative effectiveness of long-term acute care hospitals and home health agencies on patient outcomes. Lastly, no reviews addressed the variation in PAC rehabilitation outcomes by presenting diagnosis and disease severity or pre-existing comorbidities.

**Table 3.** Literature Identified for Each Key Question

Key Questions	Published and in-progress evidence reviews (10/2017 – 10/2020)	Published and ongoing primary Studies (10/2015 – 10/2020)
KQ 1. For adults requiring rehabilitation after acute stroke, other brain/spinal cord injury or other complex medical conditions, what is the comparative effectiveness of	Total completed reviews: 13 <sup>4-16</sup> <ul style="list-style-type: none"> <li>• Cochrane SRs – 3<sup>14-16</sup></li> <li>• Other published SRs – 10<sup>4-13</sup></li> </ul>	Total primary studies: 4 <sup>19, 20, 37, 38</sup> <ul style="list-style-type: none"> <li>• Secondary RCT analyses – 2<sup>19, 37</sup></li> <li>• Feasibility study – 1<sup>20</sup></li> </ul> Clinicaltrials.gov

different PAC rehabilitation options, including: (a) Inpatient rehabilitation facilities, (b) Long-term care hospitals, (c) Skilled nursing facilities, and (d) Home-based post-acute rehabilitation programs		<ul style="list-style-type: none"> <li>In-progress RCT – 1<sup>38</sup></li> </ul>
KQ 2(a). For adults requiring rehabilitation after acute stroke, other brain/spinal cord injury or other complex medical conditions, what is the impact of patient characteristics (e.g., age, gender, race/ethnicity), primary discharge diagnosis and pre-existing comorbidities and disability status on patient health outcomes?	<p>Total completed reviews: 3<sup>23-25</sup></p> <ul style="list-style-type: none"> <li>Published SRs – 3<sup>23-25</sup></li> </ul>	<p>Total primary studies: 4<sup>28-30, 36</sup></p> <ul style="list-style-type: none"> <li>Secondary RCT analysis – 1<sup>29</sup></li> <li>Secondary health record database analyses – 2<sup>30, 36</sup></li> </ul> <p>Clinicaltrials.gov</p> <ul style="list-style-type: none"> <li>In-progress RCT – 1<sup>28</sup></li> </ul>
KQ 2(b). For adults requiring rehabilitation after acute stroke, other brain/spinal cord injury or other complex medical conditions, what is the impact of post-acute rehabilitation facility characteristics (facility size, adequacy of staffing, types of interventions provided etc.) on patient health outcomes?	<p>Total completed reviews: 1<sup>26</sup></p> <ul style="list-style-type: none"> <li>Published SR – 1<sup>26</sup></li> </ul>	<p>Total primary studies: 2<sup>22, 27</sup></p> <ul style="list-style-type: none"> <li>Secondary RCT analysis – 1<sup>22</sup></li> <li>Secondary health records database analysis – 1<sup>27</sup></li> </ul>
KQ 2(c). For adults requiring rehabilitation after acute stroke, other brain/spinal cord injury or other complex medical conditions, what is the impact of geographic factors (e.g., geographic location, urban/rural, area income, proximity to rehabilitation facilities and home health agencies) on patient health outcomes?	<p>Total reviews: 0</p>	<p>Total primary studies: 5<sup>21, 28, 31-33</sup></p> <ul style="list-style-type: none"> <li>Secondary analysis of Medicare claims data – 4<sup>21, 31-33</sup></li> </ul> <p>Clinicaltrials.gov</p> <ul style="list-style-type: none"> <li>In-progress RCT – 1<sup>28</sup></li> </ul>
KQ 2(d) For adults requiring rehabilitation after acute stroke, other brain/spinal cord injury or other complex medical conditions, what is the impact of the availability of health insurance coverage, presence or absence of prior authorization requirement, and rehabilitation program costs on patient health outcomes?	<p>Total reviews: 0</p>	<p>Total primary studies: 1<sup>35</sup></p> <ul style="list-style-type: none"> <li>Secondary analysis of Medicare claims data – 1<sup>35</sup></li> </ul>

Abbreviations: KQ=key question; PAC=post-acute care; RCT=randomized controlled trial; SR=systematic review.

See Appendix B for detailed assessments of all EPC selection criteria.

### **Summary of Selection Criteria Assessment:**

This nomination meets all selection criteria. For KQ1 we found 13 published systematic reviews evaluating the comparative effectiveness of different PAC rehabilitation settings, and four primary studies which addressed a few additional types of PAC rehabilitation programs or interventions which were not covered by the reviews. For KQ 2(a) we found three systematic reviews and four primary studies partially addressing the question regarding variation in patient-care outcomes in post-acute rehabilitation by patient characteristics and disease-specific factors. One evidence review and two primary studies relevant to KQ 2(b) focused on rehabilitation facility-level factors that may impact patient care outcomes. Two primary studies partially addressed KQ 2(c) and five partially addressed KQ 2(d).

None of the systematic reviews or primary studies identified compared the effectiveness of different PAC rehabilitation settings comprehensively. Additionally, most publications focused on acute stroke patients and very few addressed the nomination questions in the context of postacute rehabilitation care for patients with TBI, spinal cord injury, or other complex chronic conditions. There is sparse evidence on the variation in PAC outcomes by patient demographics, presenting condition and its severity, rehabilitation facility characteristics, or on how PAC referrals may be affected by geographic factors. There was also very limited analysis of cost-of-care outcomes. A systematic review of the available evidence base would comprehensively address the comparative effectiveness of different PAC rehabilitation settings and assess other areas of interest not presently addressed by published reviews. An evidence review would be highly impactful and valuable, as it would inform clinician decision-making regarding the most appropriate post-acute rehabilitation referrals for their patients.

Please see Appendix B for detailed assessments of individual EPC Program selection criteria.

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## **Appendix A: Methods**

We assessed nomination for priority for a systematic review or other AHRQ Effective Health Care report with a hierarchical process using established selection criteria. Assessment of each criteria determined the need to evaluate the next one. See Appendix B for detailed description of the criteria.

### **Appropriateness and Importance**

We assessed the nomination for appropriateness and importance.

### **Desirability of New Review/Absence of Duplication**

We searched for high-quality, completed or in-process evidence reviews published in the last three years on October 23, 2020 on the questions of the nomination from these sources:

- AHRQ: Evidence reports and technology assessments
  - AHRQ Evidence Reports <https://www.ahrq.gov/research/findings/evidence-based-reports/index.html>
  - EHC Program <https://effectivehealthcare.ahrq.gov/>
  - US Preventive Services Task Force <https://www.uspreventiveservicestaskforce.org/>
  - AHRQ Technology Assessment Program <https://www.ahrq.gov/research/findings/ta/index.html>
- US Department of Veterans Affairs Products publications
  - Evidence Synthesis Program <https://www.hsrd.research.va.gov/publications/esp/>
  - VA/Department of Defense Evidence-Based Clinical Practice Guideline Program <https://www.healthquality.va.gov/>
- Cochrane Systematic Reviews <https://www.cochranelibrary.com/>
- PROSPERO Database (international prospective register of systematic reviews and protocols) <http://www.crd.york.ac.uk/prospéro/>
- PubMed <https://www.ncbi.nlm.nih.gov/pubmed/>
- Patient Centered Outcomes Research Institute (PCORI) <https://www.pcori.org/>

### **Impact of a New Evidence Review**

The impact of a new evidence review was qualitatively assessed by analyzing the current standard of care, the existence of potential knowledge gaps, and practice variation. We considered whether it was possible for this review to influence the current state of practice through various dissemination pathways (practice recommendation, clinical guidelines, etc.).

## Feasibility of New Evidence Review

We conducted a limited literature search in PubMed from the last five years one October 23, 2020 on parts of the nomination scope not addressed by earlier identified systematic reviews. We reviewed all identified titles and abstracts for inclusion and classified identified studies by question and study design to estimate the size and scope of a potential evidence review.

<b>Ovid MEDLINE(R) ALL 1946 to October 22, 2020</b>
Date searched: October 23, 2020
1 *Subacute Care/ or *Transitional Care/ (1378)
2 (post-acute or "post-acute" or subacute or "sub-acute" or (transitional adj3 care) or posthospital or "post-hospital").ti,ab,kf. (44148)
3 or/1-2 (44695)
4 exp *Brain Injuries/ or *Multimorbidity/ or exp *Spinal Cord Injuries/ or exp *Stroke/ (201069)
5 (((brain or "spinal cord") adj2 injur*) or "complex medical" or multimorbidit* or multi-morbidit* or poststroke or "post-stroke" or stroke).ti,ab,kf. (360332)
6 or/4-5 (418657)
7 *Rehabilitation Nursing/ or *Hospitals, Rehabilitation/ or *Stroke Rehabilitation/ or *Long-Term Care/ or *Skilled Nursing Facilities/ or *Home Care Services/ or *Home Health Nursing/ or *Home Nursing/ (52301)
8 (ESD or HHA* or HHC* or IRF or IRFs or IRU or IRUs or LTCH* or PPS or SNF* or TCI* or "early supported discharge" or facilit* or home or hospital* or inpatient* or in-patient* or long-term or "preferred payment" or ((rehab* or transitional) adj5 (care or center* or facilit* or hospital* or inpatient* or in-patient* or nurse* or nursing or service* or setting*)) or service* or setting* or "skilled nursing").ti,kf. (1456659)
9 or/7-8 (1477802)
10 and/3,6,9 (1688)
11 limit 10 to english language (1637)
12 Network Meta-Analysis/ or (meta-analysis or systematic review).pt. or (metaanalysis* or meta-analys* or ((evidence or systematic) adj2 (review or synthesis))).ti,ab,kf. (327036)
13 and/11-12 (104)
<b>14 limit 13 to yr="2017 -Current" (46) Systematic Reviews</b>
15 (Randomized Controlled Trial or Controlled Clinical Trial).pt. or (control* or random* or trial*).ti,ab,kf. (5130500)
16 and/11,15 (810)
<b>17 limit 16 to yr="2015 -Current" (466) Trials</b>
<b>EBM Reviews - Cochrane Central Register of Controlled Trials September 2020</b>
Date searched: October 23, 2020
1 *Subacute Care/ or *Transitional Care/ (3)
2 (post-acute or "post-acute" or subacute or "sub-acute" or (transitional adj3 care) or posthospital or "post-hospital").ti,ab. (5027)
3 or/1-2 (5028)
4 exp *Brain Injuries/ or *Multimorbidity/ or exp *Spinal Cord Injuries/ or exp *Stroke/ (5980)
5 (((brain or "spinal cord") adj2 injur*) or "complex medical" or multimorbidit* or multi-morbidit* or poststroke or "post-stroke" or stroke).ti,ab. (62277)
6 or/4-5 (63006)
7 *Rehabilitation Nursing/ or *Hospitals, Rehabilitation/ or *Stroke Rehabilitation/ or *Long-Term Care/ or *Skilled Nursing Facilities/ or *Home Care Services/ or *Home Health Nursing/ or *Home Nursing/ (7)
8 (ESD or HHA* or HHC* or IRF or IRFs or IRU or IRUs or LTCH* or PPS or SNF* or TCI* or "early supported discharge" or facilit* or home or hospital* or inpatient* or in-patient* or long-term or "preferred payment" or ((rehab* or transitional) adj5 (care or center* or facilit* or

<p>hospital* or inpatient* or in-patient* or nurse* or nursing or service* or setting*) or service* or setting* or "skilled nursing").ti. (419110)  9 or/7-8 (419113)  10 and/3,6,9 (917)  <b>11 limit 10 to yr="2017 -Current" (395) Trials</b></p>
<p><b>ClinicalTrials.gov</b>  Date searched: October 23, 2020</p>
<p>( post-acute OR subacute OR EXPAND[Concept] "transitional care" OR posthospital ) AND ( Brain injury OR EXPAND[Concept] "spinal cord injury" OR EXPAND[Concept] "complex medical" OR multimorbidity OR poststroke OR stroke ) AND ( ESD OR HHA OR HHC OR IRF OR IRU OR LTCH OR PPS OR SNF OR TCI OR EXPAND[Concept] "early supported discharge" OR facility OR home OR hospital OR inpatient OR long-term OR EXPAND[Concept] "preferred payment" AND or AND ( rehabilitation OR transitional ) AND ( care OR center OR facility OR hospital OR inpatient OR nurse OR nursing OR service OR setting ) OR service OR setting OR EXPAND[Concept] "skilled nursing" )   Active, not recruiting, Completed Studies   First posted from 01/01/2017 to 10/23/2020  <b>(54) Trials</b>  <b>Search results link:</b>  <a href="#">Clinical Trials.gov records</a></p>

**Value**

We assessed the nomination for value. We considered whether or not the clinical, consumer, or policymaking context had the potential to respond with evidence-based change; and if a partner organization would use this evidence review to influence practice.

## Appendix B. Selection Criteria Assessment

Selection Criteria	Assessment
<b>1. Appropriateness</b>	
1a. Does the nomination represent a health care drug, intervention, device, technology, or health care system/setting available (or soon to be available) in the US?	Yes. The nomination concerns the comparative effectiveness of different PAC rehabilitation settings for adults recovering from acute stroke, brain/spinal cord injury or other complex medical conditions and how different patient and rehabilitation facility level factors may impact patient health outcomes.
1b. Is the nomination a request for an evidence report?	Yes.
1c. Is the focus on effectiveness or comparative effectiveness?	Yes. The focus of the nomination is on comparative effectiveness of different PAC rehabilitation options for patients with complex medical conditions, including acute neurologic conditions.
1d. Is the nomination focus supported by a logic model or biologic plausibility? Is it consistent or coherent with what is known about the topic?	Yes. PAC rehabilitation plays an essential role in recovery of patients with acute stroke, traumatic brain and spinal cord injuries and other complex medical conditions. However, determination of the appropriate level of rehabilitation care for a given patient and how this care should be personalized to address each patient's medical needs remains challenging.
<b>2. Importance</b>	
2a. Represents a significant disease burden; large proportion of the population	Yes.
2b. Is of high public interest; affects health care decision making, outcomes, or costs for a large proportion of the US population or for a vulnerable population	Yes.
2c. Incorporates issues around both clinical benefits and potential clinical harms	Yes.
2d. Represents high costs due to common use, high unit costs, or high associated costs to consumers, to patients, to health care systems, or to payers	Yes.
<b>3. Desirability of a New Evidence Review/Absence of Duplication</b>	
3. A recent high-quality systematic review or other evidence review is not available on this topic	While we identified a number of high-quality systematic reviews, none of these reviews fully addressed KQs 1-2.
<b>4. Impact of a New Evidence Review</b>	
4a. Is the standard of care unclear (guidelines not available or guidelines inconsistent, indicating an information gap that may be addressed by a new evidence review)?	Current practice is governed by guidelines for stroke rehabilitation and by Medicare coverage policies, but the standard of care is unclear.
4b. Is there practice variation (guideline inconsistent with current practice, indicating a potential implementation gap and not best addressed by a new evidence review)?	Wide practice variation has been documented repeatedly.
<b>5. Primary Research</b>	

<p>5. Effectively utilizes existing research and knowledge by considering:</p> <ul style="list-style-type: none"> <li>- Adequacy (type and volume) of research for conducting a systematic review</li> <li>- Newly available evidence (particularly for updates or new technologies)</li> </ul>	<p>Size/scope of review:</p> <ul style="list-style-type: none"> <li>• Four primary studies for KQ 1</li> <li>• Four primary studies for KQ 2(a)</li> <li>• Two primary studies for KQ 2(b)</li> <li>• Five primary studies for KQ 2(c)</li> <li>• One primary study for KQ2(d)</li> <li>• Estimate of systematic review size: small to medium</li> </ul> <p>*There are additional primary studies that were identified in our search but were not included in this topic brief because they were either duplicative of the included reviews or primary studies. These additional studies could be incorporated into potential future review.</p>
<p>6. Value</p>	
<p>6a. The proposed topic exists within a clinical, consumer, or policy-making context that is amenable to evidence-based change</p>	<p>Yes.</p>
<p>6b. Identified partner who will use the systematic review to influence practice (such as a guideline or recommendation)</p>	<p>Yes. The nominator, the AAPMR plans to disseminate findings from this perspective review among healthcare providers, policymakers and other stakeholders, such as MedPAC, an independent congressional agency advised in the US Congress on issues affecting the Medicare program.</p>

Abbreviations: AAPMR=American Academy of Physical Medicine and Rehabilitation; AHRQ=Agency for Healthcare Research and Quality; KQ=key question; MedPAC=Medicare Payment Advisory Commission; PAC=post-acute care; US=United States.