

**Intensive Rehabilitation for Post-Acute Rehabilitation Services:
The Impact of Value-Based Regulatory Change on Service Delivery**

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INTRODUCTION

The United States healthcare system is the "most heavily regulated enterprise in the world."¹ The extensive and ever-changing composition of this regulation "arises from an unruly mix of state and federal agencies and mutations of statutes and common-law doctrines."² It is a system inundated by the breadth and interaction of the various tiers of regulations that implicate all domains of healthcare and health law.³ Health law components, from a public health perspective, can be summarized into health quality, autonomy, access, and cost.⁴ Although well intended, to promulgate laws for the benefit of the public's health, regulation can often have an opposite effect on healthcare service domains of quality, autonomy, access, and cost.⁵ Regulation resulting in healthcare outcomes opposite of legislative intent is most readily evident for rehabilitation services within the post-acute healthcare segment.⁶ Within a highly regulated environment with limited quality outcomes to show for the rising cost of services provided, the value of post-acute rehabilitation services may seem questionable.⁷

Post-acute rehabilitation services are provisioned to facilitate patient physical, occupational, speech, language, swallowing, and/or, cognitive limitation recovery to the maximum of the patients' potential with Medicare remaining as the largest payer of rehabilitation services.⁸ Designed to constrain post-acute entity setting costs, post-acute care services regulation has influenced rehabilitation services delivery in ways that may not be in the best interest of the patient, nor clinically meaningful.⁹ Post-acute regulation's manipulation of rehabilitation services delivery injects challenges into salient evaluation of the true value of the services provided.¹⁰ Most palpably evident regulatory influencers being 75%, now 60%, and 3-hour therapy rules for Inpatient Rehabilitation Facilities (IRF), 3 day prior hospitalization and 720 minute therapy RUG IV category for Skilled Nursing Facilities (SNF), 4 visit therapy Low Utilization Payment Adjustment (LUPA) for home health agencies (HH), and 25 day length of stay requirement for Long Term Care Hospitals (LTACH).^{11 12} However, these are just a few

¹ Showalter, J. S. (2015). *The Law of Healthcare Administration, Seventh Edition*. Health Administration Press.

² Hall, M. A. (2006). *The History and Future of Health Care Law: An Essentialist View*. Wake Forest Law Review, 341, 347-64.

³ American Hospital Association (AHA). *Regulatory overload: Assessing the regulatory burden on health systems, hospitals, and post-acute care providers*, (2017).

⁴ Hall, M.A. (2006), pg. 355

⁵ Hall, M.A. (2006), pg. 355

⁶ American Hospital Association (AHA). (2017). *Regulatory overload: Assessing the regulatory burden on health systems, hospitals, and post-acute care providers*.

⁷ Medicare Payment Advisory Commission (MedPAC). (2009). *Healthcare Spending and the Medicare Program: A Data Book*. Washington, DC: Medicare Payment Advisory Commission; 125; chart 9-3.

⁸ Dejong, G. et. al. (2002). *Assessing the Field of Disability Research*. National Rehabilitation Hospital Center for Health and Disability Research. Milbank Quarterly, Vol. 80, No. 2,

⁹ Bettger, J. & Stineman, M. (2007). *Effectiveness of Multidisciplinary Rehabilitation Services in Post-Acute Care: State-of-the-Science. A Review*. Archives Physical Medicine Rehabilitation, 88(11): 1526-1534.

¹⁰ Bettger, J. & Stineman, M. (2007). *Effectiveness of Multidisciplinary Rehabilitation Services in Post-Acute Care: State-of-the-Science. A Review*. Archives Physical Medicine Rehabilitation, 88(11): 1526-1534.

¹¹ Medicare Payment Advisory Commission (MedPac). (2014). *Report to the Congress: Medicare Payment Policy*. Retrieved from: <http://www.healthwatchusa.org/HWUSA-Presentations-Meeting/20160720-TerrieMorgan/Medpac%20report%202014.pdf>.

¹² Department of Health and Human Services, Centers for Medicare and Medicaid Services. (2015). *Preventing Inappropriate Payments on Home Health Low Utilization Payment Adjustment Claims*, MLN Matters: MM 9027.

among the many stringent regulations that have incentivized fee-for-service behaviors and distracted from clinical decision-making.

Because post-acute rehabilitation services have been easily manipulated by fee-for-service regulation incentives, it will be significantly impacted as post-acute regulation shifts to value-based care.¹³ In the shift from fee-for-service to value-driven care, there will be a substantial effect on current post-acute business models via reduction in utilization of therapies and diminishment of direct rehabilitation services impact in functional improvement outcomes and reimbursement. Through the lens of healthcare quality, autonomy, access, and cost, this analysis will explore industry behavior and provide considerations in response to this value-based regulatory change.

POST-ACUTE CARE REHABILITATION SERVICES

The current Prospective Payment System (PPS) Fee-for-Service (FFS) reimbursement model within all post-acute entities is driven by the quantity of services provided, predominately rehabilitation services.¹⁴ Prior to delving into analysis, it is important to first define the disciplines that encompass rehabilitation services and the post-acute entities in which these services are provided.

Rehabilitation services can be classified as provision of physical (PT), occupational (OT), and speech language pathology (SLP) therapy.¹⁵ Physical therapy services target evaluation and treatment of functional limitations to "prevent the onset and/or slow the progression of physical impairments after illness or injury."¹⁶ ¹⁷ Occupational therapy services target therapeutic use of occupations to assess and treat physical, cognitive, psychosocial, sensory-perceptual performance in a variety of contexts.¹⁸ While speech language pathology services assess and treat "speech, language, social communication, cognitive-communication, and swallowing disorders."¹⁹ All therapy disciplines work under physicians order as deemed medically necessary to facilitate maximum functional recovery for patients served. Therapists must document medical necessity of the services they provide.²⁰ To add further regulatory complexity, it must also be noted, that therapeutic medical necessity is defined differently per each state statute.²¹ ²²

¹³ Azar, A. (2018). *Remarks on Value-Based Transformation for Post-Acute Care*. American Health Care Association.

¹⁴ Medicare Payment Advisory Commission (MedPac). (2015). *Medicare's post-acute trends: And ways to rationalize payment*. Report to Congress: Medicare Payment Policy, Chapter 7.

¹⁵ Agency for Health Care Administration (AHCA), (2018). *Therapy Services Coverage and Limitations Handbook*.

¹⁶ American Physical Therapy Association (APTA). (1997). *Model definition of physical therapy for state practice acts in the guide to physical therapy practice*, Chapter 1, p. 2

¹⁷ Centers for Medicare Services (CMS). Retrieved from: <http://www.cms.hhs.gov/TherapyServices/>

¹⁸ American Occupational Therapy Association (AOTA). Retrieved from: <https://www.aota.org/~media/Corporate/Files/Advocacy/State/Resources/PracticeAct/Model%20Definition%20of%20OT%20Practice%20%20Adopted%2041411.pdf>.

¹⁹ American Speech Language Pathology Association (ASHA). Retrieved from: <https://www.asha.org/students/speech-language-pathology/>. Accessed 11/2018

²⁰ American Medical Association. (2015). Medical Necessity of Therapy Services. Article A52775.

²¹ Jannega, H. (2016). *Physical Therapists' Guide to Medicare*. WebPT. Retrieved from: <https://www.webpt.com/medicare>

Physical, occupational, and speech language pathology services are provided within all post-acute healthcare entities. Post-acute healthcare services are categorized by the Centers of Medicare and Medicaid (CMS) as services provided within Skilled Nursing Facilities (SNF), Inpatient Rehabilitation Hospitals (IRF), Home Health Agencies (HH), and Long Term Acute Care Hospitals (LTACH).²³ All entities are highly regulated with SNFs often noted to have significant regulation second only to the nuclear power industry.²⁴ Regulation for these post-acute entities has not facilitated its intended outcomes, primarily due to its driving structure.²⁵

The PPS FFS model incentivized all post-acute entities to increase utilization of rehabilitation services thereby facilitating overpayment for all entities, generating increased length of stay, reducing access, and swelling utilization of services.²⁶ Regulation, although well intended, often results in unintended industry outcomes. This intense regulatory burden is juxtaposed with providers being unable to produce consistent value or quality outcomes, reduced ability for patients to access services, and spending on post-acute care to have "doubled over the last decade."²⁷ This is evident through analysis of the Balanced Budget Act of 1997 PPS FFS regulatory model influence on post-acute rehabilitation services industry behavior compared to the currently unfolding behavioral response to subsequent legislation post Patient Protection and Affordable Care (PPACA) Act.^{28 29}

POST-ACUTE CARE (PAC) PROSPECTIVE PAYMENT SYSTEM (PPS)

The United States Center of Medicare and Medicaid (CMS) defines post-acute settings as skilled nursing facilities (SNF), home health agencies (HH), inpatient rehabilitation facilities (IRF), and long-term acute care hospitals (LTACH).³⁰ Each entity operates under a unique payment system that pays different amounts for the care provided.³¹ The current prospective payment system for each entity is important to review to understand the regulatory drivers that spawned the increase in services and over-delivery of care.

²² Centers for Medicare & Medicaid Services. (2018). *Internet Only Manual. Medicare National Coverage Determinations (NCD) Manual*. Retrieved from: <https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/Internet-Only-Manuals-IOMs.html>

²³ Medicare Payment Advisory Commission (MedPac). (2015) *Medicare's post-acute care: Trends and ways to rationalize payments Chapter 7. Report to the Congress Medicare Payment Policy*.

²⁴ Ferrell, B. & Coyle, N. (2006). *Textbook of Palliative Nursing*. Oxford University Press, p. 760.

²⁵ Manatt. (2017). *Regulatory overload: Assessing the regulatory burden on health systems, hospitals, and post-acute care providers*. American Hospital Association.

²⁶ Miller, Mark E. (2015). *Testimony: Medicare Post-Acute Payment Reforms*. Medicare Payment Advisory Commission (MedPAC). Retrieved from: <http://www.medpac.gov/docs/default-source/congressional-testimony/testimony-medicare-post-acute-care-reforms-energy-and-commerce-.pdf?sfvrsn=0>

²⁷ Ackerly, C., Chen, C. & Ferris, T. (2015). *How to rehabilitate Medicare's "Post-Acute" Services*. Harvard Business Review.

²⁸ Cotterill, P. & Gage, B. (2002). *Overview: Medicare Post-Acute Care Since the Balanced Budget Act of 1997*. *Healthcare Finance Review*; 24(2).

²⁹ Boninger J, Gans B, & Chan L. (2012). *Patient Protection and Affordable Care Act: Potential Effects on Physical Medicine and Rehabilitation*. *Archives of Physical Medicine Rehabilitation*; 93(6): 929-934.

³⁰ MedPac. (2015). *Medicare's post-acute care: Trends and ways to rationalize payments Chapter 7. Report to the Congress Medicare Payment Policy*

³¹ Deloitte. (2016). *Health Policy Brief: Medicare changes in post-acute care payment Shaking up the way acute care hospitals approach post-acute care*. Retrieved: <https://www2.deloitte.com/content/dam/Deloitte/us/Documents/life-sciences-health-care/us-lshc-pac-policy-brief.pdf>

PAC PPS Fee-for Service (FFS) Payment Model: Regulatory Infrastructure

Regulatory reimbursement structures for all post-acute entities are concentrated within Fee-for-Service (FFS) model or Prospective Payment System (PPS). PPS was further authorized under the Balanced Budget Act (BBA) of 1997 and the subsequent Refinement Act of 1999 (Public Law 106-113).³² SNF/HH entities transitioned to PPS in 1997 and IRF/LTCH entities in 2002.³³ The Act contained "the most sweeping changes in payment policy for Medicare post-acute care (PAC) services in a single piece of legislation."³⁴ Although driven by fee-for-service and the provision of rehabilitation services, PAC entity systems vary widely in key components such as "the unit of payment, timing of implementation, and fiscal stringency."³⁵ These idiosyncratic PAC PPS assessment instruments and different payment systems are as follows: Outcome and Assessment Information Set (OASIS) for Home Health (HH), Minimum Data Set (MDS) for Skilled Nursing Facilities (SNF), IRF-Patient Assessment Instrument (IRF-PAI) for Inpatient Rehabilitation Facilities (IRF), and Continuity Assessment and Record and Evaluation Data Set (CARE) for Long-Term Acute Care Hospitals (LTACH).³⁶ Each instrument and payment model has unique documentation, scoring, reimbursement, and transmittal requirements in which provider comprehension is not inherent. Rehabilitation therapy services are provided within all entities and have been especially sensitive to these regulatory changes as therapy services receive a substantially higher reimbursement incentive.³⁷

PAC PPS Industry Behavior

The PPS FFS regulatory structure facilitated pressures to increase overpayment in post-acute facilities driving industry changes in rehabilitation services delivery.³⁸ The Centers for Medicare and Medicaid Services (CMS), Health and Human Services Office of the Inspector General (OIG), Department of Justice (DOJ), and state regulatory agencies have conducted investigations, identified concerns regarding utilization of rehabilitation services, and written numerous reports urging for regulatory change for all post-acute entities.³⁹ The PPS FFS model influenced industry behavior via incentivizing all post-acute entities to increase rehabilitation services utilization, readily observed in IRF, SNF, and HH entities.⁴⁰

³² Public Law 106-113 (Balanced Budget Refinement Act 1999).

³³ Cotterill, P. & Gage, B. (2002). *Overview: Medicare Post-Acute Care Since the Balanced Budget Act of 1997*, Healthcare Financing Review 24:2

³⁴ Cotterill, P. & Gage, B. (2002). *Overview: Medicare Post-Acute Care Since the Balanced Budget Act of 1997*, Healthcare Financing Review 24:2

³⁵ Cotterill, P. & Gage, B. (2002). *Overview: Medicare Post-Acute Care Since the Balanced Budget Act of 1997*, Healthcare Financing Review 24:2

³⁶ Centers for Medicare and Medicaid Services (CMS). (2018). *Improving Medicare Post-Acute Care Transformation Act of 2014 (IMPACT Act): Frequently Asked Questions October 27, 2017 – March 31, 2018*. Retrieved from: <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Post-Acute-Care-Quality-Initiatives/Downloads/IMPACT-Act-FAQs-Oct-17-March-18.pdf>

³⁷ Cotterill, P. & Gage, B. (2002). *Overview: Medicare Post-Acute Care Since the Balanced Budget Act of 1997*, Healthcare Financing Review 24:2.

³⁸ Medicare Payment Advisory Commission (MedPac). (2015). *Medicare's post-acute care: Trends and ways to rationalize payment. Chapter Seven. Report to the Congress: Medicare Payment Policy*.

³⁹ U.S. Senate Finance Report, 2011.

⁴⁰ Medicare Payment Advisory Commission (MedPac). (2015). *Medicare's post-acute care: Trends and ways to rationalize payment. Chapter Seven. Report to the Congress: Medicare Payment Policy*.

The primary distinction between inpatient rehabilitation hospitals and other post-acute settings is the therapeutic intensity provided, generally "requiring at least 3 hours of therapy per day, 5 days per week."⁴¹ Patients are required to actively participate in ongoing therapy of at least two different disciplines, one of which must be either Physical (PT) or Occupational Therapy (OT).⁴² Thus, patient admission and IRF stay is driven by rehabilitation utilization and participation threshold. In a report, the OIG determined that inpatient rehabilitation hospitals kept some patients who were "unsuited for intensive therapy for extended periods of time."⁴³ The report provided further guidance that inpatient rehabilitation hospitals should not admit patients who are unable to benefit from intensive rehabilitation services.⁴⁴

Skilled Nursing Facilities classify rehabilitation services through the Resource Utilization Group, Version IV (RUG-IV) system that determines both rehabilitation intensity and SNF reimbursement levels.⁴⁵ Generally, 80% of short-term skilled Medicare residents in SNFs receive physical, occupational, and/or speech therapy.⁴⁶ In a 2010 report, the OIG indicated that SNFs commonly misreported information pertaining to therapy on the MDS.⁴⁷ The majority of SNF claims were "up-coded for ultrahigh therapy and therapists were pressured to provide more minutes of therapy for patients."⁴⁸ In a 2012 report, the OIG identified numerous problems with SNF claim submissions that included improper therapy billing to obtain additional Medicare payments.⁴⁹ The OIG even advised that, therapists should not have a financial relationship with the SNF that may influence decision making in determining the amount of therapy needed throughout a beneficiary's stay.⁵⁰ As pertains to the RUG-IV system, the American Health Care Association (AHCA) president and CEO indicated that CMS created and oversaw, "a system that is heavily focused on therapy" and now is "complaining about the inevitable result that it would create."⁵¹

The home health reimbursement structure is also driven by rehabilitation utilization. In 2011, the US Senate Finance Committee released a report on therapy utilization in home health indicating that "managers encouraged therapists to meet a 10-visit target that would have increased their

⁴¹ Murrin, S. (2015). *Case Review of Inpatient Rehab Hospital Patients Not Suited for Intensive Therapy*. Office of Inspector General OEI-06016000360

⁴² Medicare Payment Advisory Commission (MedPAC). (2015). *Report to Congress: Inpatient Rehabilitation Facilities*.

⁴³ Murrin, S. (2015). *Case Review of Inpatient Rehab Hospital Patients Not Suited for Intensive Therapy*. Office of Inspector General OEI-06016000360

⁴⁴ Murrin, S. (2015). *Case Review of Inpatient Rehab Hospital Patients Not Suited for Intensive Therapy*. Office of Inspector General OEI-06016000360

⁴⁵ Centers for Medicare and Medicaid (CMS). (2017). *Long Term Care Facility Resident Assessment Instrument 3.0 User's Manual*. Retrieved from: <https://downloads.cms.gov/files/mds-30-rai-manual-v115-october-2017.pdf>

⁴⁶ DataPRO Team. (2002). *Skilled nursing facilities prospective payment system quality medical review Data Analysis Pro: Final Report for CMS Contract*. 500-99-CO01, Attachment J-19.

⁴⁷ Levinson, Daniel. (2010). *Questionable billing by skilled nursing facilities*. Department of Health and Human Services. Office of Inspector General

⁴⁸ Levinson, Daniel. (2010). *Questionable billing by skilled nursing facilities*. Department of Health and Human Services. Office of Inspector General

⁴⁹ Levinson, D. (2012). *Payments to skilled nursing facilities cost Medicare more than a billion dollars in 2009*. Office of Inspector General, OEI-02-09-00200.

⁵⁰ LaPorte, Meg. (2018). *Fraud Fighters Mine Data: Auditors pave new path with aggressive investigative tactics*. American Healthcare Association,

⁵¹ Spanko, A. (2018). *AHCA chief blasts 'offensive' skilled nursing commentary from CMS*, Skilled Nursing News.

payments, developed programs to target most profitable Medicare therapy treatment patterns, instructed employees to increase the number of therapy visits to increase the case mix and revenue."⁵² In 2012, OIG indicated that Medicare inappropriately paid "\$5 million for home health claims" with one of every four HHAs exceeding threshold for unusually high billing for services.⁵³

Numerous post-acute providers have been identified in submitting false claims with accusations around providing rehabilitation services that were not medically skilled, reasonable, or necessary.⁵⁴ *Kindred Healthcare Inc.* settled with U.S. Department of Justice resolving claims under False Claims Act for \$125 million being accused of submitting Medicare reimbursement claims for rehabilitation therapy services that were "not skilled, reasonable, and/or medically necessary."⁵⁵ The Department of Justice intervened on false claims suits against *HCR Manor Care*, the skilled nursing rehabilitation provider, for providing medically unnecessary therapy.⁵⁶ Inpatient Rehabilitation Hospital provider, *HealthSouth*, settled with Department of Justice at \$325 million for submitting improper billing claims for rehabilitation services.⁵⁷ *Genesis Healthcare* settled with the DOJ for 52.7 million for improper billing of therapy.⁵⁸ Home Health Agency (HHA), *Amedisys*, agreed to pay \$150 million to resolve false claims act allegations for billing Medicare for rehabilitation services that were not reasonable or necessary.⁵⁹ These are just a few of the copious reports, cases, and settlements demonstrating post-acute rehabilitation market behavior in response to regulatory incentives. The regulatory structure has driven post-acute market behavior that has impacted public health domains of quality, autonomy, access, and cost.

PPS Quality Impact

The PAC PPS regulatory infrastructure has had unintended impact on quality outcomes found to be evident in federal government reports for all PAC entities. These unintended outcomes are most evident within limited functional improvement correlation with total amount of services provided and limited overall quality outcomes data. For example, despite an increase in rehabilitation services delivery within post-acute entities, there are limited functional improvement outcomes measures that show a correlation. In a study comparing outcomes between Medicare and Medicare Advantage (MA) patients with hip fracture, "MA patients had

⁵² U.S. Senate Finance Report, 2011

⁵³ Levinson, D. (2012). *Inappropriate and questionable billing by Medicare home health agencies*. Office of Inspector General.

⁵⁴ 31 U.S. Code 3729-33 False Claims

⁵⁵ U.S. ex re: *Halpin et. al. v. Kindred Healthcare Inc. et. al.*, U.S. District Court, District of Massachusetts, No. 11-12139.

⁵⁶ *United States ex rel. Ribik v. Manor Care, Inc., et. al.*, Case No. 1:09CV13-CMH-HCB (E.D. Va.); *United States ex rel. Sough v. HCR Manor Care, et al.*, Case No. 1:14CV1228 (E.D. Va.); and *United States ex rel. Carson v. HCR Manor Care, et al.*, Case No. 1:11CV1054 (E.D. Va).

⁵⁷ HealthSouth Agrees to Pay \$325 Million to Resolve Medicare Billing Allegations, 14 Health L. Rptr. (BNA) 25 (Jan. 5, 2005).

⁵⁸ The United States Department of Justice. (2017). *Genesis Healthcare Inc. Agrees to Pay Federal Government \$53.6 Million to Resolve False Claims Act Allegations Related to the Provision of Medically Unnecessary Rehabilitation Therapy and Hospice Services*. Office of Public Affairs. Retrieved from: <https://www.justice.gov/opa/pr/genesis-healthcare-inc-agrees-pay-federal-government-536-million-resolve-false-claims-act>

⁵⁹ Amedisys, Inc. and Amedisys Holding, LLC Corporate Integrity Agreement

fewer minutes of rehabilitation therapy after hip fracture," but experienced lower rates of hospital readmission and "higher rates of successful discharge to the community than did similar FFS patients."⁶⁰ The lack of a correlation between the amounts of therapy with patient outcomes has implications for clinical recommendations and regulations regarding the amount of therapy required and reimbursed.⁶¹

Additionally, the Centers for Medicare and Medicaid Services (CMS) reported that patient therapy increased without significant changes or correlation to the acuteness or complexity of the conditions of admitted patients.⁶² MedPAC reported that between "2002 and 2012, SNF days that were classified into rehabilitation case-mix groups increased from 78 percent to 93 percent while the share of intensive therapy days as a share of total rose from 29 percent to 77 percent with the increase in most intensive therapy days (18 percent) far outpacing the changes in patient acuity."⁶³ This MedPAC finding demonstrates that therapeutic intensity was influenced by regulation rather than patient driven clinical need. This rehabilitation industry behavior was also observed within home health agencies. Home health episodes with "ten or more therapy visits received higher payment from 2001 to 2007, influencing the number of industry episodes with ten therapy visits to grow."⁶⁴ In contrast, CMS changed therapy payment to "lower payments for episodes with ten to thirteen therapy visits in 2008 while increasing payments for six-nine and fourteen or more visits which thus generated fewer episodes with ten visits and more episodes with between six-nine and fourteen or more visits," resulting in the largest one year shift in HH agency therapy volume since PPS implementation.⁶⁵ Regulation has incentivized altered or increased service delivery however this has not been correlated with improved patient functional outcomes. In addition, there is limited quality information demonstrating value of post-acute rehabilitation services provided. Each PAC entity has a different functional assessment tool: MDS, IRF-PAI, OASIS, and CARE. There is not a uniform functional assessment to measure patient improvement across PAC settings. Thus, these functional tool disparities impact quality through "care fragmentation, unsafe care transitions, and inability to determine the most cost-effective" post-acute care settings for patient discharge.⁶⁶ Value has been regulated and assessed

⁶⁰ Kumar, A. et. al. (2018). *Comparing post-acute rehabilitation use, length of stay, and outcomes experienced by Medicare fee-for-service and Medicare Advantage beneficiaries with hip fracture in hip fracturing in the United: A secondary analysis of administrative data*. PLoS Med, 15(6):e1002592.

⁶¹ Kumar, A. et. al. (2018). *Comparing post-acute rehabilitation use, length of stay, and outcomes experienced by Medicare fee-for-service and Medicare Advantage beneficiaries with hip fracture in hip fracturing in the United: A secondary analysis of administrative data*. PLoS Med.15(6):e1002592.

⁶² Department of Health and Human Services. (2012). *Inappropriate payments to skilled nursing facilities cost Medicare more than a billion dollars in 2009*. Washington (DC): Office of Inspector General. Retrieved from: <https://oig.hhs.gov/oei/reports/oei-02-09-00200.pdf>.

⁶³ Levinson, D. (2012). *Inappropriate payments to skilled nursing facilities cost Medicare more than a billion dollars in 2009*. Office of Inspector General, OEI-02-09-00200.

⁶⁴ Medicare Payment Advisory Commission. (2014). *Report to the Congress: Impact of Home Health Payment Rebased on Beneficiary Access and Quality of Care*. Retrieved from: <http://www.medpac.gov/docs/default-source/reports/december-2014-report-to-the-congress-impact-of-home-health-payment-rebased-on-beneficiary-access-to.pdf?sfvrsn=0>

⁶⁵ Medicare Payment Advisory Commission (MedPAC), Report to the Congress: Medicare Payment Policy, p. 219. Retrieved from: <http://medpac.gov/documents/reports/march-2012-report-to-the-congress-medicare-payment-policy.pdf>

⁶⁶ DeJong, G. (2010). *Bundling Acute and Post-Acute Payment: From a Culture of Compliance to a Culture of Innovation and Best Practice*. Physical Therapy, Volume 90, Issue 5, Pages 658-662. Retrieved from: <https://doi.org/10.2522/ptj.2010.90.5.658>

with fee-for-service mindset, stringently articulating; when therapy should be initiated, how much should be provided, preponderance of group/concurrent, utilization of therapy extenders, use of adjunct therapists, minimum number of therapy hours per day."⁶⁷ All of these regulatory specifications do not have clinical best practices to support them. Thus, with an increase in utilization with emphasis upon total therapy minutes provided, there has been diminished industry clinical or quality outcome focus. Diminished and conflicting clinical support surrounding PAC catalyzes nonclinical regulatory factors to have a predominant role in decision-making.⁶⁸

PPS Autonomy Impact

The PAC PPS regulatory infrastructure has had unintended impact on patient autonomy. Regulation has emphasized the importance of patient choice surrounding post-acute care. Patient choice is handicapped by hospitals limited ability to provide assistance with decision-making and scarce resources available to facilitate knowledgeable decisions surrounding post-acute rehabilitation services utilization.^{69 70}

Regulation is in place to ensure patients have a choice in the selection of post-acute rehabilitation services. Social Security statutes guarantee Medicare patients the right to choose their own providers.⁷¹ Medicare Conditions of Participation also indicate that hospitals "must not specify or otherwise limit the qualified providers that are available to the patient."⁷² It therefore would be a conflict of interest for hospital employees to influence patients to utilize post-acute providers affiliated with the hospital for example.⁷³ Because of this, many hospital legal departments have instructed employees to err on the side of caution by providing patients little guidance or recommendation surrounding selection of post-acute services.⁷⁴ Frequently, patients are provided a list of all post-acute services within a geographic radius and thus care decisions are made based on location or facility appearance.⁷⁵ Limited healthcare provider guidance during a stressful time constrained decision making period has implications for successful

⁶⁷ DeJong, G. (2010). *Bundling Acute and Post-Acute Payment: From a Culture of Compliance to a Culture of Innovation and Best Practice*. Physical Therapy, Volume 90, Issue 5, Pages 658-662. Retrieved from: <https://doi.org/10.2522/ptj.2010.90.5.658>

⁶⁸ Heinemann, Allen W. (2007). *State of the Science on Post-Acute Rehabilitation: Setting a Research Agenda and Developing an Evidence Base for Practice and Public Policy. An Introduction*. Archives of Physical Medicine Rehabilitation; 88: 1478-81

⁶⁹ Tyler, D. et.al. (2017). *Patients are not given quality-of-care data about skilled nursing facilities when discharged from hospitals*. Health Affairs (Millwood) 36(8): 1385-1391. doi: 10.1377/hlthaff.2017.0155.

⁷⁰ Showalter, J. (2015). *A Perfectly Legal Way to Help Patients Pick Higher Quality Post-Acute Providers*. Healthcare Financial Management Association. Retrieved from: <https://www.hfma.org/Content.aspx?id=29698&pagesid=3>

⁷¹ Social Security Administration. *Compilation of the social security laws: free choice by patient guaranteed*. Washington, DC: SSA. Retrieved from: <https://www.ssa.gov>

⁷² 42 C.F.R. 483.43(c)(7).

⁷³ Tyler, D. et.al. (2017). *Patients are not given quality-of-care data about skilled nursing facilities when discharged from hospitals*. Health Affairs (Millwood) 36(8): 1385-1391. doi: 10.1377/hlthaff.2017.0155.

⁷⁴ Tyler, D. et.al. (2017). *Patients are not given quality-of-care data about skilled nursing facilities when discharged from hospitals*. Health Affairs (Millwood) 36(8): 1385-1391. doi: 10.1377/hlthaff.2017.0155.

⁷⁵ Tyler, D. et.al. (2017). *Patients are not given quality-of-care data about skilled nursing facilities when discharged from hospitals*. Health Affairs (Millwood) 36(8): 1385-1391. doi: 10.1377/hlthaff.2017.0155.

rehabilitation outcomes and discharge to previous living situation.⁷⁶ Patient choice of post-acute provider is an empowering responsibility however patients have been provided with scarce outcome information, therefore limiting autonomy in making well informed decisions about their care.

PPS Access Impact

The PAC PPS regulatory infrastructure has had an unintended impact on PAC access. Access is defined as the "timely use of individual PAC rehabilitation services to achieve the best possible outcomes."⁷⁷ Post-acute rehabilitation access has been crippled by PPS post-acute admission regulatory requirements and length of stay incentives.⁷⁸

Post-acute rehabilitation access is impacted by PPS post-acute admission regulatory requirements. Some regulatory admission requirements that impeded access are the 3-day hospital-stay prior to admission to SNF for Medicare coverage. Patients are not able to access short-term skilled nursing care or rehabilitation services unless they have a prior hospital stay of "no fewer than three consecutive days pursuant to section 1861(i)."⁷⁹ In addition, regardless of patient clinical need, the SNF admission must also occur within 30-days of the three-day hospital stay hospital discharge. There is no clinical basis for this abstract rule that impedes the ability of patients to access short-term skilled nursing rehabilitation services. Home health also has admission requirements that impeded patient access such as the homebound definition and start of care clinician designation rules.⁸⁰ Not only do clinicians have challenges in determining and documenting homebound status surrounding intermittent/part time designation, it seems that so do the Centers of Medicare and Medicaid Services and the Office of the Inspector General.^{81 82}

CMS published the Clarification to Benefit Policy Manual surrounding the confined to home definition in 2011 in which the OIG later established that the confined to home definition was closer to the statute than the policy.^{83 84} This determination affects whether a patient will be able to receive home health care services. Therapists and patients alike are wedged within the conflicting regulatory deluge of home health qualification that ultimately impacts access to services. In addition, access is reduced by specifications as to which therapy disciplines are allowed to conduct the initial assessment and first comprehensive OASIS Start of Care (SOC) to

⁷⁶ Tyler, D. et.al. (2017). *Patients are not given quality-of-care data about skilled nursing facilities when discharged from hospitals*. Health Affairs (Millwood) 36(8): 1385-1391. doi: 10.1377/hlthaff.2017.0155.

⁷⁷ Ottenbacher, KJ. & Graham, JE. (2007). *The State-of-the-Science: Access to Post-Acute Care Rehabilitation Services. A Review*. Archives of Physical Medicine Rehabilitation: 88, 1513-21.

⁷⁸ Buntin, M.B. (2007). *Access to Post-Acute Rehabilitation*. Archives Physical Medicine Rehabilitation, 88: 1488-93.

⁷⁹ Centers for Medicare and Medicaid. (2018). *Medicare Shared Savings Program: SNF 3-Day Rule Waiver Guidance*. Retrieved from: <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/sharesavingsprogram/Downloads/SNF-Waiver-Guidance.pdf>

⁸⁰ Centers for Medicare and Medicaid Services. (2011). *Home health quality initiative overview*. Retrieved from: <http://www.cms.hhs.gov/HomeHealthQualityInits>

⁸¹ 76 Fed. Reg. 68526, 68599 (Nov. 4, 2011)

⁸² Office of Inspector General (OIG). (2012). *Documentation of Coverage Requirements for Medicare Home Health Claims*, OEI-01-08-00390

⁸³ Medicare Benefit Policy Manual, Pub. 100-02, Ch. 7, 30.1.1

⁸⁴ Office of Inspector General (OIG). (2012). *Documentation of Coverage Requirements for Medicare Home Health Claims*, OEI-01-08-00390.

develop the plan of care. Medicare Conditions of Participation indicate that for patients with orders for both nursing and rehabilitation therapy, only a registered nurse may conduct the initial assessment visit (484.55(a)(1)) and for patients with orders for only rehabilitation services, occupational therapy cannot establish initial eligibility for the Medicare home health benefit 484.55(a)(2).⁸⁵ Thus, occupational therapists are excluded or unable to conduct patient start of care services (SOC) that essentially initiates or provides patient access to home health services.⁸⁶ These home health regulations are not clinically based and impact timely access to services. Inpatient Rehabilitation Facility admission regulatory requirements also have "promulgated rules that limit access to inpatient rehabilitation facilities such as the so called 75% rule and local coverage determinations."⁸⁷ All post-acute entities have regulations that impact timely access to post-acute rehabilitation services. Concerns about PAC rehabilitation access are compounded by the lack of clear evidence about which entity is appropriate for which types of patients."⁸⁸

With PPS regulatory incentive to influence overall patient length of stay, access is impacted. For Long-Term Acute Care Hospital (LTACH), the "short-stay outlier payment policy created a strong financial incentive for long-term care hospitals to time patient discharges to maximize reimbursement."⁸⁹ Skilled Nursing Facilities (SNF) time patient discharges to maximize reimbursement as CMS covers 100 days of patient stay with first 20 days fully covered.⁹⁰ Home health agencies have also been found to time discharges to maximize reimbursement.⁹¹ Under PPS, home health patients must receive a minimum of four physical, occupational, or speech therapy visits during a 60-day episode for full amount, thus providing financial incentives for home health agencies to time length of stay.⁹² Although, there is wide variation in utilization due local practice regulations, length of stay regulatory manipulation has impacted patient access.⁹³ PAC PPS has unintended impact on the access domain most readily observed with pre-admission requirements and length of stay both of which are influenced by regulation rather than clinical decision making.

⁸⁵ CFR 409.42(c)(4)

⁸⁶ The American Occupational Therapy Association. (2017). *Occupational Therapy in Medicare Home Health: Support the Medicare Home Health Flexibility Act*.

⁸⁷ Heinemann, Allen W. (2007). *State of the Science on Post-Acute Rehabilitation: Setting a Research Agenda and Developing an Evidence Base for Practice and Public Policy. An Introduction*. Archives of Physical Medicine Rehabilitation; 88: 1478-81.

⁸⁸ Bettger, J.P. & Stineman, M.G. (2007). *Effectiveness of Multidisciplinary Rehabilitation Services in Post-acute Care: State of the Science. A Review*. Archives Physical Medicine Rehabilitation; 88(11): 1526-1534. Doi: 10.1016/j.apmr.2007.06.768.

⁸⁹ Yan S., Kim et. al, (2015). *Medicare Payment Policy Creates Incentives for Long-Term Care Hospitals to Time Discharges for Maximum Reimbursement*, Health Affairs, 34, no. 6: pp. 907-915.

⁹⁰ Centers for Medicare and Medicaid Services (2018). *Medicare Coverage of Skilled Nursing Care*.

⁹¹ Office of the Inspector General (OIG). (2016). *Nationwide Analysis of Common Characteristics in OIG Home Health Fraud Cases*. HHS OIG Data Brief. OEI-05-16-00031.

⁹² Centers for Medicare and Medicaid. *Home Health Prospective Payment System: Payment System Fact Series. 2012a*. <http://www.cms.gov/Outreachand-Education/Medicare-Learning-NetworkMLN/MLNProducts/downloads/HomeHlthrosPaymt.pdf>.

⁹³ Buntin, M.B. (2007). *Access to Post-Acute Rehabilitation*. Archives Physical Medicine Rehabilitation, 88: 1488-93.

PPS Cost Impact

The PAC PPS regulatory infrastructure has had an unintended impact on the cost domain. The Medicare regulatory reimbursement structure placed a premium on therapy hours, which incentivized increased provision of services, therefore has had unintended PAC cost impact.⁹⁴ When Congress made post-acute entities exempt from acute care Diagnosis Related Groups (DRG) Prospective Payment System (PPS), it allowed for continued post-acute fee-for-service payment practices and proliferated post-acute facilities and the therapy profession.⁹⁵

All post-acute entities across the United States saw a sharp rise in cost and spending.⁹⁶ PPS FFS spending on skilled nursing facilities "increased sharply in 2011, reflecting CMS adjustment for implementation of resource utilization groups version IV beginning October 2010."⁹⁷ Home healthcare spending rose rapidly under the PPS, increasing "about 10 percent per year between 2001 and 2009."⁹⁸ Between 2000 and 2013, HHA grew by 68% prompting HHS to impose a moratorium on agency enrollment within the states of Illinois, Michigan, Florida, and Texas.⁹⁹ Because "home health PPS rewards the provision of therapy," the proportion of visits with "therapy rose from 9% to 26% over 1997 to 2003."¹⁰⁰ The number of "Medicare FFS IRF cases grew rapidly throughout the 1990s and the early years of the IRF prospective payment system with payments per IRF case rising, on average, 1.9 percent per year between 2008 and 2014 and payments per case growing 2.6 percent between 2014 and 2015."¹⁰¹ About "42% of Medicare fee-for-service patients" were discharged to a PAC setting after hospitalization in 2013.¹⁰² Between 2001 and 2013, Medicare spending on PAC, both facility-based and in-home, "doubled from \$29 billion to \$59 billion per year and has grown faster than most other major Medicare spending categories."¹⁰³ CMS has developed an interactive map entitled, "Market Saturation and Utilization Map" that allows for physical and occupational therapy selection as a drop down

⁹⁴ Spanko, A. (2018). *AHCA chief blasts 'offensive' skilled nursing commentary from CMS*, Skilled Nursing News.

⁹⁵ DeJong, G. (2010). *Bundling Acute and Post-Acute Payment: From a Culture of Compliance to a Culture of Innovation and Best Practice*. Physical Therapy, Volume 90, Issue 5, Pages 658-662.
<https://doi.org/10.2522/ptj.2010.90.5.658>

⁹⁶ Medicare Payment Advisory Commission (MedPAC). (2017). *A Data Book: Health care spending and the Medicare Program. Chapter 8 Post-Acute Care: Skilled nursing facilities, Home health services, inpatient rehabilitation facilities, Long-term care hospitals*.

⁹⁷ Medicare Payment Advisory Commission (MedPAC). (2017). *A Data Book: Health care spending and the Medicare Program. Chapter 8 Post-Acute Care: Skilled nursing facilities, Home health services, inpatient rehabilitation facilities, Long-term care hospitals*.

⁹⁸ Medicare Payment Advisory Commission (MedPAC), (2017). *A Data Book: Health care spending and the Medicare Program. Chapter 8 Post-Acute Care: Skilled nursing facilities, Home health services, inpatient rehabilitation facilities, Long-term care hospitals*.

⁹⁹ Medicare Payment Advisory Commission (MedPAC). (2015). *Report to the Congress: Medicare Payment Policy, March 2015*.

¹⁰⁰ Buntin, M.B. (2007). *Access to Post-Acute Rehabilitation*. Archives Physical Medicine Rehabilitation, 88: 1488-93.

¹⁰¹ MedPac, 2017.

¹⁰² Tian, Wen. (2016). *Statistical Brief #205: An All-Payer View of Hospital Discharge to Post-acute care, 2013*. Agency for Healthcare Research and Quality (AHRQ) Healthcare Cost and Utilization Project. Retrieved from: <https://www.hcup-us.ahrq.gov/reports/statbriefs/sb205-Hospital-Discharge-Postacute-Care.pdf>

¹⁰³ Medicare Payment Advisory Commission (MedPAC). (2018). *Health Care Spending and the Medicare Program*. Retrieved from: http://medpac.gov/docs/default-source/data-book/jun18_databookentirereport_sec.pdf?sfvrsn=0

option.¹⁰⁴ ¹⁰⁵ The interactive map allows for visualization of extreme values. For example, increased saturation of therapists may demonstrate potential fraud, waste, and abuse within post-acute rehabilitation service delivery. These misaligned financial incentives embedded in the fee-for-service reimbursement model facilitate increased utilization of rehabilitation services without focus on value which results in higher overall spending without a correlation in outcomes improvement.¹⁰⁶ PPS regulation, although well intended, bred "gaming of the system."¹⁰⁷ This has resulted in unintended industry impact on quality autonomy, access, and cost. Because post-acute rehabilitation services have been easily manipulated by the fee-for-service regulation incentives, it will be significantly impacted as post-acute regulation shifts to value-based care.¹⁰⁸

POST-ACUTE CARE (PAC) VALUE-BASED PAYMENT MODEL

The Institute for Healthcare Improvement (IHI) developed the Triple Aim in 2008 as guidance for improvement in healthcare via simultaneous focus upon: patient experience, population health, and reduction in cost.¹⁰⁹ The triple aim framework, targeting the best care of the whole population at the lowest cost, is tangible through the subsequent promulgation of the Patient Protection and Affordable Care Act (PPACA) of 2010, also known as the Affordable Care Act (ACA).¹¹⁰ ¹¹¹ ¹¹² This legislation set into motion a cascade of regulations that intend post-acute service delivery to shift to a value-based model.¹¹³ Service delivery value is defined as the health outcomes achieved per dollar spent, thus value is not in the volume of service delivered.¹¹⁴ Realizing a system of value for the population while driving out waste has become the overarching goal of healthcare reform.¹¹⁵ The regulatory system will be reviewed to understand the levers that will diminish rehabilitation service utilization and its direct impact on functional improvement outcomes, reimbursement.

¹⁰⁴ <https://data.cms.gov/market-saturation>

¹⁰⁵ American Physical Therapy Association. (2017). *Interactive map from CMS lays out PT and OT Market Saturation*. PT In Motion News.

¹⁰⁶ Parkinson, M. (2013). *American Health Care Association: PAC Reform Response*. Retrieved from: https://www.ahcancal.org/facility_operations/medicare/Documents/20130819%20AHCA%20Response%20on%20PAC%20Reform.pdf

¹⁰⁷ Porter, M. (2010). *What is Value in Health Care?* Perspective: The New England Journal of Medicine 363:26.

¹⁰⁸ Azar, A. (2018). *Remarks on Value-Based Transformation for Post-Acute Care*. American Health Care Association.

¹⁰⁹ Stiefel M. & Nolan K. (2012). *A Guide to Measuring the Triple Aim: Population Health, Experience of Care, and Per Capita Cost*. Institute for Healthcare Improvement (IHI), Innovation Series 2012 White Paper. Cambridge, Massachusetts.

¹¹⁰ Public Law 111-148. (2010). *Patient Protection and Affordable Care Act*. Retrieved at: <https://www.gpo.gov/fdsys/pkg/BILLS-113hr4994enr/pdf/BILLS-113hr4994enr.pdf>

¹¹¹ Institute for Healthcare Improvement. (2018). *IHI Triple Aim Initiative*. <http://www.ihl.org/engage/initiatives/TripleAim/Pages/default.aspx>

¹¹² American Physical Therapy Association (APTA). *Transforming Health Care: The public policy priorities of the American Physical Therapy Association 2017-2018*. <https://www.apta.org/FederalIssues/PublicPolicyPriorities/Document/>

¹¹³ Public Law 111-148. (2010). *Patient Protection and Affordable Care Act*. Retrieved at: <https://www.gpo.gov/fdsys/pkg/BILLS-113hr4994enr/pdf/BILLS-113hr4994enr.pdf>

¹¹⁴ Porter ME, Teisberg EO. (2006). *Redefining health care: creating value-based competition on results*. Boston: Harvard Business School Press. Retrieved from: <https://www.nejm.org/doi/pdf/10.1056/NEJMp1011024>

¹¹⁵ Porter ME, Teisberg EO. (2006). *Redefining health care: creating value-based competition on results*. Boston: Harvard Business School Press. Retrieved from: <https://www.nejm.org/doi/pdf/10.1056/NEJMp1011024>

Value-based Payment Model: Regulatory Infrastructure

The ACA focuses upon increasing value by improving quality and reducing cost. The Act therefore propagates subsequent legislation and an array of value-based delivery payment models.¹¹⁶ Within the value-based regulatory models, post-acute rehabilitation services will swing from focus on the amount of services provided to accountability and demonstrating outcomes achieved through service delivery.

Subsequent ACA legislation such as Protecting Access to Medicare Act (PAMA) of 2014,¹¹⁷ Improving Medicare Post-Acute Care Transformation Act (IMPACT Act) of 2014,¹¹⁸ Medicare Access and CHIP Reauthorization Act of 2015 (MACRA),¹¹⁹ and Bipartisan Budget Act of 2018¹²⁰ will affect post-acute rehabilitation services. PAMA incorporates value-based systems such as the SNF 30-day all-cause re-hospitalization initiative. The IMPACT Act is bipartisan legislation with the purpose to improve value by establishing PAC uniform reporting requirements.¹²¹ It focuses on standardizing clinical data and assessments across post-acute entities by developing new quality measures, and facilitating the comparison of outcomes among providers and settings to generate infrastructure for future site-neutral payment reforms.¹²² It delineates development of a post-acute site-neutral payment structure under the guidance of the Medicare Payment Advisory Commission (MedPAC).¹²³ In addition, the Quality Payment Program Merit-Based Incentive Payment System (MIPS) under MACRA provides clinicians with final quality score that will be made available to the public.¹²⁴ Physical, Occupational, and Speech Language Pathologists will be deemed eligible providers effective 2019.¹²⁵ Initially many therapists will be excluded due to setting and volume thresholds.¹²⁶ Also, the Bipartisan Budget Act permanently repeals the Medicare Part B therapy cap, outlines specifications for utilization of therapy assistants (reimburses 85% which is similar to physician assistants), and

¹¹⁶ Bowling B et. al. (2018). *Provider Reimbursement Following the Affordable Care Act*. Healthcare Management; 37(2): 129-135.

¹¹⁷ Protecting Access to Medicare Act. 128 STAT. 1040. Public Law 113-93. Retrieved from: <https://www.gpo.gov/fdsys/pkg/PLAW-113publ93/pdf/PLAW-113publ93.pdf>

¹¹⁸ Improving Medicare Post-Acute Care Transformation Act. 128 STAT. 1952, Public Law 113-185. Retrieved from: <https://www.gpo.gov/fdsys/pkg/PLAW-113publ185/pdf/PLAW-113publ185.pdf>

¹¹⁹ Medicare Access and CHIP Reauthorization Act of 2015 (MACRA). 129 STAT. 87, Public Law 114-10. Retrieved from: <https://www.congress.gov/114/plaws/publ10/PLAW-114publ10.pdf>

¹²⁰ Bipartisan Budget Act of 2018. 132 STAT. 64. Public Law 115-123. Retrieved from: <https://www.congress.gov/115/plaws/publ123/PLAW-115publ123.pdf>

¹²¹ Public Law 113-185, HR 4994. Retrieved from: <https://www.gpo.gov/fdsys/pkg/BILLS-113hr4994enr/pdf/BILLS-113hr4994enr.pdf>

¹²² H.R. 4994 Public Law 113-185 42 USC 1305

¹²³ Improving Medicare Post-Acute Care Transformation Act. 128 STAT. 1952, Public Law 113-185. Retrieved from: <https://www.gpo.gov/fdsys/pkg/PLAW-113publ185/pdf/PLAW-113publ185.pdf>

¹²⁴ Medicare Access and CHIP Reauthorization Act of 2015 (MACRA). 129 STAT. 87, Public Law 114-10. Retrieved from: <https://www.congress.gov/114/plaws/publ10/PLAW-114publ10.pdf>

¹²⁵ Centers for Medicare and Medicaid Services (CMS). (2018). 2019 Medicare Physician Fee Schedule (MPFS) Final Rule. Retrieved from: <https://www.federalregister.gov/documents/2018/11/23/2018-24170/medicare-program-revisions-to-payment-policies-under-the-physician-fee-schedule-and-other-revisions>

¹²⁶ Centers for Medicare and Medicaid Services (CMS). (2018). 2019 Medicare Physician Fee Schedule (MPFS) Final Rule. Retrieved from: <https://www.federalregister.gov/documents/2018/11/23/2018-24170/medicare-program-revisions-to-payment-policies-under-the-physician-fee-schedule-and-other-revisions>

eliminates use of therapy thresholds within home health.¹²⁷ With further legislation eliminating rehabilitation services as drivers of reimbursement, associations such as the AOTA are stressing that rehabilitation services should still remain an essential component of post-acute care delivery.¹²⁸

All value-based delivery models will have an impact on post-acute rehabilitation services delivery. A component of the Centers for Medicare and Medicaid (CMS), The Innovation Center, was added by ACA Section 3021 and trials innovative value-based payment and delivery models.¹²⁹ Some of these models that will have a significant impact are Bundled Payments for Care Improvement Initiative (BPCI), Merit Based Payment System (MIPS), Medicare Advantage, Next Generation ACO Models, and Patient Centered Medical Home.¹³⁰ All models focus on interdisciplinary-shared accountability for patient outcomes tied to reimbursement. The Accountable Care Organization (ACO), for example, is an integrated group of care providers that are responsible for providing cost-efficient, high quality care.¹³¹ The Patient Driven Payment Model (PDPM) will impact skilled nursing and the Patient Driven Grouper Model (PDGM) will impact home health rehabilitation services delivery. The site-neutral payment model will reimburse post-acute care entities for Medicare patients based on their clinical needs, not on the peculiarities of individual post-acute settings nor the total amount of therapy services provided.¹³²¹³³ Many of the noted value-based models alter how rehabilitative care is delivered by "integrating different levels of care and creating uniform quality metrics to access quality and efficiency."¹³⁴ All of the above will require post-acute rehabilitation services to increase interdisciplinary/inter-entity collaboration with demonstration of their value for improved service delivery outcomes. In the move from fee-for-service to quality driven care, there will be a substantial disruption of current post-acute business models via reduction in utilization of therapies and diminishment of direct rehabilitation services impact in functional improvement outcomes and reimbursement.

¹²⁷ The American Occupational Therapy Association (AOTA) Federal Affairs Team. (2018). *The Bipartisan Budget Act of 2018*. The American Occupational Therapy Association Inc. Retrieved from: <https://www.aota.org/Advocacy-Policy/Congressional-Affairs/Legislative-Issues-Update/2018/Bipartisan-Budget-Act-2018.aspx>

¹²⁸ The American Occupational Therapy Association (AOTA) Federal Affairs Team. (2018). *The Bipartisan Budget Act of 2018*. The American Occupational Therapy Association Inc. Retrieved from: <https://www.aota.org/Advocacy-Policy/Congressional-Affairs/Legislative-Issues-Update/2018/Bipartisan-Budget-Act-2018.aspx>

¹²⁹ Centers for Medicare & Medicaid Services (2016). *CMS Innovation Center: Report to Congress December 2016*. Retrieved from: <https://innovation.cms.gov/Files/reports/rtc-2016.pdf>

¹³⁰ Boninger, J. Gans, B. & Leighton, C. (2012). *Patient Protection and Affordable Care Act: Potential Effects on Physical Medicine and Rehabilitation*. Archives Physical Medicine and Rehabilitation 93(6): 929-934. Retrieved from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3508768/>

¹³¹ Centers for Medicare and Medicaid Services. *Accountable Care Organizations*. Retrieved from: <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/ACO/>

¹³² Boninger, J. et. al. *Patient Protection and Affordable Care Act; Potential effects on physical medicine and rehabilitation*. Arch Physical Medicine Rehabilitation 2012; 93: 929-34

¹³³ DeJong, G. (2014). *Site Neutral Payment for Post-acute care: Framing the Issue*, Archives of Physical Medicine and Rehabilitation, 95, no. 6, pp.1212-1216.

¹³⁴ Bundling. DeJong G. (2010). *Bundling acute and post-acute payment: from a culture of compliance to a culture of innovation and best practice*. Physical Therapy; 90: 658-62.

Value-based Payment Model: Emerging Industry Behavior

As regulation transitions from a fee-for-service to value-based model, emerging industry momentum is surrounding professional education on awareness of fraud, waste, and abuse. The APTA indicates that regulatory "compliance is the key to preventing payment cuts and reducing the regulatory burden."¹³⁵ Industry awareness and education activity is most evident via review of the strategic plans and public policy agendas of the physical (APTA), occupational (AOTA), and speech language pathology (ASHA) professional practice associations.

Establishing professional compliance and advocacy education infrastructure has been of focus particularly in response to the Office of Inspector General (OIG) findings of post-acute rehabilitation industry fraud, waste, and abuse. Medicare has put particular emphasis on therapy in its efforts to "root out fraud and abuse and recover ill-spent tax dollars" when "aggregate numbers suggest fraud and abuse is a problem in therapy."¹³⁶ Each professional organization has provided educational resources about industry fraud waste and abuse. APTA indicates, "plenty of good therapists don't realize that they're inadvertently guilty of abuse and waste when they make billing, coding, and documentation errors."¹³⁷ The APTA warned via webinar, that therapists in home health agencies "should stay aware that if agencies are pushing a specific number of visits for different patients, that should be a warning sign to you."¹³⁸ The American Speech Language Hearing Association (ASHA) public policy agenda, the organization that represents speech language pathologists, intends to "advocate for productivity standards – ethical practice."¹³⁹ The American Occupational Therapy Association (AOTA) released an advisory opinion emphasizing that practitioners have "ethical and legal duty to be vigilant in knowing standards and regulations."¹⁴⁰ The American Physical Therapy Association (APTA) launched an integrity in-practice campaign and established a primer for physical therapists on preventing fraud, waste, and abuse.¹⁴¹ In collaboration with the National Association of Long Term Care, all of the rehabilitation professional organizations released a consensus statement on clinical

¹³⁵ Ries, E. (2014). *Addressing the 'Biggest Threat' to Physical Therapy*. American Physical Therapy Association (APTA) PT in Motion. Retrieved from: https://integrity.apta.org/uploadedFiles/Integrityaptaorg/About_Us/Campaign/PTinMotionFeb2014_AddressintheBiggestThreatToPhysicalTherapy.pdf

¹³⁶ Ries, E. (2014). *Addressing the 'Biggest Threat' to Physical Therapy*. American Physical Therapy Association (APTA) PT in Motion. Retrieved from: https://integrity.apta.org/uploadedFiles/Integrityaptaorg/About_Us/Campaign/PTinMotionFeb2014_AddressintheBiggestThreatToPhysicalTherapy.pdf

¹³⁷ Ries, E. (2014). *Addressing the 'Biggest Threat' to Physical Therapy*. American Physical Therapy Association (APTA) PT in Motion.

¹³⁸ Elliott, J. et. al. (2018). *Webinar: Challenging the Myths Associated with PDPM and PDGM*. American Physical Therapy Association (APTA). Retrieved from: <https://apta.adobeconnect.com/a844235408/p54db0oq2mk5/?launcher=false&fcsContent=true&pbMode=normal>

¹³⁹ American Speech Language Hearing Association. (2018). *2019 Annual Public Policy Agenda*. Retrieved from: <https://www.asha.org/uploadedFiles/2019-ASHA-Public-Policy-Agenda.pdf>

¹⁴⁰ American Occupational Therapy Association (AOTA). (2016). *Advisory Opinion for Ethics Commission: Ethical Considerations for Productivity, Billing, and Reimbursement*. Retrieved from: <https://www.aota.org/~media/Corporate/Files/Practice/Ethics/Advisory/reimbursement-productivity.pdf>

¹⁴¹ American Physical Therapy Association (APTA). (2017). *Preventing Fraud, Waste, and Abuse: A Primer for Physical Therapists*. Retrieved from: http://integrity.apta.org/uploadedFiles/Integrityaptaorg/Reducing_Risk/Understanding_Risk/Primer/PreventingFraudPrimer_Presentation.pdf

judgment.¹⁴² The statement referred readers to professional ethics, Medicare guidelines, and provided compliance education.¹⁴³ These association efforts with focus on compliance are in response to fee-for-service industry behaviors.¹⁴⁴ However, they do not demonstrate poised response to current value-based care driven reimbursement models. The value-driven payment model should unleash rapid industry focus not only on compliance but also on rapid innovation and best practice determination.¹⁴⁵ Post-acute business model rehabilitation service delivery change levers will be further analyzed through the lens of quality, autonomy, access, and cost.

PAC Value-based Quality Impact

The PAC value-based regulatory infrastructure intends industry focus on improved outcomes rather than the amount of rehabilitation services provided. Post-acute rehabilitation type and intensity has been influenced by non-clinical factors, "especially Medicare's method of payment," which has caused "wide variation in the use of therapies" with lack of evidence on what rehabilitation services are appropriate, for what types of patients, and in which post-acute setting.^{146 147 148} As a result, value-based regulation will diminish direct rehabilitation services impact on functional improvement outcomes and reimbursement.

Value-based models focus on measurable outcomes at a reduced overall cost. Because of the focus on amount of service provision and disparate functional scoring measures, post-acute rehabilitation functional outcomes have had limited measurement and substantial differences in practice within and between entities.¹⁴⁹ This makes it challenging to identify the value, "outcome per dollar spent," of the services provided.¹⁵⁰ The Institute of Medicine (IOM) indicates that service delivery should be evidenced based and should not "vary illogically from

¹⁴² American Occupational Therapy Association (2014). *Consensus Statement on Clinical Judgment in Healthcare Settings AOTA, APTA, ASHA*. Retrieved from:

<https://www.aota.org/~media/Corporate/Files/Practice/Ethics/APTA-AOTA-ASHA-Concensus-Statement.pdf>

¹⁴³ American Occupational Therapy Association (2014). *Consensus Statement on Clinical Judgment in Healthcare Settings AOTA, APTA, ASHA*. Retrieved from:

<https://www.aota.org/~media/Corporate/Files/Practice/Ethics/APTA-AOTA-ASHA-Concensus-Statement.pdf>

¹⁴⁴ DeJong, G. (2010). *Bundling Acute and Post-acute Payment: From a Culture of Compliance to a Culture of Innovation and Best Practice*. Physical Therapy, Volume 90, Issue 5, Pages 658-662,

<https://doi.org/10.2522/ptj.2010.90.5.658>

¹⁴⁵ DeJong, G. (2010). *Bundling Acute and Post-acute Payment: From a Culture of Compliance to a Culture of Innovation and Best Practice*. Physical Therapy, Volume 90, Issue 5, Pages 658-662,

<https://doi.org/10.2522/ptj.2010.90.5.658>

¹⁴⁶ Heinemann, A. (2007). *State-of-the-Science on Post-acute Rehabilitation: Setting a Research Agenda and Developing an Evidence Base for Practice and Public Policy-An Introduction*. Physical Therapy, Volume 87, Issue 11, Pages 1536-1541, <https://doi.org/10.2522/ptj.20070232>

¹⁴⁷ Buntin M.B. (2007). *Access to post-acute rehabilitation*. Archives of Physical Medicine Rehabilitation; 88: 1488-1493. Retrieved from: [https://www.archives-pmr.org/article/S0003-9993\(07\)01450-5/pdf](https://www.archives-pmr.org/article/S0003-9993(07)01450-5/pdf)

¹⁴⁸ Prvu Bettger, J. & Stineman, M. (2007). *Effectiveness of Multidisciplinary Rehabilitation services in Post-Acute Care: State-of-the-Science. A Review*. Archives of Physical Medicine Rehabilitation; 88(11): 1526-1534. Doi: 10.1016/j.apmr.2007.06.768.

¹⁴⁹ Temkin-Greener, H. et. al. (2018). *Rehabilitation Therapy for Nursing Home Residents at the End-of-Life*. The Journal of Post-Acute and Long-Term Care Medicine; pages 1-5. Retrieved from:

[https://www.jamda.com/article/S1525-8610\(18\)30418-3/pdf](https://www.jamda.com/article/S1525-8610(18)30418-3/pdf)

¹⁵⁰ Porter ME. (2008). *Defining and introducing value in health care*. In: *Evidence-based medicine and the changing nature of health care: 2007 IOM annual meeting summary*. Washington, DC: Institute of Medicine, 161-72.

clinician to clinician or from place to place."¹⁵¹ The IOM recommends standardized measures with shared accountability among an interdisciplinary team of providers.¹⁵² Because post-acute rehabilitation performance measurement has been provider-based, related to care setting regulation incentives, rather than patient based, quality and outcomes have been left unmeasured and with no one accountable.¹⁵³ For example, of 2.3 million Medicare beneficiaries who received rehabilitation services, only 1 in 3 patients reported improvement in functioning.¹⁵⁴ Not demonstrating outcomes is a "vexing issue for therapists" in that in value-based models such as bundling; provider participation is limited to demonstrated high quality outcome providers.¹⁵⁵

A standardized functional assessment across post-acute entities is thought to improve the ability to measure value.¹⁵⁶ CMS contracted with the RAND Corporation to develop and implement, as delineated by the IMPACT Act of 2014, a standardized assessment tool to harmonize disparate scoring methods and PAC payment.¹⁵⁷ The standardized assessment tool, labeled the Continuity Assessment and Record Evaluation (CARE), has guiding principles of data uniformity, interoperability, and ability to survey patient outcomes longitudinally across multiple levels of care.¹⁵⁸ Patient rehabilitation quality will no longer be defined as the availability of therapists and amount of therapy services provided at the PAC entity but rather by functional outcomes as scored on CARE Tool GG item set by interdisciplinary teams, comprised not only of therapists.¹⁵⁹ Thus, therapists will need to enhance assessment skills, interdisciplinary communication, and alignment of clinical practices.¹⁶⁰ The CARE Tool will also replace the Functional Independence Measure (FIM) Uniform Data System for Medical Rehabilitation

¹⁵¹ Institute of Medicine. (2001). *Shaping the Future for Health. Crossing the Quality Chasm: A New Health System for the 21st Century*. National Academy Press. Retrieved from:

<http://www.nationalacademies.org/hmd/~/media/Files/Report%20Files/2001/Crossing-the-Quality-Chasm/Quality%20Chasm%202001%20%20report%20brief.pdf>

¹⁵² Institute of Medicine. (2001). *Shaping the Future for Health. Crossing the Quality Chasm: A New Health System for the 21st Century*. National Academy Press. Retrieved from:

<http://www.nationalacademies.org/hmd/~/media/Files/Report%20Files/2001/Crossing-the-Quality-Chasm/Quality%20Chasm%202001%20%20report%20brief.pdf>

¹⁵³ Institute of Medicine. (2006). *Performance measurement: accelerating improvement*. Washington, DC: National Academies Press. Retrieved from:

<http://www.nationalacademies.org/hmd/~/media/Files/Report%20Files/2005/Performance-Measurement-Accelerating-Improvement/ReportBriefPerformanceMeasurementAcceleratingImprovement.pdf>

¹⁵⁴ Simming, A. et. al. (2018). *Patient-Reported Outcomes in Functioning Following Nursing Home or Inpatient Rehabilitation*. Journal of American Medical Directors Association; 19(10):864-870.

¹⁵⁵ DeJong, G. (2010). *Bundling Acute and Post-acute Payment: From a Culture of Compliance to a Culture of Innovation and Best Practice*. Physical Therapy, Volume 90, Issue 5, Pages 658-662, <https://doi.org/10.2522/ptj.2010.90.5.658>

¹⁵⁶ Jette A, Haley S, & Pengseheng N. (2003). *Comparison of Functional Status Tools Used in Post-Acute Care*. Health Care Finance Rev; 24(3): 13-24.

¹⁵⁷ Edelen, M. et. al. (2017). *Development and Maintenance of Standardized Cross Setting Patient Assessment Data for Post-Acute Care: Summary Report of Findings from Alpha 1 Pilot Testing*. RAND Corporation, Santa Monica CA. www.rand.org

¹⁵⁸ Mandl, S. (2017). *The Data Element Uniformity, Assessment Domain Standardization, & The IMPACT Act of 2014*. The Division of Chronic & Post-Acute-Care; The Centers for Medicare and Medicaid Services.

¹⁵⁹ Centers for Medicare and Medicaid Services (2018). *Post-Acute Care Quality Initiatives: Functional Measures*. Retrieved from: <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Post-Acute-Care-Quality-Initiatives/Functional-Measures-.html>

¹⁶⁰ Temkin-Greener, H. et. al. (2018). *Rehabilitation Therapy for Nursing Home Residents at the End-of-Life*. The Journal of Post-Acute and Long-Term Care Medicine; pages 1-5. Retrieved from:

[https://www.jamda.com/article/S1525-8610\(18\)30418-3/pdf](https://www.jamda.com/article/S1525-8610(18)30418-3/pdf)

(UDSMR) in which "many of the new indicators show a higher rate of patients with maximum function (and, therefore, lower IRF needs)."¹⁶¹ Standardizing functional score reporting across PAC settings via the CARE Tool will assist with determining value as defined by improvement of functional outcomes.

Fee-for-service models elevated therapy services as the driver of reimbursement through service provision rather than the resulting outcomes. In the value-based models, rehabilitation services will have diminished impact on direct reimbursement and reduction of services if value outcomes cannot be determined. Therapy impact on revenue will require interdisciplinary entity collaboration and the ability to prove outcomes captured through CARE Tool GG item set scores and standardized assessments.¹⁶² Standardized assessment and outcomes are crucial in that regulation is incentivizing PAC leaders not to provide therapy. Unfortunately, within post-acute rehabilitation, "we know little about the "active ingredients" of rehabilitation delineating which types of patients are best suited for which setting so that optimal rehabilitation outcomes are achieved at a reduced cost."¹⁶³ Because capturing outcome measures has long been a "largely unrealized aspiration of physical therapists," much more needs to be learned regarding the optimal dose of therapy services, "taking into context the prognosis, symptom burden, endurance, and a realistic anticipated benefit from therapy."^{164 165} It will also be important to identify the "threshold at which therapy interventions are unlikely to enhance life or reverse the natural course of decline associated with terminal illness."¹⁶⁶ The APTA indicates that rehabilitation services "survival in value-based payment models will be dependent on standardized data, the use of data to inform and drive practice, adopt clinical practice guidelines/protocols, and the eradication of unwarranted variability in practice."¹⁶⁷ It emphasizes that the, "wide variation in practice both in the intensity as well as the type of services delivered

¹⁶¹Kahn, C. (2018). *Letter to CMS Administrator Re: CMS-1688-P, Medicare Program; Inpatient Rehabilitation Facility Prospective Payment System for Federal fiscal year 2019; Proposed Rule* (Vol. 83, No. 89), May 8, 2018. Federation of American Hospitals. Retrieved from: https://fah.org/fah-ee2-uploads/website/documents/FAH_Comments_on_the_FY_2019_Inpatient_Rehabilitation_Facility_%28IRF%29_Prospective_Payment_System_Proposed_Rule.pdf

¹⁶² Centers for Medicare and Medicaid Services (2018). *Post-Acute Care Quality Initiatives: Functional Measures*. Retrieved from: <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Post-Acute-Care-Quality-Initiatives/Functional-Measures-.html>

¹⁶³ Heinemann, A. (2007). *State-of-the-Science on Post-acute Rehabilitation: Setting a Research Agenda and Developing an Evidence Base for Practice and Public Policy-An Introduction*. Physical Therapy, Volume 87, Issue 11, Pages 1536-1541, <https://doi.org/10.2522/ptj.20070232>

¹⁶⁴ Fritz, Julie (2012). *Physical Therapy In A Value-Based Healthcare World*. Journal of Orthopedic and Sports Physical Therapy; 42(1): 1-2. Doi: 10.2519/jospt.2012.0101.

¹⁶⁵ Temkin-Greener, H. et. al. (2018). *Rehabilitation Therapy for Nursing Home Residents at the End-of-Life*. The Journal of Post-Acute and Long-Term Care Medicine; pages 1-5. Retrieved from: [https://www.jamda.com/article/S1525-8610\(18\)30418-3/pdf](https://www.jamda.com/article/S1525-8610(18)30418-3/pdf)

¹⁶⁶ Temkin-Greener, H. et. al. (2018). *Rehabilitation Therapy for Nursing Home Residents at the End-of-Life*. The Journal of Post-Acute and Long-Term Care Medicine; pages 1-5. Retrieved from: [https://www.jamda.com/article/S1525-8610\(18\)30418-3/pdf](https://www.jamda.com/article/S1525-8610(18)30418-3/pdf)

¹⁶⁷ American Physical Therapy Association (APTA). (2018). *Post-Acute Myth vs. Reality Webinar 11.15.2018*. Retrieved from: https://apta.adobeconnect.com/_a844235408/p54db0oq2mk5/?launcher=false&fcsContent=true&pbMode=normal

must be eliminated."¹⁶⁸ The APTA further indicates that, if therapy specifies and demonstrates its role in reducing re-hospitalizations, returning patients to the community with less risk, supporting patients ability to remain in their home and engage in community, rehabilitation services will be a valuable component in care.¹⁶⁹

The value-based regulatory reimbursement structure will heighten pressures to identify value and reduce cost in post-acute facilities that will drive significant industry changes in rehabilitation service delivery. The PAC standardized measures intend to assist with more clearly delineating the effectiveness of post-acute services to help cost containment efforts in ways that "maximally minimize the loss of meaningful clinical services."¹⁷⁰ These PAC standardized quality outcomes information will be made available to patients, which will further impact post-acute facility business models and care delivery.

PAC Value-based Autonomy Impact

PAC Value-based regulation will impact patient and therapist autonomy. Patients will have more information to make educated decisions about their care and their providers.¹⁷¹ PAC interdisciplinary outcomes will be made transparent to assist patients in patient choice of post-acute care rehabilitation services providers. There will also be reduced therapist autonomy in regards to their direct impact on functional scores and PAC reimbursement.

The Centers for Medicare and Medicaid Services (CMS) established a star rating system for post-acute care providers. Nursing Home Compare, a web-based report card, "details quality of care at all CMS-certified nursing homes."¹⁷² Although consumers had a positive reaction, its utilization appeared limited by "lack of trust of the data."¹⁷³ In addition, the quality measures are currently inadequate "one size fits all patients" measures.¹⁷⁴ For example, prior to July 2016, only 3 of 11 quality measures used to generate Nursing Home Quality Domain five-star ranking were pertinent to short-stay rehabilitation patients.¹⁷⁵ In addition, nursing home compare does

¹⁶⁸ American Physical Therapy Association (APTA). (2018). *Post-Acute Myth vs. Reality Webinar 11.15.2018*. Retrieved from:

https://apta.adobeconnect.com/_a844235408/p54db0oq2mk5/?launcher=false&fcsContent=true&pbMode=normal

¹⁶⁹ American Physical Therapy Association (APTA). (2018). *Post-Acute Myth vs. Reality Webinar 11.15.2018*. Retrieved from:

https://apta.adobeconnect.com/_a844235408/p54db0oq2mk5/?launcher=false&fcsContent=true&pbMode=normal

¹⁷⁰ Prvu Bettger, J. & Stineman, M. (2007). *Effectiveness of Multidisciplinary Rehabilitation services in Post-Acute Care: State-of-the-Science. A Review*. Archives of Physical Medicine Rehabilitation; 88(11): 1526-1534. Doi: 10.1016/j.apmr.2007.06.768.

¹⁷¹ The Advisory Board Company (2018). *Healthcare Industry Trends: Healthcare Market Survey and Outlook*. Retrieved at: https://www.advisory.com/research/market-innovation-center/resources/2013/your-next-strategy-presentation-is-ready?wt.ac=tagline_mplc_resource_2015markettrendsslides

¹⁷² Konetza, RT & Perrallion, MC (2016). *Use of Nursing Home Compare Website Appears Limited by Lack of Awareness and Initial Mistrust of the Data*. Health Affairs (Millwood). 706-13. doi: 10.1377/hlthaff.2015.1377.

¹⁷³ Konetza, RT & Perrallion, MC (2016). *Use of Nursing Home Compare Website Appears Limited by Lack of Awareness and Initial Mistrust of the Data*. Health Affairs (Millwood). 706-13. doi: 10.1377/hlthaff.2015.1377.

¹⁷⁴ Mukamel D. et. al. (2016). *When Patients Customize Nursing Home Ratings, Choices and Rankings Differ From the Government's Version*. Health Affairs; 35(4). Retrieved from: <https://doi.org/10.1377/hlthaff.2015.1340>.

¹⁷⁵ Centers for Medicare and Medicaid Services (CMS). (2018). *Design for Nursing Home Compare Five Star Quality Rating System Technical Users Guide*. Retrieved from: <https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/CertificationandCompliance/downloads/usersguide.pdf>

not indicate what proportion of the facilities patient population is short stay rehabilitation versus long stay chronic care. Currently, patients have had little autonomy in making educated decisions in determining which provider specializes in particular type of service. With value-based purchasing comes increased standardized outcome data that will improve patient autonomy in care decision-making. As more data is made available, the CMS compare websites are evolving with Nursing Home Compare Plus, allowing for patients and their families to create their own composite."¹⁷⁶ In addition, as organizations are held accountable for outcomes patient autonomy/choice may appear to paradoxically undermine hospitals ability to respond that accountability."¹⁷⁷ Sharing data with patients that includes but is not limited to data on quality measures should be utilized to assist patients with educated autonomy.¹⁷⁸ The tools provided to patients and families to assist in decisions surrounding their post-acute rehabilitation services will assist in identifying higher quality outcome providers.¹⁷⁹

Therapists must reconsider "what professional autonomy means in a changing value-based healthcare environment."¹⁸⁰ Value-based care, is "redefining what it means to be a good physical therapist" from a practitioner primarily focused on the amount of care provisioned to a "team member sharing in the accountability for improving the value across a complete cycle of care."¹⁸¹ Although there will also be reduced therapist autonomy and direct impact on functional scores, the interdisciplinary outcome contributions will be made transparent to assist patients in choice of high quality post-acute care rehabilitation services providers.

PAC Value-based Access Impact

Post-acute value-based regulation will impact post-acute rehabilitation services access via incentivized reduction in rehabilitation services utilization and diminishment of therapy impact functional outcome that will be seen across PAC entities.

Effective October 2019, Skilled Nursing Facilities (SNF) will be operating under the Patient Driven Payment Model (PDPM), developed via CMS contract with ACUMEN, which will impact PAC business models and provide disincentive for rehabilitation services provision.¹⁸² PDPM eliminates RUG-IV thresholds model that provided incentive for therapy provision and

¹⁷⁶ Mukamel, DB et. al. (2016). *When Patient Customize Nursing Home Ratings, Choices and Rankings Differ from the Government's Version*. Health Affairs (Millwood) 35(4): 714-9. doi: 10.1377/hthaiff.2015.1340.

¹⁷⁷ Tyler, D. et. al. (2017). *Patients are not given quality-of-care data about skilled nursing facilities when discharged from hospitals*. Health Affairs (Millwood) 36(8): 1385-1391. doi: 10.1377/hlthaff.2017.0155.

¹⁷⁸ Tyler, D. et. al. (2017). *Patients are not given quality-of-care data about skilled nursing facilities when discharged from hospitals*. Health Affairs (Millwood) 36(8): 1385-1391. doi: 10.1377/hlthaff.2017.0155.

¹⁷⁹ Medicare Payment Advisory Committee. (2018). *Encouraging Medicare Beneficiaries to Use Higher Quality Post-Acute Care Providers*. Report to the Congress: Medicare and the Health Care Delivery System. Retrieved from: http://www.medpac.gov/docs/default-source/reports/jun18_ch5_medpacreport_sec.pdf?sfvrsn=0

¹⁸⁰ Fritz, Julie (2012). *Physical Therapy In A Value-Based Healthcare World*. Journal of Orthopedic Sports Physical Therapy; 42(1): 1-2. Doi: 10.2519/jospt.2012.0101.

¹⁸¹ Fritz, Julie (2012). *Physical Therapy In A Value-Based Healthcare World*. Journal of Orthopedic and Sports Physical Therapy; 42(1): 1-2. Doi: 10.2519/jospt.2012.0101.

¹⁸² Acumen (2018). *Skilled Nursing Facilities Patient Driven Payment Model Technical Report*. Retrieved from: https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/SNFPPS/Downloads/PDPM_Technical_Report_508.pdf

did not allow for adequate capture of patient clinical characteristics.¹⁸³ The American Health Care Association (AHCA) President and CEO expressed concern regarding the "tone of the Patient-Driven Payment Model (PDPM) and many of the specific comments related to therapy" which criticize skilled nursing providers for providing therapy.¹⁸⁴ The model also sets "an arbitrary 25%" combined limit on concurrent and group therapy."¹⁸⁵ When therapy associations advocated either removing or raising the cap, CMS refused specifically pointing to the potential for fraud or gaming of the system.¹⁸⁶ Taylor Pickett of Omega Healthcare Investors (NYSE: OHI) indicated that, "I think operating margins are likely to improve just because of ability to do 25% group and concurrent."¹⁸⁷ Increased industry shifts in use and abuse of group/concurrent therapy without clinical support will impact rehabilitation quality and signal program compliance issues that may warrant further investigation.¹⁸⁸ CMS intends to closely monitor therapy PAC provider behavior of therapy minutes provided via use of MDS Section O.¹⁸⁹ Thus, therapy access will be limited if PAC therapy provider decision making is predicated on the notion that businesses will continue to utilize financial incentives as the basis for patient care.¹⁹⁰ PDPM is an opportunity to apply learning from the number of false claims settlements with numerous therapy providers that utilize financial incentives as the basis of patient care decision-making.

Effective January 2020, home health will be operating under the Patient Driven Groupings Model (PDGM), which will impact business models and provide disincentive for rehabilitation services provision. CMS indicates that the redesign of the home health payment system encourages value over volume and removes incentives to provide unnecessary care.¹⁹¹ The legislation also reduces home health billing from a 60-day-episode to 30-day-episode.¹⁹² Some of the rationale behind this, along with the CMS groupings model, is the elimination of the

¹⁸³ Acumen (2018). *Skilled Nursing Facilities Patient Driven Payment Model Technical Report*. Retrieved from: https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/SNFPPS/Downloads/PDPM_Technical_Report_508.pdf

¹⁸⁴ American Health Care Association. (2018). *AHCA Statement on 2019 SNF PPS Final Rule*. Retrieved from: https://www.ahcancal.org/News/news_releases/Pages/AHCA-Statement-on-2019-SNF-PPS-Final-Rule.aspx

¹⁸⁵ American Health Care Association. (2018). *AHCA Statement on 2019 SNF PPS Final Rule*. Retrieved from: https://www.ahcancal.org/News/news_releases/Pages/AHCA-Statement-on-2019-SNF-PPS-Final-Rule.aspx

¹⁸⁶ Acumen (2018). *Skilled Nursing Facilities Patient Driven Payment Model Technical Report*. Retrieved from: https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/SNFPPS/Downloads/PDPM_Technical_Report_508.pdf

¹⁸⁷ Flynn, M. (2018). *Skilled Nursing Providers See Opportunity in Group Therapy Despite Coming Cap*. Skilled Nursing News. Retrieved from: <https://skillednursingnews.com/2018/08/skilled-nursing-providers-see-opportunity-group-therapy-despite-coming-cap/>

¹⁸⁸ Elliott, J. et. al. (2018). Webinar: Challenging the Myths Associated with PDPM and PDGM. American Physical Therapy Association (APTA). Retrieved from: <https://apta.adobeconnect.com/a844235408/p54db0oq2mk5/?launcher=false&fcsContent=true&pbMode=normal>

¹⁸⁹ Acumen (2018). *Skilled Nursing Facilities Patient Driven Payment Model Technical Report*. Retrieved from: https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/SNFPPS/Downloads/PDPM_Technical_Report_508.pdf

¹⁹⁰ Medicare Payment Advisory Commission (MedPAC). (2018). *Post-acute care: Increasing the Equity of Medicare's Payments within Each Setting*. Report to the Congress: Medicare Payment Policy.

¹⁹¹ Centers for Medicare and Medicaid Services. (2018). Medicare and Medicaid Programs; CY 2019 Home Health Prospective Payment System. 42 CFR Parts 409, 424, 484, 486, and 488. Federal; 83(219).

¹⁹² 115th Congress. Bipartisan Budget Act. (February 9, 2018). 132 STAT 64. Public Law 115-123. Retrieved from: <https://www.congress.gov/115/plaws/publ123/PLAW-115publ123.pdf>

therapy threshold, deemed as an incentive for providers to overprovide therapy.¹⁹³¹⁹⁴ Early industry commentary indicates that this regulation will "discourage taking patients needing complex care and necessary therapy or services after first 30-day period."¹⁹⁵ Home health reimbursement will be adjusted based on five characteristics, one being the functional level (low, medium, or high impairment) of the patient however the therapy component in clinical groupings is not adequately represented.¹⁹⁶ In the model currently, dysfunction related to communication/cognition is not a factor in determining functional levels will impact speech language pathology access and adequate clinical classification of patients.¹⁹⁷ PDPM and PDGM shift away from service provision to services characteristics and will diminish therapy direct impact on quality functional outcomes and reimbursement.¹⁹⁸

PAC Value-based Cost Impact

Post-Acute Value-based Care will have a significant cost impact on rehabilitation service delivery model through utilization of therapies and diminishment of direct rehabilitation services impact on functional improvement outcomes and reimbursement.

Diminishment in utilization of therapies could become reality if "providers continue to utilize financial considerations as the basis for care planning decisions."¹⁹⁹ The Medicare Advisory Payment Advisory Committee (MedPAC) defined rehabilitation as an "over-valued service" and recommends reducing payment as high as 3.8%.²⁰⁰ Early statements from the industry indicate that with minutes being eliminated as driver of reimbursement, skilled nursing facilities will see

¹⁹³ Centers for Medicare and Medicaid Services. (2018). *CMS finalizes calendar year 2019 and 2020 payment and policy changes for home health agencies and home infusion therapy suppliers*. Fact Sheet: Home Health Agencies, Legislation. Retrieved from: <https://www.cms.gov/newsroom/fact-sheets/cms-finalizes-calendar-year-2019-and-2020-payment-and-policy-changes-home-health-agencies-and-home>

¹⁹⁴ Centers for Medicare and Medicaid Services (2018). *SNF PPS: New Patient Driven Payment Model*. Medicare Learning Network (MLN) Call Transcript. Retrieved from: <https://www.cms.gov/Outreach-and-Education/Outreach/NPC/Downloads/2018-12-11-PPS-Transcript.pdf>

¹⁹⁵ American Physical Therapy Association (APTA). (2018). *Letter to CMS administrator re: Medicare and Medicaid Programs; CY 2019 Home Health Prospective Payment Update; Home Health Value-Based Purchasing Model; Home Health Quality Reporting Requirements*. Retrieved from: https://www.apta.org/uploadedFiles/APTAorg/Payment/Medicare/Coding_and_Billing/Home_Health/Comments/APTACommentsCY2019HHPPSProposedRule.pdf

¹⁹⁶ Centers for Medicare and Medicaid Services. (2018). Medicare and Medicaid Programs; CY 2019 Home Health Prospective Payment System. 42 CFR Parts 409, 424, 484, 486, and 488. Federal; 83(219).

¹⁹⁷ American Physical Therapy Association (APTA). (2018). *Letter to CMS administrator re: Medicare and Medicaid Programs; CY 2019 Home Health Prospective Payment Update; Home Health Value-Based Purchasing Model; Home Health Quality Reporting Requirements*. Retrieved from: https://www.apta.org/uploadedFiles/APTAorg/Payment/Medicare/Coding_and_Billing/Home_Health/Comments/APTACommentsCY2019HHPPSProposedRule.pdf

¹⁹⁸ Flynn, M. (2018). *Rehab Business Model Will Change 'Substantially' Under PDPM*. Skilled Nursing News. Retrieved from: <https://skillednursingnews.com/2018/05/rehab-business-model-will-substantially-change-pdpm/>

¹⁹⁹ Department of Health and Human Services. (2018). Medicare Program; Prospective Payment System and Consolidated Billing for Skilled Nursing Facilities (SNF) Final Rule for FY2019, SNF Value-Based Purchasing Program, and SNF Quality Reporting Program. <https://www.gpo.gov/fdsys/pkg/FR-2018-08-08/pdf/2018-16570.pdf>

²⁰⁰ American Physical Therapy Association (APTA). (2018). *MedPAC Recommendations for PT Payment Decreases Met with Strong Responses from APTA, Private Practice Section, Alliance*. PTinMotion News, August 2018. Retrieved from: <http://www.apta.org/PTinMotion/News/2018/08/21/MedPACResponseLetters/>

a "significant decrease in therapy," because for many patients, "it doesn't make sense."²⁰¹ In the current model, skilled facilities do "80-90% therapy-type residents and only 10% medically complex" while under PDPM it the mix will be "more of a 60-40 or 50-50 split which is a significant decrease in therapy."²⁰² Under PDPM, facilities are also incentivized for reduced length of stay. If a patient is not discharged from the SNF setting within 20 days, PT/OT component has a decreased payment by 2% every seven days beginning day 21, which is essentially less than three dollars per day after 30 day base payment includes therapy.²⁰³ PDGM also incentives for reduced length of stay. PDGM and Bipartisan Budget Act reduces home health billing from 60-day-episode to 30-day-episode in which Musculoskeletal Rehabilitation PT/OT/ST and Neuro/Stroke Rehabilitation PT/OT/SLP are only groupings that specify increased need for therapy.²⁰⁴ To control cost, post-acute providers will need to provide high quality outcomes rather than isolated response to regulatory therapy disincentives.

Providers have often indicated that they, "practice according to how we are paid."²⁰⁵ This statement is most clearly reflected in that many large therapy providers have recently settled for providing unnecessary rehabilitation services under the fee-for-service model. Thus, mere absolute industry compliance with current regulation would result in the diminishment of rehabilitation services. MedPAC also indicated PAC provider trends of "maximizing revenues by taking advantage of payment system rules and shortcomings."²⁰⁶ Reimbursement models seeks to reduce heterogeneous patterns of care that often show overutilization of low-value care with measuring, comparing, and reporting outcomes a crucial step towards making good choices about reducing costs."²⁰⁷

REGULATION SHIFT ANALYSIS: KEY CONSIDERATIONS

Post-Acute Rehabilitation value-based regulation quality, autonomy, access, and cost shifts will impact every layer of industry behavior from the individual clinician to the hospital executive.

Individual Therapist

The clinical behavior of the individual therapist plays a crucial role in the viability of therapy in value-based care models. The shift from volume to value-based care will require therapists to take accountability for their clinical decision-making and ownership of their clinical profession.

²⁰¹ Flynn, M. (2018). *Rehab Business Model Will Change 'Substantially' Under PDPM*. Skilled Nursing News. Retrieved from: <https://skillednursingnews.com/2018/05/rehab-business-model-will-substantially-change-pdpm/>

²⁰² Flynn, M. (2018). *Rehab Business Model will Change 'Substantially' Under PDPM*. Skilled Nursing News. Retrieved From: <https://skillednursingnews.com/2018/05/rehab-business-model-will-substantially-change-pdpm/>

²⁰³ Elliott, J. et. al. (2018). *Webinar: Challenging the Myths Associated with PDPM and PDGM*. American Physical Therapy Association (APTA).

²⁰⁴ 115th Congress. Bipartisan Budget Act. (February 9, 2018). 132 STAT 64. Public Law 115-123. Retrieved from: <https://www.congress.gov/115/plaws/publ123/PLAW-115publ123.pdf>

²⁰⁵ Hollmann, Peter. (2011). American Medical Association (AMA) CPT Editorial Panel October 2011. Retrieved from: <https://www.ama-assn.org/about/cpt-editorial-panel>

²⁰⁶ Medicare Payment Advisory Committee (MedPAC). (2015). *Chapter 7: Medicare's Post-Acute Care: Trends and Ways to Rationalize Payments*. Report to the Congress: Medicare Payment Policy. Retrieved from: <http://www.medpac.gov/docs/default-source/reports/chapter-7-medicare-s-post-acute-care-trends-and-ways-to-rationalize-payments-march-2015-report-.pdf>

²⁰⁷ Porter ME. (2008). *Defining and introducing value in health care*. In: *Evidence-based medicine and the changing nature of health care: 2007 IOM annual meeting summary*. Washington, DC: Institute of Medicine, 161-72.

Clinicians will need to take accountability for their professional decision-making such as the outcomes achieved and documentation of all services provided. Therapists have "distance to go in implementing standardized outcome measures in most clinical settings."²⁰⁸ Outcomes can be demonstrated through participation in such data collection efforts as the ASHA National Outcomes Measurement System (NOMS) Data Base and Physical Therapy Outcomes Registry.²⁰⁹²¹⁰ The onus will be on physical therapists to "demonstrate their value through the collection, review, and reporting of data that demonstrates the contribution of physical therapy to the overall outcome of care."²¹¹ The AOTA indicates that the "time is now to start thinking about protocols and clinical judgment to be sure that the profession of occupational therapy maximizes its impact on client's function, cognition and mental health."²¹² Evidenced-based outcomes and data based decision-making will "change the rules of the game" with post-acute rehabilitation legitimacy depending on how it adds value to overall patient outcomes.²¹³ Therapist must ensure documentation specifies medical necessity and supports the skilled services provided.²¹⁴ Per the Medicare guidelines, therapy services shall be of such a level of complexity that only a therapist could safely and effectively perform the services.²¹⁵ Documentation that does not demonstrate medical necessity and skill jeopardizes access to therapy services for patients now and in the future.²¹⁶ Clinicians will also need to take ownership and advocate for their profession in new value-based reimbursement models. The APTA urges therapists to "stay informed and engaged," with the shifts in value-based regulation and "push back on the notion that 'less' therapy is the way to go."²¹⁷

Hospital/Department

Post-acute value-based regulatory models will influence department/hospital rehabilitation services participation in value-based models and collaboration for clinical innovation. Post-acute participation in value-based models and partnerships with acute in provider networks and ACOs is essential with declining length of stay, increases in managed care, and outcomes based competition.²¹⁸ In value-based outcomes based competition, size matters, reflecting CMS intent

²⁰⁸ Jette, D. Et. al. (2009). *Use of Standardized Outcome Measures in Physical Therapist Practice: Perceptions and Applications*. Physical Therapy; 89(2): 125-35.

²⁰⁹ American Speech Language Hearing Association (ASHA). (2018). *Benefits of NOMS Participation*. Retrieved from: <https://www.asha.org/NOMS/>

²¹⁰ American Physical Therapy Association (APTA). (2017). *APTA Launches Physical Therapy Outcomes Registry to Improve Patient Care*. Retrieved from: <http://www.apta.org/Media/Releases/Association/2017/2/15/>

²¹¹ Elliott, J. et. al. (2018). *Webinar: Challenging the Myths Associated with PDPM and PDGM*. American Physical Therapy Association (APTA).

²¹² Sandhu, S. & Metzler, C. (2015). *Make an IMPACT on Post-Acute Care: Five Things You Can Do*. OT Practice Magazine. Retrieved from: <https://www.aota.org/advocacy-policy/federal-reg-affairs/news/2015/impact-post-acute-care.aspx>

²¹³ DeJong, G. (2016). *Health Policy Perspective-Coming to Terms With the IMPACT ACT of 2014*. American Journal of Occupational Therapy, 70, 7003090010

²¹⁴ Skilled-Reasonable Medically Necessary. (CMS Pub 100-02, Chapter 15 222.2 LCD L26884)

²¹⁵ Skilled-Reasonable Medically Necessary. (CMS Pub 100-02, Chapter 15 222.2 LCD L26884)

²¹⁶ Skilled-Reasonable Medically Necessary. (CMS Pub 100-02, Chapter 15 222.2 LCD L26884)

²¹⁷ Elliott, J. et. al. (2018). *Webinar: Challenging the Myths Associated with PDPM and PDGM*. American Physical Therapy Association (APTA).

²¹⁸ Health Dimensions Group (HDG) (2017). *Top Trends in Aging Services: Healthcare Insights and Outlooks 2018*. Retrieved from: <https://www.beckershospitalreview.com/hospital-management-administration/top-trends-in-aging-services-healthcare-insights-and-outlooks-2018.html>

to "increase market competition and consumer choice within our programs to help control costs and ensure that our programs are available for future generations."²¹⁹ Therefore hospitals will be focused on standardizing clinical pathways, allocating resources to initiatives that provide the highest probability of improving patient outcomes. Hospitals will also be focused on innovative approaches to identify and achieve value-based outcomes. For example, *The Rehabilitation Institute of Chicago* (IRF) rebranded to the *Shirley Ryan AbilityLab* and refocused to integrate research with care delivery.²²⁰ *Ignite Medical Resorts* is a new SNF provider in the market that focuses on high hospitality and technology in comparison to its 'archaic' competitors.²²¹ Hospitals will be focusing on value-based partnership participation and innovation in care delivery to remain competitive in the market.

Industry Level

The value-based regulatory shift will significantly impact rehabilitation industry with pressures for research outcomes and advocacy partnerships. Value-based regulation "requires scientific evidence resulting from a robust research agenda and credible evidence stemming from patient cohort studies."²²² The PTA indicates that the lack of advancement in research impedes care delivery.²²³ The AOTA emphasizes that the profession must expand our research to expand our impact.²²⁴ At the NIH Blue Ribbon Panel on Medical Rehabilitation Research, it is noted that "rehabilitation research is not thriving and that reforms are needed to assist people with injuries, illnesses, disabilities, and chronic conditions in order to maximize their ability to function, live independently, and return to work."²²⁵ There will be industry funding and focus to build "research capacity and infrastructure."²²⁶ ²²⁷ The industry will also focus on increased "advocacy, lobbying, policy development, partnership (consumer groups/professional

²¹⁹ Centers for Medicare & Medicaid Services, Office of the Actuary. (2018). *CMS Office of the Actuary Releases 2017-2026 Projections of National Health Expenditures*. Retrieved from: <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsProjected.html>

²²⁰ Fahey, M. (2018). *Transforming Rehabilitation Through Translational Research*. Rehabilitation Management. Retrieved from: <http://www.rehabpub.com/2017/09/transforming-rehabilitation-translational-research/>

²²¹ Stempniak, M. (2018). *Betting On Deluxe Hospitality Mindset for Skilled Nursing*. McNight's Long Term Care News. Retrieved from: <https://www.mcknights.com/daily-editors-notes/betting-on-a-deluxe-hospitality-mindset-for-skilled-nursing/>

²²² DeJong, G. (2016). *Health Policy Perspectives - Coming to Terms With the IMPACT ACT of 2014*. American Journal of Occupational Therapy, 70, 7003090010

²²³ American Physical Therapy Association (APTA). (2017). *Transforming Health Care: The public policy priorities of the American Physical Therapy Association 2017-2018*. Retrieved from: <https://www.apta.org/FederalIssues/PublicPolicyPriorities/Document/>

²²⁴ American Occupational Therapy Association (2018). *Fiscal Year 2018 Board of Directors Strategic Priorities*. Retrieved from: <https://www.aota.org/~media/Corporate/Files/AboutAOTA/Governance/AOTA-Strategic-Goals-and-Objectives-2018-2020.pdf>

²²⁵ US Department of Health and Human Services. (2016). *National Institutes of Health (NIH) Research Plan on Rehabilitation: Moving the Field Forward*. Retrieved from: https://www.nichd.nih.gov/sites/default/files/publications/pubs/Documents/NIH_ResearchPlan_Rehabilitation.pdf

²²⁶ Public Law No: 114-255. 130 STAT.1033. (December 2016). H.R.34 *21st Century Cures Act*. Retrieved from: <https://www.congress.gov/114/plaws/publ255/PLAW-114publ255.pdf>

²²⁷ US Department of Health and Human Services. (2016). *National Institutes of Health (NIH) Research Plan on Rehabilitation: Moving the Field Forward*. Retrieved from: https://www.nichd.nih.gov/sites/default/files/publications/pubs/Documents/NIH_ResearchPlan_Rehabilitation.pdf

groups)."²²⁸ Focus will be to ensure rehabilitation services are included within value-based payment models and other emerging health care delivery systems.²²⁹

RECOMMENDATIONS

As discussed, value-based regulation will impact micro and macro ecosystems of behavior from the individual clinician to the hospital system. Industry behavioral response to value-based care at every level of the ecosystem is critical in defining the value of PAC rehabilitation and "maximally minimizing the loss of meaningful clinical services."²³⁰

Industry behavioral response must not be predicated on regulatory incentive gaming in order to rebuild trust and ultimately reduce the overwhelming regulatory oversight burden. Demonstrated therapy provider decision-making has been predicated on financial incentives rather than clinical practice decisions. The copious number of therapy providers settling for false claims should thus forewarn and guide behavior as healthcare further advances with value-based regulatory models. If history repeats itself, rehabilitation services utilization will be significantly diminished. Value-based business models must be developed via a clinical, business, and regulatory compliance multipronged approach. Business decisions made in isolation of clinical and regulatory considerations can further damage trust with regulatory authorities and diminish utilization of services.

Standardized outcomes and research output on the effectiveness of rehabilitation within post-acute care for specific populations should be supported. Increased availability of outcomes may help shift away from stringent regulation oversight that prescribes therapy provision. The industry must improve, coordinate, and enhance research capacity infrastructure for rehabilitation research within all domains. Interagency collaboration will also be crucial for collaboration for rehabilitation research advancement along with partnership with government agencies to ensure trust rebuilding and future alignment. As innovation, data, and research outcomes are generated, collaborative efforts among "academicians, policy-makers, clinicians, and patients are necessary to ensure that resources should be allocated and applied in the most appropriate ways."²³¹ These collaborative efforts will facilitate embedding evidenced based outcomes into policy and move industry away from arbitrary to evidence-based regulation.²³²

²²⁸ American Speech Language Hearing Association. (2018). *2019 Annual Public Policy Agenda*. Retrieved from: <https://www.asha.org/uploadedFiles/2019-ASHA-Public-Policy-Agenda.pdf>

²²⁹ American Speech Language Hearing Association. (2018). *2019 Annual Public Policy Agenda*. Retrieved from: <https://www.asha.org/uploadedFiles/2019-ASHA-Public-Policy-Agenda.pdf>

²³⁰ Prvu Bettger, J. & Stineman, M. (2007). *Effectiveness of Multidisciplinary Rehabilitation services in Post-Acute Care: State-of-the-Science. A Review*. Archives of Physical Medicine Rehabilitation; 88(11): 1526-1534. Doi: 10.1016/j.apmr.2007.06.768.

²³¹ Prvu Bettger, J. & Stineman, M. (2007). *Effectiveness of Multidisciplinary Rehabilitation services in Post-Acute Care: State-of-the-Science. A Review*. Archives of Physical Medicine Rehabilitation; 88(11): 1526-1534. Doi: 10.1016/j.apmr.2007.06.768.

²³² Heinmann, Allen. (2007). *State-of-the-Science on Post-acute Rehabilitation: Setting a Research Agenda and Developing an Evidence Base for Practice and Public Policy. An Introduction*. Archives of Physical Medicine Rehabilitation; 88: 1478-81

CONCLUSION

In conclusion, post-acute rehabilitation services value in value-based reimbursement models should not be as arbitrarily decided, as it appears to have been the case of post-acute PPS regulation.²³³ Rehabilitation services, including physical therapy (PT), occupational therapy (OT), and speech language pathology (SLP), are key components in preventing deconditioning, restoring functional status, and facilitating discharge to the community in the post-acute health care delivery system.²³⁴ What is the value of post-acute rehabilitation services? Unfortunately, little is known about what ingredients of the rehabilitation process produce the best outcomes, for which patient, and in what post-acute setting due to significant gaps in standardized tools and current research.²³⁵ It is of utmost urgency for PAC rehabilitation industry to demonstrate value through determination of best practice and quality outcomes as a critical part of a care delivery team. Regulation opposite of intent is to discard therapies as high cost services not of value.

²³³ Kumar, A et. al. (2018) *Comparing post-acute rehabilitation use, length of stay, and outcomes experienced by Medicare fee-for-service and Medicare Advantage beneficiaries with hip fracture in the United States: A secondary analysis of administrative data*. PLoS Med 15(6): e1002592. Retrieved from:

<https://doi.org/10.1371/journal.pmed.1002592>

²³⁴ Kumar, A. et. al. (2018). *Comparing post-acute rehabilitation use, length of stay, and outcomes experienced by Medicare fee-for-service and Medicare Advantage beneficiaries with hip fracture in hip fracturing in the United: A secondary analysis of administrative data*. PLoS Med, 15(6):e1002592.

²³⁵ Heinmann, Allen. (2007). *State-of-the-Science on Post-acute Rehabilitation: Setting a Research Agenda and Developing an Evidence Base for Practice and Public Policy. An Introduction*. Archives of Physical Medicine Rehabilitation; 88: 1478-81