

# Key Considerations and Barriers to Creating an Evidenced-Informed Approach for Screening, Counseling, and Referral to Arthritis Appropriate Evidence-Based Interventions: A Landscape Assessment



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Report Limitation: Findings of this report are based on an environmental scan of the literature and 12 interviews with key stakeholders (e.g., health care provider leads, payers, National Provider Organizations) and three listening panels with National Partners, National State Organizations, and State Health Department leads. Additional validation and viewpoints should and will be considered for the “arthritis care model design.”

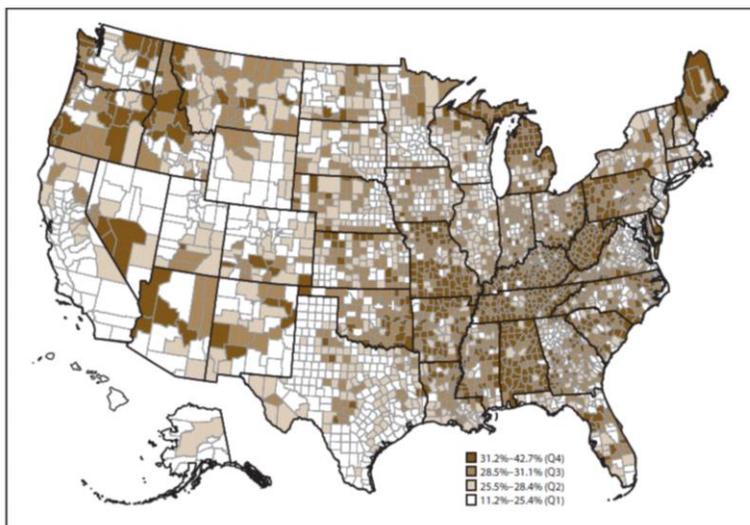
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## Introduction

Physical activity is recommended as a tool for managing all types of arthritis<sup>1</sup>, and patients with arthritis are encouraged to engage in arthritis-appropriate evidence-based interventions (AAEBIs), which include physical activity-based interventions or self-management education programs that encourage dietary changes and physical activity.<sup>2</sup> As part of an initial effort to articulate an evidenced-informed approach for using physical activity-based interventions to treat patients with arthritis, Leavitt Partners—in partnership with the National Association of Chronic Disease Directors (NACDD)—conducted a landscape assessment to better understand the U.S. healthcare system’s current approach to arthritis care, including identifying the barriers to conducting function, pain, and physical activity screenings; patient counseling on the benefits of physical activity; and referral to AAEBIs. Arthritis affects an increasing number of Americans and can intensify the impact of other chronic diseases.

According to the Centers for Disease Control and Prevention (CDC), arthritis affects more than 58 million people in the United States – or one adult in every four<sup>3</sup> – and the prevalence of arthritis varies substantially by county (see **Figure 1**).<sup>4</sup> Additionally, arthritis is common among people with other chronic conditions (including obesity, diabetes, and heart disease), and certain risk factors can increase the likelihood of developing arthritis.<sup>5</sup> Between 2008 and 2014, average annual all-cause direct and indirect costs for osteoarthritis and allied disorders were \$486.4 billion<sup>6</sup>. For rheumatoid arthritis, total direct medical costs

Figure 1. Model-based prevalence\* of arthritis among adults aged 18 years, by county, Behavioral Risk Factor Surveillance System, 2015.



Q=quartile

\*Prevalence of arthritis at the county level was estimated with a multilevel regression model approach for counties (N=3,142) in all 50 states and in the District of Columbia. Prevalence was based on the BRFSS definition of arthritis.

<sup>1</sup> Sara Wilcox et al., “Perceived Exercise Barriers, Enablers, and Benefits among Exercising and Nonexercising Adults with Arthritis: Results from a Qualitative Study,” *Arthritis & Rheumatism (Arthritis Care & Research)* 55, no. 4 (August 15, 2006): 616–27, <https://doi.org/10.1002/art.22098>; “Physical Activity for Arthritis | CDC,” February 20, 2019, <https://www.cdc.gov/arthritis/basics/physical-activity-overview.html>.

<sup>2</sup> “Clinical Practice Guidelines,” n.d., <https://www.rheumatology.org/Practice-Quality/Clinical-Support/Clinical-Practice-Guidelines>.

<sup>3</sup> Centers for Disease Control and Prevention, “FAQs about Arthritis | CDC,” October 12, 2021, <https://www.cdc.gov/arthritis/basics/faqs.htm>.

<sup>4</sup> Kamil E. Barbour et al., “Geographic Variations in Arthritis Prevalence, Health-Related Characteristics, and Management — United States, 2015,” *MMWR. Surveillance Summaries* 67 (2018), <https://doi.org/10.15585/mmwr.ss6704a1>.

<sup>5</sup> Centers for Disease Control and Prevention, “Fast Facts About Arthritis | CDC,” April 19, 2022, <https://www.cdc.gov/arthritis/basics/arthritis-fast-facts.html>.

<sup>6</sup> Marc C. Hochberg, Miriam G. Cisternas, and Sylvia I. Watkins-Castillo, “The Burden of Musculoskeletal Diseases in the

were \$12,509 for patients using any treatment regimen, and \$36,053 for biological disease modifying anti-rheumatic drug (bDMARD) users<sup>7</sup>. Physical activity, self-management education programs, and other non-pharmacological approaches can potentially decrease the impact of arthritis; however, there is no commonly followed approach for healthcare providers to integrate these interventions throughout the care delivery system. The goal of the landscape assessment is to evaluate current recommendations, practices, and gaps in order to inform the development of an evidenced-informed approach that would best use current or future practices to treat patients with arthritis using AAEBIs.

The landscape assessment included an environmental scan of known literature related to arthritis care and stakeholder interviews to better understand barriers and opportunities (see [Appendix A](#) for a bibliography of resources and [Appendix B](#) for a summary of interviews).

The environmental scan explored information related to:

- Arthritis clinical care delivery approaches, including innovative approaches to arthritis care
- Availability and types of AAEBIs throughout the U.S.
- Current processes related to pain, function, and physical activity screening; counseling; and referring eligible individuals to AAEBIs
- Incentives related to AAEBIs (e.g., reimbursement, quality measures, etc.)
- Past successes and challenges of increasing provider approaches to conduct function, pain, and physical activity screening; counseling; and referral
- Variables/characteristics that will be important to consider in a pilot site

Leavitt Partners also conducted twelve stakeholder interviews and three listening sessions with key advocacy organizations, health systems, providers/clinicians, payers, and public health experts at State Health Departments (SHD). The interviews explored:

- Current practices related to arthritis management, including screening, counseling, and referrals; healthcare provider awareness of the benefits of appropriate physical activity for individuals with arthritis; promotion of AAEBIs; and incentives to screen, counsel, and refer to AAEBIs
- Pain points related to healthcare providers' engagement with AAEBIs, including reasons why providers do not screen, counsel, and refer patients to interventions
- Ideas for how to increase healthcare provider engagement with AAEBIs

This report includes a summary of the landscape assessment around the current processes and gaps related to conducting function, pain, and physical activity screenings; patient counseling on the benefits of physical activity; and referral to AAEBIs. Also included in this report are key considerations for overcoming identified barriers or gaps within the screening, counseling, and referral processes for arthritis. Based on the key learnings from the landscape assessment, this report highlights several key considerations to support a future expert panel as they develop an evidence-informed approach for healthcare provider screening, counseling, and referral to AAEBIs.

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United States," BMUS: The Burden of Musculoskeletal Diseases in the United States, accessed August 16, 2022, <https://www.boneandjointburden.org/fourth-edition/iiib10/osteoarthritis>.

<sup>7</sup> Andrew Hresko, Jay Lin, and Daniel H. Solomon, "Medical Care Costs Associated with Rheumatoid Arthritis in the US: A Systematic Literature Review and Meta-Analysis," *Arthritis Care & Research* 70, no. 10 (October 2018): 1431–38, <https://doi.org/10.1002/acr.23512>.

# Section 1: Function, Pain, and Physical Activity Screening

Screening procedures to assess for function and pain are an important first step of early arthritis treatment.<sup>8</sup> In addition to these tools (the most common of which are outlined below), screening tools that assess for physical activity levels are increasingly being used in the clinical setting and results are used to promote physical activity as a method to manage a patient's arthritis. Physical activity screening tools are applicable not only for arthritis, but for other chronic diseases in which physical activity is promoted as a method to manage the chronic condition as well. The following section summarizes key learnings from the secondary literature scan and interviews related to screenings and identifies key barriers and challenges that should be considered when developing an evidenced-informed approach.

## Key Learnings

### **Common function and pain assessments can support arthritis care, but there are limitations to these tools.**

Function and pain assessments are important screening tools that can guide treatment and therapy decisions for patients with arthritis. These assessments measure the impact of arthritis on patients' activities of daily living, which can often be significant and disruptive. The American College of Rheumatology (ACR) assigns preferred status for specific functional assessments for provider use, including the Patient Reported Outcome Measurement Information System (PROMIS) Physical Function 10-item (PROMIS PF10a), the Health Assessment Questionnaire-II (HAQ-II), and the Multi-Dimensional Health Assessment Questionnaire (MD-HAQ), as described in the Table 1 below. These functional assessment scales are listed in the 2021 Merit-Based Incentive Payment System (MIPS) Measure #178 for Rheumatoid Arthritis Functional Status Assessment,<sup>9</sup> which can serve as an incentive for providers serving Medicare patients to make use of these screening tools.

Some pain assessment examples include the Visual Analog Scale (VAS), PROMIS, the Numeric Rating Scale (NRS), and the Widespread Pain Index (WPI) and symptom severity (SS) scale for Fibromyalgia (see **Table 1** below). The 2019 MIPS Measure #109 for Osteoarthritis, although retired in 2020, included acceptable pain and function assessments, such as the Knee Injury and Osteoarthritis Outcome Score (KOOS) and the Hip Injury Osteoarthritis Outcome Score (HOOS).<sup>10</sup> One orthopedic physician noted that the Joint Commission and orthopedic surgeons typically use the HOOS Joint Replacement (JR) and KOOS JR<sup>11</sup> tools to assess patient hip and knee pain and function, particularly in practices that work with Medicare patients.<sup>12</sup>

<sup>8</sup> Centers for Disease Control and Prevention, "FAQs about Arthritis | CDC."

<sup>9</sup> American Medical Association, "Quality ID #178: Rheumatoid Arthritis (RA): Functional Status Assessment," *Centers for Medicare & Medicaid Services*, November 2019, 6.

<sup>10</sup> MDinteractive, "Are Your Quality Measures Still Available to Report in 2020?," Text, MDinteractive, May 18, 2020, <https://mdinteractive.com/mips-blog/are-your-quality-measures-still-available-report-2020>.

<sup>11</sup> Hospital for Special Surgery, "Osteoarthritis & Joint Replacement Outcome Surveys | HSS," Hospital for Special Surgery, n.d., <https://www.hss.edu/hoos-jr-koos-jr-outcomes-surveys.asp>.

<sup>12</sup> Leavitt Partners interview with Vigeo Orthopedics, June 8, 2022.

Currently, there is no single gold standard measurement for function or pain assessment of osteoarthritis, rheumatoid arthritis, and other forms of arthritis. There are components within functional assessments that can relate across the spectrum of arthritic conditions; however, in an interview with ACR, representatives noted that some providers push back on generalizing these assessments for arthritis and maintain that assessments should be specific to the type of arthritis the patient is experiencing.<sup>13</sup> Others feel exploring a simple and global PROMIS-like function and pain assessment for primary care providers would be beneficial, especially to help track longitudinal progress of various interventions.<sup>14</sup>

Table 1. Pain and Function Assessments by Type

Assessment Name	Assessment Type	Endorsement	MIPS Measure	Description
Health Assessment Questionnaire-II (HAQ-II) <sup>15</sup>	Function	ACR	#178	HAQ-II is a 10-item questionnaire that performs at least as well as the HAQ and is simpler to administer and score. The HAQ-II is better correlated with clinical and outcome variables than the HAQ, the modified HAQ, and Medical Outcomes Study Short Form 36 physical function scale. The HAQ-II can be used in all places where the HAQ is now used and may prove to be easier to use in the clinic.  The HAQ-II has a long scale measured in logits, indicating that it captures more of the continuum of disability than other HAQ modifications. One study <sup>16</sup> revealed of the HAQ family questionnaires, the HAQ-II has the most favorable psychometric characteristics as measured by reliability, fit, scale length, reversed thresholds, and item gaps.
Hip Injury Osteoarthritis Outcome Score (HOOS) <sup>17</sup>	Pain and Function	AAOS	#109 (retired)	HOOS is a self-reported outcome measure questionnaire used to evaluate Total Hip Arthroplasty patients. The questionnaire was built upon the Western Ontario and MacMaster Universities Osteoarthritis Index (WOMAC). It is a 40-item questionnaire, including five subscales: pain, symptoms, activity of daily living, sports/recreation, and hip-related quality of life. The maximum score is 100, indicating no hip problems. The minimum score is zero, indicating severe hip problems.

<sup>13</sup> Leavitt Partners interview with the American College of Rheumatology, May 4, 2022.

<sup>14</sup> Leavitt Partners interview with Johns Hopkins Arthritis Center, April 7, 2022.

<sup>15</sup>Frederick Wolfe, Kaleb Michaud, and Theodore Pincus, "Development and Validation of the Health Assessment Questionnaire II: A Revised Version of the Health Assessment Questionnaire," *Arthritis & Rheumatism* 50, no. 10 (October 2004): 3296–3305, <https://doi.org/10.1002/art.20549>; Rheuminfo, "Health Assessment Questionnaires (HAQ, HAQ-II, MDHAQ)," accessed July 13, 2022, <https://rheuminfo.com/physician-tools/health-assessment-questionnaires-haq-haq-ii-mdhaq/>.

<sup>16</sup> Wolfe, Michaud, and Pincus, "Development and Validation of the Health Assessment Questionnaire II."

<sup>17</sup> CODE Technology, "HOOS Hip Score | Patient-Reported Outcome Measure," *HOOS Score* (blog), accessed July 13, 2022, <https://www.codetechnology.com/hoos-hip-tool/>.

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				Variations of HOOS were developed to create an outcome measure that is specific for a population or conditions (including HOOS-JR). HOOS is easy to administer and relatively easy to score. HOOS subscales of sports/recreation and quality of life make it a more responsive measure in younger and/or more active populations. It can also be used over short and long-term intervals to assess changes induced by treatment, primary injuries, or post-traumatic osteoarthritis.
<b>Knee Injury and Osteoarthritis Outcome Score (KOOS)<sup>18</sup></b>	Pain and Function	AAOS	#109 (retired)	<p>KOOS is a self-reported outcome measure questionnaire assessing the patient’s opinion about the health, symptoms, and functionality of their knee. It is a 42-item questionnaire, including five subscales: symptoms, pain, activities of daily living, sports/recreation, and quality of life. The maximum score is 100, indicating no knee problems. The minimum score is zero, indicating severe knee problems.</p> <p>Variations of KOOS were developed to create an outcome measure that is specific for a population or conditions (including KOOS-JR). KOOS subscales of sports/recreation and quality of life can make it a more responsive measure in younger and/or more active populations.</p>
<b>Multi-Dimensional Health Assessment Questionnaire (MD-HAQ)<sup>19</sup></b>	Pain and Function	ACR	#178	<p>MD-HAQ is derived from the HAQ to include physical function in ten activities, pain, morning stiffness, fatigue, and global status. The MD-HAQ added more complex activities of daily living than the HAQ and predicts important long-term outcomes.</p> <p>The MD-HAQ also has a long scale, but one study<sup>20</sup> noted it indicates a lack of one-dimensionality and/or inaccurate assessment. The MD-HAQ was also noted to have gaps in the scales.</p>
<b>Numeric Rating Scale (NRS)<sup>21</sup></b>	Pain	ACR	#109 (retired)	The NRS measures pain intensity for adults, including chronic pain due to rheumatic diseases, where respondents select a whole number between zero and

<sup>18</sup> American Physical Therapy Association, “Knee Injury and Osteoarthritis Outcome Score (KOOS),” APTA, accessed July 13, 2022, <https://www.apta.org/patient-care/evidence-based-practice-resources/test-measures/knee-injury-and-osteoarthritis-outcome-score-koos>.

<sup>19</sup> Rheuminfo, “Health Assessment Questionnaires (HAQ, HAQ-II, MDHAQ).”

<sup>20</sup> Wolfe, Michaud, and Pincus, “Development and Validation of the Health Assessment Questionnaire II.”

<sup>21</sup> Gillian A. Hawker et al., “Measures of Adult Pain: Visual Analog Scale for Pain (VAS Pain), Numeric Rating Scale for Pain (NRS Pain), McGill Pain Questionnaire (MPQ), Short-Form McGill Pain Questionnaire (SF-MPQ), Chronic Pain Grade Scale (CPGS), Short Form-36 Bodily Pain Scale (SF-36 BPS), and Measure of Intermittent and Constant Osteoarthritis Pain (ICOAP),” *Arthritis Care & Research* 63, no. S11 (November 2011): S240–52, <https://doi.org/10.1002/acr.20543>.

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				ten representing a continuum between “no pain” and “pain as bad as you can imagine”.
<p><b>Patient Reported Outcome Measurement Information System (PROMIS)<sup>22</sup></b></p> <p>PROMIS Global -10 (AAOS)</p> <p>PROMIS -29 (AF)</p>	Pain and Function	AAOS Arthritis Foundation	#109 (retired)	<p>PROMIS is a self-reported measure of physical, mental, and social health that is appropriate for use across health conditions for the assessment of systems and functions. PROMIS is available in multiple formats (e.g., computer adaptive tests, short forms), and can be integrated into diverse administration platforms, as well as translated into many languages.</p> <p>The PROMIS tool represents an evolution of current measurements with clinic metrics and psychometrics, which is one reason providers tend to favor it.</p> <p>As part of the Patient-Reported Outcomes Measurement Information System (PROMIS) created in 2004, The PROMIS Global-10 is a publically available global health assessment tool that allows measurements of symptoms, functioning, and healthcare-related quality of life (HRQoL) for a wide variety of chronic diseases and conditions. The PROMIS Global-10 short form consists of 10 items that assess general domains of health and functioning including overall physical health, mental health, social health, pain, fatigue, and overall perceived quality of life.</p> <p>The PROMIS-29 tool includes 29 questions reflecting eight domains with four questions each, and one pain VAS. PROMIS-29 assesses physical function, pain, and a global assessment of disease activity, which are put together into a single score.<sup>23</sup></p>
<p><b>Patient Reported Outcome Measurement Information System (PROMIS) Physical Function 10-item (PROMIS PF10a)<sup>24</sup></b></p>	Function	ACR	#178	<p>PROMIS PF10a is a 10-item questionnaire that patients rate on a scale of five (not at all) to one (cannot do) and then five (without any difficulty) to one (unable to do). PROMIS PF10a data can be collected via paper, assessment center API (includes REDCap), Epic PROMIS CAT Application, NIH Toolbox iPad App, and the PROMIS iPad App.</p>

<sup>22</sup> HealthMeasures, “Compare Measurement Systems,” accessed July 13, 2022, <https://www.healthmeasures.net/explore-measurement-systems/selecting-among-measurement-systems/compare-measurement-systems>.

<sup>23</sup> Leavitt Partners interview with Johns Hopkins Arthritis Center.

<sup>24</sup> Elizabeth Wahl et al., “Validity and Responsiveness of a 10-Item Patient-Reported Measure of Physical Function, PROMIS PF-10a, in a Rheumatoid Arthritis Clinic Population,” *Arthritis Care & Research* 69, no. 3 (March 2017): 338–46,

Visual Analog Scale (VAS) <sup>25</sup>	Pain	ACR	#109 (retired)	The VAS, a validated measure for acute and chronic pain, records subjective scores with a handwritten mark on a 10-centimeter line representing a continuum between “no pain” and “worst pain”.
Widespread Pain Index (WPI) and Symptom Severity (SS) scale <sup>26</sup>	Pain	ACR	--	The WPI and SS scale were originally developed to classify fibromyalgia in adults and assess pain distribution and the severity of fatigue, memory difficulties, tiredness, headache, abdominal pain, and depression.

Despite being useful for supporting arthritis care, function and pain assessments have limitations:

- For any given type of arthritis, there currently is no consensus on a single, gold standard function and pain assessment, making it challenging to efficiently track disease progression.
- Patients with chronic pain may become more acclimated to their pain, making it difficult to assess changes in pain severity.<sup>27</sup> Two separate interviewees identified a means of overcoming this barrier. Rather than focusing solely on capturing pain intensity, they recommended measuring how pain interferes with patients’ activities of daily living, which can give physicians the opportunity to provide more tailored counseling and referral services.<sup>28</sup>
- There is concern that pain assessments may lead to more opioid prescriptions when other, non-pharmacological approaches are available. Nearly one in three adults with arthritis in the United States purchased at least one prescription opioid in 2015<sup>29</sup>. One health system stopped conducting pain assessments due to concerns that they may lead to a prescription that may cause opioid use disorder. Instead, the health system focuses their efforts more on function and physical activity assessments.<sup>30</sup>
- Interviewees cited the PROMIS tool as a valuable tool for conducting screenings, but some interviewees noted that it is very time-intensive and may not be conducive in the clinical setting. Instead, they recommended to use it either within or outside the clinical setting while the patient is waiting to see their physician.<sup>31</sup>

<https://doi.org/10.1002/acr.22956>; Claire E. H. Barber et al., “2019 American College of Rheumatology Recommended Patient-Reported Functional Status Assessment Measures in Rheumatoid Arthritis,” *Arthritis Care & Research* 71, no. 12 (December 2019): 1531–39, <https://doi.org/10.1002/acr.24040>.

<sup>25</sup> Domenica A. Delgado et al., “Validation of Digital Visual Analog Scale Pain Scoring With a Traditional Paper-Based Visual Analog Scale in Adults,” *Journal of the American Academy of Orthopaedic Surgeons. Global Research & Reviews* 2, no. 3 (March 23, 2018): e088, <https://doi.org/10.5435/JAAOSGlobal-D-17-00088>.

<sup>26</sup> Joanne Dudeney et al., “Evaluating the Psychometric Properties of the Widespread Pain Index and the Symptom Severity Scale in Youth with Painful Conditions,” *Canadian Journal of Pain* 3, no. 1 (2019): 137–47, <https://doi.org/10.1080/24740527.2019.1620097>.

<sup>27</sup> Leavitt Partners interview with Johns Hopkins Arthritis Center.

<sup>28</sup> Leavitt Partners interview with Johns Hopkins Arthritis Center; Leavitt Partners interview with the American Physical Therapy Association, April 25, 2022.

<sup>29</sup> Centers for Disease Control and Prevention, “Arthritis and Joint Pain Management | CDC,” July 5, 2022, <https://www.cdc.gov/arthritis/pain/joint-pain-management.htm>.

<sup>30</sup> Leavitt Partners interview with Intermountain Healthcare and the American College of Sports Medicine, May 11, 2022.

<sup>31</sup> Leavitt Partners interview with Listening Session #1, May 6, 2022.

## Physical activity screening tools can be used for patients with arthritis, among other chronic diseases.

In addition to assessments for function and pain, another tool that could be implemented to support arthritis care are physical activity screenings, including Exercise is Medicine (EIM) as a Vital Sign<sup>32</sup> and Physical Activity as a Vital Sign (PAVS).<sup>33</sup> Initiatives to implement these tools encourage providers to include physical activity counseling and referrals during patient encounters.

The evidence to support physical activity screening tools is still emerging, but results from a systematic review suggests the tools' potential effect on clinical assessment and outcomes, as well as their simple and quick administration. The 2017 systematic review<sup>34</sup> explores healthcare providers' use of physical activity screening tools for disease prevention and management, the identification of patients who would benefit from exercise counseling, as well as referral of patients to physical activity-based interventions (e.g., physical therapy, evidence-based community programs, such as Walk With Ease (WWE), etc.). The systematic review found nine studies that identified five physical activity measures being used as vital signs measures involving arthritis. The review notes a large hospital system using Exercise Vital Signs (EVS) for over one and a half years revealed improvements in relative weight loss among overweight patients and reduction in glycosylated hemoglobin among diabetic patients. For PAVS, moderate physical activity of five or more days per week versus fewer than five days per week was associated with a lower body mass index (BMI). Another experimental analysis<sup>35</sup> of a health system using EVS to collect patient-reported exercise levels revealed that EVS implementation was associated with greater exercise-related progress note documentation and referrals and that systematically collecting exercise information during outpatient visits is associated with significant changes in exercise-related clinical processes and outcomes. Continuing to integrate these physical activity screening tools could potentially address a number of chronic diseases and could specifically enhance efforts to refer patients with arthritis to physical activity-based interventions.

Despite efforts to promote its use, several director-level interviewees from arthritis advocacy groups and national organizations feel EVS and PAVS have not been as widely used or integrated into clinical settings as they could be.<sup>36</sup> Reasons cited for these tools not being widely used include limited healthcare provider time with patients, provider sentiment that physical activity counseling was not part of their training, and feelings from healthcare providers of not having an easier answer for physical activity for patients with low PAVS score.<sup>37</sup>

However, several health systems have successfully implemented these tools. Prisma Health - Upstate, a healthcare system in South Carolina, partnered with the YMCA of Greenville, the University of South Carolina School of Medicine Greenville, and the American College of Sports Medicine (ACSM) to create the

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<sup>32</sup> Pamela G. Bowen et al., "Exercise Is Medicine as a Vital Sign: Challenges and Opportunities," *Translational Journal of the American College of Sports Medicine* 4, no. 1 (January 1, 2019): 1–7.

<sup>33</sup> Yvonne M. Golightly et al., "Physical Activity as a Vital Sign: A Systematic Review," *Preventing Chronic Disease* 14 (November 30, 2017): 170030, <https://doi.org/10.5888/pcd14.170030>.

<sup>34</sup> Golightly et al.

<sup>35</sup> Richard W. Grant et al., "Exercise as a Vital Sign: A Quasi-Experimental Analysis of a Health System Intervention to Collect Patient-Reported Exercise Levels," *Journal of General Internal Medicine* 29, no. 2 (February 2014): 341–48, <https://doi.org/10.1007/s11606-013-2693-9>.

<sup>36</sup> Leavitt Partners interview with Listening Session #1.

<sup>37</sup> Leavitt Partners interview with Intermountain Healthcare and the American College of Sports Medicine.

Exercise is Medicine Greenville (EIMG) program.<sup>38</sup> The EIMG uses a population health management model to implement a clinic-to-community approach where patients can receive exercise and other lifestyle medicine interventions for the prevention and management of chronic disease, obesity, and sedentary lifestyles. EIMG consists of a 12-week medically based clinical exercise program in which participants can learn how to increase overall health and reduce risks related to chronic disease, obesity, hypertension, hyperlipidemia, hypercholesterolemia, and musculoskeletal weakness and pain. The EIMG program includes professional webinars and training, a policy and procedures manual, and an EIMG clinical workflow education guide.<sup>39</sup>

Another example of a health system utilizing physical activity screening tools is Kaiser Permanente's Southern California region where they implemented<sup>40</sup> PAVS as a standard of care for all patient visits in October 2009. Kaiser Permanente designed PAVS to be included and assessed at each patient's visit, then reported in aggregate minutes of physical activity per week for moderate or vigorous exercise. At minimum, providers were required to offer advice, reassurance, or guidelines for patients as it relates to physical activity. Kaiser Permanente was one of the first health systems to integrate PAVS in their EHR and found that it caused little disruption to patient flow and productivity. After the first one and a half years of PAVS use, Kaiser Permanente found that 86 percent of its adult members that had a medical visit had their physical activity recorded, opening the door for providers to discuss the topic of exercise and physical activity with those patients. Screening a patient's physical activity level is the first step to proper counseling and referring to appropriate physical activity-based interventions and can apply to a variety of chronic disease conditions where physical activity is a recommended treatment or management activity. An evidenced-informed approach could help leverage examples where these screenings have been integrated into workflows in order to benefit from these screening tools across disease states, including arthritis.

The EIM<sup>41</sup> model developed by the American College of Sports Medicine (ACSM) uses PAVS as their physical activity screening tool<sup>42</sup> of choice and encourages incorporating the tool into electronic health records (EHR) and patient intake forms. Below we highlight several health systems who have integrated the PAVS screening tool into their EHRs; however, each health system customizes the screening tool based on what works best for their system and patient populations. The "Exercise is Medicine Health Care Providers' Action Guide"<sup>43</sup> provides guidance for implementing PAVS into a provider's practice. To integrate these tools and support care for chronic conditions—particularly arthritis—providers can utilize their staff, create tools within EHRs, and refer patients to physical activity resources (e.g., programs, facilities, certified exercise professionals, or self-directed/online resources).

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<sup>38</sup> Ryan R. Porter et al., "Design and Implementation of a Clinic-to-Community, Physical Activity Health Promotion Model for Healthcare Providers," *Preventive Medicine Reports* 26 (April 1, 2022): 101697, <https://doi.org/10.1016/j.pmedr.2022.101697>.

<sup>39</sup> "EIMG-Executive-Summary\_V1.2\_MAY2019.Pdf," accessed August 22, 2022, [https://www.exerciseismedicine.org/wp-content/uploads/2021/02/EIMG-Executive-Summary\\_V1.2\\_MAY2019.pdf](https://www.exerciseismedicine.org/wp-content/uploads/2021/02/EIMG-Executive-Summary_V1.2_MAY2019.pdf).

<sup>40</sup> Robert Sallis, "The Physical Activity Vital Sign and Electronic Health Records: The Kaiser Permanente Experience," *Aspetar Sports Medicine Journal*, Integrating EIM Into Healthcare, 6 (May 2017), <https://www.aspetar.com/journal/upload/PDF/20175417940.pdf>.

<sup>41</sup> American College of Sports Medicine, "Exercise Is Medicine," Exercise is Medicine, n.d., <https://www.exerciseismedicine.org/home/>.

<sup>42</sup> American College of Sports Medicine, "Physical Activity Vital Sign," n.d., [https://www.exerciseismedicine.org/assets/page\\_documents/EIM%20Physical%20Activity%20Vital%20Sign.pdf](https://www.exerciseismedicine.org/assets/page_documents/EIM%20Physical%20Activity%20Vital%20Sign.pdf).

<sup>43</sup> American College of Sports Medicine, "Provider Action Guide," *Exercise Is Medicine* (blog), 2021, [https://exerciseismedicine.org/assets/page\\_documents/EIM%20Health%20Care%20Providers%20Action%20Guide%20clickable%20links.pdf](https://exerciseismedicine.org/assets/page_documents/EIM%20Health%20Care%20Providers%20Action%20Guide%20clickable%20links.pdf).

## It is important to assess patient readiness in the physical activity screening process.

Several interviewees noted that physical activity screening efforts should consider the patient's readiness to participate in physical activity programs, rather than solely focusing on current activity levels. Motivational interviewing strategies in particular can help to identify patient priorities, which can lead to more successful counseling.<sup>44</sup> One physician explained understanding patient motivations, prompts, and environments provides important context for helping a patient identify more opportunities to experience physical activity successfully.<sup>45</sup>

There are a variety of existing tools that providers can utilize to assess patient readiness for change. For example, a series of training modules created by "Creating Opportunities for Arthritis Control at Home (COACH)," designed for nurses, nurse practitioners, occupational therapists, physical therapists, physician assistants, social workers, primary care providers, and others, can help providers understand their patients' readiness for change and apply techniques to customize self-management support to meet the individual patients' needs.<sup>46</sup> The University of California San Francisco Center for Excellence in Primary Care developed "The 10 Building Blocks of Primary Care: My Action Plan," a tool used to engage patients in behavior-change discussion with a clinician or health coach.<sup>47</sup> The 5A's, an intervention model including five major steps to intervention for treating tobacco use and dependence, showed mixed results for physical activity counseling.<sup>48</sup> EIM also developed a "Readiness to Change" table<sup>49</sup> with a brief outline of the five stages of change and recommended steps for patients in each stage.<sup>50</sup> The ACSM physical readiness tool<sup>51</sup> and the Fear-Avoidance Beliefs Questionnaire<sup>52</sup> can also assist with assessing patient readiness in the physical activity screening process.

Beyond existing tools, several interviewees discussed potential opportunities to facilitate assessing patient readiness. For example, a readiness tool—specific to physical activity—could help patients set physical activity goals and establish a plan to achieve them. Several interviewees agreed that such a tool should first be implemented in a clinical environment before a patient participates in physical activity-based interventions. Interviewees noted that a physical activity-specific readiness tool would likely need to be used for the same individual multiple times for continued goal support, assessment, and updates.<sup>53</sup> When

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<sup>44</sup> Leavitt Partners interview with Listening Session #2, May 4, 2022; Leavitt Partners interview with Intermountain Healthcare and the American College of Sports Medicine.

<sup>45</sup> Leavitt Partners interview with Intermountain Healthcare and the American College of Sports Medicine.

<sup>46</sup> United States Bone & Joint Initiative, "COACH - Creating Opportunities for Arthritis Control at Home," United States Bone and Joint Initiative, November 4, 2020, <https://www.usbji.org/programs/public-education-programs/coach>.

<sup>47</sup> "The 10 Building Blocks of Primary Care: My Action Plan," accessed August 22, 2022, [https://cepc.ucsf.edu/sites/cepc.ucsf.edu/files/Action\\_Plans\\_14-0602.pdf](https://cepc.ucsf.edu/sites/cepc.ucsf.edu/files/Action_Plans_14-0602.pdf).

<sup>48</sup> C Martinez et al., "Factors Associated with Implementation of the 5A's Smoking Cessation Model," *Tob Induc Dis.* 15, no. 41 (2017), <https://doi.org/10.1186/s12971-017-0146-7>.

<sup>49</sup> "Readiness to Change.Pdf," accessed August 22, 2022, [https://exerciseismedicine.org/assets/page\\_documents/Readiness%20to%20Change.pdf](https://exerciseismedicine.org/assets/page_documents/Readiness%20to%20Change.pdf).

<sup>50</sup> "Determine Your Patients Readiness to Change," *Exercise Is Medicine* (blog), accessed August 22, 2022, <https://www.exerciseismedicine.org/eim-in-action/health-care/health-care-providers/determine-your-patients-readiness-to-change/>.

<sup>51</sup> ACSM, "ACSM Blog," ACSM\_CMS, November 11, 2019, <https://www.acsm.org/blog-detail>.

<sup>52</sup> "Fear-Avoidance Beliefs Questionnaire," Shirley Ryan AbilityLab, June 26, 2014, <https://www.sralab.org/rehabilitation-measures/fear-avoidance-beliefs-questionnaire>.

<sup>53</sup> Leavitt Partners interview with Listening Session #1.

assessing patient readiness, interviewees also suggested assessing additional prominent conditions that often accompany arthritis and that can have a significant impact on overall health and well-being, such as anxiety, depression, fatigue, sleep quality, and social determinants of health (SDOH).<sup>54</sup>

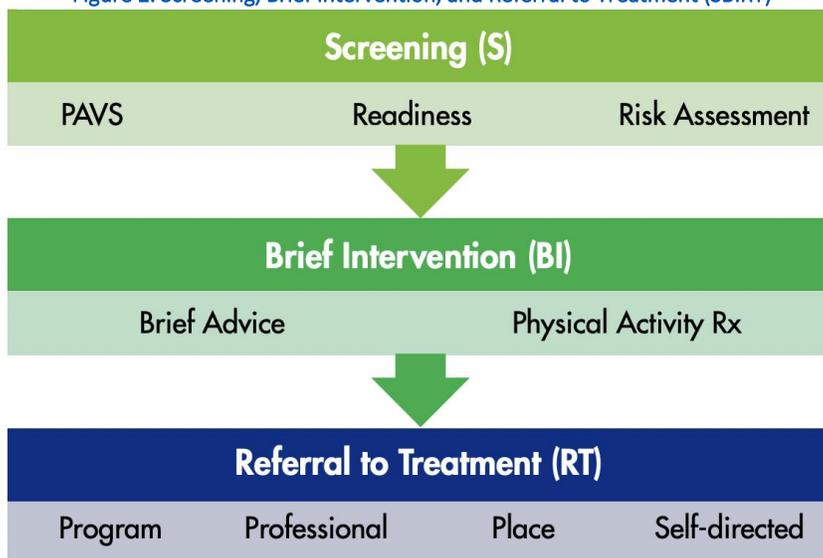
### Arthritis screening strategies and tools should be integrated into the clinical and technological workflows.

Inherent in the EIM model is the understanding that physical activity is key to preventing, treating, and managing many diseases, including arthritis and other chronic diseases, and that it should be assessed just as routinely as other vital signs (e.g., blood pressure).<sup>55</sup> In addition, providers and other non-traditional healthcare members play a significant role in function, pain, and physical activity screening efforts due to their ability to reach a large patient population and their being seen as a trusted source of health information and advice. The most effective way to ensure function, pain, and physical activity is routinely screened is by integrating it into clinical workflows. Doing so may improve treatment decision-making, focus discussions on what may be the most burdensome symptoms, encourage patient engagement in their own care, and increase trust between patients and providers.<sup>56</sup>

A representative from Intermountain Healthcare noted that the EIM and the Screening, Brief Intervention and Referral to Treatment (SBIRT) approaches (see **Figure 2**)<sup>57</sup> were built to fit well within existing provider workflows and was developed for healthcare providers to approach patients with a variety of chronic health conditions, avoiding the need to teach a new approach to providers.<sup>58</sup> Promoting such models or opportunities to integrate screenings into clinical workflows that require little burden or minimal additional effort on providers is ideal.

An interviewee from APTA highlighted two areas where physical therapists can assist in screening and subsequent referral to AAEBIs. APTA is currently working on more knowledge translation of their clinical practice guidelines in order to make them more condensed and easier for physical therapists to use,

Figure 2. Screening, Brief Intervention, and Referral to Treatment (SBIRT)



<sup>54</sup> Leavitt Partners interview with Johns Hopkins Arthritis Center; Leavitt Partners interview with Baylor Scott and White, May 20, 2022; Leavitt Partners interview with UT Health Austin Musculoskeletal Institute, April 26, 2022.

<sup>55</sup> Sarah E Linke et al., "Integrating 'Exercise Is Medicine' into Primary Care Workflow: A Study Protocol," *Translational Behavioral Medicine* 11, no. 4 (September 18, 2020): 921–29, <https://doi.org/10.1093/tbm/ibaa088>.

<sup>56</sup> Surabhi Bhatt et al., "Integration of Patient-Reported Outcomes in a Total Joint Arthroplasty Program at a High-Volume Academic Medical Center," *JAAOS Global Research & Reviews* 4, no. 5 (May 2020): e20.00034, <https://doi.org/10.5435/JAAOSGlobal-D-20-00034>.

<sup>57</sup> "EIM-Health-Care-Providers-Action-Guide-Clickable-Links.Pdf," accessed July 6, 2022,

<https://www.exerciseismedicine.org/wp-content/uploads/2021/02/EIM-Health-Care-Providers-Action-Guide-clickable-links.pdf>.

<sup>58</sup> Leavitt Partners interview with Intermountain Healthcare and the American College of Sports Medicine.

including increasing screenings. The interviewee also detailed that there is not currently a guideline that establishes a pathway for primary care providers to refer patients to physical therapists or to provide a referral for more conservative care, such as AAEBIs. The interviewee suggested that physical therapists could serve as a funnel for identifying the appropriate patients for AAEBIs moving forward. There may be an opportunity to include such recommendations in physical therapy clinical practice guidelines in the future.

One facilitator for success when considering screening integration into clinical workflows is through EHR systems.<sup>59</sup> Within EHR systems where screenings are embedded, flags and notifications appear for the provider if the patient does not meet the recommended physical activity standards. However, these flags often do not come integrated into an EHR and need to be built or added. Some of the members of ACSM have been able to build PAVS into EPIC and have seen more members doing these EHR “custom builds.” Several examples were provided of health systems that have completed custom builds:<sup>60</sup>

- **Intermountain Healthcare (Intermountain):** A clinical leader championed the work of building PAVS into the Cerner EHR system. PAVS at Intermountain was slightly adjusted to include assessments of regular levels of physical activity (*i.e.*, is the patient sedentary, active, moderately active, etc.).
- **University of Michigan:** A physician at the University of Michigan has been working to custom build PAVS into their EHR system and was able to upload the “Prescription for Health” handouts created by ACSM as a companion to the PAVS measures.
- **Johns Hopkins:** PROMIS became a part of EPIC over time and is now built into the EPIC foundation system, though it still requires some programming. Providers can order questionnaires, such as PROMIS, for patients through EPIC and patients can answer questions before or during their appointment via MyChart. The EPIC module will link the results to certain diagnoses and visits. One rheumatologist from Johns Hopkins noted around 60 percent of his patients complete the PROMIS assessment prior to their visit, and the remainder fill it out in the waiting room.<sup>61</sup>
- **University of South Carolina School of Medicine, Greenville:** The University of South Carolina School of Medicine, Greenville partnered with ACSM, YMCA-Greenville, and Prisma Health to create the Exercise is Medicine- Greenville (EIMG) model to implement a “clinic-to-community” approach with the goal of creating a more physically active and healthier community in Greenville, South Carolina.<sup>62</sup>

Building a flag for physical activity within an EHR system could help streamline the process for physical activity screening, counseling, and ultimately referral for patients with arthritis.<sup>63</sup>

## Annual wellness visits are an opportunity for screenings.

Annual wellness visits are one method by which function, pain, and physical activity screenings for arthritis can take place. One interviewee noted the Baylor Scott and White Health and Wellness Center, for example,

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<sup>59</sup> Leavitt Partners interview with Johns Hopkins Arthritis Center.

<sup>60</sup> Leavitt Partners interview with Intermountain Healthcare and the American College of Sports Medicine.

<sup>61</sup> Leavitt Partners interview with Johns Hopkins Arthritis Center.

<sup>62</sup> Porter et al., “Design and Implementation of a Clinic-to-Community, Physical Activity Health Promotion Model for Healthcare Providers.”

<sup>63</sup> Leavitt Partners interview with Listening Session #1.

conducts physical activity screenings at every annual wellness visit for their patients.<sup>64</sup> Additionally, a representative from the New Hampshire Department of Public Health Chronic Pain Management program revealed that physical activity screening is typically located in the annual wellness visit or physical exam within an EHR system.<sup>65</sup>

Along with annual wellness visits, annual physical therapy visits provide an opportunity for physical therapists to assess physical activity and nutrition and conduct a movement screening on patients (e.g., how a patient sits, stands, walks, and general movement capabilities), which often feed into arthritis treatment. Annual physical therapist visits could represent an ideal opportunity for physical therapists to support patients with arthritis, and interviewees suggested that geriatric-specific annual wellness visits may be more suited to implement various function, pain, and physical activity arthritis screenings.

One example of how screenings can be integrated into wellness visits is Medicare Part B's "Welcome to Medicare" preventive wellness visit for new members. This preventive visit includes a review of the patient's medical and social history which also provides education and counseling of preventive services. The "Welcome to Medicare" preventive visit provides the patient with a written plan detailing which further preventive screenings or services they may need.<sup>66</sup> Outside of the "Welcome to Medicare" preventive wellness visit, Medicare does reimburse annual physical therapist visits where screenings can be administered. However, one challenge to these visits is that a physical therapist cannot bill for this reimbursement themselves. A physical therapist must be licensed under a physician-owned practice to be reimbursed for annual physical therapy visits.<sup>67</sup> As such, while opportunities exist among Medicare beneficiaries during wellness visits, barriers do exist.

While opportunities exist and providers should be encouraged to conduct screenings during annual wellness visits, these opportunities are open only to the older adult population and result in gaps and continued need to identify and leverage ways to reach the working age adult population with arthritis (ages 18-64). Thus, annual wellness visits should not be the only instance in which providers administer screenings. Beyond annual wellness visits, one interviewee noted that it would be beneficial to integrate physical activity screenings into a daily interaction form, so that physical activity is assessed during every visit—not just the annual wellness visit—and follow-up would be easier to conduct and track.<sup>68</sup> Regardless of whether screening integration occurs in annual wellness visits or daily interaction forms, ensuring that patients with arthritis are screened during clinical interactions would be an ideal method to increase screenings.

### **Care teams should leverage community health workers in proactive screening processes.**

A common challenge for screenings conducted at the point of care is that they often only benefit patients that are already in the care setting and do not benefit the population beyond the care setting. A proactive approach to reach these patients in creative ways could benefit overall screening efforts.

For example, at Baylor Scott and White, one representative noted that community health workers (CHW) are

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<sup>64</sup> Leavitt Partners interview with Intermountain Healthcare and the American College of Sports Medicine; Leavitt Partners interview with Baylor Scott and White.

<sup>65</sup> Leavitt Partners interview with Listening Session #2.

<sup>66</sup> Medicare.gov, "Preventive Visit Coverage," n.d., <https://www.medicare.gov/coverage/welcome-to-medicare-preventive-visit>.

<sup>67</sup> Leavitt Partners interview with the American Physical Therapy Association.

<sup>68</sup> Leavitt Partners interview with Listening Session #2.

integral to identifying and overcoming barriers that people in the community experience, especially those who are uninsured. Rather than waiting for patients to seek care at Baylor Scott and White clinics, CHWs work with local champions and the community to conduct outreach and encourage individuals to receive screening or to participate in one of the various programs available at the Baylor Scott and White Health and Wellness Center.<sup>69</sup> A Montefiore Health System representative explained that Montefiore takes a proactive approach for patients who are not going to regular office visits by employing CHWs to provide outreach assistance in the community.<sup>70</sup> CHWs are generally trained to conduct certain screening measures such as blood pressure screening, or simple behavioral health screenings, but they are not typically equipped to do clinical screenings. CHWs can be trained in different specialties and screening methods as they have a wide range of health-related conditions and are often needed for general patient support.<sup>71</sup> Such proactive approaches allow providers to access additional populations and get a head start on arthritis screenings and treatments.

## Key Barriers and Challenges

### Limited provider time during patient visits reduces opportunities to screen.

A key barrier to screening for arthritis pain, function, and physical activity highlighted in our research is the limited time providers have with their patients. One interviewee noted that on average, physicians have around seven minutes with each patient, making it extremely challenging to conduct screenings on top of other priorities.<sup>72</sup> Several interviewees noted they chose specific screening tools that are less time-intensive due to the time restrictions they have with patients.<sup>73</sup>

To address this time barrier in the clinical setting, one interviewee recommended a patient-facing assessment or screening tool that could be completed in advance or in the waiting room.<sup>74</sup> For example, a Johns Hopkins representative noted the PROMIS tool's integration into their EPIC health record system to deploy it during visits or even between visits through patients' MyChart portal.<sup>75</sup> CHWs are another promising member of a care team, and community, who can perform basic screening activities and increase opportunities to screen patients with arthritis.<sup>76</sup> CHWs are trained to understand a variety of programs and how to refer and connect people to the right resources. The Massachusetts Department of Public Health has been encouraging different health systems to include CHW salaries as part of their core-operating budget, moving away from reimbursement models and towards team-based care.<sup>77</sup> Regardless of the strategy or activities chosen, addressing limited provider time with patients will be key to strengthening not only screening efforts, but counseling and referral efforts as well.

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<sup>69</sup> Leavitt Partners interview with Baylor Scott and White.

<sup>70</sup> Leavitt Partners interview with Montefiore Health System, April 22, 2022.

<sup>71</sup> Leavitt Partners interview with the National Association of Community Health Workers, June 10, 2022.

<sup>72</sup> Leavitt Partners interview with Listening Session #2.

<sup>73</sup> Leavitt Partners interview with Listening Session #2; Leavitt Partners interview with UT Health Austin Musculoskeletal Institute.

<sup>74</sup> Leavitt Partners interview with Listening Session #1.

<sup>75</sup> Leavitt Partners interview with Johns Hopkins Arthritis Center.

<sup>76</sup> Leavitt Partners interview with the National Association of Community Health Workers.

<sup>77</sup> Leavitt Partners interview with Listening Session #1.

## Unwillingness to integrate Physical Activity as a Vital Sign into workflow and limited time with patients prevents providers from using the tool.

As noted above, a major barrier to using the PAVS tool in the clinical setting is the limited amount of time providers have with each patient.<sup>78</sup> Increased provider education around PAVS—particularly communicating that it is a short, two-question assessment—might address provider concerns surrounding time constraints. Interviewees suggested providing opportunities for patients to complete screenings prior to seeing their physicians as one strategy to tackle limited provider time with patients.<sup>79</sup> Other interviewees explained that some providers that are aware of PAVS are unwilling to integrate the screening tool into their clinical workflow, expressing that physical activity education was not part of their residency.<sup>80</sup> For those who do have a low PAVS score, providers may not feel that they have an easy answer to counseling patients on getting more physically active.<sup>81</sup> Efforts to show the effectiveness and the potential to ease provider burden that would result from integrating PAVS or other screening tools into the workflow should be considered.

## Obstacles exist to integrating physical activity-related screenings into electronic health records.

The interviewees discussed some of the challenges with integrating screening assessments into EHRs. One interviewee explained that within EHRs, physical activity screening is typically located in the annual well check-up, creating a gap for patients who do not get an annual check-up. This is particularly an issue for Federally Qualified Health Centers (FQHC), where a lot of their patients do not get annual check-ups due to care access barriers.<sup>82</sup>

Another obstacle to EHR integration is that many states do not have a single EHR system, which restricts the SHDs ability to efficiently collect and analyze data on arthritis referrals and makes bi-directional referral systems difficult to operationalize. As noted above, some health systems have custom-built PAVS into their EHR system, though there is not an established and consistent way to build this measure into different EHR systems.<sup>83</sup> Streamlining the referral process through statewide registries could be an alternate path forward to reduce provider burden and improve care for patients with arthritis.<sup>84</sup> One interviewee noted if they were able to build physical activity-related screening measures into their EHR system, they would be better positioned to receive reimbursement for their evidence-based interventions, though building measures into the EHR system is very time-intensive and difficult.<sup>85</sup>

In some cases, screening questions should be slightly modified based on a patient's unique conditions. For example, asking patients who are wheelchair-bound about their walking activity would not be appropriate.<sup>86</sup> This adds another layer of complexity to custom building screening components into an EHR. However, a provider at the University of Washington is working to adapt and modify the EIM model for patients with disabilities, which could represent an opportunity to apply their adjusted method for EHR integration

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<sup>78</sup> Leavitt Partners interview with Listening Session #1.

<sup>79</sup> Leavitt Partners interview with Listening Session #1.

<sup>80</sup> Leavitt Partners interview with Intermountain Healthcare and the American College of Sports Medicine.

<sup>81</sup> Leavitt Partners interview with Listening Session #1.

<sup>82</sup> Leavitt Partners interview with Listening Session #2.

<sup>83</sup> Leavitt Partners interview with Intermountain Healthcare and the American College of Sports Medicine.

<sup>84</sup> Leavitt Partners interview with Listening Session #3, May 16, 2022.

<sup>85</sup> Leavitt Partners interview with Baylor Scott and White.

<sup>86</sup> Leavitt Partners interview with Intermountain Healthcare and the American College of Sports Medicine.

elsewhere. Additionally, a simple two or three-item scale such as PAVS or EVS that assesses the number of days per week and minutes per day of moderate physical activity may make customizing efforts easier as they do not focus on a specific type of activity.

### **Lack of arthritis-specific measures prevents potential improvements in screening efforts.**

Providers can be encouraged to administer certain screenings (or services) if they are tied to specific measures that are used to assess quality of care and/or to calculate performance-based reimbursement. There are several measure sets in addition to MIPS Measures which are commonly used to evaluate the quality of healthcare, including Health Level Seven (HL7) and the United States Core Data for Interoperability (USCDI), and measures developed and endorsed by the United States Preventive Services Task Force (USPSTF) and the National Quality Forum (NQF). Across interviews with payers and providers, the Healthcare Effectiveness Data and Information Set (HEDIS) was most commonly identified as the measure set used to assess healthcare quality or to calculate performance-based reimbursement. However, there are currently no HEDIS measures directly related to arthritis.<sup>87</sup> Tying the HEDIS measure to reimbursement via prevention and care metrics could also incentivize health systems to improve arthritis care.

A representative of BlueCross BlueShield of Arkansas suggested turning to HEDIS measures related to obesity.<sup>88</sup> They currently use HEDIS measures in shared savings programs and in patient-centered medical home models to encourage providers to perform certain screenings or services and to improve patient outcomes. While they do not include any incentives specific to arthritis, the payer does emphasize those measures related to treating obesity in patients. The Care for Older Adults (COA) HEDIS measure includes advance care planning, medication review, functional status assessment, and pain assessment for adults 66 years and older.<sup>89</sup> While this measure is also not specific to arthritis, it ensures older adults receive care to optimize their quality of life—particularly through screening to identify functional decline—which could likely encompass arthritis-related concerns in relevant populations. Without existing arthritis-specific measures, incentivizing providers to perform screenings may be more challenging, particularly for those providers who are not participants of value-based care models where reimbursement is based on quality of care or health outcomes.

### **Lack of payer involvement prevents increased screenings.**

While payers could have a unique opportunity to enable function, pain, and physical activity screening efforts through incentives and other methods, there is hesitancy among payers to contribute to such efforts. Each of the payer interviewees confirmed that payers do not provide specific guidance or incentives on screenings. One interviewee noted payers do not want to overstep their role and interfere with the providers' role in care decisions.<sup>90</sup> This hesitancy extends beyond just screenings—payers are reticent to get involved in any aspect of healthcare traditionally under the purview of providers. Payers may offer care management or wraparound services to patients, but they conclude providers should decide which screenings to perform

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<sup>87</sup> Leavitt Partners interview with Listening Session #3.

<sup>88</sup> Leavitt Partners interview with BlueCross BlueShield of Arkansas, May 23, 2022.

<sup>89</sup> Adam O'Neill, "Care for Older Adults," *NCQA* (blog), accessed August 22, 2022, <https://www.ncqa.org/hedis/measures/care-for-older-adults/>.

<sup>90</sup> Leavitt Partners interview with Humana Kansas, May 6, 2022.

with patients and where to refer them.

Interviewees agreed that payers can also have an underlying fear surrounding lost revenue due to improved member health outcomes, which prevents them from contributing to screening efforts specifically.<sup>91</sup> More traditional payers may only choose to intervene with members' care once they become high cost, which could exclude members with arthritis that have lower costs associated with their claims.<sup>92</sup>

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<sup>91</sup> Leavitt Partners interview with Humana Kansas.

<sup>92</sup> Leavitt Partners interview with BlueCross BlueShield of Arkansas.

## Section 2: Counseling on Benefits of Physical Activity

Offering counseling to patients on the benefits of physical activity can help patients manage their arthritis pain and improve overall health and wellbeing. However, in a recent study only around 40 percent of primary care providers—or two in five—assessed and recommended physical activity to adult patients with arthritis.<sup>93</sup> Health systems and national public health organizations are increasingly recommending providers assess and counsel patients on physical activity at every visit;<sup>94</sup> however, most providers currently have inadequate knowledge, attitudes, and specific counseling skills to effectively promote physical activity.<sup>95</sup> Part of provider counseling efforts should include opportunities and encouragement to join AAEBIs.

The following section further explores key learnings from the secondary literature scan and interviews related to counseling and identifies key barriers and challenges that should be considered when developing an evidenced-informed approach.

### Key Learnings

#### **Leveraging coordinated and integrated care teams boosts counseling opportunities.**

Arthritic conditions are complex, and the impact of disease often extends beyond the musculoskeletal system to cause pain and damage to other parts of the body. Properly treating arthritis requires coordination across a multidisciplinary care team, which may include rheumatologists, physical therapists, exercise physiologists, dieticians, social workers, CHWs, orthopedic specialists, sports medicine providers, nurses, and medical assistants. Depending on the type of arthritis a patient has, the care team may look different. However, a common sentiment highlighted across interviews was the opportunity to leverage a more integrated and multidisciplinary care team to care for patients with arthritis.

An orthopedic surgeon from the Musculoskeletal Institute at The University of Texas (UT) Health Austin highlighted its tailored care pathways for the treatment of different chronic conditions—including inflammatory and autoimmune disease, and chronic conditions of the upper extremity, lower extremity, and

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<sup>93</sup> Dana Guglielmo et al., “Physical Activity Assessment and Recommendation for Adults With Arthritis by Primary Care Providers-DocStyles, 2018,” *American Journal of Health Promotion: AJHP* 35, no. 4 (May 2021): 559–70, <https://doi.org/10.1177/0890117120981371>.

<sup>94</sup>American College of Sports Medicine, “Health Care Providers’ Action Guide,” n.d., <https://www.exerciseismedicine.org/wp-content/uploads/2021/02/EIM-Health-Care-Providers-Action-Guide-clickable-links.pdf>; Leavitt Partners interview with Intermountain Healthcare and the American College of Sports Medicine. American College of Sports Medicine, “Health Care Providers’ Action Guide”; Leavitt Partners interview with Intermountain Healthcare and the American College of Sports Medicine. American College of Sports Medicine, “Health Care Providers’ Action Guide”; Leavitt Partners interview with Intermountain Healthcare and the American College of Sports Medicine.

<sup>95</sup>Emily T. Hébert, Margaret O. Caughy, and Kerem Shuval, “Primary Care Providers’ Perceptions of Physical Activity Counselling in a Clinical Setting: A Systematic Review,” *British Journal of Sports Medicine* 46, no. 9 (July 1, 2012): 625–31, <https://doi.org/10.1136/bjsports-2011-090734>; Charles E. Lewis et al., “The Counseling Practices of Internists,” *Annals of Internal Medicine* 114, no. 1 (January 1991): 54–58, <https://doi.org/10.7326/0003-4819-114-1-54>.

back/neck<sup>96</sup>—that describe which members of the care team should be involved.<sup>97</sup> An advantage of having strong, integrated care teams is leveraging each individuals' strengths and allowing each team member to do what they do best. For example, a representative from the Johns Hopkins Division of Rheumatology noted efforts to optimize the limited time that physicians have with patients by having nurses educate patients about various aspects of their disease and administering certain medications.<sup>98</sup> Such coordinated and integrated care team approaches can increase opportunities and time spent counseling patients with arthritis.

Health coaches, for example, could help relieve the burden from clinical staff by counseling patients on physical activity, identifying self-management, and other evidence-based interventions. A five-year CDC Arthritis grant was awarded to the North Carolina Center for Health and Wellness (NCCHW) to address the impact of arthritis and to increase awareness of arthritis management in North Carolina.<sup>99</sup> The work includes a dedicated health coach that works with older adults to identify opportunities for referral to AAEBIs, such as WWE.<sup>100</sup>

Baylor Scott and White's Health and Wellness Center has extended their care teams beyond the traditional clinical members to include CHWs. CHWs use their network within the community to refer patients to programs and resources that fit their unique needs.<sup>101</sup> Representatives from health departments also endorsed this approach, highlighting the important role that non-physician members of the care team can play in addressing arthritis, in particular by decreasing burden on physicians and improving the patient experience.<sup>102</sup>

Although CHWs offer a promising way to counsel patients with arthritis, challenges to leveraging CHWs should be addressed if they are to be fully integrated into the care team. While CHWs are trained to understand a variety of programs and to connect people to the right resources, they often lack a strong support system that can direct and manage their workload. Additionally, health systems often use short-term grants to fund CHWs; once the funding cycle is over, health systems can lose the valuable skills and community relationships that CHWs developed.<sup>103</sup> This presents an opportunity for health systems to better integrate CHWs into the care team to leverage their strengths in supporting screening, counseling, and referral efforts.<sup>104</sup>

## **Providers applying a tailored, patient-centered care approach can enhance counseling efforts.**

Leavitt Partners' research highlighted the increasing importance placed on working with each individual

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<sup>96</sup> Samantha C. Shapiro and Karl Koenig, "The Case for Integrated Musculoskeletal Care Teams," *The Rheumatologist* (blog), December 14, 2020, <https://www.the-rheumatologist.org/article/the-case-for-integrated-musculoskeletal-care-teams/>.

<sup>97</sup> Leavitt Partners interview with UT Health Austin Musculoskeletal Institute.

<sup>98</sup> Leavitt Partners interview with Johns Hopkins Arthritis Center.

<sup>99</sup> healthy\_admin, "Healthy Aging NC," *Healthy Aging NC* (blog), accessed July 15, 2022, <https://healthyagingnc.com/about/>.

<sup>100</sup> Janice Self, "Health Coaching Training," *Healthy Aging NC* (blog), accessed July 6, 2022, <https://healthyagingnc.com/health-coaching-training/>.

<sup>101</sup> Leavitt Partners interview with Baylor Scott and White.

<sup>102</sup> Leavitt Partners interview with Listening Session #2.

<sup>103</sup> Carl Rush et al., "Sustainable Financing of Community Health Worker Employment," Brief (The National Association of Community Health Workers, July 2020), <https://nachw.org/wp-content/uploads/2020/10/SustainableFinancingReportOctober2020.pdf>.

<sup>104</sup> Leavitt Partners interview with the National Association of Community Health Workers.

patient on a personal level; this tailored, patient-centered approach is ideal when counseling patients with arthritis. The ACR, Arthritis Foundation, and the European League Against Rheumatism (EULAR) promote the use of shared decision making between the provider and patient in their guidelines for rheumatoid arthritis, psoriatic arthritis, and osteoarthritis.<sup>105</sup> EULAR also recommends providers use a “patient-centered framework” in their assessment and treatment of inflammatory arthritis and osteoarthritis, where care that is respectful and responsive to each patient’s preferences and needs guides clinical decisions.<sup>106</sup>

Innovative care providers are incorporating patient-centered care with shared decision-making to counsel patients with arthritis. An orthopedic surgeon at the UT Health Austin Musculoskeletal Institute emphasized the need to work with each patient individually to design a treatment program that works for their current disease state and treatment goals.<sup>107</sup> The UT Health Austin Musculoskeletal Institute is also working to prove their innovative model of whole-person approach to treating osteoarthritis, which is designed to provide “360-degree care” to meet physical, emotional, and social needs of patients.<sup>108</sup> Such an approach requires a tailored understanding of each patient’s unique circumstances and needs. Another physician at the Johns Hopkins Arthritis Center noted that rather than working toward specific metrics of disease activity, providers must ask patients about their goals and priorities with treatments in order to develop a tailored approach with a plan to meet their goals.<sup>109</sup>

Physical therapists provide a promising example of enhancing patient-centered care for arthritis. According to representatives from the American Physical Therapy Association (APTA), a typical approach that physical therapists provide for a patient is heavily personalized and dependent on the individual’s readiness to engage in different exercise plans. The physical therapist will often work to ensure that the patient can continue to perform activities of daily living safely while encouraging patients to stay as physically active as possible by continuing current activities and modifying them as needed.

## Key Barriers and Challenges

### **Although providers may understand the benefits of physical activity, they may lack resources to instruct patients.**

Interviewees revealed that physical activity as a general referral or recommendation has gained traction among providers. However, physicians may feel ill-prepared to prescribe exercise, emphasizing a need for additional assistance to make exercise recommendations and referrals.<sup>110</sup> There are organizations that have

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<sup>105</sup> Liana Fraenkel et al., “2021 American College of Rheumatology Guideline for the Treatment of Rheumatoid Arthritis,” *Arthritis Care & Research* 73, no. 7 (June 8, 2021): 924–39, <https://doi.org/10.1002/acr.24596>; Josef S Smolen et al., “EULAR Recommendations for the Management of Rheumatoid Arthritis with Synthetic and Biological Disease-Modifying Antirheumatic Drugs: 2016 Update,” *Annals of the Rheumatic Diseases* 76, no. 6 (June 2017): 960–77, <https://doi.org/10.1136/annrheumdis-2016-210715>.

<sup>106</sup> Rinie Geenen et al., “EULAR Recommendations for the Health Professional’s Approach to Pain Management in Inflammatory Arthritis and Osteoarthritis,” *Annals of the Rheumatic Diseases* 77, no. 6 (June 1, 2018): 797–807, <https://doi.org/10.1136/annrheumdis-2017-212662>.

<sup>107</sup> Leavitt Partners interview with UT Health Austin Musculoskeletal Institute.

<sup>108</sup> Dell Medical School, “New Study Seeks to Prove Innovative Model of Whole-Person Health Care...,” Dell Medical School, May 5, 2021, <https://dellmed.utexas.edu/news/new-study-seeks-to-prove-innovative-model-of-whole-person-health-care-for-osteoarthritis>.

<sup>109</sup> Leavitt Partners interview with Johns Hopkins Arthritis Center.

<sup>110</sup> Wilcox et al., “Perceived Exercise Barriers, Enablers, and Benefits among Exercising and Nonexercising Adults with Arthritis: Results from a Qualitative Study.”

either created or are creating such guidance. Representatives from the ACR noted the organization is currently working on a clinical practice guideline that will complement the current guidelines for arthritis and include more counseling and treatment options for patients with rheumatoid arthritis that expand beyond pharmacological approaches, including physical activity.<sup>111</sup> SHDs may also have opportunities to support the development or dissemination of available resources. For example, the New York State Department of Health developed an online health care provider toolkit<sup>112</sup> to support providers in counseling adult patients on the benefits of physical activity. Additionally, national organization representatives from one listening session noted there are some resources to support providers in counseling patients, such as findhelp.org,<sup>113</sup> which includes a catalog of available evidence-based programs by zip code, or the Evidence Based Leadership Collaborative (EBLC) site,<sup>114</sup> which is a collaborative initiative to help find and implement evidence-based health promotion programs. However, availability of such tools is limited and focuses more on efforts to refer patients to evidence-based programs rather than resources geared at supporting provider efforts to counsel patients themselves on how to become more physically active.<sup>115</sup>

As noted above, counseling efforts should include a process to solicit a patients' own health goals, what success means to them, and what they would like to be able to do. This patient-driven outcomes discussion should be followed by a tailored recommendation from healthcare providers to help patients achieve those goals. However, providers likely need more resources to support implementing such a tailored, patient-centric approach to counseling patients with arthritis.<sup>116</sup>

## **Insufficient healthcare provider training prevents efficient and timely counseling.**

Several interviewees highlighted insufficient healthcare provider training as a barrier to counseling patients on the benefits of physical activity. A major concern across the provider and health system interviews was that primary care providers specifically do not receive sufficient training surrounding diagnosing arthritis or physical activity counseling. One rheumatologist from Johns Hopkins emphasized the lack of training among primary care providers can delay treatment up to two years due to inaccurate diagnosis.<sup>117</sup> An orthopedic surgeon added that the current system throws the bulk of the work on primary care providers that lack the necessary training surrounding musculoskeletal diseases.<sup>118</sup> Another orthopedic surgeon noted that providing education for primary care providers on musculoskeletal diseases and warning signs may lead to more timely and appropriate specialist referrals.<sup>119</sup>

One physician noted that many providers who do not receive adequate training during medical school will likely not implement it in practice, highlighting the importance of implementing training on physical activity counseling during medical school.<sup>120</sup> According to several healthcare providers, medical schools' lack of

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<sup>111</sup> Leavitt Partners interview with the American College of Rheumatology.

<sup>112</sup> New York State Department of Health, "Health Care Provider Toolkit: Physical Activity Counseling for Adults with Arthritis," New York State Department of Health, May 2021, [https://www.health.ny.gov/diseases/conditions/arthritis/provider\\_toolkit/](https://www.health.ny.gov/diseases/conditions/arthritis/provider_toolkit/).

<sup>113</sup> "Findhelp.Org, by Findhelp - The Social Care Network," findhelp.org, n.d., <https://www.findhelp.org/>.

<sup>114</sup> "Home | Evidence Based Leadership Council," n.d., <http://www.eblcprograms.org/>.

<sup>115</sup> Leavitt Partners interview with Listening Session #1.

<sup>116</sup> Leavitt Partners interview with Listening Session #1.

<sup>117</sup> Leavitt Partners interview with Johns Hopkins Arthritis Center.

<sup>118</sup> Leavitt Partners interview with UT Health Austin Musculoskeletal Institute.

<sup>119</sup> Leavitt Partners interview with Vigeo Orthopedics.

<sup>120</sup> Leavitt Partners interview with Intermountain Healthcare and the American College of Sports Medicine.

training, education, and exposure to musculoskeletal health may lead to a delay in the diagnosis and treatment of arthritic conditions.<sup>121</sup> Existing cultural barriers that can instigate fear among certain patient populations underscore the additional need for culturally appropriate healthcare provider training surrounding discussing culturally-specific concerns with patients.<sup>122</sup> Given these concerns expressed across provider interviews, there is a clear opportunity to increase training efforts among primary care providers.

In a recent Morbidity and Mortality Weekly Report (MMWR), CDC encourages incorporating counseling into clinical training curriculums and continuing education programming as a method to encourage more healthcare providers to provide counseling on the benefits of physical activity.<sup>123</sup> Several interviewees provided examples of where such efforts are taking place. For example, the University of South Carolina School of Medicine Greenville (USCM Greenville) is working to integrate the “lifestyle is medicine” curriculum into their medical school and provides training and education to physicians on the EIM model.<sup>124</sup> Similarly, representatives from the Utah Department of Health noted efforts with the Utah Physician Assistant program at the University of Utah School of Medicine to educate aspiring medical professionals about arthritis.<sup>125</sup>

Physical therapists are also working on increasing training and education opportunities to better support physical therapists in physical activity counseling opportunities. For example, the Springfield College Department of Physical Therapy developed a student coaching manual to guide the Doctor of Physical Therapy students through their role as a WWE coach and introduce key principles of the delivery model.<sup>126</sup> The coaching manual includes population health and physical therapy background information, in addition to motivational interviewing and a behavior change model.<sup>127</sup> APTA is currently working to conduct more knowledge translation of their clinical practice guidelines to make them more applicable and actionable for physical therapists.<sup>128</sup> In the development of an evidence-informed approach, consideration should be given to increasing training and education opportunities among healthcare providers, or building off existing efforts similar to those described here.

### Limited provider time during patient visits prevents effective counseling.

Across interviews, a lack of time with patients was cited as a significant provider barrier to effective counseling, noting that some specialists may only get 10 – 15 minutes with each patient while primary care providers may only get seven minutes.<sup>129</sup> The lack of time can therefore prevent more in-depth

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<sup>121</sup> Leavitt Partners interview with Vigeo Orthopedics; Leavitt Partners interview with Johns Hopkins Arthritis Center; Leavitt Partners interview with UT Health Austin Musculoskeletal Institute; Leavitt Partners interview with Listening Session #2.

<sup>122</sup> Leavitt Partners interview with Listening Session #2.

<sup>123</sup> Jennifer M. Hootman, “Health Care Provider Counseling for Physical Activity or Exercise Among Adults with Arthritis — United States, 2002 and 2014,” *MMWR. Morbidity and Mortality Weekly Report* 66 (2018), <https://doi.org/10.15585/mmwr.mm665152a2>.

<sup>124</sup> Leavitt Partners interview with Intermountain Healthcare and the American College of Sports Medicine.

<sup>125</sup> Leavitt Partners interview with Listening Session #3.

<sup>126</sup> National Association of Chronic Disease Directors, “Harnessing Physical Therapy Students to Support WWE Self-Directed Participants” (National Association of Chronic Disease Directors, April 2021), <https://actiononarthritis.chronicdisease.org/index.php?gf-download=2021%2F11%2FSpringfield-College-Arthritis-Success-Story-2021-SR.pdf&form-id=2&field-id=6&hash=fee018e276b3f800ce08c625ed707e0f8299056f382ef909036602e4b4950f62>.

<sup>127</sup> Julia Chevan et al., “Walk With Ease Self-Directed Program Student Coaching Manual v2.0” (Springfield College Department of Physical Therapy, n.d.), <https://springfield.edu/sites/default/files/inline-files/SCPT%20Student%20Health%20Coaching%20Manual%20V2.pdf>.

<sup>128</sup> Leavitt Partners interview with the American Physical Therapy Association.

<sup>129</sup> Leavitt Partners interview with Johns Hopkins Arthritis Center; Leavitt Partners interview with Listening Session #2.

conversations to counsel patients on physical activity and appropriately refer them to physical activity-based interventions.<sup>130</sup>

To supplement the limited time spent with patients in a clinical setting, providers may share resources that patients can access at home on their own time. For example, the Johns Hopkins Arthritis Center hosts a YouTube channel<sup>131</sup> with a series of educational videos for patients with various forms of inflammatory arthritis. These videos share information about the symptoms and treatment for arthritic conditions, as well as advice to help patients navigate life with their disease.<sup>132</sup> Another potential strategy to the limited time available to counsel patients and to encourage communication throughout the clinical care team and with individuals involved in administering lifestyle change programs is to conduct daily huddles to review lists of patients that may be eligible for certain programs. Montefiore Health System implemented such an approach and noted it has allowed providers to coordinate handoffs to one another and ensure that patients receive as many services as possible while they are in the office rather than needing to come back for an additional visit.<sup>133</sup> The evidence-informed approach should include similar opportunities to address limited provider time with patients, as well as other strategies explored in this report (e.g., utilizing non-traditional care members like CHWs and health coaches).

### **Patient challenges to engaging in physical activity can impact counseling efforts.**

Patient challenges to engaging in physical activity create additional barriers to counseling. Treating arthritis through physical activity relies on the ability of the patient to self-manage or care for themselves and their condition. While some approaches and innovations assist patients with arthritis, they can also reveal barriers for others. For example, one qualitative study<sup>134</sup> revealed physical, psychosocial, social, and environmental barriers to exercise for patients:

- **Physical barriers:** pain, fatigue, lack of mobility, and comorbid conditions
- **Psychological barriers:** attitudes, beliefs, fear, and perceived negative outcomes
- **Social barriers:** lack of support, no one to exercise with, and competing role responsibilities
- **Environmental barriers:** lack of programs or facilities, environmental conditions, cost concerns, and lack of transportation concerns

Several interviewees further emphasized some of the same barriers above. For example, physical and environmental barriers for rural communities came up across interviews where they stressed the lack of programs, gyms, and other opportunities.<sup>135</sup> Across interviews, fear of exercise increasing pain came up as a major barrier (discussed in further detail in the section below). Successful counseling techniques should include strategies to address such physical, psychological, social, and environmental barriers.

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<sup>130</sup> Leavitt Partners interview with Listening Session #1; Leavitt Partners interview with Johns Hopkins Arthritis Center.

<sup>131</sup> "Johns Hopkins Rheumatology - YouTube," October 20, 2020, <https://www.youtube.com/c/JohnsHopkinsRheumatology/featured>.

<sup>132</sup> Leavitt Partners interview with Johns Hopkins Arthritis Center.

<sup>133</sup> Leavitt Partners interview with Montefiore Health System.

<sup>134</sup> Wilcox et al., "Perceived Exercise Barriers, Enablers, and Benefits among Exercising and Nonexercising Adults with Arthritis: Results from a Qualitative Study."

<sup>135</sup> Leavitt Partners interview with BlueCross BlueShield of Arkansas; Leavitt Partners interview with the American Physical Therapy Association.

## Patient fear of physical activity can challenge provider counseling efforts.

Movement and correct modification of exercise activity can reduce arthritic pain, but there are misconceptions or counterinformation positing that physical activity can be detrimental and increase pain.<sup>136</sup> This represents a major barrier to counseling patients on the benefits of physical activity expressed across interviews, specifically patients fear of increasing their arthritis pain with physical activity.<sup>137</sup> In some cases, patients may use this fear to push back on provider physical activity counseling efforts.<sup>138</sup> Cultural beliefs can also increase fear of pain from physical activity, creating an additional need to address these fears with culturally appropriate approaches.<sup>139</sup>

Interviewees agreed on the need to address patient concerns and misconceptions about physical activity increasing pain and provided potential solutions to address patients' fear:<sup>140</sup>

- Develop additional patient education,<sup>141</sup> including information on how to manage pain through physical activity, and teaching exercise modifications.<sup>142</sup>
- Use additional care team members—including occupational and physical therapists, health coaches, and CHWs—to instruct patients on safe and protective methods for physical activity.<sup>143</sup>
- Provide details on the benefits of physical activity with a particular focus on the benefits of exercise in the long run.<sup>144</sup>

## Arthritis is seen as lower priority compared to other conditions.

A common sentiment discussed across interviews was that arthritis itself may not be as high of a priority for providers as other chronic diseases—such as obesity, heart disease, smoking cessation, and hypertension—and competing demands of managing patients with comorbidities can often cause providers to overlook arthritis.<sup>145</sup> Patients with multiple chronic conditions, particularly older adults with arthritis, can require complex care, which can make counseling efforts more challenging.<sup>146</sup> Providers are therefore challenged with prioritizing conditions with higher mortality rates when counseling patients with arthritis and may not have appropriate time to address a patient's arthritis concerns.<sup>147</sup>

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<sup>136</sup> Leavitt Partners interview with Intermountain Healthcare and the American College of Sports Medicine.

<sup>137</sup> Katarina Sjögren Forss, Louise Stjernberg, and Eva Ekvall Hansson, "Osteoarthritis and Fear of Physical Activity—The Effect of Patient Education," ed. Udo Schumacher, *Cogent Medicine* 4, no. 1 (January 1, 2017): 1328820, <https://doi.org/10.1080/2331205X.2017.1328820>; Ingrid Demmelmaier et al., "Trajectories of Fear-Avoidance Beliefs on Physical Activity Over Two Years in People With Rheumatoid Arthritis," *Arthritis Care & Research* 70, no. 5 (2018): 695–702, <https://doi.org/10.1002/acr.23419>.

<sup>138</sup> Leavitt Partners interview with Intermountain Healthcare and the American College of Sports Medicine.

<sup>139</sup> Leavitt Partners interview with Listening Session #2.

<sup>140</sup> Leavitt Partners interview with Listening Session #1.

<sup>141</sup> Sjögren Forss, Stjernberg, and Ekvall Hansson, "Osteoarthritis and Fear of Physical Activity—The Effect of Patient Education." Sjögren Forss, Stjernberg, and Ekvall Hansson. Sjögren Forss, Stjernberg, and Ekvall Hansson.

<sup>142</sup> Leavitt Partners interview with Intermountain Healthcare and the American College of Sports Medicine.

<sup>143</sup> Leavitt Partners interview with Johns Hopkins Arthritis Center.

<sup>144</sup> Leavitt Partners interview with Listening Session #1; Leavitt Partners interview with the American Physical Therapy Association.

<sup>145</sup> Osteoarthritis Action Alliance, "OA Comorbidities & Co-Occurring Symptom - Osteoarthritis Prevention and Management in Primary Care," September 2019, <https://oaaction.unc.edu/wp-content/uploads/sites/623/2019/08/Final-Comorbidities-and-Co-Occurring-Symptoms-final.pdf>.

<sup>146</sup> Leavitt Partners interview with Listening Session #3.

<sup>147</sup> Camille Roubille, Pierre Fesler, and Bernard Combe, "Shifting from a Rheumatologic Point of View toward Patient-Centered

When counseling patients on sometimes complex and competing health needs, it can be helpful if providers can reference options that address multiple needs rather than hyper-focusing on one condition. Multiple SHD representatives noted health systems and SHDs should take a broad approach and suggested that AAEBI referrals should be leveraged for other chronic diseases in addition to arthritis.<sup>148</sup> Two additional state health agency representatives suggested making the case for AAEBIs without focusing solely on arthritis, but rather, overarching chronic disease needs. They noted that arthritis efforts may not have as many outspoken advocates with sufficient funding and recommended identifying higher profile organizations with access to funding to propel the work forward by connecting physical activity interventions to multiple chronic disease efforts.<sup>149</sup>

### **There are limited coding and billing opportunities for arthritis counseling.**

Coding and billing for arthritis care delivery is a major pain point, particularly for providers attempting to deliver physical activity counseling. The lack of a specific current procedural terminology (CPT) code for physical activity counseling makes opportunities to bill payers for those efforts challenging. However, in January 2020 the American Medical Association (AMA) approved a list of new category III CPT codes that are specifically designated for health and wellness coaching and include physical activity related CPT codes. Category III CPT codes are not federally regulated, and therefore, reimbursement by payers for these codes is optional and payers typically wait for Category I approval before beginning reimbursement.<sup>150</sup> Additional opportunities may exist with leveraging CPT codes for self-management education programs—particularly those requiring a physical activity component—for diabetes patients. These CPT codes could represent a significant opportunity given estimates that among adults with diabetes, the prevalence of doctor-diagnosed arthritis was 47.1% between 2013 – 2015.<sup>151</sup>

To address coding and billing concerns, physicians and physical therapists may use certain ICD-10 diagnostic codes (e.g., Exercise counseling (Z71.89), Physical deconditioning (R53.81), Muscular deconditioning (R29.898)). Most opportunities for using these diagnostic codes occurs within the context of other chronic diseases (e.g., type 2 diabetes, obesity, depression, etc.). Because there is no specific CPT code for physical activity counseling, providers may use therapeutic exercise codes when teaching patients exercises to develop muscle strength and endurance, joint range of motion, and flexibility. However, a Coding and Billing Tips sheet developed by EIM and the ACSM suggests that “Bill for Time” with Evaluation & Management (E&M) codes presents an ideal opportunity to receive reimbursement for counseling efforts.<sup>152</sup> This allows a provider to bill payers if a certain percentage of the patient visit was spent on

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Care in Rheumatoid Arthritis with an Integrated Management of Comorbidities,” *The Journal of Rheumatology* 46, no. 6 (June 1, 2019): 545–47, <https://doi.org/10.3899/jrheum.181379>.

<sup>148</sup> Leavitt Partners interview with Listening Session #3.

<sup>149</sup> Leavitt Partners interview with Listening Session #2.

<sup>150</sup> Physical Activity Alliance, “Physical Activity Related Current Procedural Terminology (CPT) Codes,” n.d., <https://paamovewithus.org/wp-content/uploads/2021/09/PAA-Physical-Activity-CPT-Codes-Nov-2020-AMA-Approved-Final.pdf>.

<sup>151</sup> Kamil E. Barbour et al., “Vital Signs: Prevalence of Doctor-Diagnosed Arthritis and Arthritis-Attributable Activity Limitation — United States, 2013–2015,” *MMWR. Morbidity and Mortality Weekly Report* 66 (March 7, 2017), <https://doi.org/10.15585/mmwr.mm6609e1>.

<sup>152</sup> Exercise is Medicine and American College of Sports Medicine, “The Challenge of Reimbursement - Coding and Billing Tips,” 2019, [https://www.dropbox.com/sh/to0xn1z3d3atnex/AABkWN5uEsWHzLg4KPhfGXS\\_a/Resources?dl=0&preview=EIM\\_Provider+Coding+Tip+Sheet.pdf&subfolder\\_nav\\_tracking=1](https://www.dropbox.com/sh/to0xn1z3d3atnex/AABkWN5uEsWHzLg4KPhfGXS_a/Resources?dl=0&preview=EIM_Provider+Coding+Tip+Sheet.pdf&subfolder_nav_tracking=1).

counseling the patient on physical activity and/or exercise.

On the payer side, interviewees noted each payer may have varying member benefits for physical activity (e.g., gym memberships, subscription to exercise programs, etc.) or “in-house” programs that their members may choose to join (e.g., UnitedHealthcare’s Renew Active program). While these added member benefits are helpful, members and their providers may not be aware of them. Additionally, billable events vary across payers where one payer contract may only consider the completion of a program as a billable event, and another payer contract may include outreach, sign-up, and program attendance as billable events.<sup>153</sup> Therefore, an added complexity occurs when a provider must bill different payers at different moments during counseling and/or referral efforts depending on the patient’s insurer and/or provider contracts.

### **There is a lack of value-based reimbursements for arthritis counseling.**

Value-based care models promote and support coordinated and patient-centered care. A rheumatoid arthritis-focused roundtable held in 2018 by the National Committee of Quality Assurance (NCQA) discussed efforts and barriers to developing a value-based care model for rheumatoid arthritis. Three barriers identified include the financial cost of practice transformation, the administrative investment required for practice transformation, and complications arising from a heterogeneous patient population.<sup>154</sup> While opportunities for value-based arthritis care are rare and more work needs to be done to design contracts that incentivize and enable value-based care,<sup>155</sup> the lack of value-based opportunities can be seen as both a barrier and an opportunity to improve arthritis counseling efforts.

A representative from APTA noted that payment for physical therapist screening, counseling, and referring activities is a barrier and bundled payment models may enable physical therapists delivering arthritis care.<sup>156</sup> The UT Health Austin Musculoskeletal Institute currently has one bundled payment contract which covers a large portion of their population. However, they are not compensated under a value-based contract for the bulk of their effort to improve outcomes and avoid unnecessary costs.<sup>157</sup> Another interviewee highlighted a current value-based model related to screening for obesity, which could represent an opportunity to encourage efforts to counsel patients on physical activity, and a potential example for applying this to patients with arthritis.<sup>158</sup> A representative from Intermountain Healthcare also studied self-reported physical activity data and healthcare utilization and cost among patients with various cardiovascular and chronic diseases. They found much lower healthcare utilization among patients who were meeting the recommended levels of physical activity and the data and results significantly influenced the benefit design at SelectHealth, Intermountain’s healthcare insurance company.<sup>159</sup> These and other value-based care models, including the challenges and barriers, should be examined in efforts to create an evidence-informed approach to bill for services.

One interviewee noted that value-based arrangements could address payer concerns surrounding lost

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<sup>153</sup> Leavitt Partners interview with Listening Session #2.

<sup>154</sup> National Committee for Quality Assurance, “Rheumatoid Arthritis: Transforming Care Delivery to a Value-Based Model” (National Committee for Quality Assurance, July 2019), <https://www.ncqa.org/wp-content/uploads/2019/07/NCQA-Rheumatoid-WhitePaper.pdf>.

<sup>155</sup> Leavitt Partners interview with UT Health Austin Musculoskeletal Institute.

<sup>156</sup> Leavitt Partners interview with the American Physical Therapy Association.

<sup>157</sup> Leavitt Partners interview with UT Health Austin Musculoskeletal Institute.

<sup>158</sup> Leavitt Partners interview with BlueCross BlueShield of Arkansas.

<sup>159</sup> Leavitt Partners interview with Intermountain Healthcare and the American College of Sports Medicine.

revenue due to improved member health outcomes.<sup>160</sup> There may also be opportunities to partner with research arms within payer organizations around value-based arrangements.<sup>161</sup> Additionally, arthritis may be a good candidate for the Value-Based Insurance Design (VBID) Model process<sup>162</sup> with the Center for Medicaid and Medicare Services (CMS) because it is a chronic disease that requires more time to evaluate the impact of an intervention.<sup>163</sup>

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<sup>160</sup> Leavitt Partners interview with Humana Kansas.

<sup>161</sup> Leavitt Partners interview with Humana Kansas.

<sup>162</sup> Center for Medicare and Medicaid Innovation, "Value-Based Insurance Design Model (VBID) Fact Sheet Calendar Year (CY) 2022," 2022, <https://innovation.cms.gov/media/document/vbid-cy2022-model-overview-fact-sheet>.

<sup>163</sup> Leavitt Partners interview with Humana Kansas.

## Section 3: Referral to Physical Activity-Based Interventions

As indicated above, physical activity has shown to reduce pain and improve function and quality of life for individuals with arthritis, as well as other chronic conditions. Multiple physical activity-based interventions and self-management education programs have proven to help individuals manage their arthritis, including AAEBIs<sup>164</sup> and interventions that are recognized by the CDC<sup>165</sup> as "promising" or on the "program watch list" (see Appendix C). The availability of different programs varies across the country, and the addition of mailed, self-directed, and online programs may improve access, particularly for individuals in rural areas. Programs tend to be implemented by CBOs—like YMCAs or Area Agencies on Aging (AAA)—and SHDs and are usually supported by grant funding. Common characteristics of AAEBIs include:

- Low impact exercise
- Balance and coordination training
- Small group activities (e.g., less than 20 people)
- Goal setting exercises
- Instruction on managing chronic disease (e.g., action planning, problem-solving, decision making)
- Focus on confidence and motivation
- Commonly delivered through CBOs or health departments

It is also important to note that other interventions exist beyond AAEBIs to manage arthritis. For example, the 2019 ACR/Arthritis Foundation Guideline for the Management of Osteoarthritis of the Hand, Hip, and Knee recommends cane use, braces, massage therapy, cognitive behavioral therapy, and other physical, psychosocial, and mind-body approaches.<sup>166</sup> These approaches should be considered alongside physical activity-based interventions and treatment.

Providers play a key role in referring eligible patients to physical activity-based interventions that fit their patients' needs and readiness level. The following section summarizes key learnings from the secondary literature scan and interviews related to referrals to physical activity-based interventions and identifies key barriers and challenges for consideration when developing an evidenced-informed approach.

### Key Learnings

#### **Despite access challenges to AAEBIs, tools and resources exist to support provider referral efforts.**

Despite the availability of AAEBIs and other physical activity-based interventions, there are several barriers

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<sup>164</sup> Osteoarthritis Action Alliance, "Arthritis-Appropriate, Evidence-Based Interventions (AAEBI)," Osteoarthritis Action Alliance, accessed August 22, 2022, <https://oaaction.unc.edu/aaebi/>.

<sup>165</sup> Centers for Disease Control and Prevention, "Arthritis Lifestyle Management Programs," Centers for Disease Control and Prevention, April 8, 2022, <https://www.cdc.gov/arthritis/interventions/index.htm>.

<sup>166</sup> Sharon L. Kolasinski et al., "2019 American College of Rheumatology/Arthritis Foundation Guideline for the Management of Osteoarthritis of the Hand, Hip, and Knee," *American College of Rheumatology* 72, no. 2 (February 2020): 220–33, <https://doi.org/10.1002/art.41142>.

to accessing these interventions. For example, a 2013 study<sup>167</sup> of the Stanford Arthritis Self-Management Program (similar to Better Choices Better Health for Arthritis) interviewed individuals who were unable to participate in all six weeks of the course. Common barriers to their participation included limited mobility or physical injury, illness, or being in too much pain to attend. Participants also reported doubts about the program's ability to benefit them, concerns with the time commitment, or issues fitting the classes into their schedule. While online and self-directed classes can help overcome some of these access issues, patients with arthritis can have disease-related physical limitations,<sup>168</sup> which act as barriers that programs like this will have to contend with. Another recent study<sup>169</sup> interviewed CBOs who implemented WWE and all sites experienced issues recruiting participants for programs, with two sites not identifying a single participant for the first six months. Despite these access challenges, there are opportunities for providers to play a stronger role in referring patients to AAEBIs, and several tools and resources exist to support in these efforts.

A systematic review published by the CDC<sup>170</sup> suggests that PAVS could be used as a starting point for referrals to identify patients who would benefit from exercise counseling or physical-activity interventions. In addition, the OAAA<sup>171</sup> provides resources and guidelines on using PAVS to assist providers with assessing physical activity goals for patients, weight loss guidelines, and how to engage patients in evidence-based self-management education programs; OACareTools<sup>172</sup> to help expand providers knowledge of osteoarthritis and how to support adults with arthritis; and resources to support referrals to WWE, Chronic Disease Self-Management Program suite, Fit and Strong, Active Living Every Day, and Enhance Fitness. Finally, the "Exercise is Medicine Health Care Providers' Action Guide"<sup>173</sup> provides physical activity referral guidelines such as referring patients to programs, places, professionals, or recommended active transportation and self-directed resources (e.g., website, phone applications, activity trackers, etc.) that will best support their needs and interests. These tools may be used to educate and support providers on referral best practices and may ultimately increase referral rates.

## Connecting individuals to resources through community-based work is a popular strategy for improving access.

From April 2018 through December 2019, the CDC partnered with the National Parks and Recreation Association (NPR) to implement a referral process between CBOs and healthcare organizations. The goal of this intervention<sup>174</sup> was to strengthen relationships between healthcare providers and CBOs to better

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<sup>167</sup> Ilana N. Ackerman, Rachele Buchbinder, and Richard H. Osborne, "Factors Limiting Participation in Arthritis Self-Management Programmes: An Exploration of Barriers and Patient Preferences within a Randomized Controlled Trial," *Rheumatology* 52, no. 3 (March 1, 2013): 472–79, <https://doi.org/10.1093/rheumatology/kes295>.

<sup>168</sup> Unnur Petursdottir, Solveig A. Arnadottir, and Sigridur Halldorsdottir, "Facilitators and Barriers to Exercising Among People With Osteoarthritis: A Phenomenological Study," *Physical Therapy* 90, no. 7 (July 1, 2010): 1014–25, <https://doi.org/10.2522/ptj.20090217>.

<sup>169</sup> Leigha H. Vilen, Mary Altpeter, and Leigh F. Callahan, "Overcoming Barriers to Walk With Ease Implementation in Community Organizations," *Health Promotion Practice*, April 2, 2021, 152483992110028, <https://doi.org/10.1177/15248399211002851>.

<sup>170</sup> Golightly et al., "Physical Activity as a Vital Sign."

<sup>171</sup> Osteoarthritis Action Alliance, "Nonpharmacologic Management - Referral to Other Specialties," Osteoarthritis Prevention & Management in Primary Care, n.d., <https://oaaction.unc.edu/oa-module/oa-treatment/nonpharmacologic/>.

<sup>172</sup> "OACareTools - Healthcare Providers," Osteoarthritis Action Alliance, n.d., <https://oaaction.unc.edu/oacaretools/oacaretools-healthcare-providers/>.

<sup>173</sup> American College of Sports Medicine, "Health Care Providers' Action Guide."

<sup>174</sup> Leisha E.K. Spencer-Brown et al., "Evaluation of an Electronic Health Record Referral Process to Enhance Participation in Evidence-Based Arthritis Interventions," *Preventing Chronic Disease* 18 (May 2021), <https://doi.org/10.5888/pcd18.200484>.

deliver AAEBIs. Of the 3,660 referred patients, 29 percent (1,063) engaged in an AAEBI. The success of the referral engagement rate was attributed to increased awareness of the availability of AAEBIs, improved credibility for AAEBIs due to provider involvement, a sense of community cohesion and trust for the park and recreation agency, and a reduction in barriers—such as cost and transportation—to participation in AAEBIs.

Many interviewees noted the importance this type of effort to connect community members to the right resources to enhance referral efforts to evidence-based interventions. For example, a UnitedHealthcare representative noted that the payer utilized their partnerships with YMCAs to pilot member access to YMCA condition-based programs because they see YMCA as a trusted health and wellness advisor for patients.<sup>175</sup> Similarly, a representative from Y-USA highlighted the Bidirectional Services eReferral (BSeR) project, which includes FHIR standard interoperability language and focuses on six disease condition domains that help facilitate referrals from the clinical environment to the community. While arthritis is one of the six disease condition domains for the BSeR project, none of the current pilots are focused on arthritis.<sup>176</sup> A representative from Humana noted the payer utilizes care managers and social workers to connect patients to resources and guide them to community programs.<sup>177</sup> A representative from Montefiore Health System stated the importance of meeting the community where they are and addressing their unique needs and challenges, adding this can be a way to leverage community-based programs to deliver lifestyle change programs. They felt this was a great way to target niche communities and tailor health information in culturally appropriate ways. They found that participants joined sessions to receive health-related information in addition to an opportunity for social interaction.<sup>178</sup> These examples show the role that payers and providers all can play in referring individuals to community-based programs, including physical activity-based interventions.

### **Centralized referral models ease provider and payer burden.**

One strategy for facilitating referrals to physical activity-based programs is having a centralized source for referrals that allows providers or payers to have a single point of contact rather than identifying and developing workflows or contracting with multiple CBOs to provide a variety of programs.

One provider from Johns Hopkins discussed the role an arthritis advocacy organization played in the past as a centralized, trusted referral source to connect providers with AAEBIs. The organization had strong connections to community resources, including CBOs and AAEBIs, and providers trusted them to assist patients who they referred to the organization. Having this centralized referral partner was a huge benefit to the health system.<sup>179</sup> Similarly, Silver Sneakers acts as a centralized source for Medicare patients to engage in programs hosted at CBOs. One payer representative described the convenience of partnering with the Silver Sneakers organization. Rather than negotiating individual contracts with each CBO delivering the program across the country, the payer has a single contract with Silver Sneakers, which manages downstream contracts with CBOs on behalf of the payer. This way, all patients on the Medicare Advantage plan can get access to the Silver Sneakers program in their area with very little effort from their payer or

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<sup>175</sup> Leavitt Partners interview with UnitedHealthcare, May 10, 2022.

<sup>176</sup> Leavitt Partners interview with Listening Session #1.

<sup>177</sup> Leavitt Partners interview with Humana Kansas.

<sup>178</sup> Leavitt Partners interview with Montefiore Health System.

<sup>179</sup> Leavitt Partners interview with Johns Hopkins Arthritis Center.

providers.<sup>180</sup>

The Minnesota Department of Health found a comparable solution for connecting older adults with chronic diseases to evidence-based classes in their area by providing patients access to Juniper, a platform for patients to find and enroll in classes that fit their needs. The platform also allows providers to refer patients to programs and collects data on the patient's participation.<sup>181</sup> A representative from The Healthy Living Center of Excellence in Massachusetts described their efforts towards maintaining a bidirectional referral process. They contract with a managed care organization (MCO), where their providers refer patients into a wide variety of evidence-based programs. The Healthy Living Center of Excellence signed a plethora of Health Information Portability and Accountability Act (HIPAA) and Business Associate Agreements (BAAs), and the MCO provides an internal registry of around 100 people they are interested in referring that month. The two organizations work on collaborative outreach to those patients and utilize motivational interviewing to pull them into the programs. Within this same contract agreement, the Healthy Living Center of Excellence sees self-referrals where a patient attends a workshop, and the patient's healthcare provider is contacted to see if they would be a good fit for the program and subsequently referred.<sup>182</sup> Incorporating a centralized referral platform or model similar to those described here should be considered in the evidence-informed approach as one method to reduce provider and payer burden around referral efforts.

## Key Barriers and Challenges

### Access to programs is limited in rural areas.

Arthritis affects nearly one in three adults in rural areas<sup>183</sup> and several interviewees noted that rural communities often face increased barriers to accessing physical activity interventions compared to urban areas (e.g., gyms, programs, AAEBIs, or other opportunities).<sup>184</sup> As a result, CDC recommends<sup>185</sup> targeting interventions to address rural disparities among patients with arthritis.

One orthopedic surgeon noted that referral efforts often depend on an institution's location and resources. For example, institutions in urban areas typically have access to care navigators that can take on referral efforts and increase referral capabilities.<sup>186</sup> In rural areas, providers likely do not have access to care navigators and therefore must play a bigger role themselves in seeking out opportunities for their patients.<sup>187</sup> However, the limited time available with each patient makes this challenging. Providers in rural areas and smaller communities may therefore prefer to leverage community-based organizations (CBOs) (e.g., churches and local groups) who can facilitate program outreach efforts.<sup>188</sup>

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<sup>180</sup> Leavitt Partners interview with Humana Kansas.

<sup>181</sup> Leavitt Partners interview with Listening Session #3.

<sup>182</sup> Leavitt Partners interview with Listening Session #2.

<sup>183</sup> Michael A. Boring et al., "Prevalence of Arthritis and Arthritis-Attributable Activity Limitation by Urban-Rural County Classification — United States, 2015," *MMWR. Morbidity and Mortality Weekly Report* 66 (2017), <https://doi.org/10.15585/mmwr.mm6620a2>.

<sup>184</sup> Leavitt Partners interview with BlueCross BlueShield of Arkansas; Leavitt Partners interview with the American Physical Therapy Association.

<sup>185</sup> Boring et al., "Prevalence of Arthritis and Arthritis-Attributable Activity Limitation by Urban-Rural County Classification — United States, 2015." Boring et al. Boring et al.

<sup>186</sup> Leavitt Partners interview with Vigeo Orthopedics.

<sup>187</sup> Leavitt Partners interview with Vigeo Orthopedics; Leavitt Partners interview with BlueCross BlueShield of Arkansas.

<sup>188</sup> Leavitt Partners interview with BlueCross BlueShield of Arkansas.

One potential solution to rural disparities is the use of telehealth. A few studies have shown positive results with using videoconferencing<sup>189</sup> and other various forms of telehealth<sup>190</sup> to provide services to patients with arthritis in rural communities. While telehealth can be cost-effective and advantageous for some patients, there may be potential technological barriers to consider among rural populations as well. The CDC also promotes the remote delivery of self-management education and physical activity programs that may offset some of the burden for providers and challenges of rurality, including transportation and program access and availability. Examples of AAEBIs that can be delivered remotely include WWE – Self-Directed or online Chronic Disease Self-Management Programs (CDSMP).<sup>191</sup> For example, the Oregon Health Authority’s Arthritis Program is partnering with Oregon State University (OSU) Extension Service to bring the self-directed version of WWE to rural communities in Oregon. The OSU Extension has developed tools to enhance the self-directed WWE program, such as weekly emails from a trained leader and links to additional resources. Each participant commits to self-directed walking sessions three times a week. For people in rural areas, the classes break down barriers to in-person WWE classes, including time and travel. Both the self-directed and group WWE programs allow participants to go at their own pace, on their own time, to improve their arthritis symptoms.<sup>192</sup>

Leveraging CBOs and telehealth represent just two potential methods to increase referrals to physical activity-based interventions in rural communities.

### **Integrating referral processes into existing workflows can be difficult for providers and community-based organizations.**

Several studies have evaluated the effectiveness of integrating referral efforts to physical activity programs into the clinical workflow. One study examined effectiveness of a clinic-based PAVS assessment and referral protocol to YMCA exercise programs compared to PAVS alone. The study found improvements in self-reported physical activity after twelve weeks in the PAVS plus referral group.<sup>193</sup> Several other meta-analyses and systematic reviews found that physician counseling and exercise referral programs improve patient’s physical activity for up to twelve months.<sup>194</sup>

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<sup>189</sup> Regina Taylor-Gjevre et al., “Addressing Rural and Remote Access Disparities for Patients with Inflammatory Arthritis through Video-Conferencing and Innovative Inter-Professional Care Models,” *Musculoskeletal Care* 16, no. 1 (March 8, 2018): 90–95, <https://doi.org/10.1002/msc.1215>.

<sup>190</sup> Michael Jong and Majed Kraishi, “A Comparative Study on the Utility of Telehealth in the Provision of Rheumatology Services to Rural and Northern Communities,” *International Journal of Circumpolar Health* 63, no. 4 (December 2004): 415–21, <https://doi.org/10.3402/ijch.v63i4.17758>.

<sup>191</sup> “Remote Delivery of Evidence-Based Programs for Chronic Disease,” May 24, 2021, <https://www.cdc.gov/arthritis/interventions/remote/index.html>.

<sup>192</sup> CDC, “Managing Arthritis in Rural Areas,” Centers for Disease Control and Prevention, February 12, 2020, <https://www.cdc.gov/arthritis/communications/features/rural.htm>.

<sup>193</sup> Gregory W. Heath, Victor O. Kolade, and James W. Haynes, “Exercise Is Medicine™: A Pilot Study Linking Primary Care with Community Physical Activity Support,” *Preventive Medicine Reports* 2 (January 1, 2015): 492–97, <https://doi.org/10.1016/j.pmedr.2015.06.004>.

<sup>194</sup> Nefyn H Williams et al., “Effectiveness of Exercise-Referral Schemes to Promote Physical Activity in Adults: Systematic Review,” *The British Journal of General Practice* 57, no. 545 (December 1, 2007): 979–86; G. Orrow et al., *Effectiveness of Physical Activity Promotion Based in Primary Care: Systematic Review and Meta-Analysis of Randomised Controlled Trials, Database of Abstracts of Reviews of Effects (DARE): Quality-Assessed Reviews [Internet]* (Centre for Reviews and Dissemination (UK), 2012), <https://www.ncbi.nlm.nih.gov/books/NBK121691/>; Alvaro Sanchez et al., “Effectiveness of Physical Activity Promotion Interventions in Primary Care: A Review of Reviews,” *Preventive Medicine*, Supplement Issue: Health Promotion and Disease Prevention in Primary Health Care: a focus on complex and multi-risk interventions, 76 (July 1, 2015): S56–67, <https://doi.org/10.1016/j.yjmed.2014.09.012>.

While providers may understand the important role physical activity can play in the treatment and management of arthritis and despite evidence of improved physical activity among patients referred to physical activity-based programs, significant challenges were raised in our interviews. A representative from Montefiore Health system noted that if processes to screen and refer patients to programs that support physical activity are not well-integrated into existing workflows, execution will be inadequate and may increase provider burnout.<sup>195</sup> An Intermountain Healthcare interviewee pointed to difficulties in asking providers to screen patients and refer them to community-based physical activity programs, particularly if EHRs are not set up to capture data from screenings or communicate with CBOs for referral.<sup>196</sup> This barrier was so significant for another provider that they decided to forgo external programs entirely, opting instead to build physical activity-based treatment programs internally in order to facilitate better data visibility and closed-loop referrals.<sup>197</sup> Some providers even face difficulties referring patients to other providers when workflows are not set up to appropriately facilitate referrals (e.g., handoffs between primary care providers and physical therapists).<sup>198</sup> While there is strong evidence for integrating referral efforts into the clinical workflow, an evidence-informed approach will need to address the challenges described above.

In addition to integrating referral processes into the clinical workflow, physical activity-based interventions are often hosted by CBOs who need to stand up the infrastructure to receive these referrals. Many of these community organizations currently receive referrals through fax. Updating processes to integrate digital referrals requires significant effort and resources, particularly if the CBOs must prepare to receive referrals from several different providers.<sup>199</sup> Oftentimes, these organizations do not have the infrastructure or resources to update their systems or purchase a technology referral platform that aligns with the providers referral system. As efforts to integrate referral processes into clinical workflows are discussed, consideration should be given to the challenges that might arise from the organizations that are receiving the referrals.

### **Payer efforts to refer members to programs are limited.**

Each of the payer interviewees confirmed that payer referral efforts are limited to varying extents by several factors, and that payers typically prefer to remain hands-off. They added payers do not normally offer guidance to providers on how to refer members, and only provide benefits or reimbursements for physical activity (e.g., Silver Sneakers), not arthritis-specific interventions.<sup>200</sup> These programs are generally covered for only Medicare Advantage (MA) members as well. This lack of benefits or reimbursements for physical activity may be related to payer hesitancy surrounding care beyond hospitals; one payer noted that it is difficult to convey that healthcare is more than just provider interactions.<sup>201</sup> The interviewees noted payers also face challenges in demonstrating cost avoidance for programs, which can make it difficult to prove their value and expand their reach.<sup>202</sup> Some of the major barriers to payers piloting a program, for example, include showing the value of the benefit and then funding the pilot.<sup>203</sup>

Although payer referral efforts are limited, interviewees posited some payers' current efforts signify future

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<sup>195</sup> Leavitt Partners interview with Montefiore Health System.

<sup>196</sup> Leavitt Partners interview with Intermountain Healthcare and the American College of Sports Medicine.

<sup>197</sup> Leavitt Partners interview with Montefiore Health System.

<sup>198</sup> Leavitt Partners interview with the American Physical Therapy Association.

<sup>199</sup> Leavitt Partners interview with Listening Session #2.

<sup>200</sup> Leavitt Partners interview with Humana Kansas; Leavitt Partners interview with BlueCross BlueShield of Arkansas.

<sup>201</sup> Leavitt Partners interview with Humana Kansas.

<sup>202</sup> Leavitt Partners interview with Humana Kansas.

<sup>203</sup> Leavitt Partners interview with UnitedHealthcare.

opportunities. For example, utilizing payer care and case management to connect members to resources and guide them to community programming<sup>204</sup> could indicate an opportunity to refer patients to programs through existing payer resources without increasing provider workloads.

An interviewee from Humana Kansas highlighted another potential opportunity to use predictive analytics to look at claims data and predict which members are good candidates for physical activity-based interventions and programs.<sup>205</sup> This data could then be given to healthcare providers (perhaps those with risk sharing contracts) or even care or case managers to connect members to interventions and programs. For example, Humana Kansas partners with provider groups to refer members to the National Diabetes Prevention Program lifestyle change program (National DPP). The payer sends the provider groups lists of members that are exhibiting risks related to pre-diabetes and diabetes and guides the providers to send members to the National DPP. Similar predictive analytics capabilities could be coordinated by payers and applied to identify members that could benefit from physical activity-based interventions and programs specific to patients with arthritis. However, while payers could engage in data-sharing efforts to identify referral opportunities, the interviewee added they may be hesitant to share such data (with providers, specifically); payers generally prefer not to share proprietary information on members.<sup>206</sup>

A UnitedHealthcare representative noted that they have taken steps to create their own fitness program. While Renew Active<sup>207</sup> is not designed specifically for patients with arthritis, many of the fitness and related services in the program, which is available to Medicare Advantage members, could be beneficial for these patients. The primary benefit included in Renew Active is free access to a network of 23,000 gyms across the country, but patients also gain access to digital workout videos, virtual classes, and a personalized fitness plan. Outreach teams at UnitedHealthcare work with providers to ensure they are aware of the benefit and can offer it to eligible patients. The interviewee added the payer is also hoping to create a pilot program based on YMCA's condition-based programs. Once studied and reviewed for success and value, these efforts could be used as a model when approaching pilot programs, specifically focusing on addressing important needs for target populations, compensation contracts with fitness centers, and connecting with providers on available resources.<sup>208</sup> Utilizing care and case managers, leveraging predictive analytics to identify eligible members, and including gym membership and other program membership or opportunities as a member benefit all represent opportunities for payers to contribute to physical activity-based intervention referral efforts.

### **Opportunities for reimbursement and funding for referral efforts are limited.**

A primary barrier preventing the referral of patients to physical activity-based interventions is the lack of reimbursement or sustainable funding for the referral to and delivery of these programs. Frequently, even if providers are aware of AAEBIs and have processes to refer patients to programs, these efforts are uncompensated by payers.<sup>209</sup> Organizations administering these programs are typically funded through a blend of grant funding and payments from participants. Furthermore, grants from SHDs face competing

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<sup>204</sup> Leavitt Partners interview with Humana Kansas; Leavitt Partners interview with BlueCross BlueShield of Arkansas.

<sup>205</sup> Leavitt Partners interview with Humana Kansas.

<sup>206</sup> Leavitt Partners interview with Humana Kansas.

<sup>207</sup> "Medicare Fitness Program | UHC Renew Active," n.d., <https://uhcrenewactive.com/home>.

<sup>208</sup> Leavitt Partners interview with UnitedHealthcare.

<sup>209</sup> Leavitt Partners interview with the American Physical Therapy Association; Leavitt Partners interview with Listening Session #1.

funding priorities and are not always guaranteed from one grant cycle to the next.<sup>210</sup> When reimbursement opportunities do exist, a representative from Montefiore Health System recommended including the coding and billing departments within health systems when designing referral procedures to ensure seamless reimbursement occurs.<sup>211</sup>

As noted previously, the Exercise is Medicine Coding and Billing Tips Sheet<sup>212</sup> provides some helpful advice on securing reimbursement for screening, counseling, and referral for exercise-based interventions, particularly by using evaluation and management codes.<sup>213</sup> However, while some providers may be able to access some reimbursement for referral efforts by documenting evaluation and management codes, this reimbursement often does not represent the level of effort put toward referral processes and the codes are not available to all providers. For instance, surgical or post-operative providers may have a particularly difficult time garnering reimbursement through these codes.<sup>214</sup>

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<sup>210</sup> Leavitt Partners interview with Listening Session #3.

<sup>211</sup> Leavitt Partners interview with Montefiore Health System.

<sup>212</sup> Exercise is Medicine and American College of Sports Medicine, “The Challenge of Reimbursement.”

<sup>213</sup> Leavitt Partners interview with Listening Session #2.

<sup>214</sup> Leavitt Partners interview with Vigeo Orthopedics.

## Section 4: Key Considerations for Development of an Evidence-Informed Approach

The primary and secondary research conducted also sheds light on several overall key considerations for developing an evidence-informed approach to increase providers' function, pain, and physical activity screenings; patient counseling on the benefits of physical activity; and referrals to AAEBIs.

### Increase integration efforts.

#### Screening

A variety of discussions in interviews and listening sessions revealed opportunities to encourage and increase screening integration into the clinical workflow. For instance, the Montefiore Health System interviewee noted focusing on initial clinical leadership buy-in to further encourage their arthritis-related screening integration.<sup>215</sup> They also determined screening integration would require both formal and informal leaders to champion change.

One interview suggested that implementing screening strategies that physicians are already familiar with—such as the SBIRT model—may simplify the process.<sup>216</sup> The EIM model represents another beneficial opportunity; it was developed to fit within existing clinical workflows where healthcare providers are already familiar with such a process, circumventing the need to teach a new provider approach. Identifying simplified and streamlined models and processes could likely aid screening integration efforts, particularly as they relate to provider satisfaction and comfort.

As noted previously, several health systems have successfully integrated PAVS into their EHRs. However, they described these efforts as very time-intensive and difficult.<sup>217</sup> According to one interview, if these challenges can be overcome, integrating screening measures into EHRs might better position providers to receive reimbursement.<sup>218</sup> Increased reimbursement could thus help to make the case for screening integration.

An evidence-informed approach should consider obtaining diverse leadership buy-in, leveraging familiar models and processes to minimize provider disruption, and preparing for challenges around EHR integration efforts by identifying the benefits of increasing screening integration efforts. Keep in mind additional chronic diseases that could benefit from increased arthritis-related screening efforts and include them in decision-making processes where relevant.<sup>219</sup> For example, 33.7 percent of adults who have arthritis also have diabetes, and 36.4 percent of adults who have arthritis also have heart disease.<sup>220</sup>

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<sup>215</sup> Leavitt Partners interview with Montefiore Health System.

<sup>216</sup> Leavitt Partners interview with Intermountain Healthcare and the American College of Sports Medicine.

<sup>217</sup> Leavitt Partners interview with Baylor Scott and White.

<sup>218</sup> Leavitt Partners interview with Baylor Scott and White.

<sup>219</sup> Leavitt Partners interview with Listening Session #2.

<sup>220</sup> Centers for Disease Control and Prevention, "National Statistics Text Descriptions | Data and Statistics | Arthritis," October 2, 2018, [https://www.cdc.gov/arthritis/data\\_statistics/national-statistics-text-version.html](https://www.cdc.gov/arthritis/data_statistics/national-statistics-text-version.html).

## Counseling

Increasing arthritis-related counseling integration efforts largely revolves around the care team. Encouraging other care team members—particularly non-physician care team members—to screen, counsel, and refer patients can relieve burden on providers.<sup>221</sup> The evidence-informed approach should consider including an integrated care team inclusive of physicians, nurses, physical therapists, occupational therapists, exercise physiologists, care coordinators, CHWs, mental health specialists, health coaches, and others who are well-coordinated to provide patient-centered care.

Emphasizing patient-centered care can also assist with increasing counseling integration efforts. Patient-centered care refers to working with each patient to identify their unique goals and priorities and considers their level of readiness for various treatment and management options.<sup>222</sup> An evidence-informed approach should work to develop an integrated, coordinated care team focused on patient-centered care, as it can significantly improve and increase counseling integration efforts.

## Referring

Working to increase arthritis-related referral integration efforts includes ensuring referrals are made and documented, and that follow-up with the patient occurs to see if they attended the program they were referred to. Follow-up with physicians (when their patient joined a program) and how their patient did (progress throughout the program), increases confidence and trust in the referring provider. Montefiore Health System accomplished this with their National DPP where they provided patient progress or success story data back to the referring provider. This data served as a positive reinforcement tool for providers as they could see the progress of their patients.<sup>223</sup> Representatives from APTA also expressed the desire for a closed-loop referral system so physical therapists can hear about the success of the programs or patients that enrolled in them.<sup>224</sup>

Interviewees expressed difficulties achieving a two-way referral system. For example, one interviewee noted that their patients are typically referred to CBOs, which likely do not have the necessary infrastructure or resources to incorporate a bi-directional referral process.<sup>225</sup> They added that some program management platforms with bi-directional referral capabilities may be more feasible for CBOs. Additionally, integrating a bi-directional referral process that is feasible for both providers and CBOs (or other organizations) will be a challenge; however, it could add significant value for involved parties and increase referral integration efforts.

Finally, access to a centralized source for referrals has proven to be of significant value to providers. A central referral platform allows providers to have a single point of contact rather than identifying and developing workflows with several programs across multiple CBOs, and thus reducing provider burden. Given the value of a bi-directional referral system and a centralized referral platform expressed from several providers across interviews and listening sessions, an evidence-informed approach should include these as

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<sup>221</sup> Leavitt Partners interview with Listening Session #2.

<sup>222</sup> Leavitt Partners interview with UT Health Austin Musculoskeletal Institute; Leavitt Partners interview with the American Physical Therapy Association.

<sup>223</sup> Leavitt Partners interview with Montefiore Health System.

<sup>224</sup> Leavitt Partners interview with the American Physical Therapy Association.

<sup>225</sup> Leavitt Partners interview with Listening Session #2.

components to increasing referral integration efforts.

## **Strengthen incentive opportunities in arthritis screening, counseling, and referring.**

A barrier to incentivizing opportunities in arthritis screening, counseling, and referring is the lack of reimbursement related to coding and billing issues. A potential solution to the CPT coding issue discussed above is that physicians and physical therapists may use therapeutic exercise codes to receive reimbursement for teaching patients exercises to develop muscle strength and endurance, joint range of motion, and flexibility. Another potential opportunity for additional reimbursement is via Health and Well-Being Coaching Category III CPT Codes.<sup>226</sup> These allow a health coach—defined as a non-physician healthcare provider who is certified by the National Board for Health and Wellness Coaching (NBHWC) or the National Board of Medical Examiners (NBME)—to provide coaching services to individuals to better manage their chronic diseases using three CPT codes. However, these CPT codes were approved in 2019 and are only in effect for five years. During that timeframe, many hope that sufficient data will be collected to show the effectiveness of coaching and ultimately result in the approval of Category I codes. Currently, reimbursement by payers for the temporary Category III codes is optional and payers typically wait for Category I approval before beginning reimbursement. Additional opportunities may exist to partner with payers willing to reimburse for these Category III CPT codes. An evidence-informed approach should take reimbursement barriers related to coding and billing concerns into consideration.

Providers are increasingly incentivized to make cost effective decisions to improve the health of their patient populations through a variety of public and private payment arrangements. These payment arrangements are designed to promote quality by rewarding patient-centered, efficient, coordinated, and evidence-based care. However, our research indicates that value-based arthritis care opportunities are rare. This presents a unique opportunity to integrate value-based arthritis care into the development of an evidence-informed approach, likely seen in a VBID model. Lessons may be extracted from the few existing value-based care arrangements, such as the UT Health Austin Musculoskeletal Institute’s bundled payment contract for their patients with arthritis.<sup>227</sup>

## **Focus on provider education and training to minimize provider burden.**

Provider buy-in and engagement is vital to the success of an evidence-informed approach. The high administrative burden, significantly short time available for patient appointments, and the common need to address a variety of patient health concerns reduce a provider’s ability to effectively screen, counsel, and refer patients to appropriate physical activity-based interventions.<sup>228</sup> As such, an evidence-informed approach should not add excessive additional burden to a physician’s workload.

A key challenge that arose in our research was the need for more provider education and training to appropriately engage with patients who have arthritis. For example, one interview noted that some providers are unwilling to integrate physical activity screening tools into their clinical workflow, citing physical activity

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<sup>226</sup> “American Medical Association Approves New Category III CPT Codes for Coaching,” 24-7 Press Release Newswire, October 15, 2019, <https://www.24-7pressrelease.com/press-release/466893/american-medical-association-approves-new-category-iii-cpt-codes-for-coaching>.

<sup>227</sup> Leavitt Partners interview with UT Health Austin Musculoskeletal Institute.

<sup>228</sup> Leavitt Partners interview with Listening Session #2; Leavitt Partners interview with Listening Session #3.

education was not part of their medical school or residency training. Additionally, some providers do not feel they are adequately prepared to counsel patients on increasing physical activity when a patient receives a low PAVS score.<sup>229</sup> An evidence-informed approach should include opportunities for continual education, particularly as new learnings emerge. Beyond continual education opportunities, several interviewees highlighted the need to implement training around appropriately diagnosing arthritis and approaches to physical activity counseling within medical school training as it would significantly improve challenges with delays in the diagnosis and ultimately the treatment of arthritis.<sup>230</sup>

Table 2. Physical Activity-Based Interventions, Descriptions, and Clinical Workflow Integration

Intervention	Description	Clinical Workflow Integration
The 5 A's: Ask, Advises, Assess, Assist, and Arrange	The 5 A's brief smoking cessation intervention model includes the five major steps to intervention for treating tobacco use and dependence. "The model is based on five strategies: 1) Ask patients about smoking at every visit, 2) Advise all tobacco users to quit, 3) Assess smokers' willingness to try to quit, (4) Assist smokers' efforts with treatment and referrals, and (5) Arrange follow-up contacts to support cessation efforts." <sup>1</sup>	Many health organizations, including several international health organizations, have adopted the 5A's brief smoking cessation intervention model proposed by the evidence-based guidelines for smoking cessation. <sup>1</sup> A study also examined the effectiveness of using the 5A's approach to physical activity counseling in a medically underserved patient population and found mixed results. <sup>1</sup>
Exercise is Medicine (EIM) Model	The EIM model was developed by the ACSM aimed at making "...physical activity assessment and promotion a standard in clinical care, connecting healthcare with evidence-based physical activity resources for people everywhere and of all abilities." <sup>1</sup>	The EIM credentialing program emphasizes people, programs, places, and self-directed resources when providers are working to provide or connect patients with the right programs or resources. <sup>1</sup> The EIM model covers various components of the Screening, Brief Intervention, and Referral to Treatment (SBIRT).
Screening, Brief Intervention, and Referral to Treatment (SBIRT)	"SBIRT is a comprehensive, integrated, public health approach to the delivery of early intervention and treatment services for persons with substance use disorders, as well as those who are at risk of developing these disorders." <sup>1</sup>	This SBIRT model is known to physicians and works well within clinical workflow and be used as an application of the EIM model to assess physical activity readiness. <sup>1</sup>
Transtheoretical Model (TTM) of Behavioral Change	The TTM includes five stages of behavior change: precontemplation, contemplation, preparation, action, maintenance, and termination. It focuses on decision-making and intentional change. <sup>1</sup>	The TTM has been included in a manual to guide physical therapy students in their coaching role for the WWE program. <sup>1</sup>

<sup>229</sup> Leavitt Partners interview with Intermountain Healthcare and the American College of Sports Medicine.

<sup>230</sup> Leavitt Partners interview with Vigeo Orthopedics; Leavitt Partners interview with Johns Hopkins Arthritis Center; Leavitt Partners interview with UT Health Austin Musculoskeletal Institute; Leavitt Partners interview with Listening Session #2.

Providing additional resources to providers can support their efforts to screen, counsel, and refer patients. As noted above, providers may not know how to integrate screening efforts into their clinical workflows or may not be aware of more promising approaches (e.g., SBIRT, EIM, PAVS). Resources exist that can support providers with best practices for physical activity screening and counseling (see **Table 2** above). Additionally, providers need resources that will help them understand where they can refer their patients. An evidence-informed approach should identify and utilize beneficial resources when relevant. By improving integration efforts as described above, the challenges around limited provider time and capacity to respond to a patients' needs can be reduced.

### **Coordinate arthritis-centered approach with other chronic disease efforts.**

Patients with arthritis often have or are at increased risk for developing other comorbidities like cardiovascular disease, obesity and diabetes.<sup>231</sup> In addition, mental health conditions and chronic diseases with higher mortality rates are often higher priority for both providers and funders when compared to arthritis. Our research suggests that an evidence-informed approach should look to combine efforts to address a variety of chronic diseases, especially since physical activity and other self-management programs are important for managing many other chronic diseases beyond arthritis (e.g., diabetes). Several states have tried this approach by 'coupling' the WWE program with other programs such as the National DPP lifestyle change program and the Well-Integrated Screening and Evaluation for WOMen Across the Nation (WISEWOMAN). Coupling refers to the integration of more than one evidence-based intervention strategy to encourage sustainability in public health programming. However, one key takeaway from those efforts is the need for more resources to support organizations in implementing such 'coupling' programs.<sup>232</sup> Lastly, an evidence-informed approach could look to engage a health system in a pilot demonstration that is already committed to and undergoing prevention work on one or more chronic diseases,<sup>233</sup> as building upon previous efforts may reduce challenges inherent to implementing new pilot projects.

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<sup>231</sup> Vicki Simpson, "Models and Theories to Support Health Behavior Intervention and Program Planning," *Purdue Extension*, March 2015, 5; Boring et al., "Prevalence of Arthritis and Arthritis-Attributable Activity Limitation by Urban-Rural County Classification — United States, 2015." Simpson, "Models and Theories to Support Health Behavior Intervention and Program Planning"; Boring et al., "Prevalence of Arthritis and Arthritis-Attributable Activity Limitation by Urban-Rural County Classification — United States, 2015." Simpson, "Models and Theories to Support Health Behavior Intervention and Program Planning"; Boring et al., "Prevalence of Arthritis and Arthritis-Attributable Activity Limitation by Urban-Rural County Classification — United States, 2015."

<sup>232</sup> Madrigal Lillian, "High-Level Summary WWE + National DPP Coupling Formative Evaluation" (Emory Centers for Public Health Training and Technical Assistance: Diabetes Training and Technical Assistance Center (DTTAC), September 29, 2021), [https://actiononarthritis.chronicdisease.org/wp-content/uploads/2021/10/Formative-Eval-Summary\\_2021.10.14-2-copy.pdf](https://actiononarthritis.chronicdisease.org/wp-content/uploads/2021/10/Formative-Eval-Summary_2021.10.14-2-copy.pdf).

<sup>233</sup> Leavitt Partners interview with Listening Session #1.

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## Appendix B: Interview Summaries

As part of a collaboration with the National Association of Chronic Disease Directors (NACDD) and the Centers for Disease Control and Prevention (CDC) to support the development and implementation of an evidence-informed healthcare provider approach to conduct function, pain, and physical activity screenings; patient counseling on the benefits of physical activity; and referrals to AAEBIs, Leavitt Partners conducted primary intelligence interviews to better understand how healthcare providers are currently approaching patients with arthritis across the country.

The interviews explored:

- Current practices related to arthritis management, including screening, counseling, and referrals; healthcare provider awareness of the benefits of appropriate physical activity for individuals with arthritis; promotion of physical activity-based interventions; incentives to screen, counsel, and refer to physical activity-based interventions
- Pain points related to healthcare providers' engagement with physical activity-based interventions, including reasons why providers do not screen, counsel, and refer patients to interventions
- Ideas for how to increase healthcare providers' engagement with physical activity-based interventions

Between April and June 2022, Leavitt Partners interviewed twenty-eight individuals across twenty-four organizations. These entities were selected based on their perceived experience in clinical arthritis care; involvement in arthritis care guidelines and other formal clinical arthritis care recommendations; current or past efforts to screen, counsel, or refer individuals to physical activity-based interventions; and perceived ability to influence screening, counseling, or referral efforts. Entities included three payers, six health systems/provider entities, eight state health departments (SHDs)/state agencies, and seven arthritis advocacy/national organizations. Interviews targeted c-suite decisionmakers, medical directors, or other director-level operators familiar with the organization's efforts related to arthritis. Interviews lasted between 45 – 60 minutes, with informal note taking.

The table below outlines the intelligence gathered from the interviewees, including key takeaways on each entity's current and past screening, counseling, and referral efforts; key challenges and barriers; and recommendations for improvement.

Organization Name	Key Interview Takeaways
American College of Rheumatology (ACR)	<ul style="list-style-type: none"><li>• The ACR keeps clinical practice guidelines specific to each arthritic condition due to the various challenges that each condition presents and feels that it is important for the differences between conditions to be considered when designing approaches to treatment.</li></ul>

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### Key Considerations and Barriers to Creating an Evidenced-informed Approach for Screening, Counseling, and Referral to Physical-activity Based Interventions

	<ul style="list-style-type: none"><li>• Some clinical practice guidelines include recommendations that relate to physical activity-based interventions, integrative care management options, and care team recommendations. Physical activity counseling and referral are not a primary focus of any of the ACR sets of guidelines.</li><li>• The current RISE Registry dashboard is heavily focused on quality measures, though ACR is building another dashboard that will focus more on population health analytics.</li><li>• To implement the RISE Registry, ACR and providers have had to work with EHR vendors to connect their platforms to the RISE system. This process can be difficult and costly to the provider. Working with vendors could be a barrier to designing a referral tool for AAEBIs.</li></ul>
<b>American Physical Therapy Association (APTA)</b>	<ul style="list-style-type: none"><li>• Physical therapists appreciate hearing about patient progress and closing the feedback loop is valuable for them.</li><li>• Physical therapists may not have information on organizations providing AAEBIs, preventing them from referring their patients to them.</li><li>• Physical therapists approach counseling on physical activity on an individual basis; physical activity plans widely vary by patient, and not all patients may be ready for physical activity.</li><li>• Payment for physical therapist screening, counseling, and referring activities is a major barrier; value-based payment/bundled payment models may be helpful for physical therapists.</li><li>• Annual visits represent an ideal opportunity for physical therapists to support patients with arthritis screening, counseling, and referring to AAEBIs.</li></ul>
<b>Intermountain Healthcare and the American College of Sports Medicine (ACSM)</b>	<ul style="list-style-type: none"><li>• Providers and health and fitness professionals must connect patients to the resources that will help the patient experience physical activity successfully.</li><li>• It is important to educate patients and providers on various exercise modifications to ensure that physical activity is not only a success for the patient but also reduces the experience of pain while improving function and mobility.</li><li>• It is beneficial to use known workflows and models, such as the SBIRT model, and have providers help to embed physical activity education into behavior change mechanisms. It is imperative to build PAVS into the workflow, or else it will most likely not be tracked.</li><li>• There is not an established consistent way to embed PAVS into a health system's EHR system, but many organizations are working to "custom-build" the measure into their system.</li></ul>
<b>Baylor Scott and White Health and Wellness Center</b>	<ul style="list-style-type: none"><li>• The Health and Wellness Center has identified community integration as integral to increasing referrals to their health and wellness programs. This includes identifying a community-based champion to be a trusted voice in the community.</li><li>• CHWs can identify and assist with overcoming various barriers through conducting outreach and education to enrolling in programs.</li></ul>

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	<ul style="list-style-type: none"><li>• Reimbursement would be valuable to the Health and Wellness Clinic, but there have been many barriers to securing reimbursement pathways, including EHR integration (specifically EPIC), coordinating with the larger Baylor Scott and White Health System, and trying to incentivize prevention with payers.</li></ul>
<b>Johns Hopkins Arthritis Center</b>	<ul style="list-style-type: none"><li>• The Johns Hopkins Arthritis Center assesses the disease activity, pain, and functional status of patients regularly, but recognizing the multifaceted nature of arthritis, also assesses fatigue, sleep quality, anxiety, and depression. Rather than working exclusively toward specific metrics of disease activity, providers build treatment plans around patient goals and priorities.</li><li>• In the past, the Arthritis Foundation acted as a central referral source to local AAEBIs. Rheumatologists knew both the Arthritis Foundation staff responsible for managing referrals, and the CBOs patients would ultimately be referred to. Losing this resource meant losing connections with these partners and referrals have slowed/stopped. Having a community partner or central referral source with robust programs helps providers to refer patients to physical activity programs.</li><li>• Patients with chronic pain may become acclimated to their pain, making it difficult to assess changes in pain severity. Rather than trying to capture the intensity of pain, the Johns Hopkins Arthritis Center measures how pain interferes with patient's daily lives. These measurements can allow physicians to assess patients more accurately, which can lead to increasingly tailored counseling and referrals.</li><li>• Dr. Bingham highlighted that arthritis types can determine which AAEBI, if any, may be most appropriate for the patient. He noted that misdiagnoses by primary care doctors can delay treatment by years. Engaging patients and providers to understand the differences between the types of arthritis can assist with accurate diagnosis, which could lead to improved patient outcomes.</li></ul>
<b>UT Health Austin Musculoskeletal Institute (MSKI)</b>	<ul style="list-style-type: none"><li>• MSKI has designed care pathways that are unique to each musculoskeletal condition they treat, which determines the makeup of the care team and the process for treating the patient. In addition to this blueprint, Dr. Koenig emphasized the need to work with each patient individually to design a treatment program that works for their current disease state and treatment goals.</li><li>• While MSKI has one bundled payment contract which covers a large portion of their population, much of their effort to improve outcomes and avoid unnecessary costs are not compensated under a value-based contract. Dr. Koenig stated that the opportunities for value-based arthritis care are rare, and more work needs to be done to design contracts that incentivize and enable value-based arthritis care. MSKI is optimistic that CMS will pilot some alternative payment models similar to condition bundled or payments based on value.</li><li>• MSKI uses a multidisciplinary care team, including rheumatologists, orthopedic specialists and surgeons, sports medicine doctors, physical therapists, dieticians, social workers, and others. Different members of the care team are included depending on the condition being treated and the needs of individual patients, but all providers are well-versed in working together under the model of MSKI.</li></ul>

<p><b>Montefiore Health System</b></p>	<ul style="list-style-type: none"> <li>• Data visibility and sharing are crucial for program implementation and management. Montefiore Health System experienced challenges reidentifying patients that had participated in the program when it was being delivered externally. Without this ability, Montefiore Health System could not assess the overall success of the program regarding weight loss, program retention, diabetes prevention, and other health-related outcomes. Fully implementing the program into the health system allowed Montefiore Health System to leverage its resources better while also maintaining control of the data.</li> <li>• It is important to recognize the unique needs of each community or population served. Montefiore Health System has a diverse population, and it is important for the health system to consider the cultural context when serving these communities. It can be challenging for people to stay engaged in a year-long program, then coupled with additional challenges such as transportation or finding childcare, people may be hesitant to commit to the program. As Montefiore Health System was seeking to become a CDC-recognized organization, being culturally responsive was crucial, leading Montefiore Health System to offer the program paired with other classes, such as English as a Second Language (ESL). Montefiore Health System also offers participants a variety class locations, times, and languages to adapt to community needs. Montefiore Health System found that partnering with locally-rooted organizations to deliver the National DPP ensured a comfortable environment for community members, This partnership increased Montefiore Health System’s ability to increase access for the community.</li> <li>• Providers are motivated to refer to programs when they receive patient progress data and patient success stories. Montefiore Health System worked to provide data and stories to providers and close the referral loop throughout the internal implementation of the National DPP.</li> <li>• Clinical leadership champions help the staff buy in to the program. These internal influencers can signal their investment to the whole team, which generates internal support for implementing programs and diminishes challenges inherent to workflow changes.</li> <li>• The cost of implementing the program outweighed reimbursement costs. When the referral pathway was built into the EPIC system, Montefiore Health System was able to create a risk contract or provide a reimbursement from Emblem—a care management organization—based on the available z-codes at the time. Montefiore Health System could charge Emblem as a practice, then receive reimbursement based on that rate from the z-code.</li> </ul>
<p><b>BCBS of Arkansas</b></p>	<ul style="list-style-type: none"> <li>• Some payers may not be as willing to promote and engage in innovations. AR BCBS is a more traditional payer; they do not intervene with members until they are high cost. Regional differences in member populations can also impact some payers’ focus (i.e., AR BCBS) more than others (i.e., national payers such as Humana or UnitedHealthcare). For example, AR BCBS focuses their efforts on priority areas including smoking cessation, obesity, and hypertension, because these issues present the greatest need in their member population. Innovations may necessitate going around payers that are not willing to be a point of contact or determining incentives to involve them.</li> </ul>

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	<ul style="list-style-type: none"><li>• AR BCBS has case managers that are less involved than other payers' programs (See Humana Interview Summary). AR BCBS's case managers mainly identify high-cost claimants to ensure they are maximizing the use of their benefits, and they do not engage in preventative efforts. The case managers can attempt to connect members with community-based programs, and Dr. Schroeder can disseminate information on exercise programs to the case managers as well. This could present an opportunity to improve upon AR BCBS's current case management program to refer members to programs. There could also be an opportunity for SHDs to enable payer case managers to disseminate program information to members.</li><li>• Members with arthritis may likely have other medical comorbidities that need intervention (potentially from payers). Dr. Schroeder emphasized looking at a broader picture.</li><li>• Dr. Schroeder believes that exercise programs should be presented in schools to promote healthy behavior patterns for life.</li><li>• Members have different preferences for exercise programs (e.g., gyms, structured programs, group activities). Providing accessible and tailored programs can reduce barriers for members.</li><li>• Urban areas will likely have more programs and opportunities available when compared to rural areas. Dr. Schroeder noted that providers in rural areas tend to have a better understanding of available programs than AR BCBS.</li><li>• Dr. Schroeder believes AR BCBS could be interested in partnering with arthritis-appropriate evidence-based interventions (AAEBIs).</li></ul>
<b>Humana Kansas</b>	<ul style="list-style-type: none"><li>• One opportunity to show cost savings is to highlight that a program can reduce opioid use, a nationwide issue. Arthritis could also be a good candidate for the Value-Based Insurance Design (VBID) Model process with CMS because it is a chronic disease that requires more time to evaluate the impact of an intervention. There may be opportunities to partner with research arms within payer organizations, particularly with value-based arrangements.</li><li>• Payers can do predictive analytics to identify good candidates for programs, then share that data with providers. They can guide members to beneficial programs, with providers doing the outreach. However, encouraging payers to share data (with providers, specifically) can be a barrier; big companies do not want to share proprietary information on members.</li><li>• Payers can have care managers and social workers that would be able to connect members to resources and guide them to community programming. This could present an opportunity to refer patients to programs without increasing provider workloads.</li><li>• Payers can tend to be more conservative, even when working on innovative projects and programs. There may also be hesitancy to go outside of the doctor/physician world; it can be difficult to understand that healthcare is more than just physician interactions. Payers may also be concerned about improving health outcomes and losing out on revenue—this is where value-based arrangements could come into play. There is also fear surrounding increasing costs with new initiatives, as well as caution with government intervention.</li><li>• Consider looking at whether the risk adjustment associated with HCC codes for arthritis truly captures the increased burden of caring for patients with these conditions.</li></ul>

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	<ul style="list-style-type: none"><li>• While Humana does not currently incentivize providers to perform any arthritis-related screenings or counsel patients on physical activity or self-management programs, this could be a potential opportunity for payers to increase screening, counseling, and referral efforts.</li><li>• Humana has a partnership with a program (Silver Sneakers), where the program partners with CBOs, Humana reimburses, and then their members have access to the program. This arrangement could alleviate provider challenges surrounding reimbursement and two-way referrals with CBOs. Humana also provides free programming through community center programs. These could represent potential opportunities to study and/or scale.</li><li>• Thinking beyond arthritis to musculoskeletal conditions may be a better way to move forward with employers and payers. A focus on arthritis may lose traction.</li></ul>
<b>UnitedHealthcare</b>	<ul style="list-style-type: none"><li>• UHC designed Renew Active, a Medicare fitness program, to be the gold standard. Renew Active could be used as a model when approaching pilot programs; specifically, its focus on addressing important needs for aging populations and compensation contracts with fitness centers.</li><li>• UHC has a robust digital fitness network where they partner with leading brands. Success seen by UHC (still being measured) could indicate the value of digital fitness for other payers and beyond.</li><li>• UHC is looking to create a pilot program based on YMCA's condition-based programs. YMCAs and other fitness locations can be ideally positioned to offer programs to members. Considerations for a pilot include determining which program to pilot and where, an identification model to select members, a way to measure pilot outcomes to prove the value, and funding opportunities. Outside of the YMCA, UHC would consider piloting with organizations that have established programming and necessary compliance pieces in place.</li><li>• UHC's major barriers to piloting programs include showing the value of the benefit and then funding the pilot.</li><li>• Starting a pilot program could involve either looking at ancillary benefits with Medicare and retirement plans or going directly to partners providing exercise programming.</li></ul>
<b>Vigeo Orthopedics</b>	<ul style="list-style-type: none"><li>• While Dr. Huff cited using the HOOS, JR and the KOOS, JR tools to assess patients' physical activity, these tools mainly look at pain and function. She added that she does not use an assessment tool for physical activity interventions. This could represent a gap where orthopedic providers could benefit from additional physical activity assessments to better counsel on and refer their patients to physical activity-based interventions.</li><li>• Institutions with more resources have access to care navigators that can take on referral efforts. On the other hand, Dr. Huff noted that providers serving rural and underserved areas and communities of color typically have a good understanding of the programs available to them and stay more on top of referral opportunities. Dr. Huff personally keeps track of referral opportunities and will also look at patients' insurance around which options are covered.</li><li>• Dr. Huff noted that you need to meet people where they are and help patients to understand why they are being assessed. She added that providers need to accommodate a fifth grade health literacy level and below to ensure comprehension and to guarantee that patients take assessments seriously.</li></ul>

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	<ul style="list-style-type: none"><li>• Dr. Huff noted that two improvements to arthritis care and referrals would be additional time with patients and a comprehensive care team. She added that if she had enough time with patients, she may not need a bigger team. However, with the current time allotted, she wishes she could have a comprehensive care team that would help her to refer patients. Patient navigator programs can increase access and the ability to access community-based interventions.</li><li>• There is a delicate balance between referring too soon and waiting too long. Specialists in rural areas often prefer to see patients as soon as possible to establish a relationship. Education for primary care providers on musculoskeletal diseases and warning signs can lead to timely and appropriate specialist referrals.</li><li>• Focusing on exercise and mobility interventions will improve surgical, functional, and overall patient outcomes and satisfaction.</li><li>• Dr. Huff believes that primary care providers can get reimbursed for referral efforts, but she did not know of a way for surgeons to get reimbursed. Dr. Huff could not think of a way to receive post-operative reimbursements in the global period. She added there may be other ways to code outside of regular E&amp;M codes that she is not aware of.</li><li>• High co-pays can prevent patient access to referral services. The burden can be on the provider to prepare patients on what referral services are covered and which are not.</li></ul>
<b>National Association of Community Health Workers</b>	<ul style="list-style-type: none"><li>• CHWs need a support system and supervisors that know how to direct and manage the workload of CHWs. If health systems were to better understand the process of recruiting, screening, and hiring CHWs, they could be better utilized to address the social determinants of health, leading to better health outcomes for individuals.</li><li>• CHWs are trained to understand a variety of programs and to connect people to the right resources for them. CHW efforts are highly dependent on funding, program availability, and their support system.</li><li>• Though most providers and health systems understand and recognize the importance CHWs, identifying sustainable funding mechanisms has been a challenge for these systems as they try to recruit and retain CHWs. Many CHWs are hired out of grant funds or time-limited funding pools. Health systems need to think about identifying long-term and sustainable funding for CHWs to ensure continuity rather than risk losing the work done by the CHW after funding ends.</li></ul>
<b>Listening Session One:</b> <b>Arthritis Foundation</b> <b>Osteoarthritis Action Alliance</b> <b>YMCA of the USA</b>	<ul style="list-style-type: none"><li>• Participants agreed that integrated screening, counseling, and referral to physical activity-based interventions and/or self-management programs for arthritis should be integrated with other chronic disease prevention and management efforts.</li><li>• Participants highlighted the need to address patient concerns and misconceptions around physical activity being harmful or will increase their arthritis pain, and provide more education around the benefits of physical activity for patients with arthritis.</li><li>• All participants agreed on an approach to making arthritis "age-specific", such as with colorectal cancer screenings starting at age 45. They also noted the need to address pain from arthritis earlier among patients and not normalize pain as we age.</li><li>• One participant encouraged a pilot demonstration within a health system that is already doing prevention work on one or more chronic diseases and to implement efforts around arthritis screening, counseling, and referral to physical activity-based interventions.</li><li>• The OAAA worked with the Harvard Medical School and staff at the Brigham and Women's Core Center of Clinical Research</li></ul>

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	<p>to conduct a model-based evaluation of cost-effectiveness of the WWE self-directed program. This study includes a cost-effectiveness analysis and a budgetary impact analysis using a dataset from Montana. While there are some caveats with this dataset including participants were likely more active and healthier, resulting in lower pain levels than seen in most other studies of WWE, the preliminary results show promising cost-effectiveness of the WWE program. Cost effectiveness was higher for those individuals who were previously inactive. The manuscript is currently being reviewed and the OAAA hopes to publish it in the next several months and use it as a value proposition to support WWE programs.</p>
<p><b>Listening Session Two:</b></p> <p><b>Healthy Living Center of Excellence in Massachusetts</b></p> <p><b>New Hampshire Department of Public Health Chronic Pain Management Program</b></p> <p><b>The North Carolina Center for Health and Wellness</b> <i>(included in separate discussion)</i></p>	<ul style="list-style-type: none"> <li>• Both participants highlighted the "Three Ts" as physician barriers to effective screening, counseling, and referring: time, training, and trust.</li> <li>• One participant noted a gap in physical activity screening: Patients between 18 and 65 years old often do not get screened outside of annual well visit/physical exams. There is a pilot program that will add screenings into daily interaction forms.</li> <li>• One participant highlighted a current contract with an MCO, where providers refer patients into programs. The MCO also provides the organization with an internal registry of patients, and they collaborate on outreach and utilize motivational interviewing to pull them into programs. They added there is not one tailored referral process—referrals are too resource-heavy. The participant also highlighted the use of a Social Health Access Referral Platform (SHARP), where hospitals feed referrals into the platform and CBOs access the referrals.</li> <li>• One participant touched on contract negotiation with payers, which can take six months - one year. Their organization works to determine what providers need and how to tailor a reimbursement mechanism. Billable events vary across providers, and the negotiation process has shifted since the pandemic.</li> <li>• One participant noted interoperability challenges; there is no seamless two-way referral system between providers/EMRs. CBOs likely will not have the necessary infrastructure to update this process anytime soon. However, avoiding referring to these CBOs will not allow progress on health equity. All options need consideration.</li> </ul>
<p><b>Listening Session Three:</b></p> <p><b>Oregon Health Authority</b></p> <p><b>Kansas Department of Health and</b></p>	<ul style="list-style-type: none"> <li>• Partnerships between SHDs and health systems are key to treating patients with arthritis, especially as it relates to screening, counseling, and referral. Participants described a plethora of partnerships and how they help facilitate AAEBIs across their respective states.</li> <li>• In almost all aspects of providing AAEBIs, a lack of funding is the main reason that self-sustainability is difficult to achieve. This is further exacerbated through low reimbursement rates from Medicaid and other payers.</li> <li>• Two of the participants mentioned that adding a HEDIS measure for arthritis would allow SHDs to collect data and make recommendations to legislators. Tying the HEDIS measure to reimbursement via prevention and care metrics could incentivize</li> </ul>

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<p><b>Environment</b></p> <p><b>Utah Department of Health</b></p> <p><b>Minnesota department of Health</b></p> <p><b>Montana Department of Public Health and Human Services</b></p>	<p>health systems to improve arthritis care.</p> <ul style="list-style-type: none"><li>• Patients often have multiple chronic conditions, especially older adults with arthritis. This makes arthritis care complex. Multiple participants recommend the use of health system champions or care coordinators that can funnel patients through the right avenue of care.</li><li>• Many states do not have a single EHR system, which inhibits the SHD's ability to collect and analyze data on arthritis referrals efficiently and makes bi-directional referral systems difficult to operationalize. Streamlining the referral process through statewide registries could be an alternate path forward to decrease providers burden and result in better, more efficient care for patients with arthritis.</li><li>• Garnering buy-in and support for AAEBI funding can be difficult to achieve. A few of the participants suggested that health systems and SHDs broaden their approach, and that AAEBI referrals should be leveraged for other chronic diseases in addition to arthritis.</li></ul>
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## Appendix C: List of Arthritis-Appropriate Evidence-Based Interventions

The table below outlines information on lifestyle management programs listed on the [CDC](#) and the [OAAA websites](#), including program name, type, description, target patients, cadence, CDC status, and cost.

Name	Type	Description	Target Patients	Cadence	CDC Status	Cost
<a href="#">Arthritis Foundation Aquatic Program (AFAP)</a>	Physical Activity	Water-based exercises to increase physical activity	Adults with arthritis, older adults	2-3x per week, 1-hour sessions, 6-10 weeks	Recognized	<b>Participant Costs:</b> varies <b>Leader/Host Cost:</b> <ul style="list-style-type: none"> <li>• Training: \$99 - \$129</li> <li>• License: not required</li> </ul> <b>Facility/equipment:</b> <ul style="list-style-type: none"> <li>• \$2.30 per person for manuals</li> <li>• Warm pool</li> <li>• Exercise equipment</li> </ul>
<a href="#">Active Living Every Day</a>	Physical Activity	Offers different options to traditional exercise programs, group discussions (no exercise in class)	Adults with arthritis or other chronic conditions, older adults, sedentary adults, adults interested in increasing physical activity	1 hour a week for 12 to 20 weeks	Recognized	<b>Participant Costs:</b> <ul style="list-style-type: none"> <li>• Book and online resources: \$41.95</li> </ul> <b>Leader/Host Cost:</b> <ul style="list-style-type: none"> <li>• Training: \$373</li> <li>• License: \$0</li> </ul> <b>Facility/equipment:</b> <ul style="list-style-type: none"> <li>• Classroom with seating</li> <li>• Projector</li> <li>• Computer</li> <li>• Flip chart</li> </ul>
<a href="#">EnhanceFitness</a>	Physical Activity	Group exercise class (warm up, aerobic, strength, stretching, cool down)	Adults with arthritis, older adults, adults interested in increasing physical activity	1 hour class offered 3 times a week	Recognized	<b>Participant Costs:</b> <ul style="list-style-type: none"> <li>• varies</li> </ul> <b>Leader/Host Cost:</b> <ul style="list-style-type: none"> <li>• License:                             <ul style="list-style-type: none"> <li>○ \$3,000 for first year</li> </ul> </li> </ul>

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						<ul style="list-style-type: none"> <li>○ \$50 renewal fee</li> <li>○ \$500 for each additional site</li> <li>○ \$200 data entry fee per user per year</li> </ul> <p><b>Facility/equipment:</b></p> <ul style="list-style-type: none"> <li>● \$800 one-time expense</li> <li>● Non-carpeted room</li> <li>● Armless chairs</li> <li>● Exercise equipment</li> </ul>
<b><u>Fit &amp; Strong</u></b>	Physical Activity	Group exercise class (strength, flexibility, aerobic walking) and health education	Adults with osteoarthritis, sedentary older adults with LE joint pain, adults with comorbidities	90 minutes, 3x a week, 8 weeks	Recognized	<p><b>Participant Costs:</b></p> <ul style="list-style-type: none"> <li>● Materials: \$35 for manuals</li> <li>● Other: varies</li> </ul> <p><b>Leader/Host Cost:</b></p> <ul style="list-style-type: none"> <li>● License: <ul style="list-style-type: none"> <li>○ \$1,000 - 2,000 for main site</li> <li>○ \$400 for satellite sites</li> <li>○ \$100 -\$200 for renewal</li> </ul> </li> </ul> <p><b>Facility/equipment:</b></p> <ul style="list-style-type: none"> <li>● \$1,985 one-time expense</li> <li>● Open space with chairs</li> <li>● Exercise equipment</li> </ul>
<b>Fit and Strong! Plus</b>  *no updated link	Physical activity	Includes the physical activity components of Fit and Strong, but adds in a weight loss program	Adults with osteoarthritis, sedentary older adults with LE joint pain, adults with comorbidities	90 minutes, 3x a week, 8 weeks	Promising	<p><b>Participant Costs:</b></p> <ul style="list-style-type: none"> <li>● Materials: \$35 for manuals</li> <li>● Other: varies</li> </ul> <p><b>Leader/Host Cost:</b></p> <ul style="list-style-type: none"> <li>● License: <ul style="list-style-type: none"> <li>○ \$1,000 - 2,000 for main site</li> <li>○ \$400 for satellite sites</li> </ul> </li> </ul>

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						<ul style="list-style-type: none"> <li>o \$100 -\$200 for renewal</li> </ul> <p><b>Facility/equipment:</b></p> <ul style="list-style-type: none"> <li>• \$1,985 one-time expense</li> <li>• Open space with chairs</li> </ul> <p>Exercise equipment</p>
<a href="#"><u>Walk with Ease Group</u></a>	Physical Activity	Group walks and health discussions	Older adults, adults with arthritis	3x a week for 6 weeks	Recognized	<p><b>Participant Costs:</b></p> <ul style="list-style-type: none"> <li>• \$5 - \$11.95</li> </ul> <p><b>Leader/Host Cost:</b></p> <ul style="list-style-type: none"> <li>• Training: \$89</li> <li>• License: \$0</li> </ul> <p><b>Facility/equipment:</b></p> <ul style="list-style-type: none"> <li>• Space to walk</li> </ul>
<a href="#"><u>Arthritis Foundation Exercise Program</u></a>	Physical Activity	Low impact group exercise (warm up, rang of motion, balance, strength, cardio) and health education	Adults with arthritis	1-hour sessions 2-3x a week for 8 to 12 weeks or longer	Promising	<p><b>Participant Costs:</b> varies</p> <p><b>Leader/Host Cost:</b></p> <ul style="list-style-type: none"> <li>• Training: \$199 - \$129</li> <li>• License: not required</li> </ul> <p><b>Facility/equipment:</b></p> <ul style="list-style-type: none"> <li>• \$2.30 per person for manuals</li> <li>• Room with seating</li> <li>• Exercise equipment</li> </ul>
<a href="#"><u>Walk With Ease Self-Directed</u></a> <a href="#"><u>Spanish Version Available: Camine Con Gusto</u></a>	Physical Activity	Self-guided walks and educational guidebook	Adults with arthritis, older adults, adults without access to arthritis program	3 walks between 10 and 40 minutes a week for 8 weeks	Promising	<p><b>Participant Costs:</b></p> <ul style="list-style-type: none"> <li>• \$5 - \$11.95</li> </ul> <p><b>Leader/Host Cost:</b> N/A</p> <p><b>Facility/equipment:</b></p> <ul style="list-style-type: none"> <li>• Space to walk</li> </ul>
<a href="#"><u>Tai Chi for Arthritis</u></a>	Physical Activity	Low-impact exercise with an emphasis on evidence-based efficacy and safety to improve health,	Adults with arthritis, older adults	1-hour per week for 16 weeks; 2-hours per week for 8 weeks	Promising	<p><b>Participant Costs:</b> varies</p> <p><b>Leader/Host Cost:</b></p> <ul style="list-style-type: none"> <li>• Training: varies</li> <li>• License: \$165, yearly membership fee of \$26</li> </ul>

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		relieve arthritis pain, and improve function				(certification lapses every 2 years) <b>Facility/equipment:</b> <ul style="list-style-type: none"> <li>Room/space</li> <li>Chairs</li> </ul>
<a href="#"><u>Tai Ji Quan: Moving for Better Balance</u></a>	Physical Activity	Evidence-based balance training regimen designed to improve postural stability, awareness and mindful control of body positioning, improve function, range of motion, and lower-extremity strength building.	Older adults with arthritis or at risk for falling	2, one-hour sessions each week for 24 weeks.	Promising	<b>Participant Costs:</b> varies <b>Leader/Host Cost:</b> <ul style="list-style-type: none"> <li>Training: varies</li> <li>License: \$200 annual fee</li> </ul> <b>Facility Equipment:</b> <ul style="list-style-type: none"> <li>Room/space</li> <li>Chairs</li> </ul>
<a href="#"><u>Chronic Disease Self-Management Program</u></a>	Self-Management	Workshop focused on disease management skills	Adults with arthritis, adults with one or more chronic conditions, older adults	2 hours a week for 6 weeks	Recognized	<b>Participant Costs:</b> <ul style="list-style-type: none"> <li>varies, usually under \$50</li> </ul> <b>Leader/Host Cost:</b> <ul style="list-style-type: none"> <li>Training: \$200 - \$400</li> <li>License: \$500 - \$12,000</li> </ul> <b>Facility/equipment:</b> <ul style="list-style-type: none"> <li>Flip chart</li> <li>Markers</li> <li>Music player</li> </ul>
<a href="#"><u>Tomando Control de su Salud</u></a>	Self-Management	Workshop focused on disease management skills conducted in Spanish with culturally appropriate activities and subject matter	Spanish-speaking adults with arthritis, other chronic condition, or who are older	2-2.5 hours a week for 6 weeks	Recognized	<b>Participant Costs:</b> <ul style="list-style-type: none"> <li>varies, usually under \$50</li> </ul> <b>Leader/Host Cost:</b> <ul style="list-style-type: none"> <li>Training: \$200 - \$400</li> <li>License: \$500 - \$12,000</li> </ul> <b>Facility/equipment:</b> <ul style="list-style-type: none"> <li>Flip chart</li> <li>Markers</li> <li>Music player</li> </ul>

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<a href="#"><u>Better Choices Better Health</u></a>	Self-Management	Internet-based workshop using information from CDSMP, focused on disease management, decision-making, action-planning	Adults with arthritis or other chronic disease, older adults, rural or homebound adults	2-3x a week for 6 weeks	Promising	<b>Participant Costs:</b> <ul style="list-style-type: none"> <li>\$185 - \$275</li> </ul> <b>Leader/Host Cost:</b> N/A <b>Facility/equipment:</b> <ul style="list-style-type: none"> <li>Internet access</li> <li>Workshop book</li> </ul>
<a href="#"><u>Better Choices Better Health for Arthritis</u></a>	Self-Management	An internet-based version of <a href="#"><u>Stanford's Arthritis Self-Management Program</u></a> , aimed to help individuals adapt to their condition, gain confidence, and manage symptoms.	Adults with arthritis	~2 hours a week for 6 weeks	Promising	<b>Participant Costs:</b> <ul style="list-style-type: none"> <li>\$185 - \$275</li> </ul> <b>Leader/Host Cost:</b> N/A <b>Facility/equipment:</b> <ul style="list-style-type: none"> <li>Internet access</li> <li>Workshop book</li> </ul>
<a href="#"><u>Mailed CDSMP (Toolkit for Active Living)</u></a>	Self-Management	Same components as CDSMP but mailed in a pack.	Adults with arthritis or other chronic conditions, older adults, rural and homebound adults	Self-directed	Promising	<b>Participant Costs:</b> <ul style="list-style-type: none"> <li>\$44.76</li> </ul> <b>Leader/Host Cost:</b> N/A <b>Facility/equipment:</b> <ul style="list-style-type: none"> <li>CD player</li> </ul>
<a href="#"><u>Chronic Pain Self-Management Program</u></a>	Self-Management	Workshops for managing chronic pain	Adults who have a primary or secondary diagnosis of chronic pain	2.5-hour sessions once per week over 6-weeks	Promising	<b>Participant Costs:</b> varies <b>Leader/Host Costs:</b> <a href="#"><u>LINK</u></a> <ul style="list-style-type: none"> <li>Web-based: \$800 per person or \$10,000 for a group of 12</li> <li>In-person: varies</li> </ul> <b>Facility/Equipment:</b> <ul style="list-style-type: none"> <li>Varies upon program</li> <li>Space</li> </ul>

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<a href="#"><u>Enhance Wellness</u></a>	Self-Management	Evidence-based program that connects participants with a trained personal health and wellness coach through motivational interviewing techniques and validated assessment tools.	Older adults with chronic conditions, or adults aging with disability	Varies, self-directed	Promising	<p><b>Participant Costs:</b> varies</p> <ul style="list-style-type: none"> <li>• <b>Leader/Host Cost:</b></li> <li>• Training and License: \$300; \$50 annual renewal fee</li> <li>• WellWare License Fee: \$200 (web-based participant software application)</li> </ul> <p><b>Facility/Equipment</b></p> <ul style="list-style-type: none"> <li>• Internet access</li> </ul>
<a href="#"><u>Program to Encourage Active, Rewarding Lives (PEARLS)</u></a>	Self-Management	An intervention to reduce symptoms of depression and suicidal ideation and improve quality of life.	Adults and older adults with depression	6-8 one-hour sessions over a 4-5 month period	Recognized	<p><b>Participant Costs:</b> varies</p> <p><b>Leader/Host Cost:</b> varies; based on implementation strategies</p> <p><b>Facility/equipment:</b></p> <ul style="list-style-type: none"> <li>• Internet access</li> <li>• Phone or space to have sessions</li> </ul>
<a href="#"><u>Workplace Chronic Disease Self-Management Program</u></a>	Self-Management	An adapted version of CDSMP with primary objectives to improve self-management skills of employees, improve mental and physical health, and improve work performance and productivity	Employees	Two 50-55min sessions per week for 6 weeks	Promising	<p><b>Participant Costs:</b> varies</p> <p><b>Leader/Host Cost:</b></p> <ul style="list-style-type: none"> <li>• Web-based: \$800 per person or \$10,000 for a group of 12</li> <li>• In-person: varies</li> </ul> <p><b>Facility/Equipment:</b></p> <ul style="list-style-type: none"> <li>• Varies upon program</li> <li>• Space</li> </ul>