Chronic Pain Prevention and Treatment Policy Paper

ST. LOUIS REGIONAL HEALTH COMMISSION

CHRONIC PAIN INITIATIVE

JANUARY 16, 2019

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I. Executive Summary

The St. Louis Regional Health Commission (RHC) recommends four major policy initiatives for improvement in the prevention and treatment of chronic pain:

1. Recognize chronic pain as a public health problem.
2. Educate patients and providers about chronic pain.
3. Treat chronic pain as a chronic disease, using a holistic, collaborative, and cost-effective approach.
4. Individualize treatment plans in a patient-centered and trauma-informed manner.

Background

The RHC's 2017 *Orthopedic Referral Study: Assessment of Current Practices and Recommendations Regarding the Care of Patients with Musculoskeletal Problems* had two major findings: (1) Gateway to Better Health (GBH) patients have a high prevalence of musculoskeletal chronic pain (non-cancer pain lasting three months or longer), and (2) multifaceted opportunities exist to improve chronic pain treatment and prevention for patients in the St. Louis safety network. In November 2017, the RHC's two Advisory Boards came to the consensus that chronic pain is an important regional public health issue, and the RHC subsequently approved chronic pain as a key focus area for 2018 – 2019.

Chronic Pain Initiative

The RHC aims to use its unique position in the St. Louis health care landscape to capture the perspectives of a wide variety of stakeholders, approach the Chronic Pain Initiative through a trauma-informed lens, and use information from Gateway to Better Health claims data and patient and provider surveys to inform the work. The ensuing Chronic Pain Initiative, focused on non-cancer pain lasting three months or longer, will encompass three primary deliverables:

1. A policy statement focused on local and state changes that could reduce the impact of and enhance prevention of chronic pain for members of the Gateway to Better Health Program, as well as for those in the St. Louis Region and the State of Missouri
2. A system-focused clinical action plan to support patients and providers in the optimal management of chronic pain (musculoskeletal pain lasting three months or longer), including recommendations for an evaluation plan targeted toward (but not limited to) members of the Gateway to Better Health Program
3. A communication plan to raise awareness of the pervasiveness and impact of chronic pain on individuals and communities

The RHC Chronic Pain Prevention and Treatment Policy Paper

This document, *The RHC Chronic Pain Prevention and Treatment Policy Paper,* serves as the initiative's first deliverable**.** The goal of this policy statement is to translate federal chronic pain guidelines to a regional and statewide level, incorporating community-based expertise and evidence-based strategies, in order to improve chronic pain prevention and management. This document is guided by national pain strategies from the National Institutes of Health (NIH), the Institute of Medicine (IOM), and the U.S. Department of Health and Human Services (HHS), as well as an extensive peer-reviewed literature review, over 20 stakeholder interviews with regional experts in chronic pain, site-visits, input from advisory boards and partners in the region, Missouri Chronic Pain ECHO trainings, and referral/claims/survey data from the Gateway to Better Health Program.

Recommendations

The policy recommendations are divided into two categories: institutional policy recommendations and public policy recommendations. The institutional recommendations lay out action steps for the RHC, health centers, and other health care providers and institutions to improve chronic pain treatment for Gateway to Better Health members and those in the St. Louis Region. The public policy recommendations are directed towards the state, specifically to MO HealthNet, as well as other health care institutions with a purview beyond Missouri. A summary of the developed recommendations are included below in Table 1.

Table 1: Summary of Policy Recommendations

1. Recognize chronic pain as a public health problem.

Public Policy

A. Update St. Louis and Missouri policymakers on the chronic pain epidemic, as a precursor of the opioid epidemic. Advocate for effective chronic pain management as an upstream intervention with substantial health and economic impacts.
B. Support regional and statewide Prescription Drug Monitoring Program (PDMP) utilization in Missouri in a non-punitive manner towards patients. The PDMP should systematically identify and connect patients with needed treatment for chronic pain and/or substance use disorder.
C. Advocate for non-fatal opioid overdose to be a mandatory reportable condition in Missouri.

Institutional Policy

A. Track prevalence of chronic pain in the Gateway to Better Health (GBH) population and optimize chronic pain strategies based on these metrics.
B. Encourage all health care institutions caring for GBH patients to:
    a. Apply a racial equity framework, guided by the Ferguson Commission's report, to optimize chronic pain management.
    b. Identify and address racial disparities in chronic pain prevalence and treatment.

2. Educate patients and providers about chronic pain.

Public Policy

A. Support core competencies in pain management for prelicensure health professional education.
B. Encourage continued education for providers on chronic pain and advocate for incorporation of chronic pain into required CE for MO Board of Healing Arts.

Institutional Policy

A. Train GBH providers further on chronic pain management, substance use disorder management, and movement system and behavioral health approaches.
B. Connect chronic pain trainings to trauma, health literacy, and cultural competency/institutional racism.
C. Develop a clinical action plan to inform St. Louis health care providers.
D. Educate Gateway to Better Health patients.

3. Treat chronic pain as a chronic disease, using a holistic, collaborative, and cost-effective approach.

Public Policy

A. Include chronic pain as one of the recognized chronic health conditions in MO HealthNet's Primary Care Health Home initiative to qualify the patient for comprehensive care management services.
B. Advocate for MO HealthNet to reinstitute coverage for physical therapy, prioritizing CPT codes with existing evidence for pain reduction and chronic pain management.
C. Advocate for MO HealthNet to establish pilot programs within the medical home model to incent the co-location of physical health/movement based services at community health center sites.

D. Advocate for Gateway the Better Health to add coverage for physical therapy, prioritizing active codes over passive therapy codes (ex: manual therapy and therapeutic activity), and to support integrated physical therapy at primary care homes.
E. Advocate for MO HealthNet to include coverage for occupational therapy.
F. Promote MO HealthNet utilization of the Primary Care Health Home model for patients with chronic pain.
G. Integrate and secure behavioral health services in chronic pain management.
H. Promote MO HealthNet and BNDD (Bureau of Narcotics and Dangerous Drugs) policies that equip providers and patients with cost-effective tools without undue burdensome paperwork or other barriers that divert time away from patients.

Institutional Policy

A. Protect current service lines that assist in chronic pain (behavioral health, Community Health Workers, and chiropractic, where applicable, and GBH specialty care and diagnostic services).
B. Co-locate physical health services in primary care homes by piloting exercise therapy or physical therapy integration on-site (explore opportunities for grants and academic placements, as is done at Jordan Valley), until it is covered by MO HealthNet.
C. Encourage Gateway to Better Health provider organizations to develop protocols for chronic pain management if they have not yet done so. Share models and best practices. Highlight Affinia Healthcare's chronic pain clinic as a local model for pain management in a Federally Qualified Health Center (FQHC).
D. Prioritize effective transitions of care coordination and communication for multidisciplinary chronic pain care that spans across different healthcare organizations.

4. Individualize treatment plans in a patient-centered and trauma-informed manner.

Public Policy

A. Advocate for MO HealthNet to recognize and compensate Community Health Workers' and nurses' capacity to promote self-sufficiency and improve behavioral health of patients who struggle with chronic pain.

Institutional Policy

A. Foster education of providers and patients on patient-centered strategies to treat chronic pain.
B. Promote/advance trauma-informed care core principles in collaboration with Alive and Well Communities.
C. Support treatment models that secure more time with patients by:
    a. Integrating other professionals into the team (ex: Behavioral Health Consultants).
    b. Promoting task sharing.
    c. Supporting group-based interventions (ex: mind-body pain group).
D. Empower patients to manage chronic pain as a chronic disease.

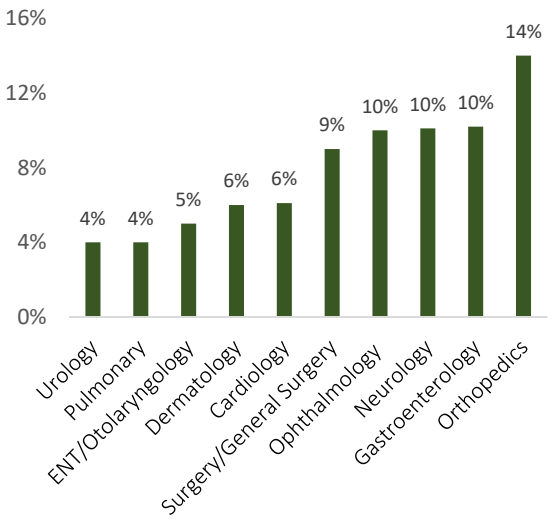
II. Introduction: the Impact of Chronic Pain and our Unique Landscape

Approximately one-half (51%) of all GBH patients surveyed report chronic pain. Two-thirds of those individuals suffer from pain in multiple body locations, and another two-thirds of patients in chronic pain indicate that it affects their employment.

Primary care providers in the St. Louis safety network also report a high prevalence of chronic pain encounters. Despite enormous evidence in favor of multidisciplinary, integrated approaches, primary care providers lack the necessary tools to relieve patient suffering. Three-quarters of GBH providers surveyed request physical therapy (PT) as the top priority to be added to their current available resources (neither Medicaid nor Gateway cover PT services that are not immediately post-operative). Many providers report that they initiate opioid treatment for pain relief, despite its high risk and lack of efficacy for chronic pain, because of limited access to other effective modalities. Recent policy interventions aimed at reducing the amount of opioid prescriptions, without including additional treatment modalities for chronic pain, have left providers and patients alike frustrated, according to stakeholder interviews.

The RHC Chronic Pain Initiative (CPI) is a direct response to help GBH patients in pain. This effort stems from years of GBH specialty referral tracking that revealed disproportionately high rates of orthopedic referral requests (see Graph 1), reports from orthopedists that a single surgery was not always a quick solution to complex chronic pain, and consensus among GBH patients and primary providers that they needed more help with chronic pain. Although the CPI was not devised to address the opioid epidemic, the RHC acknowledges that addressing physical chronic pain may be an effective "upstream" approach to deterring the overuse and misuse of opioids.

Graph 1: Gateway to Better Health Program's Specialty Care Services Referrals



June 2017 Monthly Report
*Top ten specialty care services are shown above. The remainder of services totals to 22%.

The chronic pain crisis is nationally recognized and locally magnified. During our investigations, we observed the ubiquitous nature of chronic pain and its consequences, a bounty of evidence for best practices, and a consensus among providers to improve care. The RHC understands that providers and patients need to be equipped with the knowledge and tools to prevent and address chronic pain. Although it is vital to protect referral access to specific physician specialty services such as orthopedics and pain management, adequate care for chronic pain requires multifaceted, coordinated expertise among various disciplines. Most important, the expertise of patients in knowing their own chronic pain and emotional suffering needs to be recognized and respected, in order to maximally empower their ability to thrive despite the pain.

The St. Louis Regional Commission is uniquely positioned to address the topic of chronic pain due to the following unique set of factors within our landscape:

Assets:

- The RHC's board and its advisory boards, with broad multidisciplinary and inter-organizational leadership, and established relationships with key advocates/experts/stakeholders, including but not limited to the Missouri Department of Social Services, Missouri Primary Care Association (MPCA), St. Louis Health Departments, members of the St. Louis Integrated Health Network and Behavioral Health Network of Greater St. Louis, and community advocates
- Gateway to Better Health Program providing primary and specialty care for up to 20,000 uninsured St. Louis patients annually, with meticulous tracking of claims, referral, and survey data
- Advanced knowledge of trauma-informed care through its partnership with Alive and Well Communities, with ongoing dedication to infuse trauma-informed principles into all chronic pain care improvements
- Primary Care Health Homes that are now well-established in Missouri, exhibiting expertise in collaborative interdisciplinary care with behavioral health integration
- Community Health Worker program fostering patient engagement and self-efficacy

Challenges:

- No Medicaid expansion in Missouri via the Affordable Care Act, limiting the availability of financial support for treatments for those most in need in the region
- Limited access to physical therapy and occupational therapy for patients in Missouri with GBH, Medicaid, or no insurance
- Inadequate mental health services for GBH members (GBH has not been able to cover broad mental health services) to help individuals emotionally manage their chronic pain
- Systemic inequities in social determinants of health across St. Louis, as well as deep-rooted racial inequities across the region, as documented in *For the Sake of All* and the Ferguson Commission's report

Our review and analysis revealed optimism regionally and statewide that we can do better by our patients in chronic pain. This report is designed to catalyze improvements in the way we prevent and manage chronic pain. We encourage ongoing input and assistance in reaching these goals as this regional initiative progresses.

We will be measuring progress through a multifaceted approach, relying on quantitative and qualitative data, specifically utilizing the Gateway Patient and Provider Surveys as tools to assess significant changes in the prevalence and burden of chronic pain in the St. Louis safety net population. Furthermore, we will be leveraging the Gateway to Better Health specialty care referral infrastructure to maintain and measure access to services that prevent and or address chronic pain.

III. Current Regional Burden of Chronic Pain

Pain is Universal

Pain is a normal, adaptive neurological response to current or impending danger. Pain can be life-saving in its ability to immediately alert individuals to reduce harm or seek safety. Everyone has and will feel pain. After a hazard is addressed or averted, however, any persistent prolonged pain is considered maladaptive. If this maladaptive pain, void of any further meaningful signaling, prevails for three months or more, it is considered a disease unto itself. The disease of chronic pain is not universal like acute pain, but it is pervasive and powerful with rippling personal, family, community, economic, and societal effects.

Chronic Pain vs. Acute Pain

According to the International Association for the Study of Pain (1994), pain is "an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage...and is always subjective." Pain can be further broken down into acute and chronic pain. Acute pain has a sudden onset from a specific event, injury, or illness and lasts a short time. While it is unpleasant, it has a protective purpose and alerts the individual that a potential or actual physical injury is present. Once the injury is resolved, the pain generally subsides (IOM, 2011; NPS, 2016). Alternatively, chronic pain can be defined as pain that typically lasts more than three months or past the time of normal tissue healing. Improvements can be achieved through various treatment methods, but there is generally no cure for chronic pain (IASP, 1986).

National Prevalence of Chronic Pain and its Financial Burden

Affecting at least 116 million individuals, chronic pain affects more people in the United States than heart disease, diabetes, and cancer combined (Tsang et al., 2008). From an analysis of 2016 National Health Interview Survey (NHIS) data, the CDC found that 20.4% of U.S. adults experience chronic pain, and 8% of U.S. adults suffer from high-impact chronic pain, defined as pain interfering with work or life most days or every day (Dahlhamer et al., 2018). Some population groups, however, are disproportionately affected and have a greater risk of experiencing pain and receiving inadequate treatment (Croft, Blyth, & Windt, 2010; Dahlhamer et al., 2018; Johannes et al., 2010; Nathin, 2012; Portenoy et al., 2004). Pain is more prevalent and/or care is inadequate for racial and ethnic minorities; women; people with low income or education; older adults; previously but not currently employed adults; adults living in poverty; adults with public health insurance; rural residents; and those with increased risk factors due to work, housing, limited communication skills, and limited access to health care services (Anderson, Green, & Payne 2009; Dahlhamer et al., 2018; Tait & Chibnall, 2014).

The Institute of Medicine (2011) conservatively estimates that chronic pain costs the United States at least $560-635 billion annually, which includes the cost of health care ($261 - 300 billion) and lost productivity ($297-336 billion). This number excludes the cost of pain affecting certain populations, for example, institutionalized individuals and children, as well as its emotional cost (IOM, 2011). In 2008, federal and state programs spent $99 billion in medical expenditures to treat pain, and medical expenditures for pain accounted for 14% of all Medicare costs, approximately $65.3 billion (IOM, 2011). Furthermore, the cost associated with opioid misuse and overdose in the United States is closely linked to inadequate treatment of chronic pain. The burden of prescription opioid misuse in the United States,

including the costs of health care, lost productivity, addiction treatment, and criminal justice services, is estimated to be $78.5 billion annually (Florence, Zhou, Luo, & Xu, 2013).

Regional Burden of Chronic Pain

Chronic pain is likewise pervasive in our region, particularly for enrollees in the Gateway to Better Health Program, which is a temporary health care program for low-income, uninsured adults in St. Louis City and County. According to the results of the *2018 Gateway to Better Health Patient Satisfaction Survey*, which collected responses from 343 individuals, over half (51%) of the Gateway patient population experiences chronic pain (see Graph 2). [1] Of these patients experiencing chronic pain, approximately two-thirds are experiencing pain in multiple locations, and another two-thirds reported that their pain affects their ability to seek or maintain employment (see Graphs 3 & 4). Based on claims data from January - March 2018, chronic pain accounts for 15% of primary and specialty care diagnoses for the Gateway to Better Health enrollees.[2] This claims data falls short of the actual prevalence of chronic pain because (1) the current recognition of chronic pain as a distinct disease is a recent phenomenon; (2) diagnostic coding via the ICD (International Classification of Diseases) system inadequately distinguishes chronic and acute pain; (3) from national research efforts, it is notoriously difficult to capture all encounter data that involved chronic pain; and (4) Gateway members need greater access to chronic pain management.

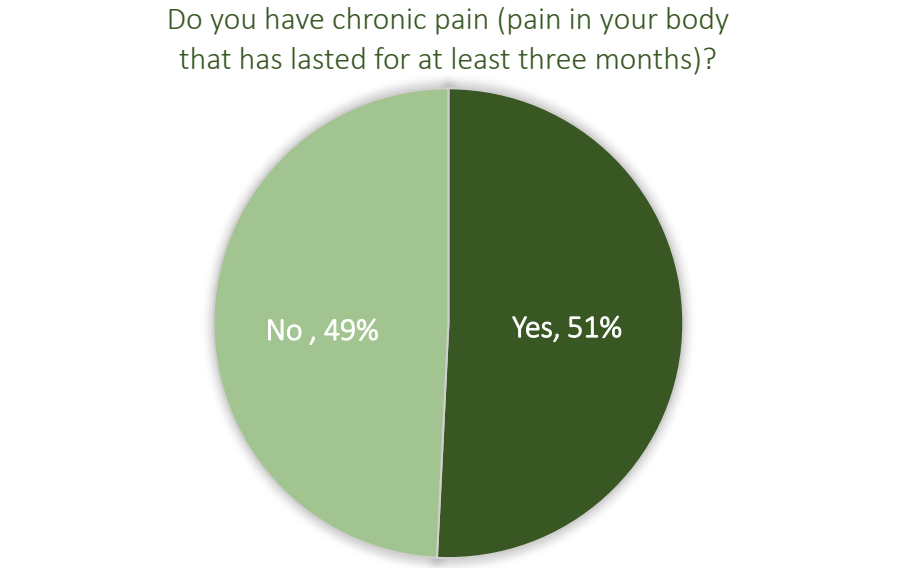
According to claims data from January - March 2018, the Gateway to Better Health Program covered medical expenses associated with chronic pain, including primary and specialty care, valued at nearly $337,000.[3] This amount represents 13.5% of the total medical expenses covered by the Gateway to Better Health Program. Furthermore, in Missouri, in 2016, the total cost of the opioid crisis was $12.6 billion, which accounted for 4.2% of the state's total GDP (Reidhead, 2018). The total economic burden from chronic pain is not known for the St. Louis Region or Missouri.

[1] While 343 individuals responded to the *2018 Gateway to Better Health Patient Satisfaction Survey*, not every participant fully completed the survey. Therefore, some of the measures have smaller sample sizes, as shown below in Graphs 2, 3, and 4. Graphs 3 and 4 have substantially smaller sample sizes because only individuals who responded yes in Graph 2 were instructed to respond to the questions for Graphs 3 and 4.

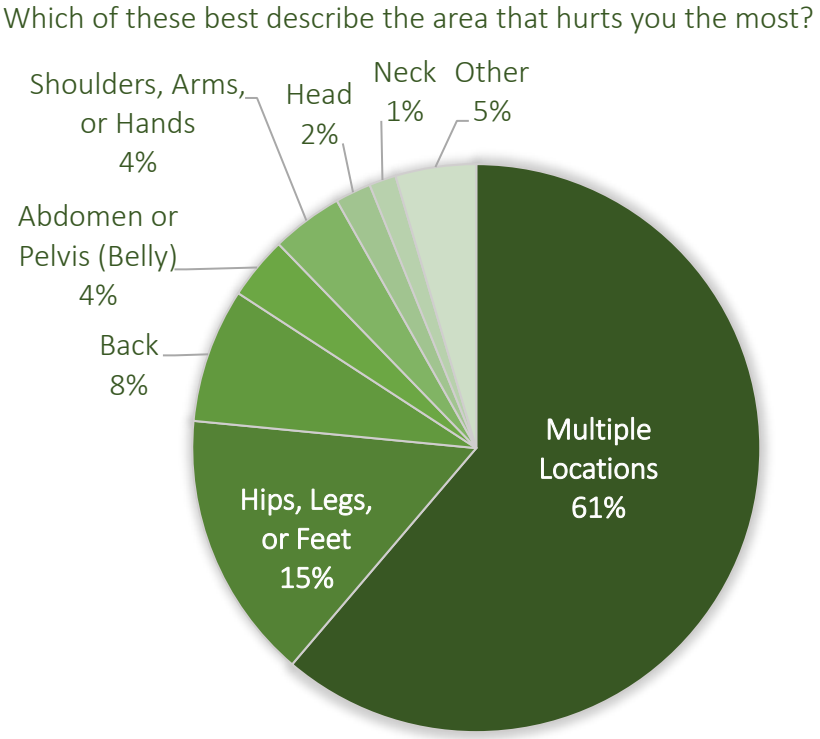
[2] Diagnoses included diseases and conditions related to the musculoskeletal system and connective tissues (pain in knee, low back pain, pain in shoulder, dorsalgia, pain in foot, cervicalgia, pain in hip, fracture, other musculoskeletal and connective tissue diseases and conditions) and diseases and conditions related to the nervous system (headache and chronic pain). Due to the difficulty in distinguishing between acute and chronic pain for certain billing codes, all codes that could be considered chronic pain were included in our reported prevalence. Claims from January to March 2018 were analyzed and pulled on November 29, 2018.

[3] Gateway to Better Health pays for specialty care services based on a fee-for-service model and primary care services based on a capitation payment model. The value of medical expenses reported includes the amount paid for specialty care services plus the *value* of primary care services (despite not having directly paid this amount, but rather a predetermined per member per month rate to each health center). The total of medical expenses for specialty care services associated with chronic pain is $200,934.74 of $1,566,399.06 total medical expenses for specialty care services (12.8%). Claims from January to March 2018 were analyzed and pulled on November 29, 2018.

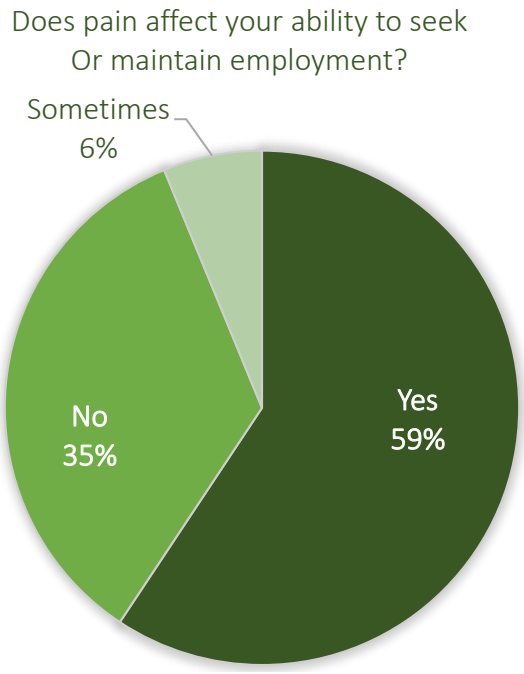
Graph 2: Prevalence of Chronic Pain in the Gateway Patient Population
(n=321)



Graph 3: Location of Chronic Pain in the Gateway Patient Population
(n=161)



Graph 4: Personal and Economic Impact of Chronic Pain in the Gateway Patient Population
(n=177)



IV. Current Regional Chronic Pain Practices

Health Centers Call for Evidence-Based Treatment Options

The results of the *2018 Gateway to Better Health (GBH) Referring Provider Satisfaction Survey*, which had a sample size of 57 providers, highlight a need to increase chronic pain treatment options in primary care centers.[4] Pain was reported to be a major focus in more than one quarter of all visits by nearly half of the providers. Top provider priorities for "additional services necessary to manage their patients' pain" are: physical therapy; comprehensive multidisciplinary pain management program; an exercise program with a trainer; and a pain doctor for injection therapies. Three quarters of respondents prioritized physical therapy as the most desirable resource to integrate into their Primary Care Health Home model to help manage chronic pain (see Graph 5). Survey results indicate that increasing the availability of treatment options would not only improve the providers' ability to treat chronic pain, but would also affect opioid prescribing patterns. Over half of the providers reported that they would prescribe fewer controlled substances for pain, such as opioids, if they had greater access to other treatment methods.

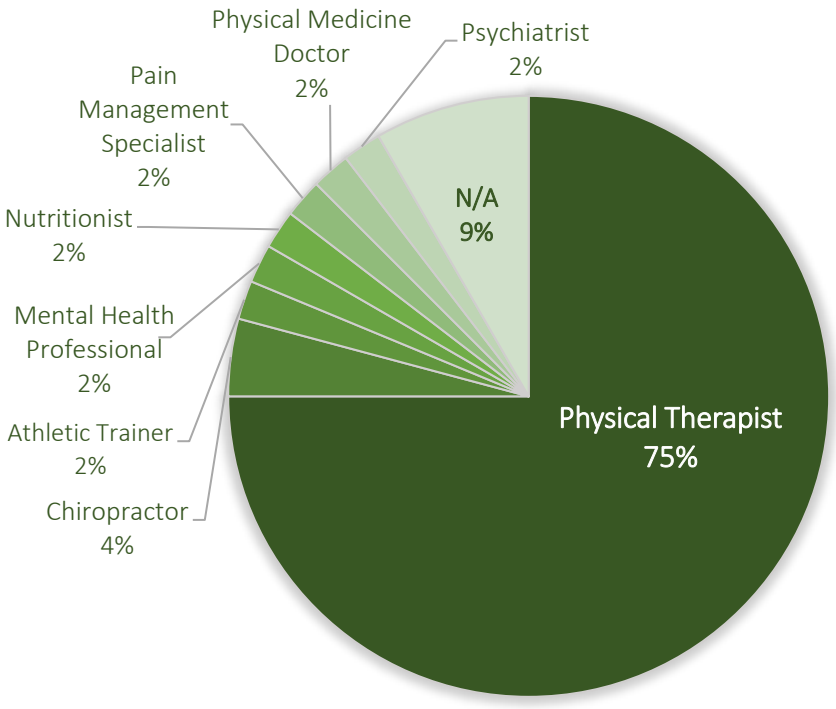
While increasing the availability of treatment options would allow providers to use more evidence-based methods for their patients and prescribe less opioids, some community health centers reported that they are already providing integrated care that reflects the multidisciplinary and biopsychosocial nature of chronic pain. Providers reported that the top three methods their patients use to manage chronic pain and increase function are primary care encounters, prescription medication, and Behavioral Health Consultant encounters. By making behavioral health services available and integrating them into the primary care model, health centers are already making progress in treating chronic pain and alleviating both its physical *and* mental components.

[4] While 57 providers responded to the *2018 Gateway to Better Health Provider Satisfaction Survey*, not every participant fully completed the survey. Therefore, the measure represented in Graph 5 has a smaller sample size of 48.

Graph 5: Top Desired Professional to Integrate in Primary Care Health Home Model for Chronic Pain Treatment

(n=48)

If you could integrate one more professional (ex: physical therapist, chiropractor, etc.) in your Primary Care Health Home model in order to help with chronic pain, what would be your top priority?



Patients Seek Evidence-Based Treatment Options

According to the *2018 Gateway to Better Health Patient Satisfaction Survey*, across the five community health centers in the Gateway to Better Health Network, the top three currently-available methods reported to have helped patients cope with pain are prescription medication (43%), physical therapy (15%), and exercise programs (12%); however, when patients were asked which methods they wish they had for pain, they reported pain medication at a much lower rate, 24% compared to 43%, and non-pharmacological methods at much higher rates. Specifically, the top three reported options were prescription medication (24%), physical therapy (21%), and exercise programs (17%). These results reflect a shared hope among GBH providers and patients for a wider array of evidence-based non-pharmacologic treatment options for chronic pain.

Current Community Health Center Approaches to Chronic Pain Management

1. *Leveraging Current Health Center Resources:* Because chronic pain is so pervasive, affecting up to half of GBH patients, all regional GBH community health centers are struggling to stretch current resources to serve these patients. These include the MO HealthNet's Patient Centered Medical Home infrastructure, the Behavioral Health Consultant (BHC) integration, the Community Health Worker patient engagement, and the trauma-informed skills acquired from the recent Alive and Well Health Center Learning Collaborative.

2. *Comprehensive Chronic Pain Management Program at Affinia Healthcare:* An integrated, multidisciplinary pain management model already exists in our region. Affinia Healthcare established an integrated pain clinic in January 2017. The pain team includes a primary care physician, a Behavioral Health Consultant, a pharmacist, a nurse, and a medical assistant; the team also has access to a chiropractor. Due to the team's emphasis on patient-centered care, meticulous assessment of the etiology (or cause) of pain, multidisciplinary approach, individual and group engagement strategies, and allocated time to allow for coordinated team-based care, no new patients have been started on chronic opioids since January 2018. The requisite longer appointment times, especially for the initial consultation, enables the team to understand the patient's goals and help set expectations while setting a customized treatment plan. As of September 2018, Affinia Healthcare reports a 17% decrease in the number of pain clinic patients who use opioids to manage their pain (47.5% of 200 patients at initial appointment to 30.5% of patients after most recent appointment), as well as an increase in non-opioid pharmacological interventions. Additionally, from observations, providers report patients are successfully reaching their personal goals centered on functionality and pain tolerance.

3. *Chiropractic Integration with Health Center Primary Care:* Care STL and at least two other community health centers have already linked chiropractic resources to primary care to help patients with musculoskeletal pain. Chiropractic providers, professors, and students have cared for health center patients at a reduced fee. This has been highly valued by the health center staff/patients interviewed/surveyed.

4. *Chronic Pain Management at Family Care Health Centers (FCHC):* A psychologist specializing in chronic pain management designed a comprehensive patient-centered curriculum for chronic pain patient group visits. The program of group teaching visits was preceded and followed by individual patient assessments, and progress was tracked via functional status metrics. Patients were encouraged to embrace their intrinsic motivations. Safe movement strategies were also

taught in conjunction with a chiropractor. Based on the success of this group, the FCHC has started "Project Step Forward," funded by a Missouri Foundation for Health grant, for the period 11/1/18 - 10/31/2021. The project's focus is on FCHC primary care patients with chronic pain. The goal is to implement a broad multidisciplinary continuous approach to help patients increase functioning, return to valued activities, and improve eating habits, quality of life, and sleep, while decreasing symptoms of depression and pain anxiety.

5. *Integrated PT at Jordan Valley Community Health Center:* Beyond the St. Louis Region, this Federally Qualified Health Center in Lebanon, Missouri, integrates chronic pain specialty care, addiction services, and physical therapy within primary care. Physical therapy is clinically, physically, and immediately integrated in the workflow of patient care, and it is provided by an academic physical therapist and his students at a deeply reduced fee.

V. Current Policies that Impact the Regional Approach to Chronic Pain

Missouri Policy and Laws Dictating Chronic Pain Options

1. *Physical Therapy:* Currently, there is no coverage for physical therapy (PT) for patients with no insurance, GBH, or MO HealthNet, although the latter two allow a limited exception post-operatively for orthopedic surgeries. Despite PT being an effective evidence-based modality to treat musculoskeletal chronic pain, there is no access to PT for chronic pain management. In August 2018, the Missouri Department of Social Services released "Proposed Rule 13 CSR 70-3.300 Complementary Medicine and Alternative therapies for Chronic Pain Management" to establish additional therapies in order "to improve health outcomes and decrease opioid use by adult participants to manage chronic pain." The RHC supports this rule and commends MO HealthNet for taking action to improve chronic pain treatment.

2. *Multidisciplinary Chronic Pain Care:* Although collaborative integrated multidisciplinary models of care for chronic pain are highly favored according to national guidelines and the peer-reviewed literature (see Appendix A), payment mechanisms to allow for sufficient reimbursement for multiple synchronous services is lacking. This is attributable to state and national health reimbursement policies. Similarly, reimbursement policies restrict the quantity of time providers can allocate for the complexity of treatment of chronic pain.

3. *Chiropractic Care:* Missouri House Bill 1516 passed by the Missouri 2018 General Assembly and signed by Governor Parsons "specifies that licensed chiropractic physicians may treat and be reimbursed for conditions currently reimbursed under MO HealthNet." Beginning in August 2018, MO HealthNet will provide up to 20 visits for chiropractic care. According to an economist at Saint Louis University, by integrating care from chiropractic physicians, Missouri could save $10 million in the next three years and up to $21 million every year thereafter (St. Louis Business Journal, 2018). Furthermore, a retrospective study by Blue Cross Blue Shield found that initiating treatment with a Doctor of Chiropractic (DC) led to paid costs for episodes of care that were approximately 40% less than episodes initiated with a Doctor of Medicine (MD). Even after adjusting for risk for each patient's costs, the same study found that episodes of care initiated with a DC were 20% less expensive than episodes initiated with an MD (Liliedahl, Finch, Axene, & Goertz, 2010).

4. *Chronic Pain as a Chronic Health Condition:* Chronic pain should be recognized as a chronic health condition in MO HealthNet's Primary Care Health Home initiative to help qualify patients for comprehensive care management services. On July 26, 2018, the Missouri Department of Social Services provided notice that the MO HealthNet Division will amend its Primary Care Health Home Medicaid State Plan Amendment to include chronic pain as both a chronic condition and a risk factor for developing other chronic conditions. The RHC supports this proposed amendment, which will help patients with chronic pain obtain adequate time and attention with their primary health care teams.

5. *Opioid Prescribing:*

Legislation:

- Missouri Senate Bill 718 passed and signed in 2018: patient satisfaction scores will no longer factor in reported pain control. Concerns were raised that linking pain management to patient satisfaction scores could put pressure on providers to overprescribe opioids. However, the impact of this legislation on chronic pain management should be tracked and reported as this policy is implemented.
- Missouri Senate Bill 826 passed and signed in 2018: A seven-day limit will be imposed on initial opioid prescriptions for acute pain. This limit aligns with the CDC guideline, which recommends that physicians prescribe the lowest effective dose of immediate-release opioids when treating acute pain. The guideline notes that a prescription for more than than seven days of opioids is rarely needed and that generally three days or less will be enough for effective pain management (recommendation category: A, evidence type: 4) (CDC, 2016).

Policy:

- In response to the opioid epidemic, the State of Missouri declared a state of emergency and established the Opioid Prescription Intervention (OPI) Program (https://dss.mo.gov/mhd/providers/opi-program.htm), which aims to (1) "provide customized informational packets about prescribing activities for providers," (2) "work with providers to update their prescribing practices and improve care," and (3) "adhere to the CDC Guidelines for prescribing opioids for chronic pain."
- The Missouri Opioid State Targeted Response (STR) project is also working on addressing the opioid addiction and overdose epidemic. The project aims to expand access in prevention, treatment, and recovery support for individuals in Missouri with opioid use disorder. The project's main focus is offering provider education around evidence-based treatment services for uninsured individuals with opioid use disorder who receive care at state-funded programs. This project, which has a budget of approximately $20 million for two years, is led by the Missouri Department of Mental Health and is administered, implemented, and evaluation by the Missouri Institute of Mental Health (MIMH) – University of Missouri, St. Louis.

Regional Policies impacting Chronic Pain

1. The St. Louis County Department of Public Health also declared a public health emergency to combat the opioid addiction and overdose epidemic (https://stlouisco.com/recover). The Department released an action plan to establish a common framework and to connect partners working on addressing the opioid addiction and overdose epidemic. The RHC's Chronic Pain Initiative was specifically mentioned as a community partner. The plan was designed keeping in mind that "efforts must be paired with support for community members who live with chronic pain."

2. Current GBH efforts to secure substance use disorder treatment as a covered GBH benefit may also positively impact regional chronic pain efforts. With the benefit, additional mental health services would be made available to those GBH patients with a substance use disorder, which would assist those with co-occurring substance use disorder and chronic pain conditions.

VI. Policy Recommendations for Chronic Pain Management and Prevention

1. Recognize Chronic Pain is a Public Health Problem

"My pain is not nearly as severe as my disappointment." - Chronic Pain Patient

"Medicine screwed up. I don't know how you fix a screw up, but apologize and say I'm sorry we screwed up. I think it needs to come from the doctors who did it." - Physician in Missouri

"If you twist your ankle, don't take opioids.... The zero pain is not worth the long-term consequences." - Physician in Missouri

Chronic pain is recognized as a public health problem, according to multiple national pain strategies from the National Institutes of Health (NIH), the Institute of Medicine (IOM), and the U.S. Department of Health and Human Services (HHS), as well as by regional stakeholders interviewed for this initiative. Pain is universal, and chronic pain is pervasive, affecting certain populations disproportionately. Chronic pain affects individuals biologically, psychologically, socially, and economically, thereby impacting entire communities.

Chronic pain should not only be problematized as a public health issue, but it also needs to be prevented and treated under this framework (IOM, 2011; NPS, 2016).

- *Prevention:* The objective of chronic pain prevention is twofold: treat acute pain appropriately and quickly to resolve the etiology of pain, and promote healthy practices in the general public to avoid injury and the development of pain.

- *Treatment:* The public health approach to chronic pain treatment utilizes the chronic disease management model: patient-empowerment, self-management, proactive outreach, multi-disciplinary approaches, non-punitive patient-centered goal setting, and continuity of care.

Measuring and tracking chronic pain are integral to treating chronic pain as a public health problem. Likewise, chronic pain can only be successfully addressed by recognizing and subverting disparities in chronic pain prevalence and pain treatment inequities.

While chronic pain is its own national epidemic, the nation's opioid crisis is interrelated. Opioids continue to be prescribed for chronic pain despite posing great risks and lacking evidence around effectiveness for chronic pain treatment (CDC, 2016). Effective lower-risk, evidence-based treatments exist but are often inaccessible to patients due to cost and other barriers. Providers and the health care system at large have contributed to igniting and fueling both epidemics. In this context, it is especially critical that policies, tools, such as the Prescription Drug Monitoring Program (PDMP), and treatment models be non-punitive and prioritize patient and public safety under the lens of public health.

Public Policy Recommendations

A. **Update St. Louis and Missouri State policymakers on the chronic pain epidemic as a precursor of the opioid epidemic.** Advocate for effective chronic pain management as an upstream intervention with substantial health and economic impacts.

B. **Support regional and statewide Prescription Drug Monitoring Program (PDMP) utilization in Missouri.** In recognition of the intersection between the opioid crisis and the chronic pain crisis, it is recommended that until a state or federal PDMP exists, the current St. Louis County Department of Public Health's PDMP should be used by as many providers as possible. A PDMP can improve patient safety by enabling providers to identify patients who are receiving opioids from other providers; recognize when a patient is being prescribed other medications, such as benzodiazepines, that may increase risks of opioids; and to calculate the total amount of opioids prescribed per day (in MME/day) (CDC, 2016). While a state-wide PDMP could serve as a beneficial tool to more safely treat patients, research shows that PDMPs do not impact drug overdose mortality rates the current way they are implemented and only minimally affect the overall consumption of opioids (Paulozzi, Kilbourne, & Desai, 2011).

   Maximizing and optimizing our regional PDMP remains a key safety goal, with two stipulations: (1) that it be implemented in a non-punitive manner towards patients and systematically connects flagged patients with needed treatment for chronic pain and/or substance use disorder, and (2) that the importance of its implementation is not overemphasized as the end-point goal of the opioid epidemic. (See the clinical and communications deliverables for this Chronic Pain Initiative).

C. **Advocate for non-fatal opioid overdose to be a mandatory reportable condition in Missouri, in order to monitor and increase the safety of patients and the public.**

Institutional Policy Recommendations

A. **Track prevalence of chronic pain in the GBH population and optimize chronic pain strategies based on these metrics.**

B. **Encourage all health care institutions caring for GBH patients to:**
   - **Apply a racial equity framework to optimize chronic pain management.**
   - **Identify and address racial disparities in chronic pain prevalence and access to treatment.**

   In line with the Ferguson Commission's report, *Forward through Ferguson* (2015), which promotes the application of a racial equity framework, the RHC recommends that all chronic pain treatment models intentionally address and eliminate racial and ethnic disparities. Specifically, with the knowledge that chronic pain disproportionately affects African-Americans and that structural racism and prejudice affect treatment of chronic pain, any models should intentionally work to reduce the prevalence of chronic pain in the African American population in St. Louis and promote equitable treatment (Hoffman, Trawalter, Axt, & Oliver, 2016; Janevic, McLaughlin, Heapy, Thacker, & Piette, 2017).

2. Educate Patients and Providers about Chronic Pain

"The human body is a complex tool. The doctors need to take a page out of this [packet on the cognitive behavioral model and thought-distortions related to chronic pain]. Why they teaching us and not them?" - Chronic Pain Patient

"We [Doctors] didn't get a lot of training in pain. No sit down effort to learn about pain management. We need more [educational] emphasis on pain management." - Physician in Missouri

Educating the public, patients, and providers about chronic pain aligns with a public health approach. This education is fundamental to improving prevention and treatment of pain. The Institute of Medicine recommends increasing public and patient understanding of pain to achieve a cultural transformation in pain care (NPS, 2016). Likewise, multiple advisory boards to the RHC identified the need for providers and patients to acknowledge and address their own expectations, knowledge sufficiency, and implicit bias regarding chronic pain sufferers. There are two target audiences to be educated and empowered through this effort:

1. *Patients:* Accompanying this policy statement, the RHC will launch a communication strategy deliverable that will aim to educate St. Louis and Gateway patients on the following topics: the difference between acute pain and chronic pain, recognition of chronic pain as a chronic disease, prevention of acute pain from transforming into chronic pain, the importance of patient self-efficacy, and risks of treatment options.

2. Providers: Pain receives little attention in most health care professional education programs despite being one of the most common reasons for health care visits (NPS, 2016). The National Pain Strategy and Relieving Pain in America expound on the importance of improving the curriculum and education for health care providers in pain and pain care. Specifically, the National Pain Strategy calls for discipline-specific core competencies and recommends that the following competencies be considered: competency in pain assessment, safe and effective pain care, the risks associated with prescription analgesics, communication of these risks to patients, and prescriber education. Furthermore, based on the complex biopsychosocial nature of pain, education must also focus on cultural competency, health literacy, and trauma-informed competencies.

Public Policy Recommendations

A. **Support core competencies in pain management for prelicensure health professional education.** Aligning with the National Pain Strategy, the RHC urges the prelicensure health professional education in the St. Louis Region to establish core competencies in pain management. The RHC also encourages health education institutions to consider regionally adopting core competencies from national guidelines, including the National Pain Strategy, Relieving Pain in America, the Interprofessional Consensus Summit, and the International Association for the Study of Pain's Core Curriculum for Professional Education in Pain (Fishman et al., 2013).

B. **Encourage continued education for providers on chronic pain and advocate for incorporation of chronic pain into required CE for MO Board of Healing Arts.**

In addition to supporting the education on chronic pain in prelicensure health professional settings, the RHC advocates for the MO Board of Healing Arts to require continued education on chronic pain for providers.

Institutional Policy Recommendations

A. **Train GBH providers further on chronic pain management, substance use disorder management, and movement system and behavioral health approaches.** Alongside this policy statement and a communication plan, the RHC will also launch a clinical action plan that will promote system and cultural change in the St. Louis health care system. Because of the intrinsic overlap between chronic pain and substance use disorder (SUD), the RHC encourages provider education in both. If GBH is able to implement the SUD treatment benefit, the RHC will provide training on SUD management to Gateway providers, in partnership with the Missouri State Targeted Response to the Opioid Crisis (Opioid STR).

B. **Connect chronic pain trainings to trauma, health literacy, and cultural competency/institutional racism.** The RHC will also provide trainings on trauma-informed principles in collaboration with Alive and Well Communities in recognition of the close relationship between pain and trauma. Educational efforts around chronic pain should also recognize the interconnected issues of chronic pain, racism, and poor health literacy and provide further training in cultural competency as well as plain language and communication skills.

C. **Develop a clinical action plan to inform St. Louis health care providers.** (Refer to the Chronic Pain Initiative's clinical deliverable).

D. **Educate Gateway to Better Health patients.** Provider education is important, but it must be paired with educational opportunities for patients. (Refer to CPI communication plan.)

3. Treat Chronic Pain as a Chronic Disease, Using a Holistic, Collaborative, and Cost-effective Approach

"The only thing left in our utility belt is the pill." - Physician in St. Louis

"I'm just a primary care doctor who knows how to listen and understand." - Physician in Missouri

"You need time with your doctor. They need to check you all over." - Chronic Pain Patient

Multiple studies have shown the effectiveness of using collaborative and holistic models to treat chronic pain, specifically treatment plans that approach pain as a biopsychosocial disease using interdisciplinary, integrated teams and multimodal methods (NPS, 2016). There is abundant evidence for non-pharmacologic therapies that are effective, cost-saving, and risk-mitigating (Tick, et al., 2018). These evidence-based therapies, empirically superior to opioids as a first line of treatment, are currently recommended by the National Institute of Health (NIH), US Food and Drug Administration (FDA), The Joint Commission (TJC), Centers for Disease Control and Prevention (CDC), and American College of Physicians (ACP).

Public policy, at the federal, state, and regional levels, are not in line with current recommendations and best practices. As the Consortium Pain Task Force White Paper poignantly states, "Coverage for care is not current to the evidence-base...Diversity of practice and engaging multiple evidence-based disciplines is enthusiastically embraced in pain medicine as a concept. Yet without a strategy on evidence-based pain care both in terms of effectiveness and cost-effectiveness, patients are not well guided in options and are often left to be the sole case managers for their own care as they navigate a system fragmented into silos" (Tick et al., 2018, p.16). The evidence is clear: non-pharmacologic, multimodal treatments can help patients with chronic pain with significantly less risk than opioids. Yet, the mismatch persists between science and policy.

Public Policy Recommendations

A. **Include chronic pain as one of the recognized chronic health conditions in MO HealthNet's Primary Care Health Home (PCHH) initiative to qualify the patient for comprehensive care management services.** The PCHH model for patients with chronic pain should be promoted. The PCHH Initiative aims to "provide intensive care coordination and care management as well as address social determinants of health for a medically complex population" (MO HealthNet). Chronic pain should be recognized as a chronic health condition in MO HealthNet's Primary Care Health Home initiative to help qualify the patient for comprehensive care management services. This categorization is in line with evidence, but additionally, it could help some patients with chronic pain secure adequate time and attention with their primary health care team.

B. **Advocate for MO HealthNet to reinstitute coverage for physical therapy, prioritizing CPT codes with existing evidence for pain reduction and chronic pain management.** Based on the evidence for physical therapy as an effective treatment for chronic pain, the RHC urges MO HealthNet to reinstitute Physical Medicine and Rehabilitation codes, giving priority especially to active codes, including but not limited to therapeutic activity and manual therapy.

C. **Advocate for MO HealthNet to establish pilot programs within the medical home model to incent the co-location of physical health services at community health center sites.** The RHC advocates for MO HealthNet to establish pilot programs within the Primary Care Medical Home model to incent the co-location of physical health services, such as physical therapy and exercise therapy.

D. **Advocate for Gateway to Better Health to add coverage for physical therapy, prioritizing active codes over passive codes, and to support integrated physical therapy at primary care homes.** In addition to urging MO HealthNet to reinstitute Physical Medicine and Rehabilitation codes, the RHC recommends Gateway to Better Health to add physical therapy as a covered benefit. This benefit should ideally support primary care health homes in developing integrated models with co-located physical therapists.

E. **Advocate for MO HealthNet to include coverage for occupational therapy.** High-impact pain, which affects 8% of the U.S. adult population, interferes with an individual's ability to work most days or every day (Dahlhamer et al., 2018). Occupational therapists can help adults suffering from chronic pain reintegrate into the workforce and/or fulfill meaningful roles.

F. **Promote MO HealthNet utilization of the Primary Care Health Home model for patients with chronic pain.** The RHC encourages MO HealthNet to incent the integration of behavioral health services in chronic pain management. By integrating physical health services and behavioral health services into its chronic pain management model, MO HealthNet would not only align itself with the current evidence around best practices to treat chronic pain, but the state would also save money.

G. **Integrate and secure behavioral health services in chronic pain management.** Relying on evidence that shows behavioral health interventions to reduce pain and disability while improving function, the RHC recommends efforts to support chronic pain management models that offer behavioral health care services.

H. **Promote MO HealthNet and BNDD (Bureau of Narcotics and Dangerous Drugs) policies that equip providers and patients with cost-effective tools without undue burdensome paperwork or other barriers that divert time away from patients.** Ideal policies would not eliminate tools currently utilized (e.g. opioids, even if it is a last resort) without replacing them with other more cost-effective tools, such as physical therapy. Currently, MO HealthNet's Opioid Prescription Intervention (OPI) Program provides customized information about prescribing activities to providers and communicates with providers about prescribing practices, based on CDC Guidelines; however, these efforts are not sufficient without increasing access to other evidence-based therapies to treat chronic pain.

Institutional Policy Recommendations

A. **Protect current service lines that assist in chronic pain (behavioral health, Community Health Workers, and chiropractic, where applicable) and GBH specialty care and diagnostic services.** In particular, equitable access to current GBH specialty care services should be secured for the safety net population.
B. **Co-locate physical health services in primary care homes by piloting exercise therapy or physical therapy integration on-site (explore opportunities for grants and academic placements, as is done**

at Jordan Valley), until it is covered by MO HealthNet. Potential collaboration between academic institutions could be a sustainable option, although the RHC urges MO HealthNet to cover this interdisciplinary model.

C. Encourage Gateway to Better Health provider organizations to develop protocols for chronic pain management if they have not yet done so. Share models and best practices; for example, highlight Affinia Healthcare's chronic pain clinic as a local model for pain management in a Federally Qualified Health Center. The RHC supports the establishment of integrated models of treatment, such as Affinia Healthcare's pain clinic, which fosters collaboration between a primary care physician, a behavioral health coach, and a pharmacist. To reduce costs and promote peer support, the RHC also invites health centers to explore group-based treatment sessions, such as Affinia Healthcare's mind-body chronic pain group or the Saint Louis County Department of Public Health's chronic pain patient group.

D. Prioritize effective transitions of care coordination and communication for multidisciplinary chronic pain care that spans across different healthcare organizations.

See Appendix A for additional information about evidence-based treatment options on which the aforementioned recommendations are based.

4. Individualize Treatment Plans in a Patient-Centered and Trauma-Informed Manner

"If the oxycodone helps, don't hinder it. Why would you want to take that away? Two steps forward and four to five steps back." - Chronic Pain Patient

"My back might be hurting, but I do it anyway. It ain't gonna have that much power over me. It's just there. It ain't going anywhere. It can't take anything from me." - Chronic Pain Patient

"Take step after step. Sometimes it won't work. And sometimes it does work." - Chronic Pain Patient

"You gotta count your blessings, not your problems...Get out and live!" - Chronic Pain Patient

"I won't let it [the pain] drop me. I won't let it steal my spirit." - Chronic Pain Patient

"It always could be worse. It ain't always about the pain." - Chronic Pain Patient

Part of the National Pain Strategy vision is to create a health care landscape where "people experiencing pain would have timely access to patient-centered care that meets their biopsychosocial needs and takes into account individual preferences, risks, and social contexts, including dependence and addiction" (NPS, 2016). In a patient-centered model, the team of health care professionals puts the patient in the center of decision making and avoids a false hierarchy, where the patient is restricted to a passive role. Furthermore, strategies should focus on the patient, not the pain, to maximize function, encourage individualized treatment modalities, and promote goals personalized to the patient. Providers should not only treat chronic pain in a patient-centered way, but they should also empower their patients to take ownership of their health and practice self-management.

Treating pain in a patient-centered manner is time-consuming: it takes time to listen to goals around function, educate patients about self-management and prevention, personalize treatment modalities, empower patients to be part of the decision-making, and promote behaviors that can ease pain, such as exercise and healthy eating. Public and institutional policies should promote a health care landscape that enables health professionals to spend adequate time with their patients to effectively implement evidence-based methods and treat chronic pain in a patient-centered manner.

Patient-centered treatment models must be trauma-informed. Both physical and psychological trauma are associated with chronic pain (Meints & Edwards, 2018). Trauma has even been shown to be associated with a two to three-fold increase in the development of widespread chronic pain (Afari et al., 2014). Furthermore, the location of brain activity for chronic physical pain overlaps with the circuitry related to emotion (Hashmi et al. 2013). This neurological overlap between chronic physical and emotional pain highlights the need to develop trauma-informed treatment models that address chronic pain in its full complexity.

Public Policy Recommendations

A. **Advocate for MO HealthNet to recognize and compensate Community Health Workers' and nurses' capacity to promote self-sufficiency and improve behavioral health of patients who struggle with chronic pain.** In addition to services provided by licensed behavioral health professionals, further support services, performed by Community Health Workers or even nurse-only visits, are beneficial to patients with chronic pain or Opioid Use Disorder, and could benefit Federally Qualified Health Centers (FQHCs) if reimbursement for those services were allowed.

Institutional Policy Recommendations

A. **Foster education of providers and patients on patient-centered strategies to treat chronic pain.** Recognize the Missouri Primary Care Association (MPCA) trainings on chronic pain via ECHO and other modalities. The MPCA continues to provide healthcare professionals education about patient-centered tools and methods on chronic pain, including but not limited to multi-disciplinary approaches, patient-provider contract with controlled substances, patient engagement, and goal-setting and communication strategies.

B. **Promote/advance trauma-informed care core principles in collaboration with Alive and Well Communities.** Alive and Well Communities will provide trainings on trauma-informed care at health centers in the Gateway Provider Network. Trainings by both the MPCA and Alive and Well will help foster a patient-centered, trauma-informed approach to chronic pain treatment.

C. **Support treatment models that secure more time with the patient by: (1) integrating other professionals into the team (ex: Behavioral Health Consultants), (2) promoting task sharing, and (3) supporting group-based interventions (ex: mind-body pain group).** The RHC supports treatment models that secure more time with patients. For example, the RHC encourages health centers to consider integrating more professionals into the pain team, such as Behavioral Health Consultants; physical therapists, occupational therapists, chiropractors, and/or athletic coaches; and community social workers. Health centers can also consider hosting group-based interventions, similar to Affinia Healthcare's mind-body pain group. Not only can this increase the amount of time the provider can spend with each patient, but group therapy has been shown to be effective for chronic pain management (Keefe, Beaupre, Gil, Rumble, & Aspnes, 2012).

VII. Conclusion

This policy statement focuses on local and state changes that could reduce the impact and enhance the prevention of chronic pain in the St. Louis Region and the State of Missouri. The evidence-based recommendations are gathered from stakeholder interviews, a review of Gateway to Better Health claims and survey data, input from a range of health care providers, and an extensive literature review. The policy statement intentionally aligns with national pain papers and guidelines, including but not limited to the Department of Health and Human Services' *National Pain Strategy*, the Institute of Medicine's *Relieving Pain in America: A Blueprint for Transforming Prevention, Care, Education, and Research*, and the *CDC Guideline for Prescribing Opioids for Chronic Pain*. The paper focuses on four major concepts: recognizing chronic pain as a public health problem; educating patients and providers about chronic pain; treating chronic pain as a chronic disease, using a holistic, collaborative, and cost-effective approach; and providing patient-centered, trauma-informed care. The recommendations are further divided into institutional policy recommendations, which are directed towards health care institutions and providers, and public policy recommendations, which are written for the state and other governing bodies. Ultimately, this paper aims to translate federal recommendation to a local and state level, empowered and informed by regional expertise, and to advocate for evidence-based approaches in chronic pain prevention and management.

Appendix A.

Evidence/Best Practice for Chronic Pain Management

According to the *CDC Guideline for Prescribing Opioids for Chronic Pain* (2016), extensive evidence shows that non-pharmacological and non-opioid pharmacological treatments can produce more benefits with less potential harm. No evidence shows that opioids produce a long-term benefit in pain and function for chronic pain when looked at least one year later, and they can cause possible harm, such as opioid use disorder, overdose, and motor vehicle injury (CDC, 2016). Based on this assessment, opioids should not be used as a first-line therapy for chronic pain; instead, non-pharmacologic therapy and non-opioid therapy should be considered first. The main problem for many providers, however, is that opioids and pharmaceuticals are the only accessible, affordable treatment option for their patients, especially their low-income, uninsured patients, who are disproportionately affected by chronic pain.

Physical Therapy and Exercise Therapy as Evidence-Based and Cost-Saving

Physical therapy has been shown to ameliorate pain. More specifically, exercise therapy, a common method used in physical therapy, reduces pain and improves function for various types of chronic pain (Busch, Barber, Overend, Peloso, & Schachter, 2007; Fransen et al., 2015; Fransen, McConnell, Hernandez-Molina, & Reichenbach, 2014; Hayden, Van Tulder, Malmivaara, & Koes, 2005). Furthermore, long-term pain and disability can be reduced when exercise therapy is combined with psychological therapy (Frogner, Harwood, Andrilla, Schwartz, & Pines, 2018; Salt, Gokun, Rankin Kerr, & Talbert, 2016).

While the burden of paying for physical therapy often falls on patients due to limited or lack of coverage from many insurance providers, physical therapy, compared to opioid therapy, has been found to be associated with lower median annual costs (Gore, Tai, Sadosky, Leslie, & Stacey, 2012). For patients with lower back pack, physical therapy as the first point of care was shown to lead to lower utilization of high-cost medical services, such as advanced imaging services and Emergency Department visits, but higher rates of hospitalization (Frogner, Harwood, Andrilla, Schwartz, & Pines, 2018). As a result of this change in utilization, costs shifted away from outpatient and pharmacy and towards provider settings. Physical therapy as a first point of care was also associated with lower rates of opioid prescriptions. Furthermore, with physical therapy, when chosen by patients with back or neck pain as a first point of care, costs of care were lower the subsequent year (Denninger, Cook, Chapman, McHenry, & Thigpen, 2018). Choosing to begin treatment with direct access to physical therapy, compared to beginning care with a traditional medical referral, led to similar improvements in patient outcomes at discharge from physical therapy. Various models have incorporated physical therapy into a primary care setting, including the United States Army Model, the Kaiser Permanente Model, and the Department of Veterans Affairs Salt Lake City Health Care System (VASLCHCS) Model.

Psychological Therapy as Evidence-Based Methods to Improve Pain and Function

By addressing psychosocial contributors to pain, Cognitive Behavioral Therapy (CBT) can result in sustained improvements in pain and function. Like physical therapy, CBT requires active patient participation in pain management and presents no apparent risks. Yet, the therapy is not always available due to limited access to specialty care services and limited insurance coverage (Williams, Eccleston, &

Morley, 2012). To increase access, primary care clinics can integrate Behavioral Health Consultants into their practice and/or primary care providers can incorporate elements of a cognitive behavioral approach into their practice. For example, providers can empower patients to take active roles in their pain management, encourage and support patients to participate in beneficial activities, such as exercise, and provide mindfulness education, including relaxation techniques and coping strategies (Kamper et al., 2014; Tick et al., 2018)

Other psychological therapies have also been shown to reduce pain. Evidence (moderate to low quality) shows that multidisciplinary biopsychosocial rehabilitation (MBR) programs are more likely to lessen pain and disability for patients with low back pain, compared to usual or physical treatment (Kamper et al., 2014). Acceptance and Commitment Therapy (ACT), a psychotherapy used to treat a wide array of mental and physical conditions, has also been shown to improve functioning and quality of life for patients with chronic pain (Dindo, Van Liew, & Arch, 2017). An important benefit of ACT is that it can be implemented in multiple therapeutic settings, ranging from primary care settings to low-cost, online platforms and applications.

Occupational Therapy as Evidence-Based Method to Improve Function and Ability

Because chronic pain causes "a sense of disempowerment, and the loss of control to engage in daily activities … [by] using a self-management approach, occupational therapy focuses on helping individuals participate in daily activities in adaptive ways" (*Occupational Therapy and Pain Rehabilitation,* www.aota.org). Multidisciplinary approaches including occupational therapy are effective modalities to manage chronic pain (Bosy et al., 2010; Hesselstrand et al., 2015).

Other Non-pharmacologic Methods

A wide variety of other evidence-based non-pharmacologic treatment methods exist, including but not limited to acupuncture therapy, massage therapy, spinal manipulation therapy and manipulative therapy, mindfulness, meditation and relaxation therapies, biofeedback, yoga, tai chi and other movement therapies, such as the Alexander technique, Pilates, and Feldenkrais (Tick et al., 2018). Despite the support for nonpharmacologic therapies for pain by the National Institute of Health (NIH), US Food and Drug Administration (FDA), The Joint Commission (TJC), Centers for Disease Control and Prevention (CDC), and American College of Physicians (ACP), federal and state policies and reimbursement models do not align with the evidence.

When benefits outweigh risks, non-opioid pharmacologic therapy, in combination with nonpharmacologic therapy, should also be used to help manage chronic pain (CDC, 2016). For example, interventional approaches, such as the draining of fluid from a joint (arthrocentesis) and injections (intra-articular glucocorticoid injection and subacromial corticosteroid injection) can provide short-term improvement in pain and function for various types of chronic pain (Bellamy et al., 2006; Buchbinder, Green, & Youd, 2003; Wallen & Gillies 2006). Additionally, medications such as acetaminophen, nonsteroidal anti-inflammatory drugs *(*NSAIDs), and certain antidepressants and anticonvulsants are effective for chronic pain management (CDC, 2016). Other non-opioid pharmacological methods not listed above are also used to treat chronic pain.

References

Afari, N., Ahumada, S. M., Wright, L. J., Mostoufi, S., Golnari, G., Reis, V., & Cuneo, J. G. (2014). Psychological trauma and functional somatic syndromes: a systematic review and meta-analysis. *Psychosomatic medicine*, 76(1), 2.

Anderson, K. O., Green, C. R., & Payne, R. (2009). Racial and ethnic disparities in pain: causes and consequences of unequal care. *The Journal of Pain*, *10*(12), 1187-1204.

Arnold, L. M., Keck, P. E., & Welge, J. A. (2000). Antidepressant treatment of fibromyalgia: a meta-analysis and review. *Psychosomatics*, *41*(2), 104-113.

Bosy, D., Etlin, D., Corey, D., & Lee, J. W. (2010). An interdisciplinary pain rehabilitation programme: description and evaluation of outcomes. *Physiotherapy Canada*, *62*(4), 316-326.

Buchbinder, R., Green, S., & Youd, J. M. (2003). Corticosteroid injections for shoulder pain. *Cochrane Database of Systematic Reviews*, (1).

Bellamy, N., Campbell, J., Welch, V., Gee, T. L., Bourne, R., & Wells, G. A. (2006). Intraarticular corticosteroid for treatment of osteoarthritis of the knee. *Cochrane Database of Systematic Reviews*, (2).

Busch, A. J., Barber, K. A., Overend, T. J., Peloso, P. M. J., & Schachter, C. L. (2007). Exercise for treating fibromyalgia syndrome. *The Cochrane Library*.

Croft, P., Blyth, F. M., & van der Windt, D. (Eds.). (2010). *Chronic pain epidemiology: from aetiology to public health* (pp. 82). Oxford University Press.

Dahlhamer, J., Lucas, J., Zelaya, C., Nahin, R., Mackey, S., DeBar, L., ... & Helmick, C. (2018). Prevalence of chronic pain and high-impact chronic pain among adults—United States, 2016. *Morbidity and Mortality Weekly Report*, *67*(36), 1001.

Denninger, T. R., Cook, C. E., Chapman, C. G., McHenry, T., & Thigpen, C. A. (2018). The Influence of Patient Choice of First Provider on Costs and Outcomes: Analysis from a Physical Therapy Patient Registry. *Journal of Orthopaedic & Sports Physical Therapy*, *48*(2), 63-71.

Dindo, L., Van Liew, J. R., & Arch, J. J. (2017). Acceptance and commitment therapy: a transdiagnostic behavioral intervention for mental health and medical conditions. *Neurotherapeutics*, *14*(3), 546-553.

Dowell, D., Haegerich, T. M., & Chou, R. (2016). CDC guideline for prescribing opioids for chronic pain—United States, 2016. *JAMA*, *315*(15), 1624-1645.

Fishman, S. M., Young, H. M., Lucas Arwood, E., Chou, R., Herr, K., Murinson, B. B., ... & Bakerjian, D. (2013). Core competencies for pain management: results of an interprofessional consensus summit. *Pain Medicine*, *14*(7), 971-981.

Florence, C., Luo, F., Xu, L., & Zhou, C. (2016). The economic burden of prescription opioid overdose, abuse and dependence in the United States, 2013. *Medical care*, *54*(10), 901.

Fransen, M., McConnell, S., Harmer, A. R., Van der Esch, M., Simic, M., & Bennell, K. L. (2015). Exercise for osteoarthritis of the knee. *Cochrane Database of Systematic Reviews*, (1).
Fransen, M., McConnell, S., Hernandez-Molina, G., & Reichenbach, S. (2014). Exercise for osteoarthritis of the hip. *Cochrane Database of Systematic Reviews*, (4).

Frogner, B. K., Harwood, K., Andrilla, C. H. A., Schwartz, M., & Pines, J. M. (2018). Physical Therapy as the First Point of Care to Treat Low Back Pain: An Instrumental Variables Approach to Estimate Impact on Opioid Prescription, Health Care Utilization, and Costs. *Health services research*.

Gatchel, R. J., Peng, Y. B., Peters, M. L., Fuchs, P. N., & Turk, D. C. (2007). The biopsychosocial approach to chronic pain: scientific advances and future directions. *Psychological bulletin*, *133*(4), 581.

Gore, M., Tai, K. S., Sadosky, A., Leslie, D., & Stacey, B. R. (2012). Use and costs of prescription medications and alternative treatments in patients with osteoarthritis and chronic low back pain in community-based settings. *Pain practice*, *12*(7), 550-560.

Hashmi, J. A., Baliki, M. N., Huang, L., Baria, A. T., Torbey, S., Hermann, K. M., ... & Apkarian, A. V. (2013). Shape shifting pain: chronification of back pain shifts brain representation from nociceptive to emotional circuits. *Brain*, *136*(9), 2751-2768.

Hayden, J., Van Tulder, M. W., Malmivaara, A., & Koes, B. W. (2005). Exercise therapy for treatment of non-specific low back pain. *Cochrane database of systematic reviews*, (3).

Hesselstrand M, Samuelsson K, Liedberg G (2015). Occupational Therapy Interventions in Chronic Pain--A Systematic Review. *Occupational Therapy Int.* 2015 Dec; 22(4):183-94.

Hoffman, K. M., Trawalter, S., Axt, J. R., & Oliver, M. N. (2016). Racial bias in pain assessment and treatment recommendations, and false beliefs about biological differences between blacks and whites. *Proceedings of the National Academy of Sciences*, *113*(16), 4296-4301.

IASP Task Force on Taxonomy. (1994). Part III: Pain Terms, A Current List with Definitions and Notes on Usage (pp 209-214) Classification of Chronic Pain, Second Edition, IASP Task Force on Taxonomy (2nd ed.) (H. Merskey & N. Bogduk, Eds.). Seattle, WA: IASP Press.

Institute of Medicine. (2011). Relieving Pain in America: A Blueprint for Transforming Prevention, Care, Education, and Research. Washington, DC: The National Academies Press. Retrieved from https://doi.org/10.17226/13172.

Janevic, M. R., McLaughlin, S. J., Heapy, A. A., Thacker, C., & Piette, J. D. (2017). Racial and socioeconomic disparities in disabling chronic pain: Findings from the health and retirement study. *The Journal of Pain*, *18*(12), 1459-1467.

Johannes, C. B., Le, T. K., Zhou, X., Johnston, J. A., & Dworkin, R. H. (2010). The prevalence of chronic pain in United States adults: results of an Internet-based survey. *The Journal of Pain*, *11*(11), 1230-1239.

Kamper, S. J., Apeldoorn, A. T., Chiarotto, A., Smeets, R. J. E. M., Ostelo, R. W. J. G., Guzman, J., & Van Tulder, M. W. (2015). Multidisciplinary biopsychosocial rehabilitation for chronic low back pain: Cochrane systematic review and meta-analysis. *Bmj*, *350*, h444.

Keefe, F. J., Beaupre, P. M., Gil, K. M., Rumble, M. E., & Aspnes, A. K. (2002). Group therapy for patients with chronic pain. *Pain management: A practitioner's handbook*, *2*, 234.

Liliedahl, R. L., Finch, M. D., Axene, D. V., & Goertz, C. M. (2010). Cost of care for common back pain conditions initiated with chiropractic doctor vs medical doctor/doctor of osteopathy as first physician: experience of one Tennessee-based general health insurer. *Journal of manipulative and physiological therapeutics*, *33*(9), 640-643.

Meints, S. M., & Edwards, R. R. (2018). Evaluating psychosocial contributions to chronic pain outcomes. *Progress in Neuro-Psychopharmacology and Biological Psychiatry*.

Merskey, H. E. (1986). Classification of chronic pain: descriptions of chronic pain syndromes and definitions of pain terms. *Pain*.

Nahin, R. L. (2015). Estimates of pain prevalence and severity in adults: United States, 2012. *The Journal of Pain*, *16*(8), 769-780.

Paulozzi, L. J., Kilbourne, E. M., & Desai, H. A. (2011). Prescription drug monitoring programs and death rates from drug overdose. *Pain medicine*, *12*(5), 747-754.

Portenoy, R. K., Ugarte, C., Fuller, I., & Haas, G. (2004). Population-based survey of pain in the United States: differences among white, African American, and Hispanic subjects. *The Journal of Pain*, *5*(6), 317-328.

Reidhead, M. (2018, January). The Economic Cost of the Opioid Epidemic in Missouri. HIDI HealthStats. Missouri Hospital Association. Hospital Industry Data Institute. Available at http://web.mhanet.com/hidi-Analytics-research

Salt, E., Gokun, Y., Rankin Kerr, A., & Talbert, J. (2016). A Description and Comparison of Treatments for Low Back Pain in the United States. *Orthopedic nursing*, *35*(4), 214-21.

Smith, B. J., Tang, K. C., & Nutbeam, D. (2006). WHO health promotion glossary: new terms. *Health promotion international*, *21*(4), 340-345.

Tait, R. C., & Chibnall, J. T. (2014). Racial/ethnic disparities in the assessment and treatment of pain: Psychosocial perspectives. *American Psychologist*, *69*(2), 131.

Tick, H., Nielsen, A., Pelletier, K. R., Bonakdar, R., Simmons, S., Glick, R., ... & Zador, V. (2018). Evidence-based nonpharmacologic strategies for comprehensive pain care: The Consortium Pain Task Force white paper. *EXPLORE*.

Tsang, A., Von Korff, M., Lee, S., Alonso, J., Karam, E., Angermeyer, M. C., ... & Gureje, O. (2008). Common chronic pain conditions in developed and developing countries: gender and age differences and comorbidity with depression-anxiety disorders. *The journal of pain*, *9*(10), 883-891.

The US Department of Health and Human Services (2016). National Pain Strategy: A Comprehensive Population Health-Level Strategy for Pain. *https://www.hhs.gov/ash/about-ash/news/2016/national-pain-strategy-outlines-actions-improving-pain-care/index.html*

Wallen, M. M., & Gillies, D. (2006). Intra-articular steroids and splints/rest for children with juvenile idiopathic arthritis and adults with rheumatoid arthritis. *Cochrane Database of Systematic Reviews*, (1).

Williams, A. C., Eccleston, C., & Morley, S. (2012). Psychological therapies for the management of chronic pain (excluding headache) in adults.

Glossary

Acceptance and Commitment Therapy (ACT)

ACT recognizes that pain, grief, and loss are fundamental to the human experience. The goal of this therapy is not to eliminate negative experiences, but rather to emphasize the pursuit of valued life priorities and directions (Dindo, Van Liew, & Arch, 2017).

Acute Pain

Acute pain has a sudden onset from a specific event, injury, or illness and lasts a short time.

Biopsychosocial Framework

The biopsychosocial framework accounts for the biological, psychological, and social dimensions of illness and diseases. The model recognizes that individuals experience disease in different ways, based on their unique sociocultural contexts (Gatchel, Peng, Peters, Fuchs, & Turk, 2007).

Chronic Pain

Chronic pain can be defined as pain that typically lasts more than three months or past the time of normal tissue healing (International Association for the Study of Pain, 1986).

Chronic Disease/Chronic Health Conditions

According to the U.S. National Center for Health Statistics, a chronic disease is a disease lasting three months or longer.

Cognitive-Behavioral Therapy (CBT)

An evidence-based treatment for chronic pain, CBT recognizes that thoughts can influence feelings and behaviors. Therefore, identifying patterns of thinking that are harmful can change feelings and improve function.

Current Procedural Terminology (CPT) Codes

Current Procedural Terminology (CPT) is a set of medical codes that providers, payers, and health care facilities use to report medical, surgical, and diagnostic procedures.

Trauma-Informed

According to SAMHSA, "a program, organization, or system that is trauma-informed: 1) r*ealizes* the widespread impact of trauma and understands potential paths for recovery, 2) *recognizes* the signs and symptoms of trauma in clients, families, staff, and others involved with the system, 3) r*esponds* by fully integrating knowledge about trauma into policies, procedures, and practices, and 4) seeks to actively resist *re-traumatization*."

Interdisciplinary Treatment

According to the International Association for the Study of Pain (2017), interdisciplinary treatment refers to "*multimodal treatment* provided by a multidisciplinary team collaborating in assessment and treatment using a shared *biopsychosocial model* and goals."

Opioid

An opioid is any compound that binds to an opioid receptor.

Pain

Pain is "an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage...and is always subjective" (International Association for the Study of Pain, 1994).

Movement System

The human movement system "consists of physiological organ systems that interact to produce and support movement of the body and its parts" (Washington University School of Medicine).

Multimodal

Multimodal treatment is the use of various interventions within one discipline, aimed at the same problem (International Association for the Study of Pain, 2017).

Racial equity

Racial equity is "a state in which life outcomes are no longer predictable by race" (*Forward through Ferguson*).

Physical Medicine and Rehabilitation Codes

CPT codes that focus on preventing, ameliorating, and adapting to injury in the *movement system*.

Self-efficacy

"Perceived self-efficacy refers to beliefs that individuals hold about their capability to carry out action in a way that will influence the events that affect their lives" (Smith, Tang, & Nutbeam, 2006).

Therapeutic Exercise/Exercise Therapy

According to the America Physical Therapy Association, therapeutic exercise is practicing physical movements to help prevent or improve impairments in the body, enhance activity, reduce risk, and improve well-being.