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Overcoming Overuse Part 3: Mapping the Drivers of Overuse in Musculoskeletal Health Care

In the Overcoming Overuse series so far, we have discussed what overuse is in musculoskeletal health care, how it happens, and the challenges of identifying and measuring overuse in physical therapy. Here, we focus on the drivers of overuse, why musculoskeletal health care overuse emerges.

There are many drivers of overuse, yet their relative importance, how they interact, or the potential value of targeting any single driver is unclear. We apply a practical framework¹⁰ for understanding overuse of musculoskeletal care (TABLE), and propose a network of interacting and interrelated drivers of overuse of musculoskeletal care in 4 domains: (1) the culture of health care consumption, (2) patient factors and experiences, (3) clinician factors and experiences, and (4) practice environment (FIGURE). We place the clinician-patient interaction at the center of our patient-centered network—where the multiple drivers of overuse of

musculoskeletal care connect and exert their influence—and hope to inspire musculoskeletal research to produce interventions to tackle overuse.

The Culture of Health Care Consumption

Misleading marketing, poor online information, and uncritical media reporting can promote overuse. “More is better,” “new is better,” and “technology is good” are popular beliefs that promote health care overuse. The messages are reinforced by pharmaceutical and device companies, and by health professionals selling tests and treatments. Medical marketing of prescription drugs, health services,

laboratory tests, and disease awareness campaigns in the United States—to both clinicians and the public—reached \$30 billion in 2016, up from \$18 billion in 1997.¹² There is little evidence that increased spending has improved health-related outcomes. The physical therapy profession is not immune; some have raised concerns that marketing initiatives could lead to unnecessary physical therapy for conditions such as back pain.¹⁵

The internet—awash with unreliable information—is a breeding ground for overuse. An analysis of publicly available information on knee arthroscopy for osteoarthritis (a procedure that offers no benefit over placebo) in Australia found that only 6 of 93 documents cited research and only 8 of 93 advised against arthroscopy.² A study of information about low back pain on websites deemed to be “trustworthy” found that fewer than half of the treatment recommendations were accurate according to UK and US clinical guidelines.⁴

The media can contribute to overuse via uncritical enthusiasm for health care.⁶ Headlines like “Breakthrough in back pain care as stem cells offer hope of cure” give hope, but evidence for the benefit of stem cell treatments is limited.

● **SUMMARY:** Overcoming overuse in musculoskeletal health care requires an understanding of its drivers. In this, the third article in a series on “Overcoming Overuse” of musculoskeletal health care, we consider the drivers of overuse under 4 domains: (1) the culture of health care consumption, (2) patient factors and experiences, (3) clinician factors and experiences, and (4) practice

environment. These domains are interrelated, interact, and influence the clinician-patient interaction. We map drivers to potential solutions to overcome overuse. *J Orthop Sports Phys Ther* 2020;50(12):657-660. doi:10.2519/jospt.2020.0111

● **KEY WORDS:** drivers, musculoskeletal, overuse, physical therapy

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Sensationalizing inaccurate information through media, marketing, and the internet impedes informed choices about management and perpetuates blind faith in the benefits of health care.

Patient Factors and Experiences

Beliefs about musculoskeletal pain and enthusiasm for new tests and treatments may leave patients vulnerable to overuse. Patient beliefs influence treatment

expectations and intentions. Patients with knee osteoarthritis disregarded the role of exercise—in favor of unproven medical treatments—for fear of doing more damage.³ Receiving structural diagnoses for shoulder pain (eg, impingement) and back pain (eg, degeneration) may increase patients' willingness to undergo surgery.

Patients often overestimate the benefits and underestimate the downsides of

health care.⁷ People diagnosed with knee osteoarthritis perceive they will experience greater benefit from injections and medicines compared to exercise.¹¹ Patients often believe that imaging will lead to more effective back pain treatment.⁸

Low health literacy has been associated with unnecessary health care use and could impact use of physical therapy.⁵ Patient expectations of physical therapy and preferences for specific interventions (eg,

TABLE

USING THE FRAMEWORK FOR REAL-LIFE EXAMPLES OF OVERUSE OF MUSCULOSKELETAL HEALTH CARE TO IDENTIFY PRACTICAL SOLUTIONS

Example of Overuse	Possible Drivers/Domains	Feasible Approaches to Improvement
Requesting diagnostic imaging for low back pain with no signs of serious disease	<ul style="list-style-type: none"> Culture of health care consumption: the belief that technology is always necessary Patient factor: the belief that imaging is needed to identify the cause of pain Clinician factor: lack of confidence in assessment, fear of disappointing patient Practice environment: ease of ordering imaging in electronic medical record 	<ul style="list-style-type: none"> Culture of health care consumption: public health campaigns against inappropriate health care (eg, Choosing Wisely) Patient factor: education about prognosis of back pain and the limitations of imaging for most back pain, reassurance, watchful waiting while increasing patient engagement in management, review patient progress Clinician factor: communication skills to improve clinician-patient interaction (eg, listening, communicating uncertainty), audit and feedback, team-based care Practice environment: electronic health record interventions (eg, defaults, accountable justification, clinical decision support)
Referring patients to a medical doctor for opioids for persistent musculoskeletal pain	<ul style="list-style-type: none"> Culture of health care consumption: pain as a vital sign and marketing of opioids Patient factor: poor knowledge of the harms of opioids Clinician factor: misperception of effectiveness and patient preferences Practice environment: reimbursement for opioids 	<ul style="list-style-type: none"> Culture of health care consumption: regulate or fine misleading marketing, public health campaigns against inappropriate health care (eg, Choosing Wisely) Patient factor: education about potential harms of opioids, plus information about safer alternatives for pain Clinician factor: education about the benefits and harms of opioids, peer comparison, listening to the patient Practice environment: ensure opioids receive appropriate scrutiny before being reimbursed and that they are never used as a first-line treatment
Referring patients for arthroscopy for knee pain	<ul style="list-style-type: none"> Culture of health care consumption: media report that "new surgery is a breakthrough for knee pain," consumer resources on the internet say that arthroscopy is an effective option for knee pain Patient factor: "my neighbor had this procedure and she had a good outcome," poor response to other treatments Clinician factor: the patient did not respond to physical therapy, so the patient requires surgery Practice environment: reimbursement for arthroscopy, lack of access to alternatives 	<ul style="list-style-type: none"> Culture of health care consumption: train journalists to be more skeptical, critical-thinking skills for the public and patients, update trustworthy websites to ensure they have accurate treatment recommendations Patient factor: communication about the benefits and harms of arthroscopy, explore patient goals Clinician factor: review the physical therapy options provided, education that arthroscopy has no benefit over placebo, develop communication skills to communicate uncertainty Practice environment: change reimbursement systems to stop funding arthroscopy and instead fund effective or safer treatments
Overreliance on manual therapy	<ul style="list-style-type: none"> Culture of health care consumption: courses of unknown value marketed to physical therapists, misleading marketing campaigns Patient factor: pain is caused by damage, and the clinician is the expert who can "fix" pain Clinician factor: the belief that precise structural labels improve targeting of treatment Practice environment: no space to provide exercise therapy and no privacy for listening to patients' personal concerns 	<ul style="list-style-type: none"> Culture of health care consumption: develop clinician and patient critical-thinking skills, regulate professional development courses, increase regulatory oversight, replace misleading marketing with marketing of areas where physical therapy has a good evidence base Patient factor: pain education, facilitate patient engagement in management Clinician factor: education about the limitations of structural diagnoses, case studies of harm caused to patients' beliefs by giving them an unnecessary structural label Practice environment: discuss with senior colleagues or organization about access to better space, explore forms of exercise that do not require lots of clinic space

manipulation)¹ may also influence the acceptability of recommended options (eg, home exercise).

Clinician Factors and Experiences

Biomedical and biomechanical treatment paradigms, the belief that more care is better, and fear of inaction may encourage overuse. In physical therapy, management paradigms for various musculoskeletal conditions are dominated by identifying “abnormalities” in posture and alignment, among others.⁹ Most abnormalities have little to no association with pain or disability, challenging the use of corrective exercises. If physical therapists are movement specialists and corrective exercises do not work, what is the benefit of specialized one-to-one physical therapy over a general low-cost exercise program?

Beliefs that more care is better, action is better than inaction, and “group

think” (“My colleagues use dry needling, so I should, too”) might discourage clinicians from adhering to management guidelines. The view that clinical experience triumphs over research evidence is evident in low physical therapist compliance with guidelines for back pain, ankle sprains, and whiplash.¹⁴

Fear of inaction could promote overuse and may relate to concerns about the negative impact on the clinician-patient interaction, missing a diagnosis, or litigation. In a 2017 Choosing Wisely Australia report, 73% of physical therapists were willing to order unnecessary imaging if requested by patients. One potential solution to fear of inaction in physical therapy is empowering patients to self-manage through home exercise. In this role, physical therapists can act as a “guide” rather than providing excessive supervised treatment.

The Practice Environment

Time constraints, funding arrangements, practice design, and vested interests can perpetuate overuse. Brief physician consultations are a barrier to providing important aspects of care, such as listening and reassurance.¹³ Quickly ordering a scan and prescribing medicine are appealing options. The perception that physicians should be the first point of contact within the health care system might encourage these behaviors. Physical therapists have more time to spend with patients with musculoskeletal conditions to provide recommended care and should be considered an appropriate point of contact.

Health system regulation, reimbursement, and commissioning of health services may be incentives to overservice and provide nonrecommended care. In the United States, the fee schedule that Medicare and private payers use tends to underpay for time and overpay for tests and procedures. We address economic drivers of overuse and vested interests later in the Overcoming Overuse series.

The practice environment may make it easier for clinicians to prescribe an unnecessary test or treatment, or more difficult to prescribe recommended care. For example, electronic health record display—if designed in a haphazard manner—can make it so that a large packet of opioids is the default option. For physical therapists, lack of space may hamper efforts to provide the exercise recommended in the guidelines for musculoskeletal conditions (eg, knee osteoarthritis).

In this article, we have discussed the key drivers of musculoskeletal health care overuse. We contend that many drivers exert their influence at the clinician-patient level—highlighting the potential value of a shared decision-making approach to overcoming overuse. ●

STUDY DETAILS

AUTHOR CONTRIBUTIONS: All authors conceived the idea. Dr O’Keeffe wrote the first draft. All authors contributed intellectual content, assisted with revisions,

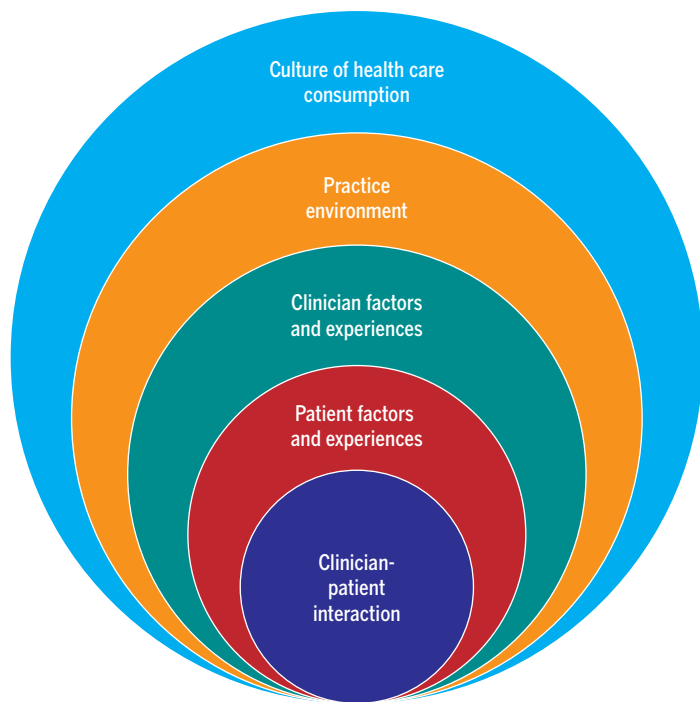


FIGURE. Framework for drivers of overuse. Within musculoskeletal health care, a network of interacting and interrelated drivers can encourage overuse. Both patients and clinicians are influenced by the culture of health care consumption, which varies between countries. Clinicians are influenced by the culture of medical care and training in their practice environments. Both clinicians and patients are influenced by their beliefs and personal experiences. Ultimately, clinical decisions and health care choices occur within the specific clinician-patient interaction. Interventions can be conceptualized within appropriate domains of drivers or through the interaction between the clinician and patient.

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