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Title: Reframing how we care for people with persistent non-traumatic musculoskeletal pain. Suggestions for the rehabilitation community.

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Introduction

In 2018, Lewis & O'Sullivan[18] asked the question 'Is it time to reframe how we care for people with persistent non-traumatic musculoskeletal (MSK) pain? They argued for a move away from the 'we can fix and cure you' model to adopting an approach that is more consistent with approaches to managing other persistent non-communicable diseases.

They argued that best practice for persistent conditions such as non-insulin dependent diabetes, hypertension, depression, multiple sclerosis and asthma is underpinned by person-centred care. An approach that includes education, lifestyle considerations such as sleep, smoking cessation, a well-balanced diet and a graduated and on-going physical activity program, and, when required, pharmacological management. Consistent with the approach proposed by Hutting et al. the emphasis would be on coaching and empowerment to support effective self-management supporting people to participate valued social, vocational and sporting activities.[8] They suggested that such a paradigm shift would require all stakeholders to reconsider their perspectives, actions and decision-making. The stakeholders include, but are not limited to; patients, physiotherapists, medical colleagues, insurance providers, educators, professional associations and the wider health policy community. Moreover, they suggested that implementaion would require a significant realignment of understanding from the public relating to managing persistent MSK conditions and the role of the physiotherapy profession in the care of MSK conditions.

Delivery of MSK care has many of the elements of a 'super wicked problem'[11], being a problem with the following key characteristics:

(i) Endemic and persistent funding of expensive, low-value care (e.g. subacromial decompressions), despite evidence of (underfunded) high-value, low-risk, cost-effective care (e.g. progressive exercise for rotator cuff related shoulder pain) without a reduction in quality.

(ii) A prevailing lack of understanding of non-traumatic musculoskeletal pain by 'consumers' (patients, clients, their families), providers (health care workers), insurers, educators, and media resulting in expectations of a 'structural diagnosis and a fix' for MSK pain.

(iii) Fragmantation and non co-operation of the promoters of change due to a lack of national and international inertia, consensus and collaboration.

(iv) Conflicts of interest from all the actors (stake-holders) due to the magnitude and consequences of change.

(v) An unquestionable need to find a solution now with the failure resulting in a growing social and economic burden for future generations.

From editorial to (the start of) action and advocacy

World Physiotherapy (WPT) is the sole international organisation representing the global physiotherapy community. It represents and can draw together diverse global perspectives from its 120 member organisations and 25 subgroups and networks. Its stated strategic imperatives include knowledge sharing and advocacy with respect to health policy. It works collaboratively within a number of global health alliances including the World Health Professions Alliance and the Global Rehabilitation Alliance on advocacy issues. It works at an organisational level with its member organisations and seeks to amplify capacity within the global community in support of promoting the value and impact of physiotherapy.

Advocacy is a combination of individual and social actions designed to gain political commitment, policy support, social acceptance and systems support for a particular goal or program (WHO, 1995) or more simply; it is a planned action of influence undertaken to achieve a specific outcome. The model used by WPT is one that clearly states a description of the intended outcome, supported by a detailed review of context, and is supported by a comprehensive strategy. The editorial[18] described a desired outcome, namely, the alignment of the management of non-traumatic persistent and disabling MSK pain conditions with the principles underpinning the management of other persistent conditions. It also described context but did not provide a comprehensive strategy ('next steps') to achieve the desired outcome.

To progress from editorial to action and advocacy required a review of the context within which we operate as a global community. Vivifying its role in international leadership, WPT provided the opportunity to bring together a diverse group of stakeholders to discuss in detail the wider context with a view to identifying a set of 'next steps' in terms of action and advocacy. This action learning opportunity at WPT Congress 2019 (https://www.wcpt.org/wcpt2019) included approximately 100 physiotherapists from low, middle and high-income countries.

Clinicians, educators and researchers from low, middle and high income countries shared their perspectives. Three patients presented their lived experiences of persistent MSK pain and the presective of insurers were also presented at the symposium. The 100 participants were asked a series of questions relating about barriers to and benefits of the outcome to be reported from various perspectives.This paper presents the results from the stakeholders' contextual analysis and forms the basis for the proposed next steps from an action and advocacy perspective.

The experience of people living with persistent MSK pain

The participants heard the lived experiences of three people suffering from persistent MSK shoulder, lowback and knee pain. A number of consistent themes emerged from their stories:

- The ‘revolving door’ of seeking and receiving multiple and varied ineffective treatments from a range of health professionals including physiotherapy, chiropractic, osteopathy, pain physicians, orthopedic surgeons, general practitioners and providers of complimentary heathcare. They recounted the loss of valued aspects of their life (work, family, social, exercise), profound emotional distress, and the sense of feeling dependent, confused, not listened too and prevailing hopelessness.
- The costs - both direct and indirect. The financial costs of ‘treatments’ as well as the cost in terms of time and energy focusing on finding an elusive ‘cure’.
- The desperation of lost income and making ‘ends meet’ (having the financial resources to buy what you need to live) due to the perceived damage caused by movement was expressed by a person experiencing shoulder pain following a diagnosis of impingement syndrome.
- Finally, they reported the empowerment and ‘success’ of self-management when coached by a phyiotherapist, that focused on empowerment and placing the individual in charge of their health.

The physiotherapist perspective

During the seminar participants were asked to consider benefits and challenges or barriers to the propsed paradign shift in care. Given the range of experience, cultural diversity and work settings of the particpants this was a key question. There was overwhelming support for the model as the patient’s experiences were familiar to them. The role of the practitioner as a health coach was supported as a positive suggestion to reducing pressure to find unrelastic and unobtainable ‘cures’. This paradigm shift was described as empowering professional leadership in the management of MSK pain. Empowering people to build their self-efficacy and gain control of their lives was seen as a way to improve both patient and clinican satisfaction.

Barriers to the model of care were also noted, including the perception that patients expected a cessation of symptoms and believed that MSK physiotherapists offered ‘cures’ and they would be ‘fixed’ by passive treatments. Inconsistent messages coming from different healthcare providers (within and between) professions were considered to significantly undermine the proposed model. Self-management was perceived as onerous and a challenge to many people and for many may not be culturally acceptable or expected.

The key principles underpinning the perceived benefits of this approach are detailed in Table 1.

Table 1: Key principles underpinning the perceived benefits of the proposed model (ACEE)

- **A**iming to build the self-efficacy to take control and ultimately be responsible and self-manage their health
- **C**oaching individual's to engage in exercise and a healthy lifestyle (physical activity, sleep, smoking cessation, approroaite nutritions choices, weight and stress management, importance of social interaction, etc)
- **E**stablishing a strong clinical alliance
- **E**ducation regarding the biopsychosocial contributors to the MSK conditions

The influence of media

When asked to consider the role that various media might play in terms of positively or negatively influencing the outcome, participants noted the following. It was considered that being truthful with the public is the principal responsibility of a journalist and that by providing honest information journalists may drive important change. In addition, it was suggested that there is a trend for sustainability and this change in focus would support such an approach. However, participants also noted a number of barriers arising from the media's influence on education and expectations of the wider public. Namely, a need to sensationalise health matters to sell stories with little regard to the harm associated with sensationalising innacuracte 'breaking news' and generate revenue by seeling advertising space that may be of poor quality, have no evidence base and may be harmful. Other barriers included speaking predominately to medical doctors and not seeking a variety of opinions within and across professions. Concern was raised over the capacity of social media to provide biased options to those seeking help.

The economic context

Financial considerations were mentioned by individual patients, by participating physiotherapists and by medical colleagues and by the insurance sector. It was acknowledged that achieving the outcome of reframing practice could ultimately have a positive economic impact on individuals, businesses and society but this was nonetheless an area of challenge. A barrier to promote this was a lack of easily accessable data.

Reimbursement models for health services vary across the world and they have been noted to be influential on physiotherapy practice.[5] The Academy of Royal Medical Colleges' initiative to reduce the harm of too much medicine[13] has argued that the reason why insurance companies continue to pay for unnecessary diagnostics and treatment is a systemic issue. It was noted by participants that business models for companies within the sector may be challenged by the approach being proposed – a shift away from high-tech, quick fix, predominantly passive approaches represents a significant change to the prevailing model of practice. It was suggested that in MSK healthcare, a biomedical model prevails and not a biopsychosocial one, which in turn creates financial incentives that may be contrary to self-management and patient empowerment. In addition, insurance models that limit the autonomy of a physiotherapist to deviate from an agreed 'care plan' or funding by activity and not outcomes may have an economic impact on both the cost for the patient and physiotherapist's income and may be a barrier to change.

Education and continuing professional development

Entry to practice education is the start of a life-long professional journey. Participants noted that current curricula may not have changed for a substantial period of time and that those teaching may have biomedical beliefs and attitudes that MSK conditions are curable. Although change may be slow in higher-education institutions encouraging examples of positive disruption in physiotherapy eductaion were presented. The clinical knowledge and skills for managing persistent pain in line with appropriate standards such as recommended by the International Association for the Study of Pain[9] have been introduced in the entry to practice physiotherapy education in some countries, such as Qatar, Nepal and South Africa.[1] In addition, Cook[6] argued that educators need to teach what is needed rather than what is preferred by faculty and as suggested by others,[7, 18] we need to educate leaders and advocates and value those skills in the next generation of physiotherapists. In addition to engaging and practicing a biopsychosocial understanding and shared decision model of healthcare, new graduates and current practitioners will need to gain expertise in coaching and motivational skills, as well as skills to target lifestyle issues such as inactivity, obesity and associated health co-morbidities.

Challenges may also present from regulators and licensure requirements which is why it was proposed that it remains important to work within systems until change be affected. Participants noted how rewarding is will be to educate future generation of healthcare professions who can be an inspiration for other healthcare professions.

The global perspective

MSK conditions are identified as the leading cause of disability globally accouting for 16% of all years lived with disability[3] and are associated with substantial levels of disability in low, middle and high-income countries.[10] The ageing population,[2] in addition to the already unmet musculoskeletal health needs contribute to the escalation of the burden of MSK pain conditions globally. A recent review of health policies in OECD countries as they relate to integrated prevention and management of non-communicable diseases noted that historically MSK conditions have not featured strongly in global or national management and monitoring frameworks suggesting that as a consequence, political attention and resource distribution has been incommensurate with the burden of disease.[3]

The provision of inappropriate investigations and low value, poorly evidenced passive care is a potential reason the burden of persistent MSK disorders is expected to rise in many countries in the next decade.4 As discussed in the seminar, the use of low-value care is increasingly being delivered in low-income countries for both diagnosis and treatment of MSK pain. For example, unnecessary diagnostic imaging for non-specific neck and back pain are extensively used in Nepal with increasing invasive procedures to manage these conditions.[15, 16] In South Africa, there is anecdotal evidence that privately-insured patients are managed within a biomedical model of healthcare with a short-cut from general practitioner to specialist, MRI and surgery for persistent MSK pain. In lower-income groups, long waiting lists and staff-shortages often perpetuate persistent pain and dependence on medication.

Some healthcare providers, as well as those seeking care, have strong beliefs that persistent pain is related to an identifiable physical problem caused by structural pathology. This leads patients to succumb to interventionism and paternalism, becoming the passive recipients of care.[14]

Where to from here?

Given the complexity and multifarious action required to achieve a paradigm shift of this magnitude and involving so many actors, it is not unreasonable to think ‘is it all just too much’? We believe not. What follows are a series of suggested actions for various the stakeholders involved with MSK pain conditions. Table 2 details resources to support this call to action.

Educators

The challenge for educators is to be at the forefront of knowledge translation and skills training to equip the MSK health workforce for the future. MSK physiotherapy is a rapidly evolving profession. Educators need to balance historical perpectives of the profession such as the emphasis on passive therapies (ie. manual therapies and electrotherapeutuc devices) and placing them in context with current evidence. MSK physiotherapy needs to transition away from the identification structural diagnosis and the administration of passive interventions and re-focus on improving function, self-management and the delivery of high value care for people with MSK pain and persistent diseases. This changing role needs to be reflected in the training programs and requires an emphasis on teaching contemporary biopsychosocial understanding and best care for the management of MSK pain; including triage for serious pathology, person centred care, evidence informed examination and management planning and implementation.[12] This needs to be combined with the training of clinical skills needed to deliver this model of care; communication, motivational and behavioral change techniques, exercise prescription, as well as the ability to effectively communicate with other clinicians to offer meaningful multi-professional care. Additional skills are required when caring for patients with comorbidities such as; mental health, obesity, addiction, cardio-vascular and respiratory disease. Skills training requires practice and direct mentoring. Those trained under 'older' models of care need support and encouragement to transition.

Clinicians

Clinicians need to update their knowledge and skills to reflect best practice. The challenge is considerable given the prevalence of outdated diagnostic labels, low value care (passive therapies), short consultation times and over treatment in clinical practice. This change is constrained by cultural beliefs within professions, financial incentives for low value care and insufficient funding for high value care. This transition will be difficult but critical for sustainable health care into the future and financial incentives to support new models or care are needed to support this process.

Where patients expect and or demand low value care of clinicans, careful communication is required to highlight the long-term benefits of coaching people towards self management as well as having honest conversations regarding the limitations of low value care. Ongoing mentoring and support is required within clinical communities to support this model of care. Clinciians should not be required to make these changes without support and management teams must fully participate in this transition for it to be successful.

Patients:

Patients need to be educated to make informed and empowered decisions for their own care based on the latest available evidence. This includes understanding the nature of their problem in simple language as well as being informed regarding the costs, benefits, risks and likely outcomes of the various interventions available to them. Understanding that with persistent MSK pain a permanent fix' is unlikely and being coached towards effective self management has long term benefits for both their physical and mental health.

Professional organisations:

Professional organisations have a responsibility to provide leadership to clearly articulate and promote best care for MSK pain. This role extends to the provision of knowledge and skills development to their members. The also need to call out low value care in their members to hold them to account. They also have a critical role in lobbying government and funders to appropriately fund high value care and defund low value care. Professional societies and organisations need to work with the media to call out 'fake news' as it appears, while providing accurate and honest health information to the broader community.

Funders and policy makers:

Policy makers and funders need to be held accountable to the people they serve in order to provide health-care systems that deliver models of care that are evidence informed and high value for the consumer. Transition to funding high value care and underfunding of low value care is required, while educating consumers of the benefits of this process.

Research community:

Researchers need to assess the long term benefits, risks and costs of various models of care for MSK pain. Researchers need to partner with clinical communities to address relevant clincial concerns, embed evidence into practice, help translate research to support practice, and encourage clinicians to evaluate long term clinical outcomes that include a broad range of measures including quality of life (QOL) and general health.

Exemplar of this model of care

The GLA:D™ program[17] is an example of an evidence based intervention for hip and knee osteoarthritis (OA) that has been implemented across the world, in high and low economically developed countries. It is evidence based, cost effective and is aligned to best care guidelines. GLAD trains physiotherapists to deliver pain education, lifestyle advice and progressive exercise in order to coach people with knee and hip OA towards self management of their condition. For the patient it has demonstrated improvements in pain, disability and QOL, while reducing the need for medication and the progession to total knee replacement. This model of care is being taught at an undergraduate and graduate level. It is supported and advocated by professional organisations, and has been adopted and funded by health systems as a first line treatment for hip and knee OA in Denmark.[17] Importantly, researchers and clinicians work together to monitor long term clinical outcomes.

Table 2: Resources to support reframing care for people with persistent non-traumatic musculoskeletal pain

Group	Resources
Patients	
Clinicians	
Educators	
Professional organisations	
Funders and policy makers	
Research community	

Summary

The approach to delivering care for people with musculoskeletal pain must change. Care should prioritise integrated, high value, cost effective approaches (e.g graduated exercise for rotator cuff related shoulder pain) over low-value expensive approaches (e.g subacromial decompression). This change requires a collective effort by policy makers, funders, professional bodies and clinicians in order to improve the health of people with MSK pain in society. If action on this super-wicked problem is not taken, then there is danger, not unlike climate change, that all will suffer.

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References

1. Available at: http://trainpainacademy.co.za/. Accessed
2. Aboderin IAG, Beard JR. Older people's health in sub-Saharan Africa. *Lancet*. 2015;385:e9-e11. 10.1016/S0140-6736(14)61602-0
3. Briggs AM, Persaud JG, Deverell ML, et al. Integrated prevention and management of non-communicable diseases, including musculoskeletal health: a systematic policy analysis among OECD countries. *BMJ Glob Health*. 2019;4:e001806. 10.1136/bmjgh-2019-001806
4. Buchbinder R, van Tulder M, Oberg B, et al. Low back pain: a call for action. *Lancet*. 2018;391:2384-2388. 10.1016/S0140-6736(18)30488-4
5. Bury TJ, Stokes EK. A global view of direct access and patient self-referral to physical therapy: implications for the profession. *Physical therapy*. 2013;93:449-459. 10.2522/ptj.20120060
6. Cook C. Cerasoli Lecture: The Sunk Cost Fallacy *Journal of Physical Therapy Education* 2017;31:10-14.
7. Dean CM, Duncan PW. Preparing the Next Generation of Physical Therapists for Transformative Practice and Population Management: Example From Macquarie University. *Physical therapy*. 2016;96:272-274. 10.2522/ptj.20150663
8. Hutting N, Johnston V, Staal JB, Heerkens YF. Promoting the Use of Self-management Strategies for People With Persistent Musculoskeletal Disorders: The Role of Physical Therapists. *The Journal of orthopaedic and sports physical therapy*. 2019;49:212-215. 10.2519/jospt.2019.0605

9. International Association for the Study of Pain. IASP Curricula. Available at: https://www.iasp-pain.org/Education/CurriculaList.aspx?navItemNumber=647. Accessed 2018.

10. James SL, Abate D, Abate KH, et al. Global, regional, and national incidence, prevalence, and years lived with disability for 354 diseases and injuries for 195 countries and territories, 1990–2017: a systematic analysis for the Global Burden of Disease Study 2017. *The Lancet*. 2018;392:1789-1858. 10.1016/S0140-6736(18)32279-7

11. Levin K, Cashore B, Bernstein S, Auld G. Overcoming the tragedy of super wicked problems: constraining our future selves to ameliorate global climate change. *Policy Sciences.* 2012;45:123-145. doi:10.1007/s11077-012-9151-0.

12. Lin I, Wiles L, Waller R, et al. What does best practice care for musculoskeletal pain look like? Eleven consistent recommendations from high-quality clinical practice guidelines: systematic review. *British journal of sports medicine*. 2019;10.1136/bjsports-2018-099878

13. Malhotra A, Maughan D, Ansell J, et al. Choosing Wisely in the UK: reducing the harms of too much medicine. *British Journal of Sports Medicine*. 2016;50:826-828. 10.1136/bjsports-2016-h2308rep

14. Norman I. Blind trust in the care-giver: is paternalism essential to the health-seeking behavior of patients in Sub-Saharan Africa? *Advances in Applied Sociology*. 2015;5:94.

15. Sharma S, Jensen MP, Moseley GL, Abbott JH. Results of a feasibility randomised clinical trial on pain education for low back pain in Nepal: the Pain Education in Nepal-Low Back Pain (PEN-LBP) feasibility trial. *BMJ Open*. 2019;9:e026874. 10.1136/bmjopen-2018-026874

16. Sharma S, Jensen MP, Pathak A, Sharma S, Pokharel M, Abbott JH. State of pain research in Nepal: A systematic scoping review. *Pain Reports*. 2019;In Press.

17. Skou ST, Roos EM. Good Life with osteoArthritis in Denmark (GLA:D): evidence-based education and supervised neuromuscular exercise delivered by certified physiotherapists nationwide. *BMC Musculoskelet Disord*. 2017;18:72. 10.1186/s12891-017-1439-y

18. Tschope B, Goulet G. Formation of a doctoring profession: are we shying away from education that really matters in the lives of our graduates. *Journal of Physical Therapy Education* 2017;31:90-94.