

Executive Summary

About the action plan

Investment in high-quality research, good access to knowledge and collaborative, interdisciplinary working across all parts of the musculoskeletal (MSK) community is needed to successfully address the large and growing burden of MSK conditions globally.

Currently, there are large disparities in resources, infrastructure and access to knowledge across the global MSK community, and a continuing divide between professions and information channels. This impairs the effective sharing and application of knowledge to the clinical management of MSK conditions.

Nationally and internationally, MSK researchers need to foster a “culture of research” based on high-quality education, including both formal and informal training, to improve clinical management and outcomes in MSK conditions.

This action plan identifies key challenges in MSK research and offers specific solutions and useful resources, with a focus on those parts of the world where the need for better MSK education and practice is greatest. The plan also aims to be a catalyst for a more collaborative way of working, and will be reviewed and updated on an annual basis.

The action plan

The action plan itself is divided into 3 key sections:

1. Achieving the vision: key elements of success

This section identifies the key elements which need to exist for good education in MSK research to be a reality in practice. It is divided into two sets of goals, at a) the international and national government levels, and b) the national and local level.

2. Achieving the vision: practical solutions for MSK research

This section provides more specific recommendations for actions which should be taken to ensure that these goals are achieved in practice. It is divided into two sets of actions, by key groups: a) national MSK organizations and institutions, and b) MSK professionals.

3. Practical resources

This section provides a set of key practical resources to support the above action points, and will be regularly updated.

PREAMBLE

Purpose

This document provides an overarching action plan for promoting musculoskeletal (MSK) health and effectively treating and preventing avoidable disability from MSK conditions *globally* through advancing education in the MSK field, with a focus on the role of research.¹

The document is intended for all those who are involved in the production or use of MSK research, at all career stages, working across basic, translational, and clinical research and across all aspects of MSK, from rare diseases to common conditions.

The action plan identifies key challenges in MSK research and offers specific solutions, including useful resources produced by national and international organizations with global relevance and broad applicability. These resources have been compiled by the [International Federation of Musculoskeletal Research Societies \(IFMRS\)](#), and will be updated and developed over time. The action plan is in this respect a “living document” which will be periodically reviewed and updated by the IFMRS and its partner organizations.

There is a huge disparity in resources, infrastructure, and access to knowledge across the global MSK community. There is also a continuing divide between professions and information channels which impairs the effective sharing and application of new knowledge to clinical management. The action plan therefore aims to be a catalyst for a more collaborative way of working, particularly in parts of the world where the need for better MSK education and practice is greatest, in a spirit of multilateral dialogue and learning.

Finally, education does not happen or exist in a vacuum. Achieving our purpose requires a concerted effort by many stakeholders at national, regional, and international levels, including researchers, clinicians, professional bodies, educational institutions, governments, and international organizations. Underpinning this is the need for a strong international network of professionals to provide a space for knowledge-sharing and collaboration. The [Knowledge Network](#) developed by the IFMRS aims to provide this space, alongside other key platforms and fora.

¹ MSK health impairments include more than 150 discrete conditions (e.g. arthritis, gout, osteoporosis and fragility fractures, sarcopenia, auto immune and rheumatic conditions), pain associated with MSK tissues/structures or presenting in MSK tissues/structures (e.g. low back pain, neck pain, fibromyalgia) and injury and trauma of the MSK system (e.g. sporting, occupational and road traffic injury and trauma).

A healthy MSK system is fundamental to mobility, dexterity, physical function, participation and quality of life. MSK health impairments are associated with pain, disability, depression, reduced ability to work, study and care for self and others, increased health resource utilisation, and for many people, premature retirement from the workforce. These outcomes have profound impacts on a person's quality of life and on the prosperity of families and communities.

The Global Context

THE UNRECOGNIZED IMPACT

Musculoskeletal (MSK) conditions have a huge and well-documented impact on both population health and global health economies, as well as on the ability of people everywhere to remain healthy, independent, productive, and mobile. For the many millions of people living with MSK conditions around the world, this means living in often significant, sometimes chronic, and sometimes debilitating pain.

However, MSK conditions continue to be widely under-recognized and under-prioritized in national and international health strategies, health policies and funding schemes, relative to their cost and impact. As a result, MSK research also remains widely under-recognized and under-resourced.

THE IMPORTANCE OF MSK RESEARCH

MSK research – encompassing basic, clinical and translational – is essential to reducing the impact of musculoskeletal conditions on individuals and society, by increasing the understanding of the nature of MSK conditions and therefore identifying the best ways in which to treat and manage them at both individual and population levels. It allows the development of increasingly effective treatments capable of preventing both the onset of symptoms and disease progression, alleviating pain, and enabling the maintenance or return to mobility.

MSK research generates the knowledge which underpins all informed, effective efforts at successfully dealing with the huge and growing burden of MSK conditions worldwide.

Recent and ongoing research has demonstrated that MSK conditions are foundational to many other widespread and serious conditions. Research has identified many and sometimes strong links of many MSK conditions with conditions including cancer, diabetes, stroke, cardiovascular disease, and poor mental health. MSK conditions are often risk factors for other widespread conditions, particularly stroke and diabetes. Effectively addressing MSK conditions provides an important means to alleviate and manage many other health issues such as obesity and depression, and to prevent or mitigate the impact of traumatic events such as fragility fractures, all of which affect a large percentage of any population.

Above all, MSK conditions must be regarded as a priority by all health systems, both nationally and internationally, commensurate with their actual cost and impact, as clearly demonstrated by the [Global Burden of Disease studies](#). The [global framework set out by the Global Alliance for Musculoskeletal Health](#) provides an important foundation for achieving this.

Education in MSK Research

“Education” is understood here in a broad sense, to include both formal education, such as professional training and career development, and wider education and knowledge gained through interaction and dialogue with peers, partners and relevant research-focused organizations.

To enhance research and thereby improve clinical management, we need to foster a “culture of research” nationally and internationally. This must span both identifying and treating MSK conditions and measures to prevent and promote MSK health at a population level, tailored to local realities. Training the next generation of clinicians and scientists should be based on an interdisciplinary approach to research.



Vision

Our vision is to enable researchers, policy makers, patients, industry and other stakeholders to engage in interdisciplinary research to establish equitable knowledge systems, thus providing a basis to better manage MSK conditions and thereby improve global health.

Action Plan

1. ACHIEVING THE VISION: KEY ELEMENTS OF SUCCESS

Achieving the Vision requires a collaborative effort by part of the whole MSK community, whose members collectively need to ensure that research meets the needs of people living with MSK conditions and the health professionals who support them, as well as providing adequate opportunities for broad engagement as part of a person-centred approach.

The IFMRS will lead on facilitating this work and providing a space for dialogue and collaboration. IFMRS partners and member societies will actively promote these opportunities and proactively lead on delivering some key areas, as relevant.

1.1 Action at the international and national government level

National governments, intergovernmental organizations such as the World Health Organisation and national health sector policy makers have key roles in producing policy, regulations, and guidance to promote solutions to MSK challenges. This requires the following:

- 1 Prioritisation of MSK conditions in national and international health policies, including:
 - a) Investment in infrastructure, workforce development, professional training and research commensurate with the impact of MSK conditions
 - b) Recognition of the importance of investing in research, access to international knowledge and applied research, and strengthening the relationship between basic, translational and clinical research
- 2 Adequate inclusion of MSK conditions and MSK research in national professional curricula
- 3 Adequate funding for MSK research nationally
- 4 Establishment of national registries of MSK conditions
- 5 Improved population health literacy and awareness of MSK conditions, and increased public and patient involvement in MSK research and care planning and delivery

1.2 Action at the national and local level

There is also much that the community of MSK professionals and research organizations can and should do to support each other and advance MSK education. This includes the following:

- 1 Improved access to the best available MSK data and research globally, particularly to researchers in low- and middle-income countries (LMICs)
- 2 National and local networks for information-sharing and peer-to-peer learning
- 3 High-quality information and educational resources that are useful and accessible to all
- 4 Initiatives aimed at improving collaboration across professions and disciplines, and overcoming fragmentation
- 5 Strategic and equitable allocation of funding for greatest impact, including improved opportunities for accessing funding

Action Plan

2. ACHIEVING THE VISION: PRACTICAL SOLUTIONS FOR MSK RESEARCH

In pursuit of the high-level goals outlined above, there are specific solutions and actions that can be taken at all levels, both by national organizations and institutions with a focus on MSK conditions and research generally, and by individual researchers, scientists, academic and clinicians with an interest in MSK.

2.1 National MSK organizations and institutions should:

- 1 Proactively engage local MSK professionals and create opportunities for closer collaboration and interdisciplinary research, including:
 - a) Programs by IFMRS members societies aimed at improving engagement, knowledge exchange, and career development for MSK researchers in LMICs, such as:
 - Improving ease of access to educational materials and training programs,•
 - Exchange programs,
 - Participation in virtual educational opportunities, e.g., webinars, workshops
 - b) Funding of research and research placements in LMICs by IFMRS member societies
- 2 Support, encourage and as far as possible enable a coordinated, person-centred and interdisciplinary approach
- 3 Support and encourage MSK research nationally through development of the MSK workforce
- 4 Actively collaborate bilaterally and through international membership organizations like the IFMRS to identify and promote best practice, including considering joining the IFMRS:
[Membership – IFMRS](#),
- 5 Use a shared MSK framework and narrative to make the case for prioritisation of and investment in MSK research nationally, such as the [IFMRS Consensus Statement](#)
- 6 Develop local evidence to support efforts to influence national and international policy to support MSK research and treatment
- 7 Proactively influence national policy in partnership with key stakeholders, including education and training curricula
- 8 Be ambassadors for this action plan and the initiatives and resources developed by the MSK community, as appropriate.

2.2 MSK professionals should:

- 1 Join existing local and national MSK research societies and organizations
- 2 Participate in international fora and make active use of digital knowledge platforms, particularly the IFMRS Knowledge Network: www.ifmrs.org/#knowledge-network,
- 3 Use and share local data, evidence and examples of best practice to help develop the international body of knowledge
- 4 Make connections locally and nationally with other key professionals, and create local MSK networks where possible
- 5 Be ambassadors for this action plan and the initiatives and resources developed by the MSK community

Action Plan

3. PRACTICAL RESOURCES

1. The IFMRS Knowledge Network
 - a) The Virtual Library (for organizational resources)
[Virtual Library – IFMRS](#)
 - b) HubLE online learning environment (for early- and mid-career researchers in particular)
[HOME - IFMRS HubLE](#)
 - c) The MSK Knowledge Portal (data analytics)
[Musculoskeletal Knowledge Portal - Home \(hugeamp.org\)](#)
 - d) Concord (for discussion and network-building)
[Discord | #ifmrs-board | Musculoskeletal Studies | by IFMRS](#)
2. A Global Strategy to Improve MSK Health
[Global strategy to improve MSK health - Global Alliance for Musculoskeletal Health \(gmusc.com\)](#)
3. The INASP AuthorAID network, including:
 - a) Personal [mentoring](#) by highly published researchers and professional editors
 - b) Online [training workshops](#) on scientific writing
 - c) A discussion group for [discussion and questions](#) where researchers can benefit from advice and insights from members across the globe
 - d) Access to a range of [documents and resources](#) on best practice in writing and publication
 - e) A chance to [network](#) or collaborate with other researchers.
 - f) [AuthorAID - Courses](#)
4. Doing Research Differently: How to maximise the usefulness and use of research for policy and practice [INASP_Doing_Research_Differently.pdf](#)