A FRAMEWORK TO EVALUATE MUSCULOSKELETAL MODELS OF CARE
The following organisations publicly support this evaluation framework.

**SUPPORTING ORGANISATIONS**

- American Academy of Orthopaedic Surgeons
- American College of Rheumatology (ACR)
- Arthritis Australia
- Arthritis New Zealand
- Asia Pacific League of Associations for Rheumatology (APLAR)
- Association of Rheumatology Health Professionals (ARHP)
- Auckland University of Technology
- Australian Orthopaedic Association (AOA)
- Australian Pain Society
- Australian Physiotherapy Association
- Australian Rheumatology Association (ARA)
- Bone and Joint Canada
- British Institute of Musculoskeletal Medicine
- European League Against Rheumatism (EULAR)
- European Region of the World Confederation for Physical Therapy (ER-WCPT)
- European Society for Clinical and Economic Aspects of Osteoporosis, Osteoarthritis, Frailty and Sarcopenia (ESCEO)
- Fit for Work Europe
- Fragility Fracture Network (FFN)
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# The Framework

## READINESS STREAM

1. Structure and components of the MoC document
   - **1A** A clear outline
   - **1B** A data-driven case for change
   - **1C** Define the target population/priority groups
   - **1D** Cost-effectiveness data

2. Engagement and consultation
   - **2A** Important stakeholders
   - **2B** What to ask and explore
   - **2C** Seeking endorsement
   - **2D** Identifying and supporting local champions

3. Promoting best practice by describing what care and how to deliver it
   - **3A** Align to contemporary standards
   - **3B** Identify required behaviour changes
   - **3C** Utilise different service delivery modes
   - **3D** Specify communication and referral pathways

4. Consumer centric
   - **4A** Practical, user-friendly recommendations
   - **4B** Partnership-based service delivery and funding

## INITIATING IMPLEMENTATION STREAM

5. Optimising implementation and evaluation success
   - **5A** Assess system readiness
   - **5B** Linking to local resources
   - **5C** Identifying likely workforce requirements
   - **5D** Building a comprehensive implementation plan
   - **5E** Formative evaluation of MoC components
   - **5F** Establishing a User Reference Group
### 6 Continuous improvement processes
- **6A** Pragmatic evaluations over time
- **6B** Quality assurance and troubleshooting mechanisms
- **6C** Data collection processes for key performance indicators
- **6D** Promoting research priorities

### 7 Key performance indicators
- **7A** Consumer relevant outcomes
- **7B** Service delivery partnerships and pathways
- **7C** Cost-effectiveness
- **7D** Stakeholder behaviour changes

### 8 Engagement and participation
- **8A** Awareness and knowledge of the MoC
- **8B** Reach to target population
- **8C** Satisfaction with processes and programs

### 9 Uptake and integration
- **9A** Adaptability across settings and responsiveness
- **9B** Innovative changes to service resourcing
- **9C** The MoC becomes routine business
- **9D** The MoC is utilised as a resource
- **9E** The new MoC replaces the old MoC
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The burden of disease associated with chronic non-communicable diseases (NCDs), particularly musculoskeletal conditions, is now clear. Indeed, data from the most recent analyses of the Global Burden of Disease study unequivocally reinforce this issue.

Urgent and coordinated global action is required to address the rising burden of disease associated with these conditions to ensure health services can meet the current and future needs of health consumers. Supporting low and middle-income nations to develop appropriate responses now is essential.

Models of Care represent one approach to respond to the burden of NCDs. Models of Care outline the principles of best practice management for specific conditions, thus providing guidance for ‘what works’ and ‘how to implement it’.

Although many nations are developing Models of Care to address NCDs, there remains inconsistency in the approach to their development and evaluation, making comparisons between them difficult. Further, achieving sustainable implementation is challenging. For these reasons, development of an internationally-informed framework to evaluate the ‘readiness’ of Models of Care for implementation and their ‘success’ after implementation is of international importance.

The Global Alliance for Musculoskeletal Health of the Bone and Joint Decade is pleased to be a partner on this project that aimed to develop such a framework. While the focus of the Framework has been on musculoskeletal health, the end products have relevance to Models of Care for NCDs generally.

As a global community, our call to action is to now use the Framework to support and optimise our development, implementation and evaluation endeavours to improve the lives of people who are at risk of, or live with, chronic NCDs.

Professor Anthony D. Woolf
Chair
Global Alliance for Musculoskeletal Health of the Bone and Joint Decade
EXECUTIVE SUMMARY AND USING THIS REPORT
Models of Care are increasingly viewed as an effective strategy to improve health service planning and delivery for non-communicable diseases. Despite the increased attention towards Models of Care, a universal framework to evaluate a Model’s readiness for implementation and success after implementation is lacking. This Framework addresses these important gaps.

THE FRAMEWORK AT A GLANCE

What is a Model of Care?
A Model of Care (MoC) is a principle-based guide that describes best practice care for particular health conditions or populations. The focus is on person-centred care and consideration of applicability in local settings. A MoC is not an operational plan for a health service or a clinical practice guideline.

Who uses Models of Care?
MoCs have cross-sector and multi-stakeholder relevance. Policy makers, health administrators and managers, service delivery organisations, clinicians, researchers, funders, advocacy organisations and consumers use MoCs to inform best practice planning and delivery of health services.

Purpose of this project and the Framework
To develop a comprehensive evaluation framework to assess the readiness for implementation and success after implementation of musculoskeletal MoCs. The Framework provides principle-based guidance on evaluating these important areas. Particular emphasis is placed on ensuring the Framework is applicable across a diverse range of environments and contexts.
What is the Framework designed to do and why should I use it?

The Framework is designed to help individuals and organisations tasked with the planning, implementation or evaluation of MoCs.

Specifically, the Framework can be used to:

- Develop a clear and concise MoC document that is acceptable to local stakeholders.
- Judge whether a MoC is ready for implementation → Readiness Stream.
- Guide the initial implementation process → Initiating Implementation Stream.
- Consider performance measures that are likely to indicate the MoC is successful → Success Stream.

Part 4 of this report, “Putting the Framework into practice” provides practical examples of how the Framework could be used in practice.

How to use the Framework

The Framework has three streams:

i. **Readiness**.

ii. **Initiating implementation**.

iii. **Success**.

Each stream has a number of domains and each domain has a number of themes. Each domain and theme is numbered to allow easy navigation across the Framework (Figure 1). Use the map on page 11 to identify relevant parts for your work.

Themes marked with a gold star have been identified as essential to a particular stream (see essential checklist on page 12). Other themes should be viewed as important, but not necessarily essential in all settings.

Development of the Framework

The Framework was developed using a four-phase approach, drawing on the knowledge and experiences of 93 international experts across 30 countries.

- **Phase 1**: Identification of the important concepts that underpin ‘readiness’ and ‘success’ of MoCs, based on in-depth interviews with Australian experts.
- **Phase 2**: Assessment of these concepts and their further development with an international panel of experts using an eDelphi method.
- **Phase 3**: Translation of the concepts into a usable and meaningful Framework for end users using a Knowledge-to-Action approach.
- **Phase 4**: Testing of the accuracy and acceptability of the Framework with the international expert panel.

**Figure 1**: Example of Framework layout
How to use this document and the framework

The document as a whole

The document is divided into five parts:
- Part 1 is the executive summary.
- Part 2 provides the background to the project.
- Part 3 contains the Framework.
- Part 4 provides scenarios of how the Framework could be applied in practice.
- Part 5 contains supporting information – definitions, acknowledgements and references.

The Framework in Part 3

The Framework contains three STREAMS:

Stream 1. Readiness (blue section): this stream outlines what should be included in a regional or national MoC, how it should be presented and the process of development. This stream is relevant to developers at a national or regional level.

Stream 2. Initiating Implementation (orange section): this stream describes how to approach implementation after a MoC has been developed. It provides guidance on what to consider for optimising implementation success and how to develop an implementation plan. This stream is relevant to those tasked with implementation of a MoC, usually at a local or regional level.

Stream 3. Success (green section): this stream considers how to approach evaluation, including both formative evaluation and impact evaluation that includes consumer and system-relevant outcomes. This stream is relevant to those tasked with monitoring the outcomes of a MoC, usually at a local or regional level.

Important notes for interpreting the Framework (Part 3):
- Within each stream are a number of DOMAINS.
- Within each domain are a number of THEMES.
- Essential themes are indicated by a gold star.
- A number of PRINCIPLES underpin each theme.

Figure 2 below shows how the Framework is structured using this hierarchy.

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Figure 2: Structure of the Framework illustrating a stream, domain, theme and principles. Here, the Readiness stream is used as an example.
Additional section for Success stream

The Success stream contains additional information on performance indicators/methods/data. This additional information recommends the “how to” with respect to undertaking evaluation activities (Figure 3).

## 6. CONTINUOUS IMPROVEMENT PROCESSES

### 6A Pragmatic evaluations over time

A pragmatic evaluation has been undertaken at different time points, inclusive of outcomes (impact) and process (formative) evaluations.

<table>
<thead>
<tr>
<th>Principles</th>
<th>Performance indicators/methods/data:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  An evaluation plan has been developed which includes both outcomes (impact) and process (formative) evaluations.</td>
<td>• Outcomes should measure to what extent components were implemented, or likely to be implemented in a specified time period.</td>
</tr>
<tr>
<td></td>
<td>• Qualitative and quantitative measures linked to key performance indicators identified during MoC development (see 1A).</td>
</tr>
<tr>
<td>2  Evaluation needs to be informed by pragmatic, mixed-methods approaches, rather than a reliance on evidence from randomised control trials (RCTs) only.</td>
<td>• Qualitative methods.</td>
</tr>
<tr>
<td></td>
<td>• Quantitative methods - surveys, quality audits, economic modelling, RCTs.</td>
</tr>
<tr>
<td>3  Evaluation outcomes need to be consumer-relevant, provider-relevant and system-relevant and map to specific components of the MoC.</td>
<td></td>
</tr>
<tr>
<td>4  Evaluation outcomes should consider:</td>
<td></td>
</tr>
<tr>
<td>i. short-term outcomes that reflect behaviour change and system efficiency improvements</td>
<td>• Short term outcomes: qualitative and quantitative data from clinicians and consumers; service activity outcomes.</td>
</tr>
<tr>
<td>ii. longer-term outcomes should reflect the effectiveness of the behaviour changes (e.g. number of people who sustain re-fractures)</td>
<td>• Longer term outcomes: population-level health and system activity outcomes from jurisdictional health surveillance systems.</td>
</tr>
</tbody>
</table>

**Figure 3:** Schematic of the Success stream illustrating the additional section related to performance indicators/methods/data.
NAVIGATING THE FRAMEWORK FOR THE EVALUATION OF MUSCULOSKELETAL MODELS OF CARE

READINESS STREAM

1 Structure and components of a MoC document
   1A A clear outline
   1B A data-driven case for change
   1C Define the target population/priority groups
   1D Cost-effectiveness data

2 Engagement and consultation
   2A Important stakeholders
   2B What to ask and explore
   2C Seeking endorsement
   2D Identifying and supporting local champions

3 Promoting best practice care by describing what care and how to deliver
   3A Align to contemporary standards
   3B Identify required behaviour changes
   3C Utilise different service delivery modes
   3D Specify communication and referral pathways

4 Consumer centric
   4A Practical, user-friendly recommendations
   4B Partnership-based service delivery and funding

INITIATING IMPLEMENTATION STREAM

5 Optimising implementation and evaluation success
   5A Assessing system readiness
   5B Linking to local resources
   5C Identifying likely workforce requirements
   5D Building a comprehensive implementation plan
   5E Formative evaluation of MoC components
   5F Establishing a multidisciplinary User Reference Group

SUCCESS STREAM

6 Continuous improvement process
   6A Pragmatic evaluations over time
   6B Quality assurance and troubleshooting mechanisms
   6C Data collection for key performance indicators
   6D Promoting research priorities

7 Key performance indicators
   7A Consumer relevant outcomes
   7B Service delivery partnerships and pathways
   7C Cost-effectiveness
   7D Stakeholder behaviour change

8 Engagement and participation
   8A Awareness and knowledge of the MoC
   8B Reach to target population
   8C Satisfaction with processes and programs

9 Uptake and integration
   9A Adaption across settings
   9B Innovative changes to service resourcing
   9C The MoC becomes routine business
   9D The MoC is utilised as a resource
   9E The new MoC replaces the previous MoC

Figure 4: Orientation map for the Framework illustrating the 3 streams (3 colour bands), domains within the streams (blocks) and themes in the domains.
A CHECKLIST OF ESSENTIAL ITEMS FOR EVALUATING MODELS OF CARE

The checklist below is a quick reference tool that contains only the essential evaluation areas, as determined by the expert panel that informed the development of the Framework. The checklist should be used in conjunction with the full Framework (Part 3 of this report), rather than a stand-alone resource.

### READINESS STREAM

| 1A | The MoC document should provide a clear outline of aims, processes and outcomes. | ✓ |
| 1B | The MoC document should outline a well-developed and objective ‘case for change’ argument based on local, regional or national circumstances. | ✓ |
| 1C | The MoC should clearly define the target population and identify any specific priority groups. | ✓ |
| 2A | The MoC should be informed by meaningful engagement and consultation with a broad range of stakeholders. | ✓ |
| 3A | The MoC should align with standards of care for quality and safety and best practice for specific musculoskeletal health conditions. | ✓ |
| 4A | The MoC should be consumer-centred in all aspects and user-focused when describing recommendations for implementation. | ✓ |

### INITIATING IMPLEMENTATION STREAM

| 5D | An implementation plan should be developed which includes guiding principles to inform the development of locally-relevant project or business plans to facilitate implementation of specific components of the MoC. | ✓ |

### SUCCESS STREAM

| 6A | A pragmatic evaluation has been undertaken at different time points, inclusive of outcomes and process evaluations. | ✓ |
| 6B | The MoC has ongoing quality assurance and troubleshooting processes. | ✓ |
| 6C | Data collection processes have been established to measure pre-defined key performance indicators (KPIs). | ✓ |
| 7A | Over time, there is evidence of improved consumer experiences, access, health outcomes and quality of life. | ✓ |
| 7D | Once fully implemented, there is behaviour change amongst stakeholders, led initially by opinion leaders, aligned to the recommendations of the MoC. | ✓ |
| 8A | There is an awareness of the MoC amongst stakeholders and organisations (inclusive of consumers) in the long term. | ✓ |
| 9A | The MoC has adaptability to be implemented in different contexts/environments/cultures and evolves over time. | ✓ |