

Supplementary Figure 1: Survey Instrument

Referral Practices for Musculoskeletal (MSK) Conditions: A Primary Care Physician Survey

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Dear Doctor, this questionnaire aims to investigate current referral practices for musculoskeletal (MSK) conditions to physiotherapy. Your responses will help identify challenges, improve referral systems, and optimize care pathways. Your participation is entirely voluntary, anonymous, and confidential. The survey will take approximately 7–10 minutes to complete.

SECTION 1: Consent & Eligibility Screening

Q1. Do you agree to participate in this study? *

Mark only one.

- ☐ Yes
- ☐ No → Skip to end (Thank You)

Q2. Are you a family medicine physician currently practicing in Saudi Arabia? *

Mark only one.

- ☐ Yes
- ☐ No → Skip to end (Thank You)

SECTION 2: Demographic Information

Q3. What is your gender? *

Mark only one.

- ☐ Male
- ☐ Female

Q4. What is your nationality? *

Mark only one.

- ☐ Saudi
- ☐ Non-Saudi

Q5. What is your current professional rank? *

Mark only one.

- ☐ Consultant
- ☐ Senior Registrar
- ☐ Registrar
- ☐ Resident
- ☐ Other: _____

Q6. How many years have you been in practice? *

Mark only one.

- ☐ < 1 year
- ☐ 1–5 years
- ☐ 6–10 years
- ☐ 11–20 years
- ☐ > 20 years

Q7. In what type of healthcare setting do you primarily work? *

Mark only one.

- ☐ Ministry of Health (MOH)
- ☐ Private sector
- ☐ Military Hospital
- ☐ University Hospital
- ☐ Other: _____

Q8. On average, how many patients with MSK conditions are scheduled per day in your clinic? *

Mark only one.

- ☐ None
- ☐ 1–2 patients
- ☐ 3–5 patients

- > 5 patients

SECTION 3: Knowledge — Awareness and Use of Clinical Decision Tools

Assesses awareness, familiarity, and exposure to MSK tools and referral systems

Q9. Are you familiar with clinical tools used to support decision-making in MSK care? *

Mark only one.

- Not familiar at all → Skip to Q12
- Aware, but do not use → Skip to Q12
- Occasionally use
- Regularly use

Q10. If you use any clinical tool, which one(s) do you use when making MSK care decisions? *

Select all that apply.

- ☐ Keele STarT MSK Tool
- ☐ STarT Back Screening Tool
- ☐ Visual Analog Scale (VAS)
- ☐ Oswestry Disability Index (ODI)
- ☐ A self-developed or locally adapted tool
- ☐ Not sure of the name
- ☐ Other: _____

Q11. What barriers prevent the use of clinical tools in your practice? *

Select all that apply.

- ☐ Lack of training
- ☐ Lack of time
- ☐ No institutional guidelines
- ☐ Belief that tools are not useful
- ☐ Not integrated in electronic medical records
- ☐ Other: _____

SECTION 4: Attitudes — Perceptions and Satisfaction with the Referral System

Perceptions, satisfaction, and beliefs about the current referral system

Q12. How satisfied are you with the current system for referring patients to physiotherapy? *

Mark only one.

- Very satisfied
- Satisfied
- Neutral
- Dissatisfied
- Very dissatisfied

Q13. How satisfied are you with the referral system for MSK specialized clinics (orthopedic, rheumatology, spinal, pain management, radiology)? *

Mark only one.

- Very satisfied
- Satisfied
- Neutral
- Dissatisfied
- Very dissatisfied

Q14. Do you believe the referral system adequately meets patient needs? *

Mark only one.

- Never
- Rarely
- Sometimes
- Often
- Always

Q15. How would you rate the communication between primary care physicians and specialists? *

Mark only one.

- ☐ Poor
- ☐ Needs improvement
- ☐ Adequate
- ☐ Excellent

SECTION 5: Practice — Referral Behaviors and Influencing Factors

Actual referral behaviors and factors influencing referral decisions

Q16. How often do you refer patients with MSK conditions to physiotherapy? *

Mark only one.

- ☐ Rarely < 10% of cases
- ☐ Sometimes 10–30% of cases
- ☐ Often 31–60% of cases
- ☐ Very often > 60% of cases

Q17. How often do you refer patients with MSK conditions to specialized clinics (e.g., orthopedic, rheumatology, spinal, pain management)? *

Mark only one.

- ☐ Rarely < 10% of cases
- ☐ Sometimes 10–30% of cases
- ☐ Often 31–60% of cases
- ☐ Very often > 60% of cases

Q18. How often do you refer patients with MSK conditions to radiology (e.g., X-ray, MRI)? *

Mark only one.

- ☐ Rarely < 10% of cases
- ☐ Sometimes 10–30% of cases
- ☐ Often 31–60% of cases
- ☐ Very often > 60% of cases

Q19. What are the most common reasons for referral to physiotherapy? *

Select all that apply.

- ☐ Severe pain
- ☐ Chronic pain
- ☐ Functional limitations
- ☐ Poor response to treatment
- ☐ Patient request
- ☐ Other: _____

Q20. What factors might influence your decision to refer a patient with MSK conditions to physiotherapy? *

Select all that apply.

- ☐ Patient preference
- ☐ Availability of physiotherapy services
- ☐ Severity of the condition
- ☐ Insurance coverage / reimbursement issues
- ☐ Familiarity with physiotherapy benefits
- ☐ Other: _____

Q21. Do you use any tools or guidelines to decide when and where to refer patients with MSK conditions? *

Mark only one.

- ☐ Yes
- ☐ No

Q22. What are the biggest challenges in the current referral system? *

Select all that apply.

- ☐ Long waiting times for specialist or physiotherapy appointments

- ☐ Limited access to certain MSK services in your region
- ☐ Insurance or cost-related issues
- ☐ Lack of clear referral guidelines or digital pathways
- ☐ Patient reluctance or low compliance with referral
- ☐ Other: _____

Q23. In your opinion, what improvements could be made to enhance the referral process or clinical decision-making for MSK conditions in your practice setting? *

Open-ended response.

SECTION 6: Contact (Optional)

Q24. Would you be willing to be contacted for follow-up questions or clarification?

Mark only one.

- ☐ Yes
- ☐ No

Q25. If yes, please provide your name and email address (optional).

Open-ended response — voluntary and confidential.

** Required question. All responses are anonymous and confidential. Data will be used for academic and research purposes only.*

Abbreviations: MSK, musculoskeletal; IRB, Institutional Review Board; VAS, Visual Analog Scale; ODI, Oswestry Disability

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