

Supplemental File 1

Guideline-based exercise management for hip and knee osteoarthritis: differences in healthcare professional and patient beliefs

Survey 1: Beliefs, Barriers and Enablers to Exercise Prescription for Hip and Knee Osteoarthritis in General Practice in Ireland

Instructions for completing this questionnaire

- When completing the questionnaire, please try and provide answers that most accurately reflect your usual clinical practice. There are no 'correct' or 'incorrect' answers.
- Please do not consult any literature while completing this questionnaire.

Section 1. Information about you

1. How long have you been qualified as a General Practitioner?
 Less than 5 years experience
 5-10 years experience
 Greater than 10 years experience
2. How many GP's work in your practice (including yourself)
3. Are you: Female Male Other Prefer not to disclose
4. Is your primary practice: urban rural mixed
5. Is your practice:
 Primary care reimbursement scheme only
 Private practice only
 Mixed
6. Since graduating from University, do you remember receiving any specific postgraduate training in musculoskeletal (MSK) which contained education about hip or knee osteoarthritis or chronic pain? (By this we do not mean clinical placements or jobs in rheumatology or orthopaedics)
 Yes No
If yes, what type of training?
 CME small groups (or guest speaker)
 Diploma in MSK
 M.Sc. in Sports & Exercise Medicine
 Sports Medicine Faculty conferences
 Private Hospital Day Course
 Therapeutic Intra Articular and Soft Tissue Injection and Assessment Course
 Specific Modules on MSK on your GP training Scheme
 Other _____
7. How would you rate your confidence in treating hip and knee osteoarthritis?
 Not confident
 Slightly confident
 Confident
 Very confident
 Extremely confident
8. Do you have, or have you ever suffered from chronic knee or hip pain yourself?
 Yes No
9. What percentage of your typical caseload is made up of patients with hip and/or knee pain?
 1-5% 6-25% 26-50% 51-75% >75%

Section 2. Exercise beliefs for hip and knee osteoarthritis

2.1 Where do you get your knowledge of care advancements for persons with knee or hip osteoarthritis? (Tick all that apply)

- Published guidelines or recommendations (e.g. NICE, EULAR, OARSI)
- Reading medical journals
- Twitter or other social media
- Podcasts
- CME networks or other GP networks
- Conference attendance
- Course attendance

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Other _____

We are interested in your views about the role of exercise in the treatment of hip and knee osteoarthritis. Please indicate the extent to which you agree or disagree with the statements given by ticking or placing an 'X' in one box per row.

Question	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
2.2 Hip and knee problems are improved by general exercise e.g. walking and swimming					
2.3 Hip and knee problems are improved by specific muscle strengthening exercises					
2.4 General exercise e.g. walking and swimming is safe for everybody to do					
2.5 Specific muscle strengthening exercise is safe for everyone to do					
2.6 Every patient with hip or knee OA should try conservative exercise treatment before more invasive procedures are recommended					
2.7 Exercise for hip or knee OA is most beneficial when it is tailored to meet individual patient needs					
2.8 A standard set of exercises is sufficient for every patient with hip or knee OA					
2.9 Education on lifestyle change is important for patients with OA					
2.10 Education on strategies for self-management of pain are important for patients with OA					
2.11 It is important that people with OA increase their overall activity levels					
2.12 Exercise is effective for patients if an x-ray shows severe knee osteoarthritis					
2.13 Exercise for OA is more effectively provided by physiotherapists than GPs					
2.14 Time constraints prevent the provision of advice on individual exercises for OA					
2.15 Exercise for OA should preferably be used after drug treatment has been tried					
2.16 Exercise for chronic knee pain would be used more frequently if access to physiotherapy was easier					

Section 3. Clinical scenario of a patient with osteoarthritis

Presented below is a clinical scenario of a patient with suspected knee osteoarthritis who presents to you with this problem for the first time. All questions in this section relate to the care you would give this particular

Patient: Mrs. Murphy, 60-year old shop owner, no health insurance
Complaint: Right sided knee pain
History: Gradually worsening over 3 years
 No history of trauma
 Pain when walking and at rest, worst when climbing stairs.
 No night pain.
 Activities of daily living are manageable. Difficulty gardening.
 Finding work increasingly difficult due to the stairs
 Tried going to gym but stopped – thinks was making pain worse.
 Otherwise well – mild hypertension
 Has tried ibuprofen with no effect
Medication: Amlodipine
Examination: Mild Obesity with Body Mass Index of 33
 Knees – bilaterally no effusions.
 Joint line tenderness on palpation.
 No pain or reduced mobility around knee cap
 Slightly reduced flexion of the right knee.
 Hips – no abnormality detected

patient.

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3.1 Select some **key words** you would use to describe their diagnosis **to the patient**. (Select all that apply)

- | | | |
|--|---|---|
| <input type="checkbox"/> Mild | <input type="checkbox"/> Cartilage thinning | <input type="checkbox"/> Fear avoidance |
| <input type="checkbox"/> Moderate | <input type="checkbox"/> Overloading | <input type="checkbox"/> Pain sensitivity |
| <input type="checkbox"/> Severe | <input type="checkbox"/> Overweight | <input type="checkbox"/> Bone on bone |
| <input type="checkbox"/> Degeneration | <input type="checkbox"/> Deterioration | <input type="checkbox"/> Weakness |
| <input type="checkbox"/> Wear and tear | <input type="checkbox"/> Normal ageing | <input type="checkbox"/> Joint swelling |
| <input type="checkbox"/> Arthritis | <input type="checkbox"/> Joint damage | Other _____ |

3.2 What investigation(s)/assessment(s), if any, would you do/order for this patient at this point

- None Knee x-ray Blood tests Other _____

3.3 At this consultation, what approaches would you use, or suggest, to manage this patient? (please tick all that apply)

- | | | |
|--|---|--|
| <input type="checkbox"/> None | <input type="checkbox"/> Advice on footwear | <input type="checkbox"/> Exercise |
| <input type="checkbox"/> Ice | <input type="checkbox"/> General activity | <input type="checkbox"/> Injection of steroids |
| <input type="checkbox"/> Heat | <input type="checkbox"/> Provision of walking aid | <input type="checkbox"/> Oral NSAID |
| <input type="checkbox"/> Rest | <input type="checkbox"/> Weight Loss | <input type="checkbox"/> Topical NSAID |
| <input type="checkbox"/> Weak opioids | <input type="checkbox"/> Paracetamol | <input type="checkbox"/> Glucosamine/Chondroitin |
| <input type="checkbox"/> Other, please state _____ | | |

3.4 If you selected exercise above, what form would this take? (Select all that apply)

- Suggest general exercise and activity
 Suggest specific exercises
 Give a leaflet or online resource
 Refer to physiotherapy or other exercise specialist
 Other (please state) _____

3.5 In an ideal world without barriers, would you refer the patient to physiotherapy or orthopaedic consultant or neither, at this stage?

- Physiotherapy
 Orthopaedic consultant
 Neither

3.6 In your current practice, would you refer this patient to physiotherapy at this stage?

- Yes
 No

If yes, why? (Select all that apply)

- Deemed an appropriate candidate for supervised conservative treatment
 Ease of access to physiotherapy
 Lack of time to appropriately address exercise needs in practice
 Lack of response to NSAIDS
 Other _____

If no, why not? (Select all that apply)

- Not an appropriate candidate for conservative treatment
 Long waiting lists and poor access to physiotherapy
 Other interventions are a priority
 Exercise will make the pain worse
 Patient has tried exercise
 I would prefer to examine further therapeutic options first (e.g., develop a pain management plan or give an intra articular steroid injection)
 Other _____

3.7 In your current practice, would you refer this patient to an orthopaedic consultant at this stage?

- Yes
 No

If yes, why? (Select all that apply)

- Deemed an appropriate candidate for surgery right now

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- Will likely need a joint replacement in a few years so put on waiting list now
- Need a specialist opinion
- Other _____

If no, why not? (Select all that apply)

- More conservative treatments have not been exhausted
- Symptoms not severe enough to warrant joint replacement
- Waiting list too long
- Other _____

3.8 Would you refer the patient to see someone else, either in the primary or community team or into secondary care, at this point?

- Yes
- No
- If yes, who? _____

Section 4. Barriers and enablers to exercise prescription and referral in general practice

In your practice and experience of treating patients with osteoarthritis, what are the main barriers to exercise prescription or referral? (Please select all that apply)

- Insufficient time in consultation
- Insufficient expertise
- Uncertainty about the effects of exercise
- Uncertainty about the most appropriate exercise type
- Uncertainty about the safety of exercise
- Cost and accessibility of physiotherapy for patient
- Physiotherapy waiting lists are too long
- Lack of a standardized physiotherapy programme for OA in the region
- Patients prefer other management options
- Patients want an orthopaedic consultant referral
- English language barrier for patients
- Severity of disease (symptoms too mild)
- Severity of disease (symptoms too severe)
- Older age of patient
- Presence of many comorbidities
- Other _____

What enablers would help you to prescribe or refer a patient with osteoarthritis to exercise in your practice?

- Increased formal post-qualification education e.g. diploma or masters
- Increased post-qualification training e.g. workshops, videos
- Increased exercise education during GP training
- More consultation time to provide exercise prescription
- Shorter waiting lists and improved access to physiotherapy
- Presence of an evidence-based physiotherapy-supervised group exercise programme for osteoarthritis in the locality
- Patients who recognize the importance of strategies for self-management of pain using appropriate exercise recommendations
- Low cost community-based exercise programmes
- Remuneration for exercise prescription and follow up consultations
- Other _____

Thank you for taking the time to complete this questionnaire. Your time and participation is greatly appreciated.

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Survey 2: Beliefs, Barriers and Enablers to Group Exercise Programme Delivery for Hip and Knee Osteoarthritis in Physiotherapy Practice in Ireland

The questionnaire is divided into 3 sections and should take approximately **7 minutes** to complete.

Instructions for completing this questionnaire

- When completing the questionnaire, please try and provide answers that most accurately reflect your usual clinical practice. There are no 'correct' or 'incorrect' answers.
- Please do not consult any literature while completing this questionnaire.

Section 1. Information about you

1. How long have you been qualified as a Physiotherapist?
 - Less than 5 years experience
 - 5-10 years experience
 - Greater than 10 years experience
2. How many Physiotherapists work in your clinic (including yourself) _____
3. Are you: Female Male Other Prefer not to disclose
4. Is your primary work setting:
 - Public hospital
 - Private hospital
 - Primary, community and continuing care
 - Private practice clinic
 - Education
 - Other (please state) _____
5. Have you undertaken any specific post-qualification training, which involved education about hip or knee osteoarthritis or chronic pain? (By this we do not mean clinical placements or jobs in rheumatology or orthopaedics) Yes No

If yes, what type of training? (Provide additional details if you wish to expand)

 - In-service training Additional details _____
 - M.Sc. (taught) in this/similar field Additional details _____
 - M.Sc. (research) in this/similar field Additional details _____
 - PhD in this/similar field Additional details _____
 - Day, weekend or online course (please name most relevant) _____
 - Other _____
6. How would you rate your confidence in treating hip and knee osteoarthritis?
 - Not confident
 - Slightly confident
 - Confident
 - Very confident
 - Extremely confident
7. Do you have, or have you ever suffered from chronic knee or hip pain yourself? Yes No
8. What percentage of your typical caseload is made up of patients with hip and/or knee osteoarthritis?
 - 1-5% 6-25% 26-50% 51-75% >75%

Section 2. Exercise beliefs for hip and knee osteoarthritis

- 2.1 Where do you access your knowledge of management for persons with knee or hip osteoarthritis? (Tick all that apply)
- Published guidelines or recommendations (e.g. NICE, EULAR, OARSI)
 - Clinic protocols, discussion with peers or in-services
 - Reading published research articles
 - Twitter or other social media
 - Podcasts
 - Blogs
 - Infographics
 - Videos
 - ISCP specialist groups and other network events
 - Conference attendance
 - Course attendance

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Other _____

Please now rank in order your preferred resources to learn from

We are interested in your views about the role of exercise in the treatment of hip and knee osteoarthritis.

Please indicate the extent to which you agree or disagree with the statements given by ticking one box per row.

Question	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
2.2 Hip and knee problems are improved by general exercise e.g. walking and swimming					
2.3 Hip and knee problems are improved by specific muscle strengthening exercises					
2.4 Hip and knee problems are improved by focusing on motor or neuromuscular control of the joints during exercise					
2.5 General exercise e.g. walking and swimming is safe for most patients to do					
2.6 Specific muscle strengthening exercise is safe for most patients to do					
2.7 Neuromuscular control exercises are safe for most patients to do					
2.8 Every patient with hip or knee OA should try conservative exercise treatment before surgery is considered					
2.9 Exercise for hip or knee OA is most beneficial when it is tailored to meet individual patient needs					
2.10 A standard set of exercises with individual progression is sufficient for every patient with hip or knee OA					
2.11 Education on lifestyle change is important for patients with OA					
2.12 Education on strategies for self-management of pain are important for patients with OA					
2.13 It is important that people with OA increase their overall activity levels					
2.14 Exercise is effective for patients if an x-ray shows severe knee osteoarthritis					
2.15 Most patients with hip or knee OA would benefit from a supervised group exercise programme					
2.16 Most patients with hip or knee OA would benefit from an individualized exercise programme					

Section 3. Barriers and enablers to exercise programme delivery in physiotherapy practice

3.1 Please select the current level of government COVID19 restrictions in place as you are completing this survey

Level 1 Level 2 Level 3 Level 4 Level 5

3.2 **Pre-COVID19** restrictions in March 2020, were you or your clinic providing **group exercise classes** for patients with hip or knee osteoarthritis? Yes No

If Yes, what was the average number of classes per week? _____

If No, were you interested in offering group exercise classes for osteoarthritis in an ideal world and **if no barriers** existed?

Yes

No

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3.3 **Pre-COVID19** restrictions in March 2020, **what** were the main **barriers** to providing group exercise programmes for patients with osteoarthritis in your practice? (Please select all that apply)

- None
- Insufficient space and equipment resources
- Insufficient personnel (staff) resources
- Insufficient referrals or low OA caseload
- Patients want individualized programmes
- Patients prefer other management options e.g. manual therapy
- Insufficient expertise
- Uncertainty about the effects of exercise
- Uncertainty about the most appropriate exercise type
- Uncertainty about the safety of exercise
- Cost for patient
- Access for patient (e.g. travel, parking, time)
- Scheduling conflict related to patient working hours and clinic hours
- Lack of a standardised programme or protocol for exercise for OA
- English language barrier for patients
- Lack of support from colleagues or managers
- Other _____

3.4 Are you currently offering **group exercise classes** for patients with hip or knee osteoarthritis and **to what capacity?**

- Yes, face to face at full capacity
- Yes, face to face at reduced capacity compared to Pre-COVID19 restrictions
- Yes, online classes only
- Yes, combination of face-to-face and online
- No

3.5 **Under current restrictions**, are there any **additional barriers** to providing **face-to-face** group exercise programmes for patients with osteoarthritis in your practice? (Please select all that apply)

- None
- Government restrictions currently do not allow for group classes
- Hospital or clinic protocols currently do not allow for group classes
- Patients do not want to attend clinic
- Not enough resources for adequate distancing for class members
- Sanitization procedures are too time consuming
- Own COVID-related safety concerns
- Other _____

3.6 **Under current restrictions**, are there any **additional barriers** to providing **online** group exercise programmes for patients with osteoarthritis in your practice? (Please select all that apply)

- None
- Lack of IT resources in clinic (e.g. online platform, webcams, high speed Wi-Fi)
- Lack of personnel (staff) with IT knowledge
- Patients lack IT resources or knowledge
- Patients prefer to wait until they can access face-to-face treatment
- Uncertainty about the effectiveness of online group exercise
- Own personal preference
- Other _____

3.7 What **enablers** would help you to provide **face to face group exercise** classes to patients with osteoarthritis in your practice if COVID restrictions were not a factor? (Please select all that apply)

- None
- More university post-qualification education e.g. diploma or masters
- More other post-qualification training e.g. short courses, workshops, videos
- More education on group exercise delivery during physiotherapy training
- Appropriate referrals from GP or other sources
- GPs who impart knowledge regarding benefits of exercise to patients upon referral

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- Resources to deliver quality educational material regarding self-management alongside exercise
- More support from colleagues or managers
- Other _____

3.8 What **enablers** would help you to provide an option of **online** group exercise classes to patients with osteoarthritis in your practice? (Please select all that apply)

- None
- Improved IT infrastructure in clinic (e.g. laptops, webcams)
- IT skills resources for delivering online programmes (e.g. tutorials, do's and don'ts)
- Access to IT resources (e.g. tutorials) to provide patients with
- Improved Wi-Fi and bandwidth nationwide
- Strong evidence for effectiveness of existing online programmes
- An online registry allowing collection of patient outcomes pre- and post- programme
- Other _____

3.9 Would you be interested in receiving **training** (1.5 day workshop) to effectively implement and deliver a standardized, international, evidence-based group exercise and education programme with online and face-to-face options for patients with osteoarthritis in your clinic?

- Extremely interested
- Very interested
- Moderately interested
- Slightly interested
- Not at all interested

If not interested, why? _____

3.10 If interested, how much would you be willing to pay for this continuous professional development training?

- €100-150
- €151-200
- €201-250
- €251-300
- €301-350
- More than €350
- N/A

Thank you for taking the time to complete this questionnaire. Your time and participation is greatly appreciated.

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Survey 3: Survey on the Role of Exercise for Hip and Knee Osteoarthritis in Adults in Ireland

The questions below are divided into 3 sections. Please complete the questions to the best of your ability.

Section 1. Information about you

1. Are you: Female Male Other Prefer not to disclose
2. Which age category do you fall into?
 - 30 to 39 years
 - 40 to 49 years
 - 50 to 59 years
 - 60 to 69 years
 - 70 to 79 years
 - 80 to 89 years
 - 90 years or older
3. Which province in Ireland do you reside in? Munster Ulster Connacht Leinster
****If "Ulster" is selected, question 3(b) will appear.**
 - 3(b) Do you access your healthcare in:
 - Northern Ireland (NHS)
 - Republic of Ireland (HSE)
 - A combination of both
4. Which of the following best describes where you live?
 - Inner city
 - Suburb of a city
 - Town
 - Village
 - Open country
 - Island off Ireland
5. Have you ever been told by a health professional that you have a diagnosis of the following?(Select all that apply)

<input type="checkbox"/> Arthritis	<input type="checkbox"/> Diabetes Mellitus (type 1 or 2)
<input type="checkbox"/> Osteoarthritis	<input type="checkbox"/> Kidney or liver disease
<input type="checkbox"/> Wear and tear	<input type="checkbox"/> Anemia (reduced number of red blood cells)
<input type="checkbox"/> Degenerative changes	<input type="checkbox"/> Other blood disease
<input type="checkbox"/> Rheumatoid arthritis	<input type="checkbox"/> Cancer
<input type="checkbox"/> Hypertension	<input type="checkbox"/> Depression
<input type="checkbox"/> Heart Disease	<input type="checkbox"/> Anxiety
<input type="checkbox"/> Ulcer or other bowel diseases	<input type="checkbox"/> Other mental health disorder
<input type="checkbox"/> Neurological disease e.g. Parkinson's/MS	
<input type="checkbox"/> Respiratory diseases e.g. COPD	<input type="checkbox"/> Thyroid Disease
<input type="checkbox"/> Hemochromatosis	<input type="checkbox"/> Fibromyalgia
<input type="checkbox"/> Other health condition _____	
6. Have you had pain and joint symptoms in any of the following joints for **6 months or more** (select all that apply)

<input type="checkbox"/> Right Knee	<input type="checkbox"/> Left Knee
<input type="checkbox"/> Right Hip	<input type="checkbox"/> Left Hip
<input type="checkbox"/> Right Ankle	<input type="checkbox"/> Left Ankle
<input type="checkbox"/> Right Shoulder	<input type="checkbox"/> Left Shoulder
<input type="checkbox"/> Right Elbow	<input type="checkbox"/> Left Elbow
<input type="checkbox"/> Right Wrist	<input type="checkbox"/> Left Wrist
<input type="checkbox"/> Right Hand/Fingers	<input type="checkbox"/> Left Hand/Fingers
<input type="checkbox"/> Lower Back	<input type="checkbox"/> Other, please describe _____
<input type="checkbox"/> Mid Back	
<input type="checkbox"/> Neck	
7. Have you ever had joint replacement surgery for any of your painful joints? Please select below the joints that have been replaced.

<input type="checkbox"/> Right Knee	<input type="checkbox"/> Left Knee
<input type="checkbox"/> Right Hip	<input type="checkbox"/> Left Hip
<input type="checkbox"/> Right Ankle	<input type="checkbox"/> Left Ankle
<input type="checkbox"/> Right Shoulder	<input type="checkbox"/> Left Shoulder

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- Right Elbow Left Elbow
 Right Wrist Left Wrist
 Right Hand/Fingers Left Hand/Fingers
 Other, please describe _____

8. Of your hip and/or knee joints that have **NOT** been replaced, which joint are you most bothered by? (select one)
- Right Knee Left Knee
 Right Hip Left Hip

All remaining questions will now be related to the joint that you have chosen.

9. How long have you been experiencing pain in your [insert chosen joint]?
- 6 months – 1 year
 1 – 2 years
 2 – 3 years
 3 – 4 years
 4 – 5 years
 More than 5 years
10. Have you seen or spoken to your GP about your painful [insert chosen joint]? Yes No
11. Have you ever had an x-ray of your [insert chosen joint]? Yes No
12. Has your GP ever referred you to an **orthopaedic consultant** for your [insert chosen joint]?
- Yes
 No
 Currently on a waiting list (private consultant referral)
 Currently on a waiting list (public consultant referral)
- ** If on a waiting list, how long have you been waiting?
- Less than 6 months
 6 months – 1 year
 1 year – 1.5 years
 1.5 years – 2 years
 More than 2 years
13. Has your GP ever referred you to a **physiotherapist** for your [insert chosen joint]?
- Yes
 No
 Currently on a waiting list (private consultant referral)
 Currently on a waiting list (public consultant referral)
- * If on a waiting list, how long have you been waiting?
- Less than 6 months
 6 months – 1 year
 1 year – 1.5 years
 1.5 years – 2 years
 More than 2 years
14. How would you rate the pain and symptoms you are experiencing in your hip and/or knee on an average day?
- No pain or symptoms
 Mild pain and symptoms
 Moderate pain and symptoms
 Severe pain and symptoms
15. Have you EVER tried any of the following specifically for your [insert chosen joint]?
- Muscle strengthening exercise
 (e.g. using weight/resistance band) No, never Yes, currently using Yes, stopped using
- Aerobic exercise
 (e.g. cycling, walking, fitness class) No, never Yes, currently using Yes, stopped using
- Information/Education course
 (e.g. self-management programme) No, never Yes, currently using Yes, stopped using
- Making efforts to lose weight No, never Yes, currently using Yes, stopped using

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Section 2. Exercise beliefs for hip and knee osteoarthritis

We are interested in your views about the role of exercise in the treatment of hip and knee osteoarthritis.

Please indicate how much you agree or disagree with the statements given by selecting one option per question.

Question	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
2.1 Hip and knee problems can be improved by general exercise e.g. walking and swimming					
2.2 Hip and knee problems can be improved by specific muscle strengthening exercises					
2.3 General exercise e.g. walking and swimming is safe for everybody to do					
2.4 Specific muscle strengthening exercise is safe for everyone to do					
2.5 Every patient with hip or knee osteoarthritis should try exercise treatment before surgery is considered					
2.6 Patients should learn more about how to self-manage their pain and symptoms using exercise and physical activity					
2.7 The best way to learn about exercise is in a supervised group setting with people who have similar pain (Pre-COVID-19 restrictions)					
2.8 The best way to learn about exercise is in a one-on-one setting with a health professional (Pre-COVID-19 restrictions)					
2.9 Exercise is effective for patients if an x-ray shows severe knee osteoarthritis					
2.10 Exercise works just as well for everybody, regardless of the amount of pain they have					

Section 3. Barriers and enablers to exercise for hip and knee osteoarthritis

In this section we want to know more about your exercise experience and what kinds of things would prevent you or help you do more exercise

3.1 How many times a week do you exercise (e.g. 30 minute walk)?

- 3 or more days per week
 Less than 3 days per week
 I don't exercise

3.2 Has a health professional ever given you specific exercises for your [insert chosen joint]?

- Yes
 No
 Not sure

*If Yes, what type of health professional? (select all that apply)

- Physiotherapist
 GP
 Orthopaedic surgeon
 Nurse
 Personal trainer

Other, please name _____

*If Yes, what type of exercise?

- Home-based individual exercises
 Group exercise class for osteoarthritis
 Other, please state _____

*If Yes, did you find the exercise beneficial?

- Yes
 No
 Not sure

3.3 Please select the current level of government COVID19 restrictions in place as you are completing this survey

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Level 1 Level 2 Level 3 Level 4 Level 5 (strictest restrictions)

3.4 Thinking about life **without COVID19** restrictions, **what** are the main **barriers** that would prevent you from exercising? (Please select all that apply)

- Pain or other joint symptoms
- I need assistance for mobility e.g. walking stick, wheelchair
- Finding time to exercise
- Lack of enjoyment from exercise
- Lack of exercise buddy or support network
- Wet or cold weather
- Other health problems
- Other disability e.g. visual impairment
- Cost of a gym membership or physiotherapy visit
- Cost of active wear or equipment
- I don't know the best types of exercise to do
- I don't know who to contact to learn more or do more exercise
- Uncertainty about the safety of exercise for joint pain
- Uncertainty about the benefit of exercise for joint pain
- Negative body image
- Access to facilities (e.g. availability, travel, parking)
- Work commitments
- Family commitments or other responsibilities
- Age
- Fear of injury
- Tiredness and fatigue
- Depression
- Other _____

3.5 Thinking about life **without COVID19** restrictions, what types of things would **help you to exercise more**? (Please select all that apply)

- Better knowledge of the best type of exercise to do
- Access to exercise that is supervised by a health professional
- Social aspect e.g. group exercise with other people with hip or knee pain
- More confidence in your joint
- Exercise recommendations from a GP
- Exercise recommendations from a physiotherapist
- More support from family or friends
- Warm and dry weather for outdoor exercise
- Low cost community exercise programmes
- Safe exercise environment (e.g. well-lit pathways)
- Other _____

3.6 Thinking about life **without COVID-19**, how interested would you be in attending a 6-week, twice per week, physiotherapy-supervised group exercise and education class for your hip or knee pain **at a clinic or community centre**?

- Extremely interested
- Very interested
- Moderately interested
- Slightly interested
- Not at all interested
- If not interested, why? _____

3.7 Thinking about **current restrictions**, how interested would you be in taking part in a 6-week, twice per week, **ONLINE** physiotherapy-supervised group exercise and education class for you hip or knee pain?

- Extremely interested
- Very interested
- Moderately interested
- Slightly interested

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Not at all interested

If not interested, why? _____

3.8 Do you have any experience with online-delivered healthcare or telerehabilitation from a GP or other health professional?

Yes

No

3.9 What are the **barriers** that would prevent you taking part in an **online exercise** class? (Please select all that apply)

Lack of technology equipment (e.g. laptop, smartphone or tablet, webcams)

Lack of confidence in using computers, laptops etc.

Wi-Fi / Broadband connection is not good enough

Preference to wait until I can access face-to-face treatment

Uncertain about how online group exercise would work

Lack of space in home environment to perform exercises

English language barriers

Lack of time to take part

Other _____

3.10 What would **help you** to take part in an **online** group exercise class with other people with osteoarthritis? (Please select all that apply)

An initial one-to-one session with a physiotherapist to get familiar with the process

Resources (e.g. videos) with explanations of how to get started

Improved Wi-Fi and bandwidth

Examples and testimonials from patients who have finished the classes

Opportunities to chat online with other patients before and after the class

Support from family members to get set up in your home

A laptop or tablet

Other _____

3.11 If interested, how much would you be willing to pay to take part in these exercise classes (price in euros for entire 14-15 session programme)?

€0-25

€26-50

€51-100

€101-150

€151-200

> €200

Thank you for taking the time to complete this questionnaire. Your time and participation is greatly appreciated.