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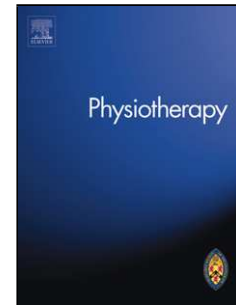
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**Identifying Priorities for Physiotherapy Research in the UK: the James Lind Alliance Physiotherapy
Priority Setting Partnership**

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55

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57 their time and enthusiasm.

58

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60

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63 James Lind Alliance (JLA).

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79 **ABSTRACT**80 **Objectives:**

81 To identify unanswered questions for physiotherapy research and help set and prioritise the top 10
82 generic research priorities for the UK physiotherapy profession; updating previous clinical condition-
83 specific priorities to include patient and carer perspectives, and reflect changes in physiotherapy
84 practice, service provision and new technologies.

85

86 **Design:**

87 The James Lind Alliance (JLA) Priority Setting Partnership (PSP) methodology was adopted, utilising
88 evidence review, survey and consensus methods.

89

90 **Participants:**

91 Anyone with experience and/or an interest in UK physiotherapy: patients, carers, members of the
92 public, physiotherapists, student physiotherapists, other healthcare professionals, researchers,
93 educators, service providers, commissioners and policy makers.

94

95 **Results:**

96 Five hundred and ten respondents (50% patients, carers or members of the public) identified 2152
97 questions (termed “uncertainties”). Sixty-five indicative questions were developed from the
98 uncertainties using peer reviewed thematic analysis. These were ranked in a second national survey
99 (1,020 responses (62% were complete)). The top 25 questions were reviewed in a final prioritisation
100 workshop using an adapted nominal group technique. The top 10 research priorities focused on
101 optimisation (top priority); access; effectiveness; patient and carer knowledge, experiences, needs
102 and expectations; supporting patient engagement and self-management; diagnosis and prediction.

103

104 **Conclusions:**

105 This study is currently the UK's most inclusive consultation exercise to identify patients'and
106 healthcare professionals'priorities for physiotherapy research. The exercise deliberately sought to
107 capture generic issues relevant to all specialisms within physiotherapy. The research priorities
108 identified a range of gaps in existing evidence to inform physiotherapy policy and practice. The
109 results will assist research commissioning bodies and inform funding decisions and strategy.

110 **(Word count 248/ 250)**

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131 **Identifying Priorities for Physiotherapy Research in the UK: the James Lind Alliance Physiotherapy**

132 **Priority Setting Partnership**

133

134 **Key messages**

- 135 • The paper identifies ranked research priorities for physiotherapy research in the UK.
- 136 • Describes the James Lind Alliance's (JLA) transparent methods and process for priority setting,
137 designed to engage with key stakeholders in physiotherapy research, in particular clinicians,
138 patients, their carers and members of the public.
- 139 • This is one of the first attempts at profession-wide priority setting using JLA methods. It has a
140 broader scope than previous PSPs, many of which are disease-specific or treatment focused (with
141 some containing specific priorities relevant to physiotherapy).
- 142 • The study assists in setting the UK physiotherapy research agenda for the medium term and
143 informs funders of stakeholders' opinions, and researchers of the context and wider priorities.
- 144 • Impact of this approach to priority setting requires evaluation

145

146 **Key Words**

147 Physiotherapy, research priorities, co-production, consensus

148

149 **Purpose**

150 Physiotherapy, like all healthcare professions, needs to extend and update its evidence base to
151 underpin clinical practice and demonstrate its role and value in contemporary healthcare. This
152 project aimed to identify research priorities for the UK physiotherapy profession that engage
153 research funders and researchers to develop the evidence in areas that matter most to patients,
154 carers and clinicians and that are relevant to healthcare policy. Research priorities for the
155 physiotherapy profession in the UK were last set in 2010(1) . We set out to update these priorities in

156 order to include views of patients and carers, reflect changes in physiotherapy practice, service
157 provision and new technologies. In contrast to previous priority setting which identified speciality-
158 and condition-specific priorities, our approach was to analyse all suggested priorities together and
159 investigate the feasibility of identifying priorities relevant to all areas of physiotherapy. The James
160 Lind Alliance (JLA) is a non-profit-making initiative, bringing multiple stakeholders together in Priority
161 Setting Partnerships (PSPs) (2). These partnerships identify and prioritise “uncertainties”, or
162 “unanswered questions”, about the effects of treatments and areas of healthcare that patients,
163 carers and clinicians agree are the most important. PSPs aim to address what has been described as
164 the mismatch between the treatments that patients and clinicians wish to see evaluated and the
165 treatments being evaluated by researchers (3-5). In 2017 the Chartered Society of Physiotherapy
166 (CSP) engaged with the James Lind Alliance (JLA) to establish a Physiotherapy Priority Setting
167 Partnership (PSP) to identify generic research priorities for the physiotherapy profession in the UK.

168

169 **Objectives**

170 The study had the following objectives:

- 171 • To work together with a wide range of stakeholders including clinicians, researchers, patients
172 and carers, funders, educators, support workers, students, service providers, commissioners and
173 policy makers in the UK to identify and agree the most important uncertainties about
174 physiotherapy.
- 175 • To agree by consensus with patients, carers and clinicians a ranked list of uncertainties for
176 physiotherapy research, including the top ten uncertainties.
- 177 • To publicise the results and process of the PSP.
- 178 • To provide the results to research commissioning bodies in a way that helps inform
179 physiotherapy research strategies and funding decisions.

180

181 **Methods**

182 *Design*

183 The project was managed by a research team at the Chartered Society of Physiotherapy (CSP), the
184 professional body for physiotherapists in the UK and led by a multi-stakeholder steering group. A
185 formal report and appendices are available online (6).

186

187 The study was initiated with an awareness meeting in January 2017 to promote the PSP to key
188 stakeholders, identify steering group members and partner organisations, discuss the scope of the
189 PSP and seek advice for engaging with the community. The steering group was responsible for
190 agreeing the initial scope of the project, publicising the PSP, overseeing the collection and analysis of
191 the priorities, dissemination of results and taking the final priorities to research funders. A senior JLA
192 adviser (KC) chaired the steering group, advised on methodology and facilitated the final priority-
193 setting workshop.

194

195 Partner organisations provided ongoing support to the PSP by promoting the project, encouraging
196 their members to take part in each stage and disseminating the findings. The PSP was supported by
197 43 partner organisations - 15 universities, 10 CSP professional networks, 8 patient groups, 5 Trusts
198 and commissioning groups, 4 research networks and one policy group (6: page 30).

199

200 The multi-stage JLA methodology (7) was used (Figure 1). In line with JLA principles, patients and
201 carers were involved in the study not only as participants in the surveys and final workshop but also
202 as members of the PSP steering group and as representatives of patient groups. Patients and carers
203 were included in each stage of the study and engaged with decision-making, recruiting patients,
204 reviewing and agreeing indicative questions, ranking of questions and disseminating results.

205

206 **FIGURE 1 – to be inserted approximately at this location**

207 Participants

208 As the PSP aimed to be inclusive, anyone living in the UK with an interest in physiotherapy was
209 eligible to participate in the identification of uncertainties (Stage 1, Figure 1). Examples included:
210 patients and/or carers who had experienced previous physiotherapy provision, members of the
211 public, patients, carers, clinicians, researchers, research funders, educators, students, service
212 providers, commissioners and policy makers. In line with JLA principles, only patients, carers and
213 clinicians participated in the prioritisation stages (Stages 3 and 4, Figure 1).

214

215 **Scope**

216 Preliminary discussions and workshops were undertaken amongst lead CSP staff in Practice and
217 Development, Policy and relevant CSP committees in relation to the scope of the project. Early
218 feedback on the scope from the initial awareness meeting informed the Steering Group's discussions
219 on the scope. A broad scope encompassing physiotherapy for any injury, illness or disability, in any
220 setting for people of all ages was agreed with four key areas of focus - interventions, self-
221 management, prevention and service delivery

222

223 The 4 stages are outlined below (see Figure 1):

224

225 **Stage 1**

226 *Literature searches to identify uncertainties*

227 As part of the scoping for the project, literature searches for two policy themes identified by the
228 steering group as being relevant were undertaken (by RS) – search strategies are available in the PSP
229 online report(6: appendices 1 and 2):

- 230 i. Developing and sharing models of good practice for reducing the burden on secondary care.
231 ii. Promoting good practice in primary care for people with multiple morbidities.

232

233 *Initial Survey*

234 The online questionnaire was developed in SurveyMonkey™ and piloted by the steering group. The
235 survey was open from May to July 2017. The questionnaire (available (8)) took approximately 15
236 minutes to complete, and was also available as a paper version. Four questions in relation to the
237 areas of focus within the scope (interventions, self-management, prevention and service delivery)
238 were included:

- 239 1) “What question(s) do you have about physiotherapy to help people recover and get back to their
240 usual activities?”
- 241 2) “What question(s) do you have about physiotherapy to help people manage their condition(s)
242 themselves?”
- 243 3) “What question(s) do you have about physiotherapy to help people to improve their health and
244 prevent disease and injury?”
- 245 4) “What question(s) do you have about how physiotherapy services are accessed and delivered?”
246

247 Questions could relate to any type of physiotherapy service; for any injury, illness, condition or
248 disability; for people of any age. Demographic data was also requested.

249
250 A website was established to advertise the partnership and the online survey. Participants were
251 recruited using convenience and purposive sampling in line with the JLA’s inclusive approach (7).

252 The partner organisations, steering group members and in the CSP promoted the survey through a
253 range of advertisements to members in online and paper publications e.g. the professional magazine
254 *Frontline*, social media, through professional and patient networks and in clinical settings.

255 Interim demographic data about participants was provided to the Steering Committee in order to
256 identify any groups that were felt to be under-represented. Targeted strategies were used to reach
257 these groups and encourage participation.

258

259 **Stage 2**

260 *Data analysis and verification of uncertainties*

261 Survey responses were analysed using Thematic Analysis (9); individual responses were coded with
262 similar codes being grouped together into themes. Indicative questions were created to represent
263 similarly coded responses within the themes. RS acted as primary analyst, coding the questions,
264 creating initial themes and identifying the indicative questions for review. During initial coding and
265 theme development, JW, BON, BF and AL second coded approximately a third of the data to enhance
266 consistency. GR peer reviewed all coded responses, themes and indicative questions. At regular
267 intervals, data coding, theme development and indicative questions were discussed by the steering
268 committee to refine the analysis. The steering group reviewed the indicative questions, to confirm
269 that the final question set reflected the intent of the initial submitted questions.

270

271 Each indicative question was then checked against the existing evidence for physiotherapy. The
272 literature, including Ovid (Pubmed), EBSCO (CINHAL), PEDro, NICE Evidence and Cochrane databases
273 was searched by RS with assistance from the CSP's library and information service. A question was
274 considered to have been addressed if it had been included in a recent (within 5 years) systematic
275 review that concluded there was sufficient evidence to answer the question. Full search strategy
276 details are in the PSP report (6: appendix 3)

277

278 **Stage 3**

279 *Interim Prioritisation*

280 A second national online survey populated with the indicative questions identified from stage 2 was
281 open from November to December 2017. The survey was targeted to eligible participants (patients,
282 carers and clinicians) following the same strategy used to promote the initial survey. In addition,
283 participants from Stage 1 who had indicated they were willing to take part in in this stage were
284 contacted. Participants were invited to select and then rank their top ten questions. The questions
285 were presented in a random order to each participant to reduce the risk of bias.

286

287 *Analysis*

288 The results of the ranking by patients and clinicians were collated, thereby giving equal weighting to
289 clinicians and patients, to form a ranked list of the indicative questions.

290

291 **Stage 4**292 *Final prioritisation workshop*

293 The top 25 questions from the interim prioritisation were taken forward to a final prioritisation
294 workshop, a consensus meeting held London in February 2018. Thirty participants (15
295 physiotherapists, 12 patients and 3 carers) were recruited through partner organisations and
296 networks to take part. We aimed to include a diverse group in terms of their professional
297 backgrounds, experience of health conditions, age and representation across the countries in the UK.
298 A small number of steering group members and a representative from the National Institute for
299 Health Research (NIHR) attended as non-participatory observers at the workshop.

300

301 Participants were divided into three equal-sized groups with a mix of physiotherapists, patients and
302 carers. The groups were asked to rank the questions using an adapted nominal group technique (10)
303 and guided discussion facilitated by three independent JLA advisors. The rankings were collated; the
304 groups were then mixed and asked to rank the questions a second time. The aggregate ranking from
305 the small group exercises was then discussed by the whole group to agree the final order of
306 questions including the top ten priorities.

307

308 **Results**309 **Stage 1 – Identifying uncertainties**

310 A total of 645 responses were submitted, of which 135 did not contain questions and were excluded,
311 Out of the 510 included participants, 174 (34.1%) had received physiotherapy as a patient; 44 (8.6%)

312 identified themselves as carers; 36 (7.1%) members of the public with an interest in physiotherapy;
313 19 responses (3.7%) had been completed on behalf of someone else. Two hundred and thirty four
314 (45.9%) identified themselves as physiotherapists working in clinical practice (categories were not
315 mutually exclusive).

316
317 The majority (75%) of respondents were female and the mean age was 47 years (range 9 to 88).
318 Most respondents lived across the UK (England (77%); Northern Ireland (10%); Scotland (5%); Wales
319 (4.5%); Other (3.5%). Respondents described their ethnicity as: White (91%); Asian/Asian British (1%);
320 Black/Black British (1%); Mixed/multiple ethnic groups (0.5%); Chinese or other ethnic group (0.5%)
321 or preferred not to say (4.5%).

322 For full details about respondents see the final report (6: Tables 1-4, pages 16-17)

323
324 The 510 responses contained 2091 uncertainties. No additional uncertainties were identified from
325 the literature searches.

326

327 **Stage 2 – Analysis and Verifying uncertainties**

328 The submitted uncertainties were collated and refined resulting in 2,152 uncertainties. This is
329 because when some of the uncertainties were analysed they were composed of more than one
330 uncertainty. Of these 2,152 uncertainties, 35 were considered out of scope. Following coding and
331 theming, 15 broad themes emerged. Similarly coded uncertainties were developed into indicative
332 questions producing 65 questions. The mean number of uncertainties underpinning an indicative
333 question was 33 (standard deviation (SD) 48, range 1-255).

334

335 The secondary care search identified systematic reviews relevant for 8 of the indicative questions.
336 Fifteen additional searches were undertaken which identified systematic reviews for a further 33
337 indicative questions (6: appendix 3). All of the systematic reviews showed that uncertainty existed.

338 Therefore, 41 of the 65 indicative questions were verified as uncertainties. The remaining 24
339 questions were discussed with the steering group and considered unlikely to have relevant
340 systematic review evidence in their topics. Considering the available literature and the broad scope
341 of each of the questions, the steering group agreed that all of the indicative questions were
342 unanswered.

343

344 **Stage 3 – Interim prioritisation**

345 There were 1,020 responses to the survey, 636 (62%) were complete and could be used in the
346 analyses; participant categories were not mutually exclusive: 490 (77%) identified themselves as
347 physiotherapists working in clinical practice, others as patients (n = 68 (10.7%)), carers (n = 14 (2.2%))
348 and members of the public (n = 6 (1%)).

349

350 Respondents' mean age was 41.9 years (range 17 to 87); most described themselves as female (81%).
351 Respondents lived in England (62%); Northern Ireland (25%); Scotland (7%); Wales (3%); Other (3%)
352 and described their ethnicity as: White (94%); Asian/Asian British (1.7%); Black/Black British (0.2%);
353 Mixed/multiple ethnic groups (1.4%); Chinese or other ethnic group (0.5%) or preferred not to say
354 (2.5%). For full details (6: Table 5 page 19, appendix 4)

355

356 *Ranking of questions*

357 The separate rankings from the patient/carers and clinician groups were weighted equally and
358 combined to form a ranked list of the top 25 uncertainties to take forward to the workshop in Stage
359 4. For the combined list of the 25 priorities taken forward, as well as the ranked list from the patient
360 and clinician groups, see the Physiotherapy PSP final report (6: Table 6 page 20).

361

362 **Stage 4 – Final prioritisation**

363 The final top ten priorities (see Table 1 below) fall within six themes: optimisation of physiotherapy
364 (top ranked question, underpinned by 18 uncertainties); access (three questions); effectiveness
365 (three questions); patient and carer knowledge, experiences, needs and expectations; supporting
366 patient engagement and self-management; diagnosis and prediction. The number of uncertainties
367 underpinning each of the top ten questions ranged from 3 – 255.

368

369 **Table 1 – to be inserted approximately at this location**

370

371 **Discussion**

372 Our study identified a ranked list of uncertainties relating to physiotherapy in the UK that includes
373 the top ten research questions. These uncertainties reflect the ambitious aim of the project to
374 develop priorities for a profession which covers diverse specialisms delivered in multiple settings and
375 potentially serves all groups in society across the life course. In addition, they address the key
376 elements within the scope of interventions, self-management, prevention and service delivery and
377 are relevant for contemporary healthcare and policy in the UK. The themes of the top 3 priorities are
378 optimisation, effectiveness and access.

379

380 With patients, carers and members of the public forming half of the participants in the initial survey
381 and equal weighting being given to them in the priority setting compared to clinicians, the
382 methodology we used allowed patients and the public to contribute to setting the physiotherapy
383 research agenda. The process was carefully monitored and overseen by the steering group
384 consisting of multiple diverse stakeholders with a range of expertise and the independent JLA. The
385 new priorities reflect moves to improve impact by wider stakeholder engagement, attempts to
386 embed collaborative patient engagement in the coproduction of research ((11, 12) and a shift in
387 thinking away from expert-led research agendas (13).

388

389 The well-established JLA methodology and philosophy add strength to the resulting top 10. A recent
390 systematic rapid review considered this type of methodology to be “robust, strategic and aimed to
391 promote equity in patient voices” (14).

392

393 Our approach to identifying broad generic priorities differs from the speciality- and condition-
394 focused approach of the previous UK physiotherapy priority setting project (1). A significant strength
395 of this approach was the removal of potential bias from overrepresentation of participants with a
396 specific condition or area of expertise. It also allowed participants to fully engage with all of the
397 priorities. The priorities not only focus on physiotherapy interventions but how services are
398 delivered, self-management and prevention. Importantly, the priorities can be widely adapted and
399 adopted by researchers and interpreted by research commissioners. Another advantage is that
400 generic priorities are less fixed and prescriptive, allowing for the inclusion of new technologies or
401 innovations.

402

403 Further work needs to be undertaken by researchers with relevant stakeholders to develop the
404 priorities into specific research questions. They can be interpreted alongside other condition- and
405 speciality-specific priorities and research recommendations. However, it is also important that
406 researchers address the urgent need for evidence about physiotherapy for people with multiple
407 physical and mental health conditions. Impact of this approach to setting the profession’s research
408 priorities requires evaluation in terms of influencing research funding and uptake and development
409 of the priorities by researchers.

410

411 Previous JLA PSP’s have typically been single condition- or issue-focused, many including
412 recommendations for research into physiotherapy related to specific conditions, for example, stroke,
413 multiple sclerosis, scoliosis and urinary incontinence (15). More recently, the scope of some PSPs has
414 broadened to include a wide range of conditions (for example, ‘multiple conditions in later life’), as

415 well as care settings (for example, 'intensive care') (16). The physiotherapy PSP was the first
416 profession specific PSP. Recently, an adult social work PSP has identified their top 10 priorities and
417 an occupational therapy PSP is underway (15).

418

419 The traditional purpose of JLA PSPs is to identify uncertainties about treatment effects. It is apparent
420 from the scope and emerging priorities of more recent PSPs, for example, the palliative and end of
421 life care PSP (15), that, how treatment and care are delivered is also important to patients, carers
422 and clinicians. Expanding the scope of PSPs to encompass service delivery also identifies
423 uncertainties relevant to healthcare policy. The JLA regularly reviews its principles and methodology.
424 The physiotherapy PSP has the broadest scope to date and the methods we used to address the
425 associated challenges is informing discussions about developing JLA approaches (2).

426

427 A limitation of this study is the low response from across the physiotherapy profession (with CSP
428 membership of approximately 57000) despite wide publicity. The exception to this is Northern Irish
429 respondents who demonstrated relatively high levels of engagement. The sampling method used in
430 the last CSP priority setting exercise (1) was fundamentally different to the approach used in the
431 current project and therefore we have no comparative data in relation to our response rate. Further
432 work is needed to understand factors affecting physiotherapists' engagement with research priority
433 setting. However, appropriate representation from all key stakeholder and demographic groups is
434 probably of more relevance than response rate in this type of large population study.

435

436 The proportion of patients, carers and members of the public declined markedly (50% to 14%) in the
437 second survey although this would have been attenuated by the equal weighting given to the
438 clinician and patient groups in the aggregated ranking. Participants in the workshop were selected
439 with a view to gaining broad representation, within the constraints of feasibility and resources.

440

441 As a whole the participants predominantly described themselves as White; with males, members of
442 Black, Asian and minority ethnic (BAME) groups and those in young and old age groups being under-
443 represented. The questionnaire was available in a variety of formats to try to improve accessibility
444 e.g. paper-based, Welsh language, but the impact of these on response rates is unclear and may not
445 have accommodated the communication needs of all potential participants e.g. those with visual
446 impairment or without English as their first language. Responses could be made by proxy, and a small
447 number of participants took this option. Targeted strategies used to engage with networks for older
448 and younger participants and BAME groups had limited success.

449
450 Underrepresentation of BAME groups is a recognised limitation of many of the JLA PSPs (2). Effective
451 strategies have been suggested by the Type 2 Diabetes PSP (16). Previous disease-specific PSPs have
452 had some success with enhanced models of engagement with people with complex health needs
453 (“assisted involvement”)(17). Further work on identifying and evaluating methodologies to improve
454 engagement and participation among professional groups and populations which are labelled “hard-
455 to-reach” (18,19,20) should be considered. Limited feasibility and resource limitations have been
456 identified as challenges to engagement with all relevant stakeholders (14) and are likely to have
457 played a part in our study. Some models of engagement may be more feasible in PSPs with a
458 narrower scope.

459
460
461 Observers in the final workshop noted the subtle realignment of priorities during discussions in each
462 group session which progressively led to agreement on the final ranking of the priorities. This is a key
463 component of the JLA methodology that might be further researched to better understand and
464 potentially enhance the steps in the consensus building process.

465

466 **Conclusion**

467 This study provides an opportunity for patients and carers, as well as clinicians and other
468 stakeholders, to influence and guide the physiotherapy profession's research agenda in the UK. A
469 focussed approach was used to agree the top ten physiotherapy research priorities out of 65
470 identified uncertainties. Using the JLA's established methods provided a unique perspective on the
471 wide scope of physiotherapy practice in the UK and co-produced a prioritised list of generic research
472 themes that encompass clinical practice, self-management, prevention and service delivery. These
473 are flexible and can be further refined to produce specific research questions that are highly relevant
474 to clinicians and patients. It is important that the impact of this approach to priority setting is
475 evaluated.

476

477 **Implications**

478 The results will directly inform, guide and influence physiotherapy research funding, commissioning
479 and decisions to produce evidence that matters to clinicians and patients. Other professional groups
480 may be interested in our methodological approach to priority setting across a wide scope of practice.
481 Common challenges around maximising engagement and representation of professional groups,
482 patients and public should be tackled in future research.

483 Word count approx. 3,500

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485 **Conflict of Interest:** The authors disclose no conflicts of interest.

486

487 **References**

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FIGURE 1

Overview of the 4 key stages of the James Lind Alliance methodology as applied to the
Physiotherapy Priority Setting Partnership

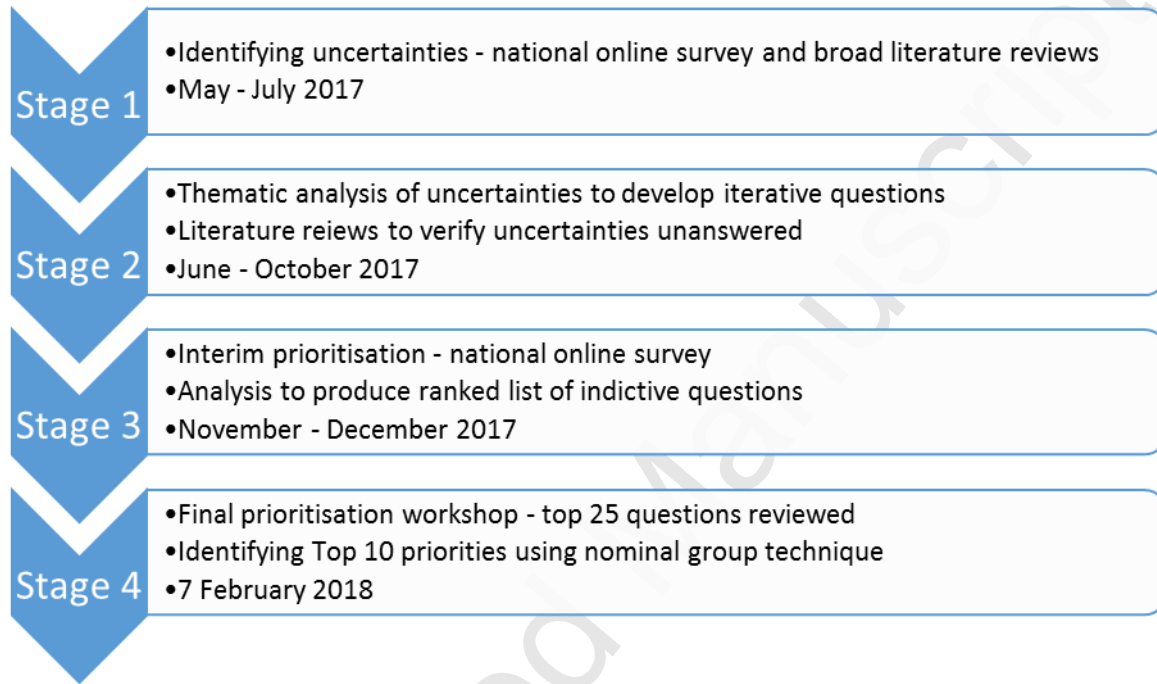


Table 1 Physiotherapy priorities – Top ten priorities after final workshop

Rank	Priorities	Theme	Number of uncertainties
1	When health problems are developing, at what point is physiotherapy most/least effective for improving patient results compared to no physiotherapy? <i>What factors affect this?</i>	Optimisation	18
2	When used by physiotherapists, what methods are effective in helping patients to make health changes, engage with treatment, check their progress, or manage their health after discharge?	Effectiveness	190
3	What are the best ways to deliver physiotherapy services to meet patients' needs and improve outcomes for patients and services?	Access	255
4	To stop health problems occurring or worsening, what physiotherapy treatments, advice or approaches are safe and effective? <i>Where more than one treatment/approach works, which work best and in what dose?</i>	Effectiveness	34
5	What are patients' expectations regarding recovery, how do these compare to physiotherapists' views and, where recovery is not possible, how is this managed?	Patient & Carer knowledge, experiences, needs and expectations	15
6	How does waiting for physiotherapy affect patient and service outcomes?	Access	17
7	What parts of physiotherapy treatments cause behaviour change or physical improvement?	Effectiveness	3
8	What approaches are effective for enabling parents, relations or carers to support physiotherapy treatment or to help patients to manage their own health problem?	Supporting patient engagement and self-management	24
9	How is patient progress and/or the results of physiotherapy treatment measured? <i>How is service performance measured and checked?</i>	Diagnosis and prediction	11
10	How can access to physiotherapy be improved for groups who have reduced access?	Access	22