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

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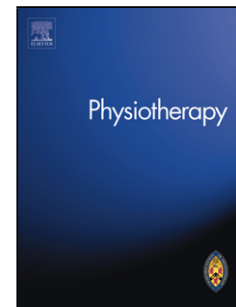
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2 **Identifying Priorities for Physiotherapy Research in the UK: the James Lind Alliance Physiotherapy**3 **Priority Setting Partnership**

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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

484

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486

#### 487 **References**

- 488 [1] Rankin G, Rushton A, Olver P, Moore A. Chartered Society of Physiotherapy's identification of  
489 national research priorities for physiotherapy using a modified Delphi technique.  
490 *Physiotherapy*. 2012;98(3):260-72.

491

- 492 [2] The James Lind Alliance. The James Lind Alliance 2018 Available from:  
493 <http://www.jla.nihr.ac.uk/> Accessed 3 December 2018  
494
- 495 [3] Chalmers I, Atkinson P, Fenton M, Firkins L, Crowe S, Cowan K. Tackling treatment  
496 uncertainties together: the evolution of the James Lind Initiative, 2003–2013. *Journal of the*  
497 *Royal Society of Medicine.* 2013;106(12):482-91.  
498
- 499 [4] Tallon D, Chard J, Dieppe P. Relation between agendas of the research community and the  
500 research consumer. *The Lancet.* 2000;355(9220):2037-40.  
501
- 502 [5] Petit-Zeman S, Firkins L, Scadding JW. The James Lind Alliance: tackling research mismatches.  
503 *The Lancet.* 2010;376(9742):667-9.  
504
- 505 [6] Chartered Society of Physiotherapy. Discovering physiotherapy research priorities that matter  
506 to patients, carers and clinicians. 2018. Available from: [https://www.csp.org.uk/professional-](https://www.csp.org.uk/professional-clinical/research-and-evaluation/research-priorities)  
507 [clinical/research-and-evaluation/research-priorities](https://www.csp.org.uk/professional-clinical/research-and-evaluation/research-priorities) Accessed 3 December 2018  
508
- 509 [7] NETSCC and K. Cowan. The James Lind Alliance guidebook. 2016. Available from:  
510 <http://www.jla.nihr.ac.uk/jla-guidebook/> Accessed 3 December 2018  
511
- 512 [8] James Lind Alliance. James Lind Alliance, Priority Setting Partnership. *Physiotherapy.* 2018.  
513 Available from: <http://www.jla.nihr.ac.uk/priority-setting-partnerships/physiotherapy/>  
514 Accessed 3 December 2018  
515
- 516 [9] Braun V, Clarke V. Using thematic analysis in psychology. *Qualitative Research in Psychology.*  
517 2006;3(2):77-101.

518

519 [10] Jones J, Hunter D. Consensus methods for medical and health services research. *BMJ (Clinical*  
520 *research ed)*. 1995;311(7001):376-80.

521

522 [11] Liberati A. Need to realign patient-oriented and commercial and academic research. *The*  
523 *Lancet*. 2011;378(9805):1777-8.

524

525 [12] UK Research and Innovation. Research council partners and public engagement with research  
526 2018. Available from: [https://www.ukri.org/public-engagement/research-council-partners-](https://www.ukri.org/public-engagement/research-council-partners-and-public-engagement-with-research/)  
527 [and-public-engagement-with-research/](https://www.ukri.org/public-engagement/research-council-partners-and-public-engagement-with-research/) Accessed 3 December 2018

528

529 [13] Boaz A, Biri D, McKeivitt C. Rethinking the relationship between science and society: Has there  
530 been a shift in attitudes to Patient and Public Involvement and Public Engagement in Science in  
531 the United Kingdom? *Health expectations : an international journal of public participation in*  
532 *health care and health policy*. 2016;19(3):592-601.

533

534 [14] Manafò E, Petermann L, Vandall-Walker V, Mason-Lai P. Patient and public engagement in  
535 priority setting: A systematic rapid review of the literature. *PLoS one*. 2018;13(3):e0193579-e.

536

537 [15] James Lind Alliance PSPMS. James Lind Alliance, Priority Setting Partnerships. Available from:  
538 <http://www.jla.nihr.ac.uk/priority-setting-partnerships/> Accessed 3 December 2018

539

540 [16] Chalmers I, Atkinson P, Fenton M, Firkins L, Crowe S, Cowan K. Tackling treatment  
541 uncertainties together: the evolution of the James Lind Initiative, 2003–2013. *Journal of the*  
542 *Royal Society of Medicine*. 2013;106(12):482-91.

543

- 544 [17] Pollock A, George BS, Fenton M, Crowe S, Firkins L. Development of a new model to engage  
545 patients and clinicians in setting research priorities. *Journal of Health Services Research &*  
546 *Policy*. 2014;19(1):12-8.
- 547
- 548 [18] E. Burns. Making sure your research priorities are built on diversity. 2017. Available from:  
549 [http://www.jla.nihr.ac.uk/news/making-sure-your-research-priorities-are-built-on-](http://www.jla.nihr.ac.uk/news/making-sure-your-research-priorities-are-built-on-diversity/7641)  
550 [diversity/7641](http://www.jla.nihr.ac.uk/news/making-sure-your-research-priorities-are-built-on-diversity/7641) Accessed 3 December 2018.
- 551
- 552 [19] Bonevski B, Randell M, Paul C, Chapman K, Twyman L, Bryant J, et al. Reaching the hard-to-  
553 reach: a systematic review of strategies for improving health and medical research with  
554 socially disadvantaged groups. *BMC medical research methodology*. 2014;14:42.
- 555
- 556 [20] Liljas AEM, Walters K, Jovicic A, Iliffe S, Manthorpe J, Goodman C, et al. Strategies to improve  
557 engagement of 'hard to reach' older people in research on health promotion: a systematic  
558 review. *BMC public health*. 2017;17(1):349.
- 559

FIGURE 1

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

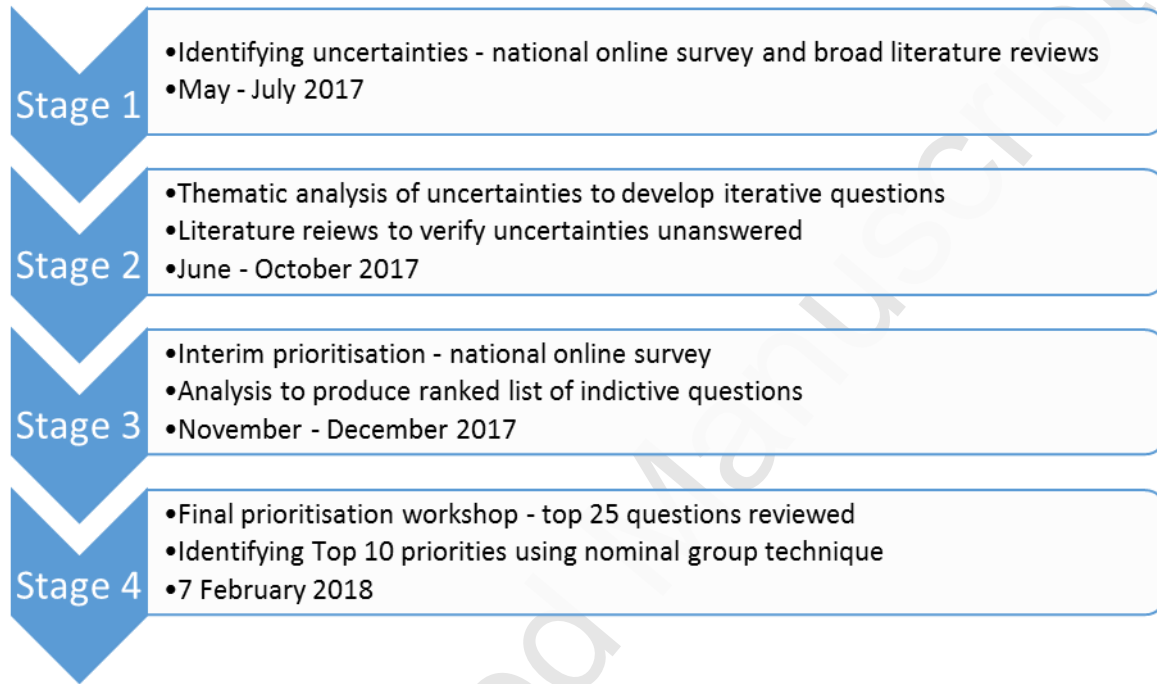




Table 1 Physiotherapy priorities – Top ten priorities after final workshop

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