

Research Bank

Journal article

Identifying priorities for physiotherapy research in the UK: The James Lind Alliance Physiotherapy Priority Setting Partnership Rankin, Gabrielle, Summers, Rachael, Cowan, Katherine, Barker, Karen, Button, Kate, Carroll, Sean Paul, Fashanu, Billy, Moran, Fidelma, O'Neill, Brenda, ten Hove, Ruth, Waterfield, Jackie, Westwater-Wood, Sarah and Wellwood, Ian

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55	
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58	
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60	
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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

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

Objectives

- The study had the following objectives:
- To work together with a wide range of stakeholders including clinicians, researchers, patients

 and carers, funders, educators, support workers, students, service providers, commissioners and

 policy makers in the UK to identify and agree the most important uncertainties about

 physiotherapy.
- To agree by consensus with patients, carers and clinicians a ranked list of uncertainties for
 physiotherapy research, including the top ten uncertainties.
- To publicise the results and process of the PSP.
- To provide the results to research commissioning bodies in a way that helps inform
 physiotherapy research strategies and funding decisions.

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 JLAprinciples, 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

10

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

were presented in a random order to each participant to reduce the risk of bias.

285

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.

Therefore, 41 of the 65 indicative questions were verified as uncertainties. The remaining 24
questions were discussed with the steering group and considered unlikely to have relevant
systematic review evidence in their topics. Considering the available literature and the broad scope
of each of the questions, the steering group agreed that all of the indicative questions were
unanswered.
Stage 3 – Interim prioritisation
There were 1,020 responses to the survey, 636 (62%) were complete and could be used in the
analyses; participant categories were not mutually exclusive: 490 (77%) identified themselves as
physiotherapists working in clinical practice, others as patients (n = 68 (10.7%)), carers (n = 14 (2.2%))
and members of the public (n = 6 (1%)).
Respondents' mean age was 41.9 years (range 17 to 87); most described themselves as female (81%).
Respondents lived in England (62%); Northern Ireland (25%); Scotland (7%); Wales (3%); Other (3%)
and described their ethnicity as: White (94%); Asian/Asian British (1.7%); Black/Black British (0.2%);
Mixed/multiple ethnic groups (1.4%); Chinese or other ethnic group (0.5%) or preferred not to say
(2.5%). For full details (6: Table 5 page 19, appendix 4)
Ranking of questions
The separate rankings from the patient/carer and clinician groups were weighted equally and
combined to form a ranked list of the top 25 uncertainties to take forward to the workshop in Stage
4. For the combined list of the 25 priorities taken forward, as well as the ranked list from the patient
and clinician groups, see the Physiotherapy PSP final report (6: Table 6 page 20).

Stage 4 – Final prioritisation

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

Table 1 – to be inserted approximately at this location

Discussion

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

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

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	Dravious II A DCD's have typically been single condition, or issue featured many including
412	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	

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	

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

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

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

Conclusion

This study provides an opportunity for patients and carers, as well as clinicians and other
stakeholders, to influence and guide the physiotherapy profession's research agenda in the UK. A
focussed approach was used to agree the top ten physiotherapy research priorities out of 65
identified uncertainties. Using the JLA's established methods provided a unique perspective on the
wide scope of physiotherapy practice in the UK and co-produced a prioritised list of generic research
themes that encompass clinical practice, self-management, prevention and service delivery. These
are flexible and can be further refined to produce specific research questions that are highly relevant
to clinicians and patients. It is important that the impact of this approach to priority setting is
evaluated.
Implications
The results will directly inform, guide and influence physiotherapy research funding, commissioning
and decisions to produce evidence that matters to clinicians and patients. Other professional groups
may be interested in our methodological approach to priority setting across a wide scope of practice
Common challenges around maximising engagement and representation of professional groups,
patients and public should be tackled in future research.
Word count approx. 3,500
Conflict of Interest: The authors disclose no conflicts of interest.
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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

•Identifying uncertainties - national online survey and broad literature reviews
•May - July 2017

•Thematic analysis of uncertainties to develop iterative questions
•Literature reiews to verify uncertainties unanswered
•June - October 2017

•Interim prioritisation - national online survey
•Analysis to produce ranked list of indictive questions
•November - December 2017

•Final prioritisation workshop - top 25 questions reviewed
•Identifying Top 10 priorities using nominal group technique
•7 February 2018

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? What factors affect this?	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? Where more than one treatment/approach works, which work best and in what dose?	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? How is service performance measured and checked?	Diagnosis and prediction	11
10	How can access to physiotherapy be improved for groups who have reduced access?	Access	22