

PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (<http://bmjopen.bmj.com/site/about/resources/checklist.pdf>) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

ARTICLE DETAILS

TITLE (PROVISIONAL)	Realist evaluation of cancer rehabilitation services in South Wales (REEACaRS): a mixed methods study protocol
AUTHORS	Csontos, Judit; Fitzsimmons, Deborah; Jones, Mari; Wilkinson, Wendy; Horton, Joanne; Love-Gould, Lisa; Tee, Anna; Watts, T

VERSION 1 - REVIEW

REVIEWER	Vishwa Raj Levine Cancer Institute Carolinas Rehabilitation USA
REVIEW RETURNED	15-Oct-2018

GENERAL COMMENTS	<p>Overall this is a very interesting manuscript/research proposal regarding cancer rehabilitation and the realist evaluations.</p> <p>In the introduction, I would be sure to include physicians as part of the multidisciplinary team (in this case, oncologists and physiatrists).</p> <p>Although the realist method of evaluation may allow for comparison of qualitative outcomes for both sites performing intervention, further explanation maybe necessary as to why comparison of these sites is applicable given that they are somewhat different in terms of services offered. For example, in phase 1, is it truly fair to compare the pre/post rehabilitation assessment measures given that they are performed at different settings? Further explanation of why it is ok to compare these may be warranted. Similar explanation may be needed for Phase 3 work.</p> <p>In Phase 2, is there any way to clarify how to control for the selection of individuals for qualitative information? For example, is there a strategy to ensure that the 20 healthcare professionals and rehabilitation professionals are randomized so that the reported qualitative information is unbiased in reporting? Perhaps explanation of how realist theory accounts for this may be warranted.</p> <p>Very interesting project; look forward to learning more from the revisions.</p>
-------------------------	---

REVIEWER	Meeke Hoedjes Tilburg University, the Netherlands
REVIEW RETURNED	20-Nov-2018

<p>GENERAL COMMENTS</p>	<p>Abstract:</p> <p>Introduction:</p> <ul style="list-style-type: none"> • The rationale for this study should be described in more detail in the introduction. Please define 'cancer rehabilitation' and 'services', and provide some more background information on current status of cancer rehabilitation in the UK. • What would be inadequate support? And what kind of support are you writing about? • Person-centered care should be introduced. What is this? Is this preferable? Why? And is this currently not provided in the UK? • Please add information about current cancer rehabilitation care in the UK, and mention what this study is precisely examining. This would improve the rationale for your study. • The two specialist rehabilitation services mentioned in the aim are not introduced. Why these two centers? It would be better to just mentioned centers and leave the number out. You can mention that in the methods section. • The aim is very broad, please specify the aim. What are you exactly going to study? <p>Methods:</p> <ul style="list-style-type: none"> • Please further explain what a realist evaluation entails. "What works for whom in which circumstances" is a research question in its own, but still too broad. • After reading the methods, it remains vague what methods are going to be used. • Are those phases part of the realist evaluation? This is not specifically mentioned. • How many individuals are going to be in the cancer rehabilitation database? Who are the participants? • What is meant with a secondary analysis? And what exactly is going to be analyzed? • Phase 3: Why two case studies and a cost-consequence analysis? To examine what? • The two specialist rehabilitation services are not mentioned in the methods. <p>It would be good to mention expected results in the abstract and how these results can be used in cancer rehabilitation care.</p> <p>Article summary:</p> <ul style="list-style-type: none"> • Please further specify the aim of the study. What do you mean with "how two specialist cancer rehabilitation services work"? Please specify more precisely what you are going to investigate. • What do you mean with time constraints? In what respect? • Last bullet: Why is that important to know? Please provide more information for a stronger rationale of the study. <p>Background of the study:</p> <ul style="list-style-type: none"> • Please add 'involuntary' to weight loss as one of the physical consequences of cancer and its treatment (line 12-13). • To what does 'these' in 'these consequences' (line 16) refer to? Both Physical and psychological consequences? Please specify. • A lot of consequences of cancer and its treatment are summed up in the first paragraph. I would like to see more structure in this first paragraph, and some elaboration on some of the consequences (depending on which ones you're going to focus on). • Are there currently unmanaged effects? This is not stated, but very important for the rationale for your study. • What kind of interventions are you writing about? "Interventions" is too broad. Please specify.
--------------------------------	---

	<ul style="list-style-type: none"> • The aim of the study does not follow logically from the text above. Please provide a clear, strong motivation for the study. • Please specify the aim of the study. • Please add a definition of cancer rehabilitation services. <p>Methods: Aims and objectives: main aim is too broad, please specify. Objectives: 2. Which needs? Please specify. 3. What are you specifically going to be investigating? What aspects of cancer rehabilitation? 3a: 'people who have been received care'. Please remove 'been'. Research design: • Is the realist evaluation the study design? Or are you using both qualitative and quantitative research methods in the context of a realist evaluation? Please describe specifically how the realist evaluation will answer your research questions. • Please elaborate on the three phases. There must be some kind of logic behind these three phases, but this is not clearly described. Now, the authors just specify what they will do during these three phases, not what these phases mean and why they are being executed in the first place. To be able to assess the appropriateness of the chosen methods per phase, I need to know as a reader what the authors intend to assess per phase and the methods they will use to assess this. Setting: • Why these two rehabilitation centers? Was there a specific reason for those two? Why not one? Are results going to be compared between the two centers? Participants and data sources: • Please provide a description of each phase. Which research questions are being answered per phase? • How will you determine when data saturation will be reached? • At the end of this section a 9-month data collection period is mentioned. Does this apply to phase 3 only? • How many participants are going to be included? Data collection and analysis: • Please provide a description of each phase. Which research questions are being answered per phase? • Phase 3: How many cases will be studies for the case study? On the basis of what will these cases be selected? And who will be included in the CCA? How many participants? Strengths and limitations: • The rationale for using realist evaluation should be mentioned earlier in the text. Conclusions: • Please mention expected results in more detail and how these are expected to influence rehabilitation services.</p>
--	--

VERSION 1 – AUTHOR RESPONSE

Reviewer 1			
Number	Comment	Response	Line/Page Number
1.	In the introduction, I would be sure to include physicians as part of the multidisciplinary team (in this case, oncologists and physiatrists).	Thank you so much for your suggestions. They are really useful in helping us to improve this paper. We had a thought, but	

		<p>in the UK rehabilitation is mostly provided by allied health professionals and the physiatrist role is not widely known. However, to make this clearer, the paragraph has been restructured to highlight that it is only true for the UK.</p> <p>'Following NICE recommendations cancer rehabilitation is usually provided by a multidisciplinary team of dieticians, nurse specialists, occupational therapists, physiotherapists, psychologists and speech and language therapists.⁶'</p>	Page 4
2.	<p>Although the realist method of evaluation may allow for comparison of qualitative outcomes for both sites performing intervention, further explanation maybe necessary as to why comparison of these sites is applicable given that they are somewhat different in terms of services offered. For example, in phase 1, is it truly fair to compare the pre/post rehabilitation assessment measures given that they are performed at different settings? Further explanation of why it is ok to compare these may be warranted. Similar explanation may be needed for Phase 3 work.</p>	<p>The text has been restructured to make it clear that the aim of the study is not to compare the two services, but to explore in what ways cancer rehabilitation is provided in South Wales, UK. This has not yet been fully investigated in Wales, and we are hoping that this project could help understand what works in rehabilitation and what needs improvement.</p> <p>In Phase 1 only the database of the South West rehabilitation service is analysed for context. Analysis of data from the South East rehabilitation service is not possible, because they have only started collecting outcome measures in 2018. To clarify this a statement was added to the paragraph:</p> <p>'Phase 1 will be the secondary analysis of the South West Wales cancer rehabilitation service's database.'</p> <p>As of Phase 3 we aim to introduce the two service models (similarities and differences), but deciding which service is more effective is out of the scope of</p>	Page 8

		<p>this study. Case studies of the services and cost-consequences analysis only aims to present costs and outcomes on a balance sheet and provide information on how these services work and what underpinning mechanisms make it work. To clarify this a statement was added to Phase 3:</p> <p>‘Phase 3 will comprise two case studies, namely the South West and South East cancer rehabilitation services, and cost-consequences analysis of the study sites to explore the service models and their resource use.’</p> <p>Based on the comments of Reviewer 2, multiple changes have been made to the whole body of the paper to make the realist evaluation process clear.</p>	Page 10
3.	<p>In Phase 2, is there any way to clarify how to control for the selection of individuals for qualitative information? For example, is there a strategy to ensure that the 20 healthcare professionals and rehabilitation professionals are randomized so that the reported qualitative information is unbiased in reporting? Perhaps explanation of how realist theory accounts for this may be warranted.</p>	<p>In qualitative research randomisation of participants is not required or necessary. To ensure that a wide-range of professionals and patients are interviewed and their experiences and opinions are accurately represented purposive sampling (which is a non-probability sampling) is used. Purposive sampling has been described in more details in the text.</p> <p>‘Purposive sampling will be used to achieve an accurate representation of cancer rehabilitation in South Wales by recruiting from a wide range of professionals with different backgrounds (dietetics, occupational therapy, physiotherapy, speech and language therapy) and people with a wide range of cancer diagnoses.²² Inclusion and exclusion criteria is presented in Table 1.’</p>	Page 9

		<p>To provide rigour for the study, in qualitative research reflection and triangulation are often used methods which are mentioned in the text.</p> <p>'To ensure the credibility of the findings a second reviewer will analyse a sample of the transcripts. Methodological triangulation will also be applied, through the comparison of the qualitative interview findings to the patients' rehabilitation records. To provide rigour, a reflective diary will be written by the principal investigator to explore her own role as a researcher and its effect on the study.'</p>	Page 10
--	--	---	---------

Reviewer 2				
Number	Paragraph	Comment	Response	Line/Page Number
1.	Abstract Introduction	The rationale for this study should be described in more detail in the introduction. Please define 'cancer rehabilitation' and 'services', and provide some more background information on current status of cancer rehabilitation in the UK.	<p>Thank you so much for your feedback. We found it really useful to improve the quality of the paper. The introduction of the abstract has been changed to provide easier flow and understanding.</p> <p>Background on Wales, UK health and social care needs has been added.</p> <p>'In Wales, UK 41% of people, who have had health and social care needs resulting from cancer and its treatments, reported that they did not receive care when needed.'</p> <p>Due to the word limit of BMJ Open (300 words for an abstract) full definitions could not be added, although we tried to make it</p>	Page 2

			<p>clear what cancer rehabilitation services are in South Wales, UK.</p> <p>‘Cancer rehabilitation services, which can comprise physical exercise, psychological support and educational interventions depending on the individual’s needs, have been found to have a positive effect on health-related quality of life worldwide.’</p>	
2.	Abstract Introduction	What would be inadequate support? And what kind of support are you writing about?	<p>By inadequate support we meant that without cancer rehabilitation patients might have unmet needs after cancer treatment. It is reported that 30% of people have unmet rehabilitation needs due to cancer treatment in the UK (National Cancer Action Team 2013). This is mentioned later in the transcript, in the Background of the study.</p> <p>‘However, it is estimated that 30% of the UK cancer population still have unmet rehabilitation needs.’¹</p> <p>It is mentioned in the Abstract that in Wales, UK, 41% of people with health and social care needs reported that they have not</p>	<p>Page 4-5</p> <p>Page 2</p>

			received care (including physiotherapy).	
3.	Abstract Introduction	Person-centered care should be introduced. What is this? Is this preferable? Why? And is this currently not provided in the UK?	After consideration and due to the word limits of the Abstract (300 words), this section has been taken out.	
4.	Abstract Introduction	Please add information about current cancer rehabilitation care in the UK, and mention what this study is precisely examining. This would improve the rationale for your study.	As mentioned in Bullet number 1, statistics have been added about unmet health and social care needs of people in Wales, UK and what is meant as cancer rehabilitation services. The aim of the study has been specified: 'The aim of this study is to investigate the conditions in which cancer rehabilitation services work and their underpinning mechanisms in South Wales, UK, specifically addressing barriers, facilitators and costs.'	Page 2
5.	Abstract Introduction	The two specialist rehabilitation services mentioned in the aim are not introduced. Why these two centers? It would be better to just mentioned centers and leave the number out. You can mention that in the methods section.	The number of cancer rehabilitation services has been taken out as recommended.	Page 2
6.	Abstract Introduction	The aim is very broad, please specify the aim. What are you exactly going to study?	The aim has been specified as mentioned in bullet number 4.	
7.	Abstract Methods	Please further explain what a realist evaluation entails. "What works for whom in which circumstances" is a research question in its own, but still too broad.	This sentence has been re-edited to provide more information on the realist evaluation process with the word limits of the Abstract. 'Realist evaluation, which explains for whom a service works in what circumstances and how through context-mechanism-outcome pattern	Page 2

			conjunctions, will be used in three phases to investigate the conditions in which cancer rehabilitation services work and their underpinning mechanisms.'	
8.	Abstract Methods	After reading the methods, it remains vague what methods are going to be used.	<p>Due to the word limits of the Abstract we could not add more details to the methods used, although we tried to restructure the Abstract to provide a bit more insight. This is a complex project, with three different phases and methods used; therefore to provide detailed information in an Abstract is a real challenge.</p> <p>'Phase 1 will be secondary analysis of a cancer rehabilitation database from a local Health Board to give context to who are accessing rehabilitation. Phase 2 will be thematic analysis of face-to-face, semi-structured rehabilitation participant (n=20) and healthcare professional (n=20) interviews to explore the mechanisms of how cancer rehabilitation works. Phase 3 will be two case studies and cost-consequences analysis of cancer rehabilitation services.'</p>	Page 2
9.	Abstract Methods	Are those phases part of the realist evaluation? This is not specifically mentioned.	<p>Yes, all three phases provide information for the realist evaluation.</p> <p>Changes made to highlight this have been mention in bullet number 7 and 8.</p>	
10.	Abstract Methods	How many individuals are going to be in the cancer rehabilitation database? Who are the participants?	The number of people in the database was not available for us before the study protocol was made due to confidentiality and permissions.	

			Participants in the database are cancer patients who had cancer rehabilitation needs and took part in rehabilitation in South West Wales. This information is available in details later in the text, in Methods, Phase 1. Due to word limits it could not be included in the abstract.	Page 8
11.	Abstract Methods	What is meant with a secondary analysis? And what exactly is going to be analyzed?	<p>Secondary analysis is the analysis of data which was not collected for the purpose of a study, such as registry data.</p> <p>Here as mentioned later in the text a patient rehabilitation database will be analysed with pre- and post-rehabilitation data and outcome measures. This could not be described in details due to the word limits of the Abstract.</p>	Page 8
12.	Abstract Methods	Phase 3: Why two case studies and a cost-consequence analysis? To examine what?	<p>The two case studies will be the two cancer rehabilitation services. This will describe the organisation of the two service model.</p> <p>Cost-consequences analysis will provide information of how much the services cost. These research methods are further described In Methods, Phase 3.</p>	Page 10-11
13.	Abstract Methods	The two specialist rehabilitation services are not mentioned in the methods.	Due to the word limits of the Abstract this was not possible. Details of the two services are provided later in the text.	Page 6-7
14.	Abstract Ethics and dissemination	It would be good to mention expected results in the abstract and how these results can be used in cancer rehabilitation care.	Due to the 300 words word limit of the Abstract, we had to leave the expected results out to give space to the development of the rationale.	

15.	Article summary	Please further specify the aim of the study. What do you mean with “how two specialist cancer rehabilitation services work”? Please specify more precisely what you are going to investigate.	<p>After some consideration the aim has been specified as recommended:</p> <p>‘The aim of this study is to investigate the conditions in which cancer rehabilitation services work and their underpinning mechanisms in South Wales, specifically: the met and unmet needs of rehabilitation participants; the ways in which care is provided to meet people’s rehabilitation needs; the barriers, facilitators, value and cost of cancer rehabilitation services.’</p>	Page 3
16.	Article summary	What do you mean with time constraints? In what respect?	<p>As this project is part of the first author’s PhD thesis, this poses some limitation, such as time constraints in data collection. However, this word has been taken out and instead it was mentioned that there was no time for longer term follow-up.</p> <p>‘...the lack of time to conduct long-term follow-up might influence the generalisability of the findings.’</p>	Page 3
17.	Article summary	Last bullet: Why is that important to know? Please provide more information for a stronger rationale of the study.	<p>This bullet has been taken out and the expected results of the study have been mentioned instead.</p> <p>‘The expected results of this study on met and unmet needs, cancer rehabilitation barriers, facilitators and costs can help with improving the services where needed to meet the needs of people who have been affected by cancer.’</p>	Page 3
18.	Background of the study	Please add ‘involuntary’ to weight loss as one of the physical consequences of	This paragraph has been re-edited and weight loss has been taken out to be replaced with malnutrition.	

		cancer and its treatment (line 12-13).	<p>'The most common health issues people face after cancer treatment are fatigue, mobility problems, breathlessness, malnutrition, anxiety and depression.'¹</p> <p>Some of the side effects had to be taken out, to keep within the word limits (4000 words) of BMJ Open.</p>	Page 4
19.	Background of the study	To what does 'these' in 'these consequences' (line 16) refer to? Both Physical and psychological consequences? Please specify.	It referred to both physical and psychological, though this sentence has been taken out for better flow.	
20.	Background of the study	A lot of consequences of cancer and its treatment are summed up in the first paragraph. I would like to see more structure in this first paragraph, and some elaboration on some of the consequences (depending on which ones you're going to focus on).	<p>This paragraph has been re-edited to focus on the most common long-term and late effects of cancer as mention in bullet number 18. Further elaboration on the different side effects was not possible due to the word limit.</p> <p>The team thought that developing other parts of the paper was more crucial.</p>	
21.	Background of the study	Are there currently unmanaged effects? This is not stated, but very important for the rationale for your study.	<p>It has been added that 30% of patients had unmet needs in the UK in 2013.</p> <p>'However, it is estimated that 30% of the UK cancer population still have unmet rehabilitation needs.'¹ The Wales Cancer Patient Experience Survey (WCPES) identified that 41% of the people who needed support after treatment in Wales did not have access to health and social care, including physiotherapy.¹³⁻¹⁴</p>	Page 4-5
22.	Background of the study	What kind of interventions are you writing about? "Interventions" is too broad. Please specify.	This sentence has been taken out for a better flow.	

23.	Background of the study	The aim of the study does not follow logically from the text above. Please provide a clear, strong motivation for the study.	We restructured the whole Background of the study section to provide better flow and rationale for the study.	
24.	Background of the study	Please specify the aim of the study.	As mentioned above, the aim has been specified. 'However, barriers to cancer rehabilitation have not been fully investigated in other cancer sites in the UK, and specifically in Wales. To provide seamless care and meet people's needs it is crucial to know how cancer rehabilitation services work. Particular attention needs to be given to how cancer rehabilitation is perceived and valued, individuals' needs, both met and unmet, and the barriers people face in accessing services. In relation to service provision it is important to understand the mechanisms which make rehabilitation work and the challenges healthcare professionals encounter when providing care.'	Page 5
25.	Background of the study	Please add a definition of cancer rehabilitation services.	It has been specified what the authors mean as cancer rehabilitation services. 'It has been defined by the National Institute for Health and Care Excellence (NICE) as a complex intervention which helps people attain maximal functioning, independence and adaptation to changes caused by cancer. ⁶ Cancer rehabilitation is wide-ranging aiming to address the various needs of people affected by cancer. It has been implemented worldwide in many different formats, including: physical (exercise classes, dietary	Page 4

			advice), psychological (mindfulness intervention, cognitive behavioural therapy) and multidimensional rehabilitation programmes (physical and psychosocial elements combined), either as individual therapy or group session. ⁷ 'Physical exercise classes, patient education, nutritional advice, swallowing assessment, counselling and vocational rehabilitation are some of the many services provided for people affected by cancer.'	Page 4
26.	Methods	Aims and objectives: main aim is too broad, please specify.	As mentioned above, the aim has been specified: 'The aim of this study is to investigate the conditions in which cancer rehabilitation services work in South Wales, UK and underpinning mechanisms.'	Page 5
27.	Methods Objectives	2. Which needs? Please specify.	Rehabilitation needs. These could be physical or psychological or both depending on the individual. 'To examine the ways in which two specialist cancer rehabilitation services have been providing help to meet people's rehabilitation needs in South Wales.'	Page 6
28.	Methods Objectives	3. What are you specifically going to be investigating? What aspects of cancer rehabilitation?	Our aim is to explore what the term 'cancer rehabilitation' means or people. Rehabilitation can have a negative connotation depending on the context and we seek to understand how people perceive rehabilitation. 'To explore how the term cancer rehabilitation is perceived by:'	Page 6

29.	Methods Objectives	3a: 'people who have been received care'. Please remove 'been'.	The grammatical error has been corrected. 'people who have received care from the services in South Wales.'	Page 6
30.	Methods Research Design	Is the realist evaluation the study design? Or are you using both qualitative and quantitative research methods in the context of a realist evaluation? Please describe specifically how the realist evaluation will answer your research questions.	Realist evaluation is the study design and the three phases are used to provide data for the context-mechanism-outcome pattern conjunctions. The whole of the Methods section has been re-edited to explain better the connection between realist evaluation and the three phases. 'Quantitative methods can be used to explore context and test outcomes, while qualitative methods can provide insight into the mechanisms of programmes and can help in the identification of unexpected outcomes and contexts. ⁴⁴ Pawson and Tilley (2001) also recommends that multiple data sources and research methods should be used as needed and if opportunity arises. ³⁹ In this study once the initial programme theories are finalised, data collection occurs in three phases.'	Page 7-8
31.	Methods Research Design	Please elaborate on the three phases. There must be some kind of logic behind these three phases, but this is not clearly described. Now, the authors just specify what they will do during these three phases, not what these phases mean and why they are being executed in the first place. To be able to assess the appropriateness of the chosen methods per phase, I need to know as a reader	The Methods section has been restructured to provide more detail on the Phases and clarify their role in realist evaluation. 'Phase 1 will be the secondary analysis of the South West Wales cancer rehabilitation service's database. Secondary analysis is the investigation of existing data collected for other purposes such as patient registry. ²³ This	Page 8

		what the authors intend to assess per phase and the methods they will use to assess this.	method has been chosen, because the analysis of existing, real world data has been found to provide useful information on service impact, underuse, capacity of the workforce and on patient population, which can provide information on the context of cancer rehabilitation in Wales. ²⁴ Moreover, it is a time-efficient and economical way to make use of existing data. ²³	
32.	Methods Setting	Why these two rehabilitation centers? Was there a specific reason for those two? Why not one? Are results going to be compared between the two centers?	<p>The rationale for choosing these to services has been specified:</p> <p>'The inclusion of these two services enables the investigation of ways in which rehabilitation is provided in both urban and rural areas of South Wales. Moreover, the exploration of two service models has the potential to represent the wide-ranging nature of cancer rehabilitation.'</p> <p>Results will not be compared between the two services. Making judgement on the effectiveness of the services is out of the scope of this project. We aim to present service models for the thorough understanding of cancer rehabilitation in South Wales.</p>	Page 6
33.	Methods Participants and data sources	Please provide a description of each phase. Which research questions are being answered per phase?	<p>The objectives have been added to each Phase description:</p> <p>'provide information on the context of cancer rehabilitation in Wales.²⁴'</p> <p>'Qualitative, in-depth exploration of the services seeks to address the</p>	<p>Page 8</p> <p>Page 9</p>

			<p>following objectives: how the term cancer rehabilitation is perceived; what are the barriers and facilitators of care; what people value in cancer rehabilitation.'</p> <p>'It seeks to address the following objectives: what met and unmet needs participants have; in what ways cancer rehabilitation services provide help to meet people's needs.'</p>	Page 11
34.	Methods Participants and data sources	How will you determine when data saturation will be reached?	<p>This section has been expanded to provide more detail on data saturation.</p> <p>'Analysis will be done concurrently with data collection to determine when data from the latest interviews starts repeating what participants said in previous interviews. If data repetition is achieved, recruitment of new participants and data collection can stop, which method is known as saturation.'²</p>	Page 9
35.	Methods Participants and data sources	At the end of this section a 9-month data collection period is mentioned. Does this apply to phase 3 only?	<p>No, it applies to Phase 2 as well. The reason for the 9 months recruitment period has been explained in Phase 2 section.</p> <p>'Participants will be recruited for a 9 months period to allow at least three turnovers of rehabilitation participants, whose rehabilitation episodes can last for twelve weeks. Multiple turnovers can help extending recruitment to a wide-range of participants with different diagnoses.'</p>	Page 10
36.	Methods Participants and data sources	How many participants are going to be included?	We set a sample size for Phase 2 (n=20), although we could not set a sample size for Phase 3 due to the lack	

			of information on the uptake of the services. We aim to include every participant who is eligible for the study and is willing to take part. Participants approached and participants signed up for the study is monitored with response slips and tally sheets to provide information on service uptake.	
37.	Methods Data collection and analysis	Please provide a description of each phase. Which research questions are being answered per phase?	As mentioned in Bullet 33, each Phase is described in details and their objectives have been added to the paragraphs.	
38.	Methods Data collection and analysis	Phase 3: How many cases will be studies for the case study? On the basis of what will these cases be selected? And who will be included in the CCA? How many participants?	<p>The cases for the case studies are the two cancer rehabilitation services.</p> <p>'Phase 3 will comprise two case studies, namely the South West and South East cancer rehabilitation services, and cost-consequences analysis of the study sites to explore the service models and their resource use.'</p> <p>The CCA will include these two services. Patients will fill Resource Use Measure Questionnaires to enable the costing of the services from a patient perspective.</p> <p>As mentioned in Bullet 36, all eligible participants will be included in Phase 3.</p>	Page 10
39.	Methods Strength and limitations	The rationale for using realist evaluation should be mentioned earlier in the text.	<p>The text has been restructured based on this recommendation and the rationale for realist evaluation is now mentioned earlier.</p> <p>'Realist evaluation developed by Pawson and Tilley (1997) is the chosen study design, because it</p>	Page 7

			enables the investigation of how a programme works for whom and in what circumstances. ¹⁸ In contrast with experimental designs which mostly interested in the effectiveness of an intervention, realist evaluation also looks at the conditions in which an intervention works.'	
40.	Methods Conclusions	Please mention expected results in more detail and how these are expected to influence	Expected results have been added to the Conclusion. 'The secondary analysis of a clinical database, case studies of service models and costing of services can draw a complex picture on the context and outcomes, while qualitative interviews with people affected by cancer and healthcare professionals can give information about what mechanisms act behind the success or failure of cancer rehabilitation. New knowledge on people's met and unmet rehabilitation needs, barriers, facilitators, value and cost of care are expected findings of this study, which can inform local healthcare providers on how to organise or improve services so that cancer rehabilitation can be utilised to its full potential. It can also provide information on common problems cancer rehabilitation services in South Wales share with other health services worldwide.'	Page 14

VERSION 2 – REVIEW

REVIEWER	Vishwa Raj Carolinas Rehabilitation United States
REVIEW RETURNED	04-Feb-2019

GENERAL COMMENTS	I think the revisions are satisfactory. I would still include physicians in the introduction (at least oncologists, if not physiatrists) as in order for any cancer rehabilitation program to be successful oncology support is necessary. Perhaps one line after the NICE recommendations may account for the idea that physicians are considered part of the multidisciplinary team in other global regions.
-------------------------	--

REVIEWER	Meeke Hoedjes Tilburg University, the Netherlands
REVIEW RETURNED	28-Feb-2019

GENERAL COMMENTS	My compliments for the revised version of the manuscript. You've addressed all review comments thoroughly. Good luck with your study. Best wishes
-------------------------	--

VERSION 2 – AUTHOR RESPONSE

Reviewer 1			
Number	Comment	Response	Line/Page Number
1.	I think the revisions are satisfactory. I would still include physicians in the introduction (at least oncologists, if not physiatrists) as in order for any cancer rehabilitation program to be successful oncology support is necessary. Perhaps one line after the NICE recommendations may account for the idea that physicians are considered part of the multidisciplinary team in other global regions.	Thank you so much for your suggestion. Oncologist has been added to the statement about rehabilitation specialists. 'Following NICE recommendations cancer rehabilitation is usually provided by a multidisciplinary team of dieticians, nurse specialists, occupational therapists, physiotherapists, psychologists and speech and language therapists in collaboration with oncologists and other physicians.' ⁴	Page 4