PEER REVIEW HISTORY

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

ARTICLE DETAILS

TITLE (PROVISIONAL)	A Knee Monitoring Device and the Preferences of Patients Living with Osteoarthritis: A qualitative study
AUTHORS	Papi, Enrica; Belsi, Athina; McGregor, Alison

VERSION 1 - REVIEW

REVIEWER	Tamar Pincus Royal Holloway University of London, UK
REVIEW RETURNED	27-Mar-2015

GENERAL COMMENTS	This manuscript describes a user-centred qualitative study carried out to elicit patients perceptions and opinions about using wearable technology developed by the authors for patients with lower limb osteoarthritis to monitor and feedback on movements. Such technology is becoming more pervasive and its uptake depends on development that closely involves users. As such, the rationale for the study is compelling, and the selection of qualitative methods is appropriate. While the study itself appears to be comprehensive, and discussion of results falls somewhat short, both in interpretation of findings and discussion of limitations. 1. Title: The title should be more precise and informative, thus defining both wearable technology (in this case, monitoring devices embedded in leggings) and in site (lower limb). 2. The abstract does not present the main findings clearly, it is vague. The main recommendations should be clearly described in the conclusions. 3. Key points should address limitations- see below. Introduction: (minor issues only) Wearable technology should be defined. Please read through carefully as there are some inaccuracies in phrasing (e.g. 'This also stems by the recognised benefits' should be 'from the recognised benefits. Please supply references for general observations throughout. Page 5- when presenting the questions that need addressing please remove or clarify 'How should it be?' Please avoid the term 'interrogated' in reference to information volunteers by participants. Methods: (major issues) Please supply a complete list of inclusion and exclusion criteria. Missing information on ethical approval. Results
	Description of sample missing: pain duration, function etc. This is

needed to assess whether they comprise a representative sample.
It would be useful to pull out the major findings that are most informative for developers. To me this is a most glaring omission. It seems that you found that the device should be light, unobtrusive, easy to put on and take off- this was to be expected. But in addition you found that patients would like the device to report to them in real time (a real issue for developers, and a need for accurate clinical input which you have not commented on). IN addition participants wanted another form of communication, not in real time, that accumulates data to plot progress. This they would like to share with their practitioners. These issues have major implications. It seems that perhaps devices should be developed in two modes: for exercise only purposes and for long-term unobtrusive monitoring. This is also a major finding that should be highlighted and picked up in the discussion.
Discussion: How well does your group represent the target population in terms of age and gender? It is a real shame that participants did not try on the device, and that no observations were taken in the wild. This should be acknowledged in the discussion. See major findings in reference to communication needs and use of device.
The discussion is a bit bitty and could be better structured.

REVIEWER	Peter Shull Shanghai Jiao Tong University Shanghai China
REVIEW RETURNED	13-Apr-2015

GENERAL COMMENTS	This study examined qualitative factors related to OA patients'
	willingness to adopt wearable technology for rehabilitation outside
	the clinical/laboratory. These kinds of qualitative studies are
	desperately needed as large amount of research effort is spent of
	wearable device development and features for modical applications
	weatable device development and reactives for medical applications,
	yet by and large, wearable devices are not being used. Fatient
	excerpts in the results section were extremely useful for wearable
	technology device developers both in research labs and industry.
	Limitations of this study need to be mentioned, particularly related to
	the assumptions that 1) the results from a user group evaluating a
	single wearable device for assessing knee liexion/extension can be
	generalized to all wearable technology, and 2) the positive response
	from asking users about a single device were truly positive in a world
	with many clinical treatment options of only looked positive because
	subjects were only presented with one option at the time of testing.
	In general, there many grammar errors throughout the paper.
	Professional grammar editing should be conducted in a revised
	manuscript.

Specific Comments Introduction, paragraph 1: The grammar in this sentence needs to be correctly to clarify the meaning, "This also stems by the recognised benefits for patients derived from long term monitoring in real life environments, and alongside rehabilitation with predicted reduction in healthcare costs"
Page 4: Please rewrite to clarify this phrase, "the complexity of the system was high questioning the usability by non-experts."
Page 5, Line 32: has this prototype already been published? If so, provide the reference here.
Page 5, Line 37-48: there is no need to describe what was done but not included in this paper or what will be published in a separate paper in the Introduction
Page 5: Grammar error, "articulates on" should just be "articulates". There are also several other grammar errors in this paragraph.
Page 5, Lines 50-55: Please justify why the findings in this paper for a single sensor can be generalized to a broader scope of design practices for wearable technology development for rehabilitation.
Page 6, Line 18: Describe the knee OA patients. What percentages were symptomatic? How often and severe was there pain. Was there confirmed radiographic evidence of knee OA? What were the K/L scores? This information is important given that more pain will likely lead to higher motivation to try new therapies and likely more forgiveness for design flaws. Also, this is important related to your previous statement that these findings are generalizable. It is possible that they are generalizable but only within a well-defined knee OA patient population. Therefore, the tested population should be defined.
Page 6, Line 21: Grammar error – "participated to". I will stop including grammar errors from this point forward but will assume that a revised manuscript will professionally grammar edited throughout the entire document.
Table 1: In conducting qualitative design user studies, if users are only given one option and asked, "what do you think?" they will typically answer positively either because they don't want to offend the people conducting the experiment or because they have no reference of comparison. However, if users are given 2 or 3 clear options and then asked to compare, they will typically give more candid and useful feedback. Results from section II "Wearable technology" of this questionnaire will likely suffer from this "only 1 option" phenomenon with users answering more positively and enthusiastically than if given several options. In Section III, users are asked in general how this compares with conventional forms of treatment, but setting up comparisons of very specific treatments would have likely resulted in more useful information. This issue should be added to the discussion as a limitation, which could potentially cause users to respond more enthusiastically to using wearable technology than their true feelings.
Table 1: Were subjects first shown the wearable device and then

asked if they knew what wearable technology was or were they first asked what wearable technology was?
Page 7, Results: List the exact number subjects who reported that they knew what "wearable technology was".
Page 7, Results: What was the exact phrasing of how subjects were asked if they knew what wearable technology was? Were you asking if they could provide the definition of "wearable technology" or what it was, i.e. sensors worn on the body? It is hard for me to imagine that most subjects has not heard of any of these: Google glass, Apple watch, Jawbone, Fitbit, Nike+ Fuelband. If they had heard of any of these devices and knew that they contained sensors for tracking body movements, then it seems that they would know what wearable technology is.
Page 7, Lines 27-34: Why only look at the first 2 themes?
Results – Practical Issues and Utility/Functionality: these patient excerpts are extremely useful for wearable technology device developers both in research labs and industry
Page 18, Lines 32-46: One finding that surfaced several times on the Results was that patients preferred a band to sensing embedded leggings. Another finding was that users wanted small, light, non- medical-looking devices. Commercial devices (Fitbit, Jawbone, etc) which are wearable bands that are small, light and don't look like medical devices have already been widely used to encourage health and fitness, to track movement activity and sleeping patterns primarily in younger, healthy individuals. Please comment on how this existing technology could also be used for rehabilitation and what if any limitations/innovations are needed for clinical adoption.
Much of this paper has focused on factors that may inhibit or encourage patients to wear and use wearable technology for assessment and improving rehabilitation methods and adherence. Another crucial factor is how information collected from the wearable technology is displayed/given to the user. Would subjects prefer to that wearable information be collected and sent to their physician who then makes recommendations? Would they prefer to access their own data at the end of a training session to make improvements? Would they prefer real-time feedback to make adjustments during the training sessions? If so what kind of feedback, visual, haptic, audio? For example wearable haptic feedback has been used for gait retraining to relieve pain and improve function in knee OA patients (Shull 2013, Six week). And many others have used haptic feedback for rehabilitation applications in laboratory settings. Please add a paragraph to the Discussion to address and comment on these issues as related to the findings in this study.
Page 18, Lines 49-56. It's unnecessary to tell readers what will be done for a future paper.

REVIEWER	Nadia Berthouze	
	University College London	
REVIEW RETURNED	20-Apr-2015	

	technology for quantify-self (or personal
informatics) is emo	erging as a possible way to support people with
long term condition	ns. Still very little work is done in this area when
the management i	nvolve physical activity. This paper investigates
the perspective of	people with Osteoarthritis towards such
technology. A qua	litative approach is used to reach a better
understanding of p	patients' perspective. Clinical staff was also
interviewed but on	ly the patient's perspective is reported. 4 themes
were identified: pro	actical/aesthetical issues, utility/functionality,
patient-doctor com	nmunication, social impact and empowerment.
The paper is intere	esting and contributes to this emerging field. The
problem tackled is	very timely as the research community is very
active and the indu	ustry has already started to commercialize such
products for health	ny people. The number of participants is limited but
possibly sufficient	for the type of study. What is not clear is why the
clinical staff's pers	pective was not reported. It would be interesting to
see how they over	lap or if there are divergences. When designing
such technology, i	t is important to have a more complete
understanding of t	he needs and perspective of all stakeholders to
What the paper is	missing is a discussion with respect to the recent
literature in HCL (o	ulalitative studies) A discussion of the findings
with this literature	would help highlight the contribution this paper
makes what is sin	nilar to other chronic conditions and what is
specific to this con	dition. See below some links for this discussion
I also indicate two	Very recent publications (2015) that were not
available at the time	te of the submission but that are very relevant to
	autions maybe interested in naving a look at them.
Minor: What was t	he inter-rater reliability?
RELEVANT LITER	RATURE
Swan, M. Emergin	a Patient-Driven Health Care Models: An
Examination of He	ealth Social Networks,
Consumer Person	alized Medicine and Quantified Self- Tracking.
International Journ	nal of Environmental Research and Public Health
6, 2 (2009), 492–5	525.
Li. I., Dev. A., and	Forlizzi, J. A Stage-based Model of Personal
Informatics System	ns. Proceedings of the SIGCHI Conference on
Human Factors in	Computing Systems, ACM (2010), 557–566.
MacLeod, H., Tan	g, A., and Carpendale, S. Personal Informatics in
Chronic Illness Ma	anagement.
Proceedings of Gr	apnics Interface 2013, Canadian Information
Processing Societ	y (2013), 149–156.
Roisin McNanev.	John Vines, Daniel Roggen, Madeline Balaam.
Pengfei Zhang, Iva	an Poliakov, Patrick Olivier Exploring the
Acceptability of Go	bogle Glass as an Everyday Assistive Device for
People with Parkir	nson's Proceedings of CHI 2014 p. 2551-255,
2014	
Cinch A Klanner	
Singi, A., Napper	, A., Jia, J., Flualyu, A., Tajauura-Jimenez, A., Achi-Berthouze N. CdeC Williams A (2014)
Motivating People	with Chronic Pain to do Physical Activity:

Opportunities for Technology Design. ACM Proceedings of the 33rd ACM Conference on Human Factors in Computing Systems (ACM CHI 2014) (pp.2803-2012)
Recently published: - McNaney (2014) was extended into the following study just published with more details: Roisin McNaney, Ivan Poliakov, John Vines, Madeline Balaam, Pengfei Zhang, Patrick Olivier LApp: A Speech Loudness Application for People with Parkinson's on Google Glass Proceedings of CHI 2015
- Sergio Felipe, Aneesha Singh, Caroline Bradley, Amanda CdeC Williams, Nadia Bianchi-Berthouze. Roles for Personal Informatics in Chronic Pain, Proceedings of Persuasive Health 2015
- O'Kane, A.A., Rogers, Y. and Blandford, A. "Concealing or Revealing Mobile Medical Devices? Designing for Onstage and Offstage Presentation" in Proceedings of the 33rd ACM Conference on Human Factors in Computing Systems (ACM CHI 2015), Seoul, South Korea, accepted for publication in April 2015

VERSION 1 – AUTHOR RESPONSE

We would like to thank the reviewers for their comments; we have made revisions (highlighted in red) to the manuscript taking into consideration these comments. Please find our responses below (in red). Reviewer Name Tamar Pincus

Institution and Country Royal Holloway University of London, UK

Please state any competing interests or state 'None declared': none declared

Please leave your comments for the authors below This manuscript describes a user-centred qualitative study carried out to elicit patients perceptions and opinions about using wearable technology developed by the authors for patients with lower limb osteoarthritis to monitor and feedback on movements. Such technology is becoming more pervasive and its uptake depends on development that closely involves users. As such, the rationale for the study is compelling, and the selection of qualitative methods is appropriate. While the study itself appears to be comprehensive, and discussion of results falls somewhat short, both in interpretation of findings and discussion of limitations.

1. Title: The title should be more precise and informative, thus defining both wearable technology (in this case, monitoring devices embedded in leggings) and in site (lower limb).

We have now changed the title clarifying that we refer to a knee monitor device as suggested.

2. The abstract does not present the main findings clearly, it is vague. The main recommendations should be clearly described in the conclusions.

Recommendations have now been reported in the conclusions.

3. Key points should address limitations- see below.

Limitation added.

Introduction: (minor issues only)

Wearable technology should be defined. Please read through carefully as there are some inaccuracies in phrasing (e.g. 'This also stems by the recognised benefits' should be 'from the recognised benefits. Please supply references for general observations throughout.

A definition of wearable technology has been added with appropriate references and sentences have been reformulated as necessary.

Page 5- when presenting the questions that need addressing please remove or clarify 'How should it

be?'

This has been now rephrased.

Please avoid the term 'interrogated' in reference to information volunteers by participants. The term 'interrogated' has now been removed as suggested.

Methods: (major issues) Please supply a complete list of inclusion and exclusion criteria. Criteria have been added. Missing information on ethical approval. Information on Ethical Approval is reported in the first paragraph of the methods session. The reference number has also been added.

Results

Description of sample missing: pain duration, function etc. This is needed to assess whether they comprise a representative sample.

Unfortunately the definition of OA is problematic at the best of times. We did not collect demographics from our patient group as we wanted to have a view of OA patients regardless of pain duration and function to allow covering a broader OA population. Our sample covered newly diagnosed patients who were undergoing their first 6-week of rehabilitation exercise as provided by the NHS and people diagnosed with OA for more than 5 years.

It would be useful to pull out the major findings that are most informative for developers. To me this is a most glaring omission. It seems that you found that the device should be light, unobtrusive, easy to put on and take off- this was to be expected. But in addition you found that patients would like the device to report to them in real time (a real issue for developers, and a need for accurate clinical input which you have not commented on). IN addition participants wanted another form of communication, not in real time, that accumulates data to plot progress. This they would like to share with their practitioners. These issues have major implications.

It seems that perhaps devices should be developed in two modes: for exercise only purposes and for long-term unobtrusive monitoring. This is also a major finding that should be highlighted and picked up in the discussion.

These findings have been further commented in the discussion session.

Discussion:

How well does your group represent the target population in terms of age and gender? Our group is representative of a typical OA group with participants being over 40 and with a majority of women. UK statistics report that a third of people aged 45 and over have sought treatment for osteoarthritis, and women are more likely than men to have sought treatment for knee osteoarthritis, 20% of people aged 45 and over have knee osteoarthritis. These are also reflected in US statistics (see http://www.arthritisresearchuk.org/arthritis-information/data-and-statistics/osteoarthritis.aspx; http://www.arthritisresearchuk.org/arthritis-information/data-and-statistics/osteoarthritis/data-on-kneeoa.aspx; http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5939a1.htm?s_cid=mm5939a1_w; http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5939a1.htm?s_cid=mm5939a1_w)

It is a real shame that participants did not try on the device, and that no observations were taken in the wild. This should be acknowledged in the discussion. This has been now acknowledged.

See major findings in reference to communication needs and use of device. The discussion has been expanded to comment on the issues raised. The discussion is a bit bitty and could be better structured.

A couple of paragraphs in the discussion section have been added to improve the interpretation of the findings and restructured to make it more readable.

Reviewer Name Peter Shull Institution and Country Shanghai Jiao Tong University Shanghai, China Please state any competing interests or state 'None declared': None

Please leave your comments for the authors below General Comments This study examined qualitative factors related to OA patients' willingness to adopt wearable technology for rehabilitation outside the clinical/laboratory. These kinds of qualitative studies are desperately needed as large amount of research effort is spent of wearable device development and features for medical applications, yet by and large, wearable devices are not being used. Patient excerpts in the results section were extremely useful for wearable technology device developers both in research labs and industry.

Limitations of this study need to be mentioned, particularly related to the assumptions that 1) the results from a user group evaluating a single wearable device for assessing knee flexion/extension can be generalized to all wearable technology,

This has been commented in the discussion session.

and 2) the positive response from asking users about a single device were truly positive in a world with many clinical treatment options or only looked positive because subjects were only presented with one option at the time of testing.

See answer below in the comment on Table 1.

In general, there many grammar errors throughout the paper. Professional grammar editing should be conducted in a revised manuscript.

Grammar has been checked throughout and changes made.

Specific Comments

Introduction, paragraph 1: The grammar in this sentence needs to be correctly to clarify the meaning, "This also stems by the recognised benefits for patients derived from long term monitoring in real life environments, and alongside rehabilitation with predicted reduction in healthcare costs" This has been now rephrased.

Page 4: Please rewrite to clarify this phrase, "the complexity of the system was high questioning the usability by non-experts."

This has been changed as suggested.

Page 5, Line 32: has this prototype already been published? If so, provide the reference here. A reference has been provided.

Page 5, Line 37-48: there is no need to describe what was done but not included in this paper or what will be published in a separate paper in the Introduction This has been removed as suggested.

Page 5: Grammar error, "articulates on" should just be "articulates". There are also several other grammar errors in this paragraph.

This has been changed as suggested.

Page 5, Lines 50-55: Please justify why the findings in this paper for a single sensor can be generalized to a broader scope of design practices for wearable technology development for rehabilitation.

This has been commented upon in the discussion session.

Page 6, Line 18: Describe the knee OA patients. What percentages were symptomatic? How often and severe was there pain. Was there confirmed radiographic evidence of knee OA? What were the K/L scores? This information is important given that more pain will likely lead to higher motivation to try new therapies and likely more forgiveness for design flaws. Also, this is important related to your previous statement that these findings are generalizable. It is possible that they are generalizable but only within a well-defined knee OA patient population. Therefore, the tested population should be defined.

The population inclusion and exclusion criteria have been added in the methods session. We do understand your point on pain but not fully agree, as pain is also one of the main reasons why OA patients do not do their exercises and adhere to prescribed treatments hence they may have more reservations and be more sceptical on new proposed solutions. We did not want to be selective during recruitment and therefore we recruited OA patients irrespective of pain level or stage of OA. This we hoped would permit a more generalised understanding of patients' current and future needs that could apply to a broad spectrum of OA patients.

Page 6, Line 21: Grammar error – "participated to". I will stop including grammar errors from this point forward but will assume that a revised manuscript will professionally grammar edited throughout the entire document.

This has been changed as suggested.

Table 1: In conducting qualitative design user studies, if users are only given one option and asked, "what do you think?" they will typically answer positively either because they don't want to offend the people conducting the experiment or because they have no reference of comparison. However, if users are given 2 or 3 clear options and then asked to compare, they will typically give more candid and useful feedback. Results from section II "Wearable technology" of this questionnaire will likely suffer from this "only 1 option" phenomenon with users answering more positively and enthusiastically than if given several options. In Section III, users are asked in general how this compares with conventional forms of treatment, but setting up comparisons of very specific treatments would have likely resulted in more useful information. This issue should be added to the discussion as a limitation, which could potentially cause users to respond more enthusiastically to using wearable technology than their true feelings.

During our focus groups we did not experience the issues raised, and our participants freely expressed their dislike of the sensor attached to a pair of leggings. The groups were led by AB who was not involved in the development of the device. As for section III, participants commented based on their personal experience and the treatment they were undergoing at the time of the focus group. This is what we value and is pivotal in the understanding of what is missing in current management and how technology can fulfil these gaps. We need to understand their actual needs if we want to use technology appropriately to address them.

Table 1: Were subjects first shown the wearable device and then asked if they knew what wearable technology was or were they first asked what wearable technology was? Participants were first asked if they knew what wearable technology was. This has now been corrected in the table.

Page 7, Results: List the exact number subjects who reported that they knew what "wearable technology was".

This has been reported now.

Page 7, Results: What was the exact phrasing of how subjects were asked if they knew what wearable technology was? Were you asking if they could provide the definition of "wearable technology" or what it was, i.e. sensors worn on the body? It is hard for me to imagine that most subjects has not heard of any of these: Google glass, Apple watch, Jawbone, Fitbit, Nike+ Fuelband. If they had heard of any of these devices and knew that they contained sensors for tracking body movements, then it seems that they would know what wearable technology is.

The question asked was 'Have you heard of anything about wearable technology?' or 'Do you know any, are you aware of wearable technology?' The participants in our study had never heard of any of the devices you mentioned. The only device they were aware of, were pedometers. They were more familiar with portable ECG monitors, Holter monitors, and portable devices such as negative pressure vacuum pump.

Page 7, Lines 27-34: Why only look at the first 2 themes?

The aim of this paper is to identify design requirements, the other themes will be discussed on a separate paper focusing more on the social/psychological aspects of the use of the technology.

Results – Practical Issues and Utility/Functionality: these patient excerpts are extremely useful for wearable technology device developers both in research labs and industry

Page 18, Lines 32-46: One finding that surfaced several times on the Results was that patients preferred a band to sensing embedded leggings. Another finding was that users wanted small, light, non-medical-looking devices. Commercial devices (Fitbit, Jawbone, etc) which are wearable bands that are small, light and don't look like medical devices have already been widely used to encourage health and fitness, to track movement activity and sleeping patterns primarily in younger, healthy individuals. Please comment on how this existing technology could also be used for rehabilitation and what if any limitations/innovations are needed for clinical adoption. This has now been discussed.

Much of this paper has focused on factors that may inhibit or encourage patients to wear and use wearable technology for assessment and improving rehabilitation methods and adherence. Another crucial factor is how information collected from the wearable technology is displayed/given to the user. Would subjects prefer to that wearable information be collected and sent to their physician who then makes recommendations? Would they prefer to access their own data at the end of a training session to make improvements? Would they prefer real-time feedback to make adjustments during the training sessions? If so what kind of feedback, visual, haptic, audio? For example wearable haptic feedback has been used for gait retraining to relieve pain and improve function in knee OA patients (Shull 2013, Six week...). And many others have used haptic feedback for rehabilitation applications in laboratory settings. Please add a paragraph to the Discussion to address and comment on these issues as related to the findings in this study.

All the issues above have been now commented upon in the discussion session.

Page 18, Lines 49-56. It's unnecessary to tell readers what will be done for a future paper. Future works have been removed.

Reviewer Name Nadia Berthouze Institution and Country University College London Please state any competing interests or state 'None declared': None

Please leave your comments for the authors below Wearable sensing technology for quantify-self (or

personal informatics) is emerging as a possible way to support people with long term conditions. Still very little work is done in this area when the management involve physical activity. This paper investigates the perspective of people with Osteoarthritis towards such technology. A qualitative approach is used to reach a better understanding of patients' perspective. Clinical staff was also interviewed but only the patient's perspective is reported. 4 themes were identified: practical/aesthetical issues, utility/functionality, patient-doctor communication, social impact and empowerment.

The paper is interesting and contributes to this emerging field. The problem tackled is very timely as the research community is very active and the industry has already started to commercialize such products for healthy people. The number of participants is limited but possibly sufficient for the type of study. What is not clear is why the clinical staff's perspective was not reported. It would be interesting to see how they overlap or if there are divergences. When designing such technology, it is important to have a more complete understanding of the needs and perspective of all stakeholders to understand how they can be addressed.

What the paper is missing is a discussion with respect to the recent literature in HCI (qualitative studies). A discussion of the findings with this literature would help highlight the contribution this paper makes, what is similar to other chronic conditions and what is specific to this condition. See below some links for this discussion.

Thank you for the literature suggestions. The references suggested have been added where appropriate to support our discussion.

I also indicate two very recent publications (2015) that were not available at the time of the submission but that are very relevant to the work and the authors maybe interested in having a look at them.

Minor: What was the inter-rater reliability?

As this was a qualitative study, the data analysed by AB and EP were validated internally through constant comparison by checking and comparing responses across the different focus groups and respondents. Furthermore, the findings were triangulated through concurrent analysis by AB & EP in order to achieve objectivity and neutrality in the analysis beyond subjective reflection and any possible lone researcher bias.

VERSION 2 – REVIEW

REVIEWER	Peter Shull Shanghai Jiao Tong University
REVIEW RETURNED	16-May-2015

GENERAL COMMENTS	The authors have adequately addressed concerns raised for the first
	submission of the manuscript.

REVIEWER	Nadia Berthouze University College London UK
REVIEW RETURNED	07-Jun-2015

GENERAL COMMENTS	The authors have addressed all my concerns and I think the paper makes an important and timely contribution to the field and I look forward to second part of this work.
	Just one issue. Given the very similar results presented in (Felipe et

al., 2015) with respect to the two modes of operations for wearable devices (guidance and assessment) as currently stressed, this similarity should be discussed in the paper even if the population (chronic pain) is not the same. Given the lack of work on this topic and the fact that two qualitative studies reach similar results on this aspect can only be a positive point. The authors should state that Felipe et al. came out while their was still in submission to highlight the almost parallel publication and hence the novelty of the work.
Felipe, S., Singh, A., Bradley, C., Williams, A., & Bianchi-Berthouze, N. (2015). Roles for personal informatics in chronic pain. Pervasive Health'15.