

# Exploring patient priorities among long-term conditions in multimorbidity: A qualitative secondary analysis

SAGE Open Medicine  
I: 2050312113503955  
© The Author(s) 2013  
Reprints and permissions:  
sagepub.co.uk/journalsPermissions.nav  
DOI: 10.1177/2050312113503955  
smo.sagepub.com  


Sudeh Cheraghi-Sohi<sup>1</sup>, Andrew Morden<sup>2</sup>, Peter Bower<sup>1</sup>, Anne Kennedy<sup>3</sup>, Anne Rogers<sup>3</sup>, Jane Richardson<sup>2</sup>, Tom Sanders<sup>2</sup>, Fiona Stevenson<sup>4</sup> and Bie N Ong<sup>2</sup>

## Abstract

**Objective:** A lack of agreement between health-care providers and patient priorities can impact the health-care provider–patient relationship, treatment concordance and potentially health outcomes. Evidence suggests that people living with multiple morbidities do prioritise among their long-term conditions. However, the evidence revealing the underlying reasons behind this prioritisation remains limited. Given the potential implications for day-to-day self-management activity and ultimately patient outcomes, this study aims to explore how and why people with multimorbidity prioritise some long-term conditions over others and what the potential implications may be for self-management activity, and in turn, suggest how such information may help clinicians negotiate the management of multimorbidity patients.

**Methods:** A secondary analysis of qualitative data was conducted utilising four existing data sets collated from the three research centres involved. Purposive sampling provided a sample of 41 participants who had multimorbidity. The research team collectively coded and analysed the data thematically.

**Results:** All participants, except two, identified one ‘main’ priority long-term condition. Current priorities were arrived at by participants making comparisons between their long-term conditions, specifically by trading off the various attributes, impacts and perceived consequences of their individual long-term conditions. Two main themes emerged as to why participants identified a particular main long-term condition: (a) proximate issues surrounding barriers to functional health and (b) prioritisation of long-term conditions perceived to have a particular future risk.

**Conclusions:** The recent focus on multimorbidity within the medical literature reflects its prevalence. It is therefore important to understand the complexities of the multimorbidity illness experience. We have added to the limited literature on condition prioritisation by revealing some novel understandings of the process of condition prioritisation which can feed into patient–provider consultations in order to allow better communication and treatment planning as well as, ultimately, optimise patient outcomes.

## Keywords

Multimorbidity, primary care, priorities, self-management, risk

## Introduction

Multimorbidity (MM), or the coexistence of two or more long-term conditions (LTCs) in a single individual,<sup>1</sup> is common, with prevalence estimates indicating that MM is the norm not the exception.<sup>2</sup> The prevalence of MM increases with age,<sup>3,4</sup> and in a context of increasing and ageing populations typical of most Western countries, the importance of MM is only likely to increase.

Despite the prevalence of MM, the dominant model of health-care provision in many Western countries is based on individual LTCs.<sup>5</sup> As a result, the majority of strategies and guidelines for LTCs are LTC specific.<sup>6</sup> Thus, a discrepancy exists between care delivery and patient need<sup>7</sup> and can create complex issues for health-care professionals and patients

<sup>1</sup>NIHR School for Primary Care Research, Manchester Academic Health Science Centre, The University of Manchester, Manchester, UK

<sup>2</sup>Arthritis Research UK, Primary Care Centre, Keele University, Staffordshire, UK

<sup>3</sup>Faculty of Health Sciences, University of Southampton, Southampton, UK

<sup>4</sup>Research Department of Primary Care and Population Health, University College London, London, UK

### Corresponding author:

Sudeh Cheraghi-Sohi, NIHR School for Primary Care Research, Manchester Academic Health Science Centre, The University of Manchester, 6th Floor Williamson Building, Oxford Road, Manchester, M13 9PL, UK.

Email: sudeh.cheraghi-sohi@manchester.ac.uk

with MM due to differing, and sometimes contradictory, management recommendations. Consequently, people living with MM face challenges such as managing polypharmacy,<sup>8,9</sup> increased risk of drug interactions,<sup>10</sup> dealing with barriers to self-care<sup>11,12</sup> and difficulties in co-ordinating health care.<sup>13</sup> As a result of such challenges, it is perhaps somewhat unsurprising that studies indicate that patients with MM place higher demands on the system in terms of increased health service utilisation and still have poorer health outcomes.<sup>14–16</sup>

People with MM, as opposed to those living with a single LTC, are therefore faced with a situation of enhanced difficulty. People with MM face not only the morbidity burden created by their multiple LTCs but also the burden of treatment, made worse by the single-LTC, protocol-driven systems they find themselves in.<sup>17</sup> The challenges associated with MM outlined above highlight that living with and attempting to successfully manage multiple LTCs require significant ‘work’ on the part of the person living with MM.<sup>18</sup> This may consume a lot of time and effort, placing restrictions on daily life and potentially leaving people with little time or flexibility to do things other than focus on their illnesses.<sup>19</sup> The ‘hard work’ of managing LTCs requires significant effort<sup>20</sup> and self-management in many areas of their lives to create and maintain order.<sup>21</sup> Furthermore, the persons living with MM also have individual values and priorities for their life beyond their conditions and health-care needs, which need to be elicited and factored into treatment plans. People with MM and their caregivers are therefore important sources of information, as it is only they who are able to relay not only the burden of illness and treatment to their health-care providers (HCPs) but also their priorities.

The issue of patient–HCP priority concordance or the level of agreement regarding priority LTCs has been highlighted as a concern for MM patients.<sup>13</sup> Studies in this area continue to illustrate low patient–HCP agreement on health and treatment priorities,<sup>22,23</sup> and a lack of agreement between HCP and patient priorities is recognised as damaging to the HCP–patient relationship and is a potential predictor of medication adherence,<sup>24</sup> treatment concordance and potentially health outcomes.<sup>25,26</sup> Given the potential implications, the subject of patient priorities in a context of patients living with multiple conditions warrants attention. While studies utilising data sets with longitudinal designs have illustrated that LTC priorities for people with MMs shift over time and the experience and management of MMs are socially situated,<sup>27,28</sup> information pertaining as to how and *why* certain conditions are prioritised in the first place remain limited,<sup>29,30</sup> particularly as findings from one study relate to a highly specific sub-population.<sup>30</sup> Thus, there remains a need to further explore the LTC priorities of those living with multiple LTCs, and the ways they are derived may provide insight into decisions around self-management activity, the potential impact of MM-focused interventions and ultimately patient outcomes. In this study, we aim to add to the limited findings

on this topic by exploring how and why people with MM prioritise some LTCs over others and what the potential implications may be for self-management activity and in turn, suggest how such information may help HCPs negotiate the management of MM patients.

## Methods

Qualitative secondary data analysis involves the reanalysis of primary qualitative data collected for other purposes.<sup>31</sup> The method is time-saving and cost-effective, and facilitates generation of new knowledge and theory.<sup>32</sup> Consequently, major funding bodies such as the Medical Research Council (MRC) and the Economic and Social Research Council (ESRC) in the United Kingdom advocate the use of the method where possible. (For example, applicants for ESRC funding are required to declare that they have searched existing archives to ascertain whether data already exist that can be effectively reused prior to undertaking new rounds of data collection. They must also undertake to offer their own data for archiving in a form that encourages reuse, and participant consent for reuse of their data is gained before archiving.)

This study utilised a particular type of secondary analysis, namely, an amplified analysis, whereby data are combined for new analytical purposes or to explore new research questions.<sup>31,33</sup> For this study, the research team’s collaboration resulted in four studies being selected from their own prior research on the basis that they contained data pertaining to LTC prioritisation, which were not the main focus for the original analyses (for details of the separate studies, see Table 1).

Prior to the beginning of the analysis, due care and attention was paid to the issue of ‘data fit’<sup>31</sup> (i.e. that the data fit the new questions being asked of it). S.I. read all the transcripts and systematically categorised the data in order to identify which participants would fall within the purposive sampling frame, namely, those who had MM plus information pertaining to LTC prioritisation. Specifically, this related to participants whose transcripts contained data which identified that a particular LTC was a priority either in response to a direct question from the interviewer and/or if they raised it spontaneously when discussing one condition in relation to their others. The latter being particularly evident in studies 1–3 where osteoarthritis (OA) was the intended focus as participants would often bring in other conditions to discuss, which were not the focus of that particular study and suggest that their knee pain arising from their OA was not in fact their priority at the time of the interview(s). This resulted in a total sample of 41 participants (see Figure 1 for the number per study), the characteristics of which are provided in Table 2. In summary, the total sample had a mean age of 66.7 years, comprised 56.1% males and had an average of 4.7 self-reported LTCs (range 2–10).

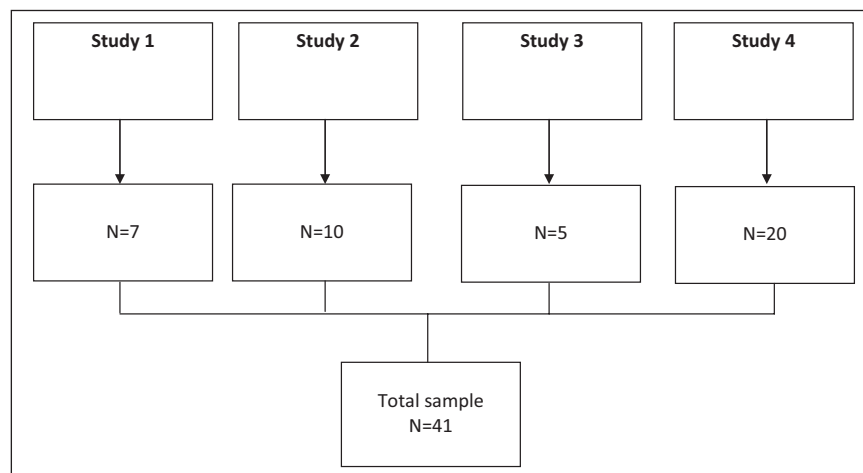
The research team consisted of sociologists and psychologists, who brought their different foci together in the

**Table 1.** Summary of primary studies.

Study number	Study	Location, recruitment and subjects	Focus <sup>a</sup>	Design
1	Hurley et al. <sup>34</sup>	South-east London, United Kingdom; patients aged above 50 years, with knee pain of >6 months duration; 47 participants and data collection (2002–2004)	To explore the health beliefs, experiences, treatment and expectations of people with chronic knee pain, and investigate if, how and why these change are presented after taking part in an integrated exercise-based rehabilitation programme	Longitudinal design (3/4 interviews per participant)
2	Grime et al. <sup>35</sup>	Staffordshire, United Kingdom; purposive sample of 27 patients who rated their health as good/very good or fair if they had moderate/severe pain and physical limitations and data collection (2007–2009)	To explore lay perceptions of wellness and joint pain, and their implications for consulting health-care professionals and taking exercise	Longitudinal design (one baseline interview plus optional interviews and patient-initiated completion of monthly diaries)
3	Ong et al. <sup>20</sup>	Staffordshire, United Kingdom; purposive sample of 22 patients with moderate to severe knee pain and data collection (2007–2009)	To explore the experiences, beliefs and attitudes of people with knee OA who are deemed to self-manage	Longitudinal design (two interviews and plus self-completed diaries)
4	Bower et al. <sup>36</sup>	Greater Manchester, United Kingdom; purposive sample of 28 patients with two or more chronic conditions and data collection (2009–2010)	Understanding patients' perceptions of co-morbid long-term conditions and the delivery of health care to manage those conditions	Single time-point interviews

OA: osteoarthritis.

<sup>a</sup>OA was the 'index condition' of the study in studies 1–3. Study 4 did not place an emphasis on any one particular condition.

**Figure 1.** Number of participants per study.

analytical discussion. An inductive thematic analytic approach was agreed upon, drawing from phenomenologically informed analysis of meanings placed upon individual experiences<sup>37</sup> with due recognition paid to social context and structure.<sup>38</sup> A number of transcripts pertaining to the final sample were then divided up among team members. In order to ensure that the analysis was 'naive' and 'critical'<sup>39</sup> rather than confirmatory, individuals within the research team were not allocated transcripts from their own primary studies. As

a further measure, S.I. was not part of any of the primary studies and coded *all* transcripts. A team meeting was held to discuss analysis and consolidate initial close coding of transcripts into focused codes and then into initial conceptual themes. S.I. then coded all transcripts using the agreed coding frame. In line with inductive data analysis practice, meetings were held during the analysis process to discuss anomalous cases or emergent ideas. As a result, some codes and sub-themes were renamed, combined or split. Any

**Table 2.** Summary of participant characteristics.

Paper ID	Sex	Age	Number of conditions	Conditions
1	Male	67	4	Irritable bowel syndrome, osteoarthritis, hypertension and hyperlipidaemia
2	Female	65	5	Osteoarthritis, polymyalgia rheumatica, osteoporosis, depression and varicosed right leg
3	Male	60	4	Osteoarthritis, hypertension and diabetes
4	Male	67	4	Osteoarthritis, hypertension, ischaemia and angina
5	Male	76	10	Osteoarthritis, hypertension, diabetes, asthma, cellulitis, bowel cancer, blocked vein, hernia and digestion problems and eye problems
6	Female	74	4	Osteoarthritis, anxiety, depression and burning sensation
7	Female	59	9	Osteoarthritis, spondylosis, bladder problem, skin irritation, benign tumour, hypertension, hyperlipidaemia, osteoporosis and asthma
8	Female	73	3	Osteoarthritis, hypertension and underactive thyroid
9	Male	71	4	Osteoarthritis, hypertension, ulcers on the legs and hyperlipidaemia
10	Female	72	6	Heart murmur, problems with eyesight, osteoarthritis, hypothyroidism, osteoporosis and colitis
11	Female	61	5	Deafness, problems with eyesight, circulation problems in the legs, osteoarthritis and hypertension
12	Male	70	5	Artherosclerosis, problems with eyesight, kidney disease, osteoarthritis and epilepsy
13	Male	70	3	Osteoarthritis, asthma and umbilical hernia
14	Female	67	7	Asthma, angina, hypertension, liver disease, osteoarthritis, osteoporosis and hyperlipidaemia
15	Male	74	4	Angina, hypertension, osteoarthritis and glucose intolerance
16	Male	72	8	Asthma, deafness, problems with eyesight, hypertension, diabetes, history of strokes, circulation problems and osteoporosis
17	Female	57	4	Deafness, problems with eyesight and osteoporosis asthma
18	Female	70	7	Asthma, hypertension, problems with eyesight, osteoporosis, diverticulitis, irritable bowel syndrome and restless leg syndrome
19	Female	65	5	Osteoarthritis, bronchiectasis, underactive thyroid, osteoporosis and sciatica
20	Female	72	5	Osteoarthritis, remission from cancer, irritable bowel, hiatus hernia and hypertension
21	Female	64	4	Osteoarthritis, bowel and bladder problems and remission from cancer
22	Female	64	4	Diabetes, chronic obstructive pulmonary disorder, depression and osteoporosis
23	Female	42	3	Asthma, depression and severe anxiety
24	Male	45	7	Cancer, diabetes, hypertension, asthma, depression, neurological condition and coronary heart disease
25	Female	79	5	Osteoarthritis, hearing problems, diabetes, heart attack and stroke
26	Female	83	4	Asthma, angina, diabetes and rheumatoid arthritis
27	Male	89	6	Glaucoma, diabetes, breathlessness, fatigue, hypertension and kidney problems
28	Male	86	4	Double vision, diabetes, chronic obstructive pulmonary disorder and arthritis
29	Female	39	2	Rheumatoid arthritis and depression
30	Male	55	3	Asthma, diabetes and high cholesterol
31	Male	65	3	Diabetes, coronary heart disease and optical hypertension
32	Female	55	4	Rheumatoid arthritis, fibromyalgia, circulation problems and depression
33	Female	69	5	Diabetes, depression, eye problems, thyroid problems, arthritis and cholesterol
34	Female	71	7	Osteoarthritis, spondylosis, swollen foot, eye problems, emphysema, thyroid problem and numbness in feet and hands.
35	Male	74	4	Osteoarthritis, diabetes, gastric reflux and hypertension
36	Female	83	4	Diabetes, heart attack, circulation trouble and gastric reflux
37	Female	64	4	Arthritis, angina, diabetes and asthma
38	Male	55	5	Arterial disease, bronchiectasis, diabetes, arthritis and asthma
39	Female	66	3	Diabetes, osteoarthritis and hypertension
40	Male	66	2	Diabetes and stroke
41	Male	57	5	Coronary heart disease, hiatus hernia, colitis, diabetes and spondylitis of the neck

disagreements were discussed until consensus was achieved and final themes were agreed upon.

## Findings

All participants, except two (ID15 and ID30), identified one 'main', priority LTC either in response to a direct question or by spontaneous indication during their interview(s). (Both participants presented a 'wellness perspective',<sup>40</sup> in that they perceived themselves to have no health concerns. Their LTCs were effectively 'backgrounded'.) Current priorities were arrived at by participants making comparisons between their LTCs, specifically by trading off the various attributes, impacts and perceived consequences of their individual LTCs. This effectively meant that at a single time point, all other LTCs, except the main LTC, were 'backgrounded'.<sup>40</sup>

Two main themes emerged as to why participants identified a particular main LTC: (a) *proximate* issues surrounding barriers to functional health and (b) prioritisation of LTCs perceived to have a particular *future* risk.

### Main barrier to functional health

This theme emerged due to participants' descriptions of LTCs being prioritised as a result of them currently causing the most disruption or presenting the greatest barrier to what can be defined as their *functional health*, namely, the ability 'to do the things one wants or needs to do'.<sup>41</sup> Prioritisation for these participants was thereby influenced by what has been described as the 'meaning as consequence' that these LTCs hold. In short, the 'meaning as consequence' of a condition relates to how people understand and experience the immediate symptoms (and associated restrictions) of an LTC.<sup>42</sup> A diverse array of LTCs was identified as having the singular most impact on functional health and ranged from persistent leg ulcers and cellulites impacting mobility to issues with eyesight. For example, the extract from the following participant typified the issue by discussing how his eyesight problems, caused by glaucoma, had vastly reduced his quality of life by preventing his participation in a number of 'valued activities':<sup>35</sup>

Well the fact that I'm so; life is so empty now, that's the, you know, I mean, I bowled up to about three years ago, I won all sorts of things in bowling and I used to play snooker, now I can't see to play snooker, I used to play bridge, and I can't play bridge ... (ID27 – glaucoma, diabetes, breathlessness, fatigue, hypertension and kidney problems)

Within this theme, however, three particular LTC types were most frequently identified as having the greatest impact when present alongside other conditions: mental health, musculoskeletal problems and bowel/bladder complaints. These conditions appeared to have wide-reaching consequences, often impacting multiple areas of life, such as the ability to take part in valued activities, employment

and/or the ability to fulfil their desired social roles and responsibilities:

it [Osteoarthritis] was in the small of my back at one time, but then it sort of, spread out into hips and down the groin, going towards the knees now ... So it's definitely getting worse, it's not improving and that's why I say that's the biggest impingement on lifestyle and doing things. (ID35 – diabetes, osteoarthritis, gastric reflux and hypertension)

The depression is worse than the rheumatoid arthritis I think ... the depression is horrible, I don't like it at all. It's so difficult to motivate yourself to do anything. I've got to make myself get out of bed. It's difficult and I know it's difficult at the moment because I've not got work and things are strange. It's just not being able to, just not functioning properly. (ID29 – rheumatoid arthritis and depression)

Colitis, that flares up. It's a bit, it's not nice having to control it in work because the smell is disgusting when you, you know. With flatulence off the drugs that you get, which is one of the side effects of the Mesalamine or Pentasa. The flatulence, the more you take the worse that will get. The pain, the urgency to go to the toilet, I think again, am I fit to work? (ID41 – coronary heart disease, hiatus hernia, colitis, diabetes and spondylitis of the neck)

In their attempts to mitigate the impact of these LTCs on their functional health, participants described spending a lot of time striving to self-manage their priority LTC rather than their other concurrent LTCs. However, this trio of LTCs commonly perceived as particularly difficult to self-manage effectively. Participants described how finding and utilising effective mechanisms of controlling these LTCs versus their other LTCs could be particularly problematic:

I've found [I'm] more concerned ... about the problems to do with my [osteoarthritic] back and mobility than I have about my diabetes, and although the side effects from diabetes can kill you, I feel that [I've] got a measure of control over it. (ID35 – osteoarthritis, diabetes, gastric reflux and hypertension)

The inability to gain effective or regular control over these LTCs was therefore a source of continued frustration. Participants' sustained efforts with no demonstrable positive impact in terms of improved control, and functional health was often demoralising:

I don't eat loads of rubbish, I don't eat too much fat because I know my system can't tolerate that, erm, and I watch what I eat, I read every label on everything that I buy, I'm absolutely wicked for that. Even, I mean, I eat a lot of pasta, but I won't buy a pasta sauce, because most of them there's too much fat in, too much salt in and too much everything in so I'll make my own and curries, I love curries but I made my own with all my own spices because I can make it without all that fat so, I'm really good and it [loss of bowel control] still happens, so that's when it makes me mad. (ID21 – osteoarthritis, bowel and bladder problems and remission from cancer)



Finally, a minority of participants discussed the added complications of living with multiple LTCs for managing their priority LTC. In particular, the interaction of LTCs could contribute to a perceived increase in illness burden and, in turn, detrimental effects upon self-management. The extract from the following participant, who had identified her depression as her priority LTC, illustrates the intertwined relationships between LTCs and unique challenges of living with MM:

Certainly if I'm under stress, that affects the arthritis, which affects the depression. ... in times, for example when my work has been good, my home life has been good, there's not been any issues in that regard, then the depression isn't that much of an issue, but when you throw in other stressful things into the mix, then I think it does because I think the stress increases the likelihood of an attack of the arthritis, which increases the likelihood of feeling low. (ID29 – rheumatoid arthritis and depression)

In summary, participants identified LTCs whose symptoms *currently* impeded their functional health or the 'meaning as consequence' that these conditions held. As a result, participants spoke of their difficulties in attempts to gain effective control and regain lost aspects of functional health.

### Future risk

In contrast to the theme of functional health discussed above, the way in which participants 'made sense' of their LTCs influenced *how* they identified their main or priority LTC. Participants outlined how particular LTCs held the potential for an adverse future event, or 'risk'. In other words, they highlighted the LTC which held the greatest perceived *risk* of causing or leading to serious complications, loss of independence and/or mortality in the *future*. Participants here appeared to weigh the current and daily impact of some of their LTCs against those which they perceived could produce more serious and negative outcomes in the future:

[Osteoarthritis] that's just pain. The other can cause you serious problems, you know. You can't die with an aching wrist, can you? Or with a, an aching knee? But your heart, if you have problems with your heart or with your bowels, yes you can. Can die with that so, quite a low priority really. (ID10 – heart problems, eyesight problems, osteoarthritis, hypothyroidism, osteoporosis and colitis)

In tandem with the (aforementioned) 'meaning as consequence' that people hold about LTCs, they can also hold a particular 'meaning as significance'.<sup>42</sup> This relates to how LTCs have particular connotations attached to them, often drawing from socially shared understandings or knowledge. Participants' accounts indicated that they held a particular 'meaning as significance' about their priority LTCs. Furthermore, these understandings shaped their perceptions of potential future risk. Some participants explicitly ascribed

their priority condition and its future consequences by bringing in their family history pertaining to the LTC:

Heart problems run in my family, especially on my father's side. My father died at thirty-eight of a heart attack, he died. My uncle on my dad's side, he died at fifty-one, you know. My two aunties on my dad's side, they both died with angina, but they were in their seventies and eighties, they were bad with angina. My dad's other brother, he had the heart operation two years before me, so heart problems do run in the family. (ID38 – arterial disease, bronchiectasis, diabetes, arthritis and asthma)

Accounts frequently contained information relating to familial risk and subsequently framed participants' perceptions of future risk pertaining to their LTCs and provide explanation as to why participant ID38 later succinctly stated that his priority LTC was his heart condition due to his risk of mortality:

I: Would you tend to prioritise one condition over another?

P: Heart problems, that comes first, obviously, because that would kill me.

In other cases, participants drew upon particular incidents and/or perceived similarities in experiences of significant others in their social networks in order to 'foretell' or 'imagine' the potential and negative consequences of their own priority condition. For example, participant ID33 identified diabetes as being her main LTC. While it was not immediately obvious why this LTC was chosen, it became clear from her account that her concerns related to the potential complications associated with diabetes and in particular the loss of her eyesight producing the catastrophic outcome of a future of dependency. The participant's prior experiences in caring for someone with sight loss were significant in shaping her views of this risk:

I looked after my mum who went blind, not with diabetes, but a detached retina ... and I thought God, if I end up like that, you become dependent on everybody. (ID33 – diabetes, depression, eye problems, thyroid problems and arthritis)

In addition, future implications of disease progression were also often closely linked to personal circumstances, highlighting the importance of individual social context in LTC prioritisation. For example, participant (ID4) consistently prioritised his OA due to his perceived risk of future physical disability. Rather than simply identifying the condition, its characteristics and perceived impact, his choice derived from a *combination* of these issues and in particular the perceived future impact (on his mobility), but was also firmly situated within his *specific* personal context, which as he describes is one of social isolation:

I mean, because I have to be mobile, I am living on my own, no one is going to take care of me, I have got to look after myself

... I have got no close relatives here or any relatives, I have lost contact with so ... I have got to be independent, you know, so walking is part of it, I have got to get to the shops and that, you know. (ID4 – osteoarthritis, hypertension, ischaemia and angina)

In summary, this theme, previously unreported in the MM literature, arose due to perceptions concerning the *meaning* ascribed to LTCs and related to the harbouring of future risks. Certain conditions were deemed as potentially life threatening and/or leading to serious complications, and in turn, impediments that then had a major impact on the self and the way people lived their lives. Priorities were arrived at by participants drawing on situated knowledge and/or were nested in specific personal contexts.

## Discussion

This study provides insights into how people with multiple LTCs prioritise among their concurrent LTCs. Specifically, prioritisation took two possible routes. First, a group of participants placed greater importance on the immediate physical impacts of particular LTCs on functional health, or the ‘meaning as consequence’ relating to these conditions.<sup>42</sup> In line with a prior study, issues of control arose in the first theme. However, in contrast to prior findings, it was not simply the issue that the LTC could not be ‘controlled by tablets’ (p. 996);<sup>42</sup> rather, the salience and implication of poor control concerned the resulting *impact* and the condition’s impediments on their ability to ‘do the things one wants or needs to do’. Furthermore, such LTCs had implications for self-management, as these were often the focus for participants who were concentrating their efforts on such LTCs. As noted elsewhere, the disruptive qualities of illness<sup>43</sup> can be an important factor in why people will turn their attention to self-managing an LTC. Arguably, self-management is bound up in the stock of embodied knowledge that people build up throughout their experiences of illness,<sup>42</sup> and symptoms are monitored and acted upon accordingly. Second, people with LTCs were a group that primarily focused upon the meaning as significance of a condition, or the future possibilities regarding the ‘connotations and imagery’ attached to it (p. 453).<sup>42</sup> This group prioritised LTCs that were perceived to have a *future risk*, a finding that has not previously been reported in this literature. Zinn’s<sup>44,45</sup> work is useful in extending the analysis offered by Bury’s theory. Zinn contends that the lay perspective of dealing with risk relates to managing and constructing a sense of certainty within the life course. This depends upon how illness is perceived as a source of disruption in the context of the person’s biography currently or in the future.<sup>44,45</sup> In Zinn’s<sup>44</sup> formulation, people hold ‘certainty constructions’ of what life can or will be. In order to maintain these biographical certain constructions, people take ‘protective actions’ (p. 203)<sup>44</sup> to facilitate maintaining them. In other words, understanding how disruption, or the perception of disruption, is temporally

mediated is necessary in order to adequately understand the actions that people take.<sup>44</sup> Specifically, participants appeared to make an explicit consideration of risk and formulate a *possible future* with their condition(s). In doing so, this allows people to take appropriate ‘protective actions’ (such as self-management strategies) to try and maintain a sense of biographical continuity.

The significance and consequence of conditions have been observed to ‘co-exist’, or to be seemingly contradictory and have differing impacts on the actions that people take, in single LTC.<sup>43</sup> Lawton suggests that people only think about the future with LTCs once they have experienced symptoms or have illnesses with apparent and long-lasting physical effects.<sup>46</sup> However, the findings from this study suggest that in their accounts, participants appear to focus on the current physical functional consequences of a main LTC or the possible futures and significant meanings attributed to an LTC. This difference may be because participants who highlighted the consequences of an LTC were in a period where symptoms were ‘foregrounded’.<sup>40</sup> Thus, their concerns may have been *temporally* immediate and pressing, whereas the latter group may have had fewer corporeal concerns at the point of interview(s) and therefore focused upon the possible future connotations of their LTCs. This suggestion would appear to be somewhat supported by the two participants who did not identify a priority LTC. They presented a ‘wellness perspective’,<sup>40</sup> reporting that their LTCs and therefore health concerns were backgrounded by the fact that they were currently asymptomatic and under control. Further prospective studies would allow for such issues to be unpacked.

Our study also reinforces the existing argument that understanding ‘risk’ and discussing it adequately in clinical contexts needs to go beyond focusing upon communicating lifestyle risk factors or numerical probabilities of risk.<sup>47,48</sup> In particular, paying attention to patients’ specific concerns and understandings of ‘risk’ relating to their multiple LTCs are important. Arguably, they can be confounded by the (potential) fluctuations between priorities relating to symptom flare-ups. Thus, clinicians face a longitudinal challenge in building relationships with patients to understand their illness histories and paths in order to offer adequate support. Such aims, however, may not be readily facilitated by the existing organisation of health-care services which illustrate reduced continuity in primary care where most patients with MM are managed.<sup>49</sup>

## Strengths and weaknesses

This study adds to a small existing literature seeking to understand the basis of MM patient LTC prioritisation.<sup>29,30</sup> The study design and sample allowed for an in-depth exploration of the issue in question by drawing together data sets from different research centres, study populations and combination of LTCs, which could not easily be done with single-centre studies. Qualitative secondary analysis has been

criticised for a lack of due consideration of the importance of context in both data generation and analysis;<sup>50</sup> the research collaboration comprised primary researchers from all the included primary studies and therefore addresses such concerns. It is also possible that the data-selection process may have affected the specific examples provided in the results section; however, we felt that our process of ‘data sorting’<sup>51</sup> to ensure data fit did not affect the overall themes but simply resulted in data that could potentially answer the question asked of it. Finally, this study is the first to indicate how ‘risk’ and MM are interrelated from the patient perspective. Methodological constraints mean that further prospective research on the issue of risk would be beneficial to unpack and track the consequences of patients with MM risk perceptions.

## Conclusion

The recent focus on MM within the medical literature reflects its prevalence, which will only continue to increase with ageing populations. It is therefore important to understand the complexities of the MM illness experience, and we have added to the limited literature by revealing some novel understandings of the process of condition prioritisation in MM patients. We advocate further qualitative and quantitative research, particularly prospective research, to further explore the complexity of prioritisation and the interactions between condition consequences (symptoms) and meanings (what the condition entails). In addition, it is necessary to understand how these factors can interact with, and be influenced by, changes in an individual’s life course and social context. We also advocate that HCPs utilise findings such as these to better understand the complex reasoning and implications of such reasoning for the management of their patients with MM.

## Declaration of conflicting interests

The views expressed are those of the authors and not necessarily those of the NHS, the NIHR or the Department of Health.

## Funding

This article presents independent research funded by the National Institute for Health Research (NIHR).

## References

- Mercer SW, Smith SM, Wyke S, et al. Multimorbidity in primary care: developing the research agenda. *Fam Pract* 2009; 26(2): 79–80.
- Barnett K, Mercer S, Norbury M, et al. Epidemiology of multimorbidity and implications for healthcare, research and medical education: a cross-sectional study. *Lancet* 2012; 12: 60240–60246.
- Uijen AA and Van de Lisdonk EH Multimorbidity in primary care: prevalence and trend over the last 20 years. *Eur J Gen Pract* 2008; 14(Suppl. 1): 28–32.
- Van den Akker M, Buntinx F, Metssemakers J, et al. Multimorbidity in general practice: prevalence, incidence, and determinants of co-occurring chronic and recurrent diseases. *J Clin Epidemiol* 1998; 51: 367–375.
- Douglas K. How can we treat multiple chronic conditions? *BMJ* 2012; 344: e1487.
- Department of Health. Our health, our care, our say: a new direction for community services. Report, Department of Health, UK, January 2006.
- Beasley JW, Hankey TH, Erickson R, et al. How many problems do family physicians manage at each encounter? A WReN study. *Ann Fam Med* 2004; 2(5): 405–410.
- Townsend A, Hunt K and Wyke S. Managing multiple morbidity in mid-life: a qualitative study of attitudes to drug use. *BMJ* 2003; 327(7419): 837.
- Bayliss EA, Steiner JF, Fernald DH, et al. Descriptions of barriers to self-care by persons with comorbid chronic diseases. *Ann Fam Med* 2003; 1(1): 15–21.
- Boyd C and Fortin M. Future of multimorbidity research: how should understanding of multimorbidity inform health system design? *Public Health Rev* 2010; 32(2): 451–471.
- Bayliss EA, Ellis JL and Steiner JF. Barriers to self-management and quality-of-life outcomes in seniors with multimorbidities. *Ann Fam Med* 2007; 5(5): 395–402.
- Jerant AF, Friederichs-Fitzwater MM and Moore M. Patients perceived barriers to active self-management of chronic conditions. *Patient Educ Couns* 2005; 57(3): 300–307.
- Noel PH, Frueh BC, Larne AC, et al. Collaborative care needs and preferences of primary care patients with multimorbidity. *Health Expect* 2005; 8(1): 54–63.
- Fortin M, Bravo G, Hudon C, et al. Relationship between multimorbidity and health-related quality of life of patients in primary care. *Qual Life Res* 2006; 15(1): 83–91.
- Fortin M, Bravo G, Hudon C, et al. Psychological distress and multimorbidity in primary care. *Ann Fam Med* 2006; 4(5): 417–422.
- Wolff JL, Starfield B and Anderson G. Prevalence, expenditures, and complications of multiple chronic conditions in the elderly. *Arch Intern Med* 2002; 162(20): 2269–2276.
- May C, Montori V and Mair F. We need minimally disruptive medicine. *BMJ* 2009; 339: b2803.
- Corbin J and Strauss A. Managing chronic illness at home: three lines of work. *Qualitative Sociology* 1985; 8(3): 224–247.
- Belgrave LL. The relevance of chronic illness in the everyday lives of elderly women. *J Aging Health* 1990; 2(4): 475–500.
- Ong BN, Jinks C and Morden A. The hard work of self-management: living with chronic knee pain. *Int J Qual Stud Health Well-Being* 2011; 6(3): 7035–7045.
- Kralik D, Koch T, Price K, et al. Chronic illness self-management: taking action to create order. *J Clin Nurs* 2004; 13: 259–267.
- Voigt I, Wrede J, Diederichs-Egidi H, et al. Priority setting in general practice: health priorities of older patients differ from treatment priorities of their physicians. *Croat Med J* 2010; 51(6): 483–492.
- Junius-Walker U, Stolberg D, Steinke P, et al. Health and treatment priorities of older patient and their general practitioners: a cross-sectional study. *Qual Prim Care* 2011; 19(2): 67–76.



24. Christensen B, Howren M, Hillis S, et al. Patient and physician beliefs about control over health: association of symmetrical beliefs with medication regimen adherence. *J Gen Intern Med* 2010; 25(5): 397–402.
25. Gabbay M, Shiels C, Bower P, et al. Patient-practitioner agreement: does it matter? *Psychol Med* 2003; 33: 241–251.
26. Janz NK, Wren PA, Copeland LA, et al. Patient-physician concordance: preferences, perceptions, and factors influencing the breast cancer surgical decision. *J Clin Oncol* 2004; 22(15): 3091–3098.
27. Morris RL, Sanders C, Kennedy AP, et al. Shifting priorities in multimorbidity: a longitudinal qualitative study of patient-prioritization of multiple conditions. *Chronic Illn* 2011; 7(2): 147–161.
28. Cheraghi-Sohi S, Bower P, Kennedy A, et al. Patient priorities in osteoarthritis and co-morbid conditions: a secondary analysis of qualitative data. *Arthritis Care Res* 2013; 65(6): 920–927.
29. Schoenberg N, Leach C and Edwards W. ‘It’s a toss up between my hearing, my heart and my hip’: prioritizing and accommodating multiple morbidities by vulnerable older adults. *J Health Care Poor Underserved* 2009; 20(1): 134–151.
30. Lindsay S. Prioritizing illness: lessons in self-managing multiple chronic diseases. *Can J Sociol* 2009; 34(4): 983–1002.
31. Heaton J. Secondary analysis of qualitative data: an overview. *Hist Soc Res* 2008; 33(3): 33–45.
32. Thorne S. Secondary analysis in qualitative research: issues and implications. In: Morse J (ed.) *Critical issues in qualitative research methods*. London: SAGE, 1994, pp. 263–280.
33. Hinds P, Vogel R and Clarke-Steffen L. The possibilities and pitfalls of doing a secondary analysis of a qualitative data set. *Qual Health Res* 1997; 7(3): 408–424.
34. Hurley M, Walsh N, Bhavani V, et al. Health beliefs before and after participation on an exercised-based rehabilitation programme for chronic knee pain: doing is believing. *BMC Musculoskel Disord* 2010; 11: 31.
35. Grime J, Richardson J and Ong BN. Perceptions of joint pain and feeling well in older people who reported being healthy: a qualitative study. *Br J Gen Pract* 2010; 60(577): 597–603.
36. Bower P, Harkness E, Macdonald W, et al. Illness representations in patients with multimorbid long-term conditions: a qualitative study. *Psychol Health* 2012; 27(10): 1211–1226.
37. Smith J and Osborne M. Interpretive phenomenological analysis. In: Smith J (ed.) *Qualitative psychology*. London: SAGE, 2003, pp. 51–80.
38. Charmaz K. *Constructing grounded theory: a practical guide through qualitative analysis*. London: SAGE, 2006.
39. May C, Allison G, Chapple A, et al. Framing the doctor-patient relationship in chronic illness: a comparative study of general practitioners’ accounts. *Sociol Health Illn* 2004; 26(2): 135–158.
40. Paterson B. The shifting perspectives model of chronic illness. *J Nurs Scholarsh* 2001; 33(1): 21–26.
41. Blaxter M. *Health (key concepts)*. 2nd ed. Cambridge: Polity Press, 2010.
42. Bury M. The sociology of chronic illness: a review of research and prospects. *Sociol Health Illn* 1991; 13(4): 451–468.
43. Sanders C, Donovan J and Dieppe P. The significance and consequences of having painful and disabled joints in older age: co-existing accounts of normal and disrupted biographies. *Sociol Health Illn* 2002; 24(2): 227–253.
44. Zinn JO. Health, risk and uncertainty in the life course: a typology of biographical certainty constructions. *Soc Theory Health* 2004; 2(3): 199–221.
45. Zinn JO. The biographical approach: a better way to understand behaviour in health and illness. *Health Risk Soc* 2005; 7(1): 1–9.
46. Lawton J. Colonising the future: temporal perceptions and health-relevant behaviours across the adult lifecourse. *Sociol Health Illn* 2002; 24(6): 714–733.
47. Morden A, Jinks C and Ong BN. Rethinking ‘risk’ and self-management for chronic illness. *Soc Theory Health* 2012; 10: 78–99.
48. Alaszewski A, Alaszewski H and Potter J. Risk, uncertainty and life threatening trauma: analysing stroke survivor’s accounts of life after stroke. *Forum Qual Soc Res* 2006; 7(1).
49. Campbell SM, McDonald R and Lester H. The experience of pay for performance in English family practice: a qualitative study. *Ann Fam Med* 2008; 6(3): 228–234.
50. Van Den Berg H. Reanalyzing qualitative interviews from different angles: the risk of decontextualization and other problems of sharing qualitative data. *Forum Qual Health Res* 2005; 6(1): Article 30.
51. Heaton J. *Reworking qualitative data*. London: SAGE, 2004.