



**What attributes of patients affect their involvement in safety? A key opinion leaders' perspective**

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Title: What attributes of patients affect their  
involvement in safety? A key opinion leaders' perspective

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4 **Title: What attributes of patients affect their**  
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6 **involvement in safety? A key opinion leaders' perspective**  
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11 **ABSTRACT**  
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13 **Objective:** Little is known about which attributes the  
14 patients need when they wish to maximize their capability  
15 to partner safely in health care. We aimed to identify  
16 these attributes from a key opinion leaders' perspective.  
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24 **Design:** Delphi study involving indirect, group  
25 interaction through a structured two-round survey.  
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30 **Setting:** International electronic survey.  
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35 **Participants:** 11 (65%) of the 17 invited, internationally  
36 recognized experts on patient safety completed the study.  
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41 **Outcome measures:** Patient attributes agreed by the Delphi  
42 panel to contribute maximally to safe health care.  
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48 **Results:** The panelists agreed that 13 attributes are  
49 important for patients who want to maximize the role of  
50 safe partners. These domains relate to: autonomy,  
51 awareness, conscientiousness, knowledge, rationality,  
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4 responsiveness and vigilance; for example, important  
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6 attributes of autonomy include the ability to speak up,  
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8 freedom to act and ability to act independently. Spanning  
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10 7 domains, the attributes emphasize intellectual  
11  
12 attributes and to a lesser extent moral attributes.  
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16  
17 **Conclusions:** Whereas current safety discourses emphasize  
18  
19 attributes of *professionals*, this study identified  
20  
21 *patient* attributes that key opinion leaders believe can  
22  
23 maximize the capability of patients to partner safely in  
24  
25 health care. Further research is needed that asks  
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27 patients about the attributes they believe are most  
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29 important.  
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**ARTICLE SUMMARY****Article focus**

- This paper aimed to identify, from a key opinion leaders' perspective, the personal attributes that patients need when they wish to maximize their capability to partner safely in health care.

**Key messages**

- A Delphi exercise involving 11 international experts on patient safety identified 10 intellectual and three moral attributes, as important for patients wanting to maximize their ability to be safe healthcare partners.
- The intellectual attributes are in the domains of autonomy, awareness, conscientiousness, responsiveness and vigilance; the moral attributes constitute domains of conscientiousness and vigilance.
- Important attributes of patient autonomy include the ability to speak up and act independently, and freedom to act.

**Strengths and limitations of this study**

- Going beyond safety discourses that emphasize attributes of safe health professionals, this study elicits key opinion leaders' perspectives on

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4 attributes that enable *patients* to maximize their  
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6 capability to serve as safe healthcare partners.  
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- 8
- 9 • However, this study was small, individual attributes  
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11 can be interpreted in different ways, and there is a  
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13 need to ask patients themselves about the attributes  
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15 that patients need in order to partner most safely.  
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## 10 11 12 **INTRODUCTION**

13  
14 Patient safety policies and discourses promote safety  
15 initiatives that enable patients (and their families) to  
16 be active partners in health care,<sup>1</sup> for example by  
17 detecting and reporting possible safety events.<sup>2</sup> This  
18 kind of patient involvement respects and empowers  
19 patients as people - rather than as dehumanized  
20 by-products of the 'medical gaze'<sup>3</sup> - and may improve the  
21 quality and outcomes of health care.<sup>1</sup> Research has  
22 explored factors that influence the willingness<sup>4 5</sup> and  
23 motivation<sup>6</sup> of patients to participate in safety  
24 initiatives. Little is known however about which personal  
25 attributes of patients are important when they wish to  
26 maximize their safe participation in health care.  
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45 Long et al.<sup>7</sup> identified attributes and qualities of  
46 safe health professionals within complex and imperfect  
47 health systems. Davis et al.<sup>8</sup> earlier identified patient-  
48 and illness-related factors associated with patient  
49 involvement in health safety.<sup>2</sup> And Coulter and Ellins<sup>1</sup> had  
50 highlighted the importance of health literacy to  
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4 patients' obtaining and understanding basic health  
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6 information. More widely, however, safety experts have  
7  
8 yet to identify and agree explicitly on key personal  
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10 attributes of safe patients. This lack of agreement  
11  
12 persists despite variation in the capacity of patients to  
13  
14 act for safety and in the levels of support they need.<sup>9</sup>  
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20 We are not assuming here that patients should have  
21  
22 certain attributes. Rather, we are suggesting that such  
23  
24 attributes can be important resources when patients wish  
25  
26 to participate actively as safe partners in health care.  
27  
28 This perspective draws on Sen's<sup>10</sup> theory of human  
29  
30 capabilities. His capability approach is consistent with  
31  
32 the notion that patients' personal attributes are  
33  
34 resources, which can define their capabilities for safe  
35  
36 functioning in medicine.<sup>11</sup> These capabilities signify  
37  
38 feasible opportunities for patients to be safe and act  
39  
40 safely. They permit patients to be free agents of change  
41  
42 and live the kind of lives they find valuable. However,  
43  
44 Sen's capability approach emphasizes the capabilities  
45  
46 (ends) themselves whereas we focus on identifying (and  
47  
48 weighting) the attributes necessary for capability. Thus,  
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50 the social environment, on which conversion of some  
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52 resources for capability may depend, sits outside the  
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4 scope of our study; as does the ability to assess the  
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6 safety that patients have achieved or could achieve.  
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11 Judged in terms of opportunity, the expression 'safe  
12  
13 partner' may imply that the patient does not err,<sup>12</sup> for  
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15 example, by not forgetting to take medication,<sup>13</sup>  
16  
17 independently of the issue of moral responsibility.<sup>14</sup>  
18  
19 Alternatively, it may imply that the patient maximizes  
20  
21 the safety of health care by doing 'good' (in the  
22  
23 philosophical sense of doing what is important or  
24  
25 valuable). For example the patient might report an error  
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27 to their health provider; this distinction resembles the  
28  
29 difference between non-maleficence and beneficence.  
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35 For our purpose, the first meaning is timid and too  
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37 restrictive. It is also subsumed within the second  
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39 meaning that emphasizes the minimum attributes that  
40  
41 patients need in order to maximize their capability to  
42  
43 partner safely. This perspective resembles the Joint  
44  
45 Commission for Accreditation of Health Care  
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47 Organizations' focus on accreditation standards that are  
48  
49 maximally achievable.<sup>15</sup> Thus, we aimed specifically to  
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51 identify the most important attributes that patients need  
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53 when they wish to maximize their capability to partner  
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4 safely in health care. Rather than reduce the spotlight  
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6 on the clinician, this approach widens the spotlight to  
7  
8 encompass patients as co-producers of safe care according  
9  
10 to their capability and willingness to play that role.  
11  
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### 13 14 15 **METHOD**

16  
17 We conducted a Delphi study approved by the University of  
18  
19 Auckland Ethics Committee (Ref. 8126, 8 May 2012). The  
20  
21 Delphi method elicits expert judgments through indirect  
22  
23 group interaction. It is suited here to building formal  
24  
25 consensus between participants in the absence of strong  
26  
27 research evidence as to the most important attributes  
28  
29 defining patients as safe healthcare partners. Our  
30  
31 exercise involved geographically isolated experts, who  
32  
33 are recognized internationally as having and applying  
34  
35 in-depth, specialized knowledge and skills in the area of  
36  
37 patient safety. It involved these experts in a  
38  
39 structured, two-round electronic survey in late 2012.  
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47 Physicians have been reported to typify individual  
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49 patients as 'good' or not on the basis of their adherence  
50  
51 to unwritten rules of conduct.<sup>16</sup> However, from literature  
52  
53 spanning health care and philosophy, we identified 10  
54  
55 preliminary domains of five patient attributes for  
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4 participants to rate in the first round Delphi  
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6 questionnaire. Figure 1 shows these domains and  
7  
8 attributes. Each participant was asked to rate each of  
9  
10 the 50 attributes on a 9-point Likert scale of importance  
11  
12 ranging from 1, clearly unimportant, to 9, clearly  
13  
14 important; and was given in the second round an  
15  
16 opportunity to revise attributes and suggest new ones.  
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22 In round two, the participants were sent a  
23  
24 questionnaire that revised the wording of some attributes  
25  
26 on the basis of feedback received from round one; but  
27  
28 that retained the same thematic structure. They also  
29  
30 received their own ratings of each first round attribute  
31  
32 in relation to the group distribution. In search of group  
33  
34 consensus, this statistical feedback was intended to  
35  
36 inform the second round ratings of individual attributes;  
37  
38 and to reduce 'disagreement', as defined by a median  
39  
40 rating in the top tertile (7-9) and two or more panelists  
41  
42 rating the attribute in the bottom tertile (1-3).  
43  
44 Attributes with a median rating of 7 to 9 on the scale of  
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46 importance, without disagreement, make up the study's  
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48 final list of patient attributes. The amount and  
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50 direction of change occurring in the ratings between the  
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52 rounds was assessed by summarizing differences between  
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4 median ratings, and absolute differences between median  
5 ratings.  
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## 10 **RESULTS**

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12 Seventeen safety experts were invited to participate in  
13 the study. Thirteen responded, of whom 12 agreed to take  
14 part and completed round 1. Table 1 shows that 11 (65%)  
15 also completed round 2. All the participants were aged at  
16 least 40 and nine were men. Eight were currently residing  
17 in the Northern hemisphere. Panelists' reported multiple  
18 forms of involvement in safety-related work, including  
19 most commonly academic employment and clinical practice.  
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32 For each patient attribute, Figure 1 shows the ratings  
33 distribution, by tertile (1 to 3, 4 to 6 and 7 to 9), of  
34 the 11 round 2 participants. Table 2 lists the 13 patient  
35 attributes that the panel agreed are important in  
36 enabling patients to contribute maximally to safe health  
37 care. These attributes constitute seven of the 10 domains  
38 of attributes included in the round two questionnaire.  
39 Highest rated are the attributes relating to autonomy, in  
40 particular the 'Ability to speak up'. Next rated highest  
41 are the 'Freedom to act' and 'Ability to act  
42 independently', which similarly relate to autonomy, and  
43 'Knowing who, when and how to call for help'. Other  
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4 important domains of safe patient attributes respectively  
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6 relate to vigilance, and awareness of safety issues. The  
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8 table reports no attributes from three domains:  
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10 commitment to health; confidence; and humanity. It shows  
11  
12 that between the rounds the median ratings increased for  
13  
14 seven important attributes and decreased for six. The  
15  
16 amount of change between the rounds in median ratings is  
17  
18 generally small; the greatest difference was a decline in  
19  
20 the round two median rating of the importance of a  
21  
22 patient having the ability to decide when to follow  
23  
24 instructions.  
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### 30 **DISCUSSION**

31  
32 Safety discourses in medicine emphasize personal  
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34 attributes of health professionals. However, patients  
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36 vary in their capability and willingness for active  
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38 involvement in safety. Therefore this study aimed to  
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40 determine, from the perspective of key opinion leaders,  
41  
42 attributes that patients need when they wish to maximize  
43  
44 their capability to partner safely in health care. We  
45  
46 have reported 13 such attributes agreed by our panel.  
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52 It emphasized the importance of the autonomy of the  
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54 patient to speak up and choose freely to collaborate or  
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4 not for safe health care. These attributes and others  
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6 describing awareness, knowledge, rationality and  
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8 responsiveness appear to be cognitive or intellectual. In  
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10 contrast, important attributes relating to  
11  
12 conscientiousness and vigilance seem better described as  
13  
14 moral attributes, or attributes of character, despite the  
15  
16 relatedness of these two broad domains of patient  
17  
18 attributes. One reason for the importance of the  
19  
20 intellectual attributes may be that their meaning and  
21  
22 importance are less subjective and less contingent on the  
23  
24 particular situation presenting in health care.  
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31 Does this study ask too much of patients? We believe  
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33 "no" for two reasons. First, in the tradition of the  
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35 philosopher David Hume, the capability approach on which  
36  
37 we draw is descriptive rather than normative. It does not  
38  
39 prescribe requirements of all patients. Respectful of  
40  
41 patients, it merely indicates attributes that support  
42  
43 their willing capacity to partner safely. Second, we have  
44  
45 focused on personal attributes that can enable patients  
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47 to do the right thing, rather than necessarily do the  
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49 right thing *for the right reasons*. For example, we have  
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51 listed honesty as a potential attribute without  
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53 distinguishing between truth-telling, as a behavior, and  
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4 authenticity as a disposition of virtuous character.  
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6 Despite a small amount of literature on patient  
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8 virtues,<sup>17-20</sup> a focus on virtue was beyond the scope of  
9  
10 this study.  
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### 15 **Strengths and limitations**

16  
17 This study respects patients as people, whose personal  
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19 attributes warrant as much as consideration as those of  
20  
21 health professionals, for their capacity to maximize the  
22  
23 coproduction of safety in health care. In the absence of  
24  
25 research evidence for the importance of different patient  
26  
27 attributes, our Delphi study allowed systematic, indirect  
28  
29 interaction and consensus building between international  
30  
31 experts with knowledge of patient safety. All the round 2  
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33 ratings received equal consideration in this exercise.  
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39       Nevertheless this study has limitations. In the  
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41 context of experts' subjective judgments of the  
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43 importance of individual attributes, one panelist  
44  
45 expressed concern that many attributes can be interpreted  
46  
47 in different ways, and their importance depends on the  
48  
49 context. However, the same criticism can be leveled at  
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51 common attempts, within philosophy, to define virtues of  
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53 character; for example, humility is typically considered  
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4 a virtue even though Aristotle considered it a vice.  
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6 Therefore, the key issue, we suggest, is not whether  
7  
8 interpretations vary owing to their abstractness (they  
9  
10 frequently do vary) but whether this variation matters.  
11  
12 From our perspective, the variation is unimportant  
13  
14 because each attribute contains an implicit clause of  
15  
16 *ceteris paribus*: all other things being equal, humility  
17  
18 is generally now seen to be desirable and its importance  
19  
20 can be assessed alongside that of other human attributes.  
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25  
26 Other limitations of the study design include the  
27  
28 small size of the Delphi panel. The concept of 'experts'  
29  
30 has also been contested when restricted to professionals  
31  
32 and applied to patients.<sup>21</sup> In addition, the study lacked a  
33  
34 lay voice. Eliciting judgments from experts may, however,  
35  
36 add credibility to, and support uptake of, our findings.  
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42 Other limitations of the study include the use of  
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44 formal consensus-building to manage limits to expert  
45  
46 knowledge. This approach is susceptible to manipulation,  
47  
48 but movement in the median ratings between the rounds was  
49  
50 generally small and not saliently upwards. The Delphi  
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52 process thus apparently enabled panelists to share  
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54 differences and similarities in their thinking, without  
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4 feeling group pressure to conform in round two to the  
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6 round one ratings fed back to them.<sup>22</sup> Note, however, that  
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8 for round two, some attributes were slightly reworded,  
9  
10 the context and purpose of the study were clarified, and  
11  
12 the term 'safe partner' was explicitly defined.  
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18 The panelists' anonymity to each other in their  
19  
20 ratings facilitated their freedom of expression but could  
21  
22 have reduced their sense of group accountability and  
23  
24 denied them benefits of direct group interaction. The two  
25  
26 rounds could also have sapped panelist motivation, since  
27  
28 one panelist did not complete the second round. However,  
29  
30 the rounds were short and three months apart. We accept  
31  
32 that the attributes rated are not necessarily stable  
33  
34 within individuals and across situations, but consensus  
35  
36 on important attributes spans millennia and cultures.<sup>23</sup>  
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42 We have entered a contentious and underexplored area  
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44 of research in which difficulties will continue to  
45  
46 emerge. There is clearly a need for further research. The  
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48 next step is to ask patients themselves about the  
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50 attributes that may enable patients to maximize their  
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52 capability to partner safely in health care. Also needed  
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54 are studies that can support understanding of the  
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4 findings that describe important patient attributes, and  
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6 that assess the readiness and willingness of  
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8 professionals and patients to cultivate these attributes  
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10 at all levels of health care.<sup>25</sup> Our findings are  
11  
12 preliminary but as a starting resource, we believe that  
13  
14 they indicate patient attributes whose further  
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16 investigation and development may help to maximize  
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18 patients' capability to partner safely in health care.  
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**Table 1** Attributes of round 2 Delphi panelists

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<b>Sex</b>	
Female	9
Male	2
<b>Age group</b>	
40-49	2
50-59	7
60 or older	2
<b>Ethnicity</b>	
White	11
<b>Country of residence</b>	
Australia	1
New Zealand	2
United Kingdom	4
Europe	1
United States	3
<b>Safety related work</b>	
Academic	10
Clinical practice	5
Consumer representation	1
Health management	2
Health policy	2

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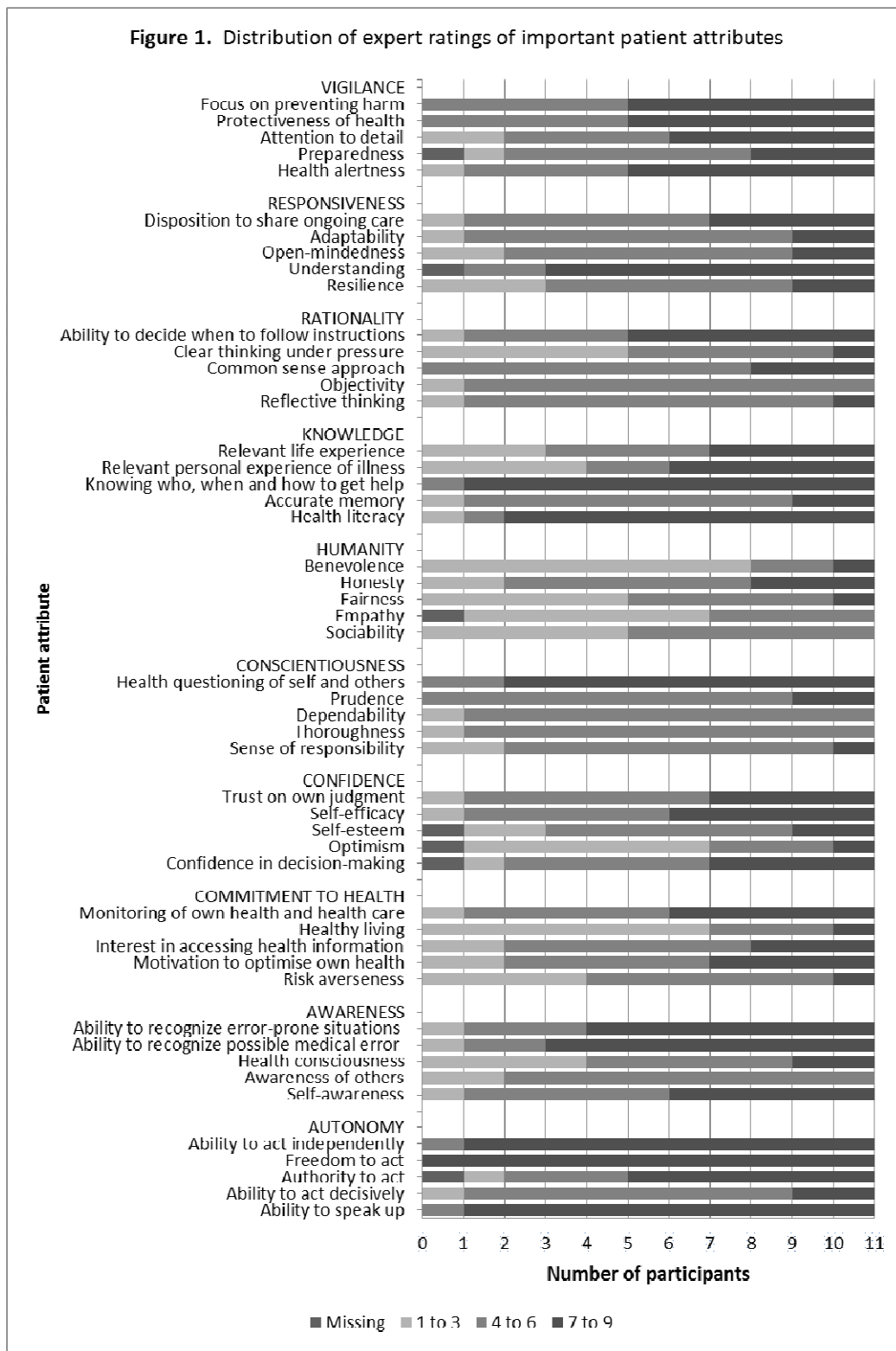
Table 2 Ratings of the importance of patient attributes for maximal involvement in safe health care

Domain	Attribute	Round 2		Difference between medians of rounds 1 and 2			Absolute difference between medians of rounds 2 and 1		
		Median	Range	Mean	Min.*	Max.*	Mean	Min.	Max.
Autonomy	Ability to speak up	9	3	-0.2	-3	2	0.7	0	3
	Freedom to act	8	1	0.8	-1	4	1.0	0	4
Awareness	Ability to act independently	8	4	1.2	-1	5	1.4	0	5
	Ability to recognize possible medical error	7	7	-0.9	-3	2	1.2	0	3
Conscientiousness	Ability to recognize error-prone situations	7	8	-0.2	-3	2	1.1	0	3
	Questioning of self and others	7	5	0.8	-2	5	1.4	0	5
Knowledge	Health literacy	7	8	-0.2	-8	3	1.5	0	8
	Knowing who, when and how to call for help	8	2	0.3	-1	2	0.5	0	2
Rationality	Ability to decide when to follow instructions	7	8	-2.2	-6	0	2.2	0	6
Responsiveness	Understanding	7	4	-1.6	-4	0	1.6	0	4
Vigilance	Health alertness	7	6	0.4	-2	5	0.9	0	5
	Protectiveness of health	7	5	1.4	-1	5	1.5	0	5
	Focus on preventing harm	7	4	1.0	-1	3	1.2	0	3

\* Min. = minimum value; max. = maximum value

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Figure 1. Distribution of expert ratings of important patient attributes



**Funding**

None

**Competing Interests**

None

**Contributorship**

Stephen Buetow conceived of the project, and led its design and implementation.

Rachel Davis, Kathleen Callaghan and Susan Dovey contributed to the study design and the acquisition, analysis and interpretation of data. All authors contributed to the writing of the manuscript.

**Data sharing**

The round 2 Delphi questionnaire is available on request by emailing Stephen Buetow.

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**What attributes of patients affect their involvement in safety? A key opinion leaders' perspective**

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Manuscripts

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4 **Title: What attributes of patients affect their**  
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6 **involvement in safety? A key opinion leaders' perspective**  
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18 and led its design and implementation. Rachel Davis,  
19 Kathleen Callaghan and Susan Dovey contributed to the  
20 study design and the acquisition, analysis and  
21 interpretation of data. All authors contributed to the  
22 writing of the manuscript.  
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33 **Data Sharing:** The round 2 Delphi questionnaire is  
34 available on request from the corresponding author.  
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4 **Title: What attributes of patients affect their**  
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6 **involvement in safety? A key opinion leaders' perspective**  
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11 **ABSTRACT**  
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13 **Objective:** Little is known about which attributes the  
14 patients need when they wish to maximize their capability  
15 to partner safely in health care. We aimed to identify  
16 these attributes from a key opinion leaders' perspective.  
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24 **Design:** Delphi study involving indirect, group  
25 interaction through a structured two-round survey.  
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30 **Setting:** International electronic survey.  
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35 **Participants:** 11 (65%) of the 17 invited, internationally  
36 recognized experts on patient safety completed the study.  
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42 **Outcome measures:** 50 patients attributes agreed by the  
43 Delphi panel to contribute maximally to safe health care.  
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48 **Results:** The panelists agreed that 13 attributes are  
49 important for patients who want to maximize the role of  
50 safe partners. These domains relate to: autonomy,  
51 awareness, conscientiousness, knowledge, rationality,  
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4 responsiveness and vigilance; for example, important  
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6 attributes of autonomy include the ability to speak up,  
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8 freedom to act and ability to act independently. Spanning  
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10 7 domains, the attributes emphasize intellectual  
11  
12 attributes and to a lesser extent moral attributes.  
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16  
17 **Conclusions:** Whereas current safety discourses emphasize  
18  
19 attributes of professionals, this study identified  
20  
21 *patient* attributes that key opinion leaders believe can  
22  
23 maximize the capability of patients to partner safely in  
24  
25 health care. Further research is needed that asks  
26  
27 patients about the attributes they believe are most  
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29 important.  
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**ARTICLE SUMMARY****Article focus**

- This paper aimed to identify, from a key opinion leaders' perspective, the personal attributes that patients need when they wish to maximize their capability to partner safely in health care.

**Key messages**

- A Delphi exercise involving 11 international experts on patient safety identified 10 intellectual and three moral attributes, as important for patients wanting to maximize their ability to be safe healthcare partners.
- The intellectual attributes are in the domains of autonomy, awareness, conscientiousness, responsiveness and vigilance; the moral attributes constitute domains of conscientiousness and vigilance.
- Important attributes of patient autonomy include the ability to speak up and act independently, and freedom to act.

**Strengths and limitations of this study**

- Going beyond safety discourses that emphasize attributes of safe health professionals, this study elicits key opinion leaders' perspectives on

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4 attributes that enable *patients* to maximize their  
5  
6 capability to serve as safe healthcare partners.  
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- 8
- 9 • However, this study was small, individual attributes  
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11 can be interpreted in different ways, and there is a  
12  
13 need to ask patients themselves about the attributes  
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15 that patients need in order to partner most safely.  
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## 10 11 12 **INTRODUCTION**

13  
14 Patient safety policies and discourses promote safety  
15 initiatives that enable patients (and their families) to  
16 be active partners in health care,<sup>1</sup> for example by  
17 detecting and reporting possible safety events.<sup>2</sup> This  
18 kind of patient involvement respects and empowers  
19 patients as people - rather than as dehumanized  
20 by-products of the 'medical gaze'<sup>3</sup> - and may improve the  
21 quality and outcomes of health care.<sup>1</sup> Research has  
22 explored factors that influence the willingness<sup>4 5</sup> and  
23 motivation<sup>6</sup> of patients to participate in safety  
24 initiatives. Little is known however about which personal  
25 attributes of patients are important when they wish to  
26 maximize their safe participation in health care.  
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45 Long et al.<sup>7</sup> identified attributes and qualities of  
46 safe health professionals within complex and imperfect  
47 health systems. Davis et al.<sup>8</sup> earlier identified patient-  
48 and illness-related factors associated with patient  
49 involvement in health safety.<sup>2</sup> And Coulter and Ellins<sup>1</sup> had  
50 highlighted the importance of health literacy to  
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4 patients' obtaining and understanding basic health  
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6 information. More widely, however, safety experts have  
7  
8 yet to identify and agree explicitly on key personal  
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10 attributes of safe patients. This lack of agreement  
11  
12 persists despite variation in the capacity of patients to  
13  
14 act for safety and in the levels of support they need.<sup>9</sup>  
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20 We are not assuming here that patients should have  
21  
22 certain attributes. Rather, we are suggesting that such  
23  
24 attributes can be important resources when patients wish  
25  
26 to participate actively as safe partners in health care.  
27  
28 This perspective draws on Sen's<sup>10</sup> theory of human  
29  
30 capabilities. His capability approach is consistent with  
31  
32 the notion that patients' personal attributes are  
33  
34 resources, which can define their capabilities for safe  
35  
36 functioning in medicine.<sup>11</sup> These capabilities signify  
37  
38 feasible opportunities for patients to be safe and act  
39  
40 safely. They permit patients to be free agents of change  
41  
42 and live the kind of lives they find valuable. However,  
43  
44 Sen's capability approach emphasizes the capabilities  
45  
46 (ends) themselves whereas we focus on identifying (and  
47  
48 weighting) the attributes necessary for capability. Thus,  
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50 the social environment, on which conversion of some  
51  
52 resources for capability may depend, sits outside the  
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4 scope of our study; as does the ability to assess the  
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6 safety that patients have achieved or could achieve.  
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11 Judged in terms of opportunity, the expression 'safe  
12  
13 partner' may imply that the patient does not err,<sup>12</sup> for  
14  
15 example, by not forgetting to take medication,<sup>13</sup>  
16  
17 independently of the issue of moral responsibility.<sup>14</sup>  
18  
19 Alternatively, it may imply that the patient maximizes  
20  
21 the safety of health care by doing 'good' (in the  
22  
23 philosophical sense of doing what is important or  
24  
25 valuable). For example the patient might report an error  
26  
27 to their health provider; this distinction resembles the  
28  
29 difference between non-maleficence and beneficence.  
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35 For our purpose the first meaning is timid and too  
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37 restrictive. It is also subsumed within the second  
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39 meaning that emphasizes the minimum attributes that  
40  
41 patients need in order to maximize their capability to  
42  
43 partner safely. This perspective resembles the Joint  
44  
45 Commission for Accreditation of Health Care  
46  
47 Organizations' focus on accreditation standards that are  
48  
49 maximally achievable.<sup>15</sup> Thus, we aimed specifically to  
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51 identify the most important attributes that patients need  
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53 when they wish to maximize their capability to partner  
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4 safely in health care. Rather than reduce the spotlight  
5  
6 on the clinician, this approach widens the spotlight to  
7  
8 encompass patients as co-producers of safe care according  
9  
10 to their capacity and willingness to play that role.  
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### 13 14 15 **METHOD**

16  
17 We conducted a Delphi study approved by the University of  
18  
19 Auckland Ethics Committee (Ref. 8126, 8 May 2012). The  
20  
21 Delphi method elicits expert judgments through indirect  
22  
23 group interaction. It is suited here to building formal  
24  
25 consensus between participants in the absence of strong  
26  
27 research evidence as to the most important attributes  
28  
29 defining patients as safe healthcare partners. Our  
30  
31 exercise involved geographically isolated experts.  
32  
33 Identified through the authors' extensive work experience  
34  
35 and professional networks, these individuals are  
36  
37 recognized internationally as having and applying  
38  
39 in-depth, specialized knowledge and skills in the area of  
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41 patient safety. We involved these experts in a  
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43 structured, on-line, two-round survey in late 2012.  
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51 Physicians have been reported to typify individual  
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53 patients as 'good' or not on the basis of their adherence  
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55 to unwritten rules of conduct.<sup>16</sup> However, from literature  
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4 spanning health care and philosophy - specifically in  
5 areas including patient safety, patient participation,  
6 and ethical theory and principles such as personhood - we  
7 identified 10 preliminary domains of five patient  
8 attributes. Figure 1 shows these domains and attributes.  
9 Each participant was asked to rate each of the 50  
10 attributes, by domain, on a 9-point Likert scale of  
11 importance ranging from 1, clearly unimportant, to 9,  
12 clearly important; and was given at the end of round 1,  
13 an opportunity to comment on the survey questionnaire as  
14 a whole and suggest changes to the attributes assessed.  
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30 In round two, the participants were sent a  
31 questionnaire that revised the wording of some attributes  
32 on the basis of feedback received from round one; but  
33 that retained the same thematic structure. They also  
34 received their own ratings of each first round attribute  
35 in relation to the group distribution. In search of group  
36 consensus, this statistical feedback was intended to  
37 inform the second round ratings of individual attributes;  
38 and to reduce 'disagreement', as defined by a median  
39 rating in the top tertile (7-9) and two or more panelists  
40 rating the attribute in the bottom tertile (1-3).  
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Attributes with a median rating of 7 to 9 on the scale of

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4 importance, without disagreement, make up the study's  
5  
6 final list of patient attributes. The amount and  
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8 direction of change occurring in the ratings between the  
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10 rounds was assessed by summarizing differences between  
11  
12 median ratings, and absolute differences between median  
13  
14 ratings.  
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## 20 **RESULTS**

21  
22 Seventeen safety experts were invited to participate in  
23  
24 the study. Thirteen responded, of whom 12 agreed to take  
25  
26 part and completed round 1. Table 1 shows that 11 (65%)  
27  
28 also completed round 2. Appendix 1 lists these  
29  
30 participants and their academic position. All of them  
31  
32 were aged at least 40 and nine were men. Eight were  
33  
34 residing in the Northern hemisphere. Panelists' reported  
35  
36 multiple forms of involvement in safety-related work,  
37  
38 including most commonly academic employment and clinical  
39  
40 practice.  
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46 For each patient attribute, Figure 1 shows the ratings  
47  
48 distribution, by tertile (1 to 3, 4 to 6 and 7 to 9), of  
49  
50 the 11 round 2 participants. Table 2 lists the 13 patient  
51  
52 attributes that the panel agreed are important in  
53  
54 enabling patients to contribute maximally to safe health  
55  
56 care. These attributes constitute seven of the 10 domains  
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4 of attributes included in the round two questionnaire.  
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6 Highest rated are the attributes relating to autonomy, in  
7  
8 particular the 'Ability to speak up'. Next rated highest  
9  
10 are the 'Freedom to act' and 'Ability to act  
11  
12 independently', which similarly relate to autonomy, and  
13  
14 'Knowing who, when and how to call for help'. Other  
15  
16 important domains of safe patient attributes respectively  
17  
18 relate to vigilance, and awareness of safety issues. The  
19  
20 table reports no attributes from three domains:  
21  
22 commitment to health; confidence; and humanity. It shows  
23  
24 that between the rounds the median ratings increased for  
25  
26 seven important attributes and decreased for six. The  
27  
28 amount of change between the rounds in median ratings is  
29  
30 generally small; the greatest difference was a decline in  
31  
32 the round two median rating of the importance of a  
33  
34 patient having the ability to decide when to follow  
35  
36 instructions.  
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#### 43 **DISCUSSION**

44  
45 Safety discourses in medicine emphasize personal  
46  
47 attributes of health professionals. However, patients  
48  
49 vary in their capability and willingness for active  
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51 involvement in safety. Therefore this study aimed to  
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53 determine, from the perspective of key opinion leaders,  
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4 attributes that patients need when they wish to maximize  
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6 their capability to partner safely in health care. We  
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8 have reported 13 such attributes agreed by our panel.  
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13 It emphasized the importance of the autonomy of the  
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15 patient to speak up and choose freely to collaborate or  
16  
17 not for safe health care. These attributes and others  
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19 describing awareness, knowledge, rationality and  
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21 responsiveness appear to be cognitive or intellectual. In  
22  
23 contrast, important attributes relating to  
24  
25 conscientiousness and vigilance seem better described as  
26  
27 moral attributes, or attributes of character, despite the  
28  
29 relatedness of these two broad domains of patient  
30  
31 attributes. One reason for the importance of the  
32  
33 intellectual attributes may be that their meaning and  
34  
35 importance are less subjective and less contingent on the  
36  
37 particular situation presenting in health care.  
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43  
44 Does this study ask too much of patients? We believe  
45  
46 "no" for two reasons. First, in the tradition of the  
47  
48 philosopher David Hume, the capability approach on which  
49  
50 we draw is descriptive rather than normative. It does not  
51  
52 prescribe requirements of all patients. Respectful of  
53  
54 patients, it merely indicates attributes that support  
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4 their willing capability to partner safely. Second, we  
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6 have focused on personal attributes that can enable  
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8 patients to do the right thing, rather than necessarily  
9  
10 do the right thing *for the right reasons*. For example, we  
11  
12 have listed honesty as a potential attribute without  
13  
14 distinguishing between truth-telling, as a behavior, and  
15  
16 authenticity as a virtuous disposition of character.  
17  
18 Despite a small amount of literature on the patient  
19  
20 virtues,<sup>17-20</sup> a focus on virtue was beyond the scope of  
21  
22 this study.  
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27

### 28 **Strengths and limitations**

29  
30 This study respects patients as people, whose personal  
31  
32 attributes warrant as much as consideration as those of  
33  
34 health professionals, for their capacity to maximize  
35  
36 safety in health care. In the absence of research  
37  
38 evidence for the importance of different patient  
39  
40 attributes, we have conducted a Delphi study. It allowed  
41  
42 systematic, indirect interaction between international  
43  
44 experts with knowledge of patient safety. All the round 2  
45  
46 ratings received equal consideration in this exercise.  
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52 Nevertheless this small study has limitations. In the  
53  
54 context of experts' subjective judgments of the  
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4 importance of individual attributes, one panelist  
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6 expressed concern that many attributes can be interpreted  
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8 in different ways, and their importance depends on the  
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10 context. However, the same criticism can be leveled at  
11  
12 common attempts, within philosophy, to define virtues of  
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14 character; for example, humility is typically considered  
15  
16 a virtue even though Aristotle considered it a vice.  
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18 Therefore, the key issue, we suggest, is not whether  
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20 interpretations vary owing to their abstractness (they  
21  
22 frequently do vary) but whether this variation matters.  
23  
24 From our perspective, the variation is unimportant  
25  
26 because each attribute contains an implicit clause of  
27  
28 *ceteris paribus*: all other things being equal, humility  
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30 is generally now seen to be desirable and its importance  
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32 can be assessed alongside that of other human attributes.  
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39 Among other limitations is that some attributes, such  
40  
41 as "ability to speak up" could also be grouped into  
42  
43 different domains. In turn, the domains themselves may  
44  
45 overlap. However, whereas from a classical perspective,  
46  
47 domains are discrete entities, a "cognitive approach"  
48  
49 recognizes their tendency to be fuzzy at their boundaries  
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51 and inconsistent in their constitution. They merely  
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4 comprise the best-fitting attributes, called prototypes.  
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9 The concept of 'experts' has also been contested when  
10 restricted to professionals and applied to patients.<sup>21</sup> Our  
11 Delphi panel was a small select group. Its opinions may  
12 be biased but this concern limits all such exercises.  
13  
14 Moreover, although sound inquiry requires  
15 self-reflection, the extent to which bias is problematic  
16 hinges on "assumptions about objective method".<sup>22</sup> The  
17 opinions of the panel are enabling, not least because  
18 they command respect, coming from experts who have  
19 experience in applying knowledge of human factors to the  
20 design and management of safe healthcare systems.  
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35 That said, the study lacked a concerted lay voice,  
36 although experience as a mental health service user and  
37 activist has informed the contributions of one panelist.  
38 Her feedback and that of others on the round 1  
39 questionnaire guided changes to, and ratings of, the  
40 round 2 questionnaire. There is a lack of literature on  
41 attributes of safe patients, with which to compare our  
42 findings. However, these findings are consistent with  
43 growing interest in goods internal to the practice of  
44 medicine, including attributes of safe practitioners.<sup>7</sup>  
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Other limitations of the study include the use of formal consensus-building to manage limits to expert knowledge. This approach is susceptible to manipulation, but movement in the median ratings between the rounds was generally small and not saliently upwards. The Delphi process thus apparently enabled panelists to share differences and similarities in their thinking, without feeling group pressure to conform in round two to the round one ratings fed back to them.<sup>23</sup> Note, however, that for round two, some attributes were slightly reworded, the context and purpose of the study were clarified, and the term 'safe partner' was explicitly defined.

The panelists' anonymity to each other in their ratings facilitated their freedom of expression but could have reduced their sense of group accountability and denied them benefits of direct group interaction. The two rounds could also have sapped panelist motivation, since one panelist did not complete the second round. However, the rounds were short and three months apart. We accept that the attributes rated are not necessarily stable within individuals and across situations, but consensus on important attributes spans millennia and cultures.<sup>24</sup>

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4 We have entered a contentious and underexplored area  
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6 of research in which difficulties will continue to  
7  
8 emerge. There is clearly a need for further research. The  
9  
10 next step is to ask patients themselves about the  
11  
12 attributes that may enable patients to maximize their  
13  
14 capability to partner safely in health care. Also needed  
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16 are studies that can support understanding of the  
17  
18 findings that describe important patient attributes, and  
19  
20 that assess the readiness and willingness of  
21  
22 professionals and patients to cultivate these attributes  
23  
24 at all levels of health care. Our findings are  
25  
26 preliminary but as a starting resource, we believe that  
27  
28 they indicate patient attributes whose further  
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30 investigation and development may help to maximize the  
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32 capability of patients to partner safely in health care.  
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**Table 1** Attributes of round 2 Delphi panelists

<b>Sex</b>	
Female	9
Male	2
<b>Age group</b>	
40-49	2
50-59	7
60 or older	2
<b>Ethnicity</b>	
White	11
<b>Country of residence</b>	
Australia	1
New Zealand	2
United Kingdom	4
Europe	1
United States	3
<b>Safety related work</b>	
Academic	10
Clinical practice	5
Consumer representation	1
Health management	2
Health policy	2

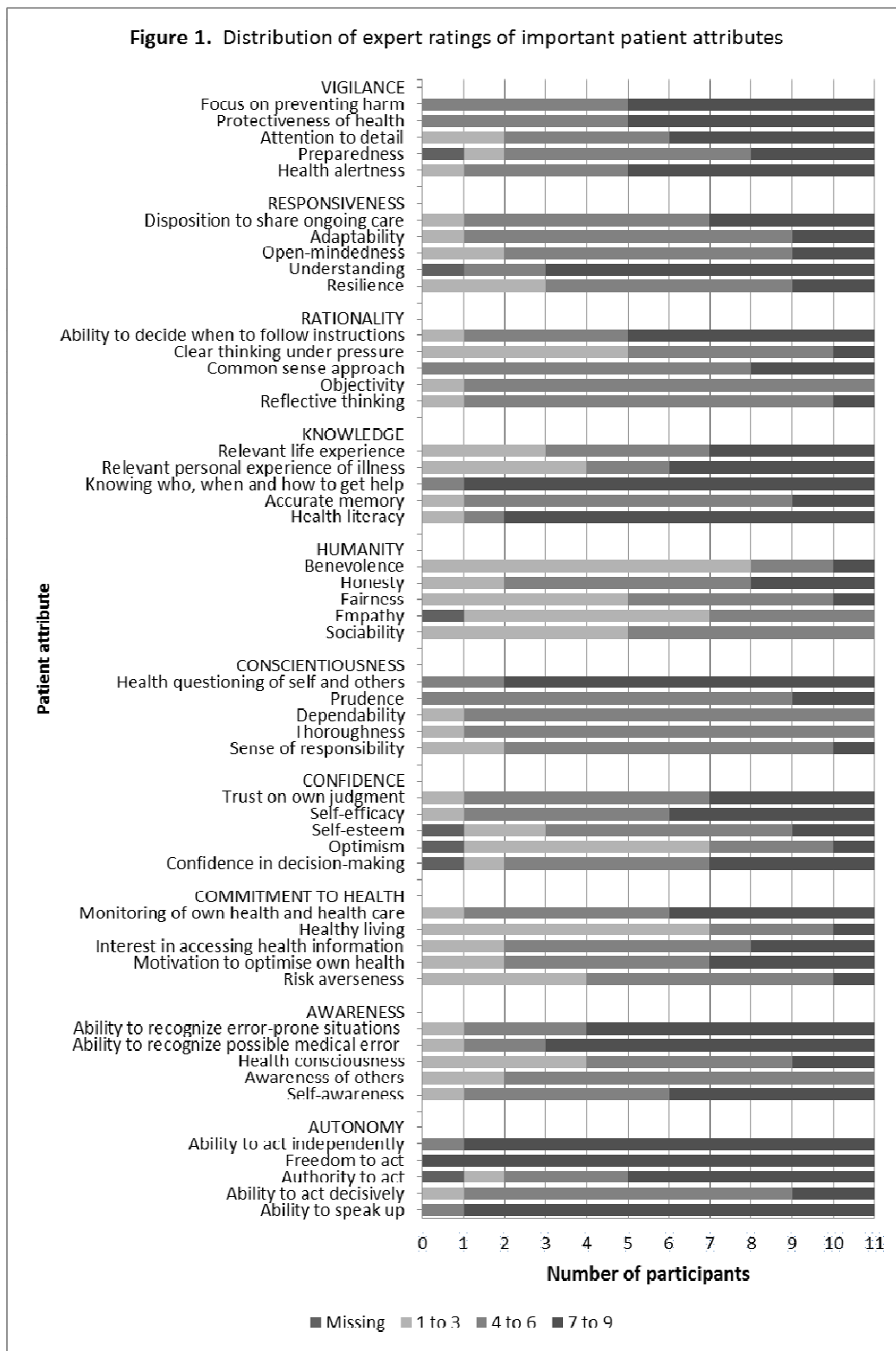
Table 2 Ratings of the importance of patient attributes for maximal involvement in safe health care

Domain	Attribute	Round 2		Difference between medians of rounds 1 and 2			Absolute difference between medians of rounds 2 and 1		
		Median	Range	Mean	Min.*	Max.*	Mean	Min.	Max.
Autonomy	Ability to speak up	9	3	-0.2	-3	2	0.7	0	3
	Freedom to act	8	1	0.8	-1	4	1.0	0	4
Awareness	Ability to act independently	8	4	1.2	-1	5	1.4	0	5
	Ability to recognize possible medical error	7	7	-0.9	-3	2	1.2	0	3
Conscientiousness	Ability to recognize error-prone situations	7	8	-0.2	-3	2	1.1	0	3
	Questioning of self and others	7	5	0.8	-2	5	1.4	0	5
Knowledge	Health literacy	7	8	-0.2	-8	3	1.5	0	8
	Knowing who, when and how to call for help	8	2	0.3	-1	2	0.5	0	2
Rationality	Ability to decide when to follow instructions	7	8	-2.2	-6	0	2.2	0	6
Responsiveness	Understanding	7	4	-1.6	-4	0	1.6	0	4
Vigilance	Health alertness	7	6	0.4	-2	5	0.9	0	5
	Protectiveness of health	7	5	1.4	-1	5	1.5	0	5
	Focus on preventing harm	7	4	1.0	-1	3	1.2	0	3

\* Min. = minimum value; max. = maximum value

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Figure 1. Distribution of expert ratings of important patient attributes





## Appendix 1

The panel comprised: **Richard Baker**, Professor of Quality in Health Care, University of Leicester, UK; **Glyn Elwyn**, Visiting Professor, Dartmouth Center for Health Care Delivery Science, USA; **Vikki Entwistle**, Professor of Health Services Research and Ethics, University of Aberdeen, UK; **Anton Kuzel**, Professor of Family Medicine, Virginia Commonwealth University, USA; **Alan Merry**, Professor and Head of the School of Medicine, University of Auckland, NZ; **Ron Patterson**, Professor of Health Law and Policy, University of Auckland, NZ, and NZ Health and Disability Commissioner 2000–2010; **William Runciman**, Professor in Patient Safety and Healthcare Human Factors, University of South Australia, Australia; **David Schwappach**, Scientific head of the Swiss Patient Safety Foundation, Zurich, Switzerland; **Charles Vincent**, Professor of Clinical Safety Research, Imperial College London, UK; Dr. **Janet Walcraft**, Honorary Fellow, University of Birmingham, UK; and **Saul Weingart**, Associate Professor of Medicine, Harvard Medical School, USA.

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21 Kathleen Callaghan and Susan Dovey contributed to the  
22 study design and the acquisition, analysis and  
23 interpretation of data. All authors contributed to the  
24 writing of the manuscript.  
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33 **Data Sharing:** The round 2 Delphi questionnaire is  
34 available on request from the corresponding author.  
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13 **ABSTRACT**

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15 **Objective:** Little is known about which attributes the  
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17 patients need when they wish to maximize their capability  
18  
19 to partner safely in health care. We aimed to identify  
20  
21 these attributes from a key opinion leaders' perspective.  
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25 **Design:** Delphi study involving indirect, group  
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27 interaction through a structured two-round survey.  
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31 **Setting:** International electronic survey.  
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35 **Participants:** 11 (65%) of the 17 invited, internationally  
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37 recognized experts on patient safety completed the study.  
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41 **Outcome measures:** 50 patients attributes agreed by the  
42  
43 Delphi panel to contribute maximally to safe health care.  
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47 **Results:** The panelists agreed that 13 attributes are  
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49 important for patients who want to maximize the role of  
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51 safe partners. These domains relate to: autonomy,  
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53 awareness, conscientiousness, knowledge, rationality,  
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7 responsiveness and vigilance; for example, important  
8 attributes of autonomy include the ability to speak up,  
9 freedom to act and ability to act independently. Spanning  
10 7 domains, the attributes emphasize intellectual  
11 attributes and to a lesser extent moral attributes.  
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19 **Conclusions:** Whereas current safety discourses emphasize  
20 attributes of professionals, this study identified  
21 *patient* attributes that key opinion leaders believe can  
22 maximize the capability of patients to partner safely in  
23 health care. Further research is needed that asks  
24 patients about the attributes they believe are most  
25 important.  
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**ARTICLE SUMMARY****Article focus**

- This paper aimed to identify, from a key opinion leaders' perspective, the personal attributes that patients need when they wish to maximize their capability to partner safely in health care.

**Key messages**

- A Delphi exercise involving 11 international experts on patient safety identified 10 intellectual and three moral attributes, as important for patients wanting to maximize their ability to be safe healthcare partners.
- The intellectual attributes are in the domains of autonomy, awareness, conscientiousness, responsiveness and vigilance; the moral attributes constitute domains of conscientiousness and vigilance.
- Important attributes of patient autonomy include the ability to speak up and act independently, and freedom to act.

**Strengths and limitations of this study**

- Going beyond safety discourses that emphasize attributes of safe health professionals, this study elicits key opinion leaders' perspectives on

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7 attributes that enable *patients* to maximize their  
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9 capability to serve as safe healthcare partners.  
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- 11 • However, this study was small, individual attributes  
12 can be interpreted in different ways, and there is a  
13 need to ask patients themselves about the attributes  
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15 that patients need in order to partner most safely.  
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14 **INTRODUCTION**  
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16 Patient safety policies and discourses promote safety  
17 initiatives that enable patients (and their families) to  
18 be active partners in health care,<sup>1</sup> for example by  
19 detecting and reporting possible safety events.<sup>2</sup> This  
20 kind of patient involvement respects and empowers  
21 patients as people - rather than as dehumanized  
22 by-products of the 'medical gaze'<sup>3</sup> - and may improve the  
23 quality and outcomes of health care.<sup>1</sup> Research has  
24 explored factors that influence the willingness<sup>4 5</sup> and  
25 motivation<sup>6</sup> of patients to participate in safety  
26 initiatives. Little is known however about which personal  
27 attributes of patients are important when they wish to  
28 maximize their safe participation in health care.  
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43 Long et al.<sup>7</sup> identified attributes and qualities of  
44 safe health professionals within complex and imperfect  
45 health systems. Davis et al.<sup>8</sup> earlier identified patient-  
46 and illness-related factors associated with patient  
47 involvement in health safety.<sup>2</sup> And Coulter and Ellins<sup>1</sup> had  
48 highlighted the importance of health literacy to  
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7 patients' obtaining and understanding basic health  
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9 information. More widely, however, safety experts have  
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11 yet to identify and agree explicitly on key personal  
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13 attributes of safe patients. This lack of agreement  
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15 persists despite variation in the capacity of patients to  
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17 act for safety and in the levels of support they need.<sup>9</sup>  
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21 We are not assuming here that patients should have  
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23 certain attributes. Rather, we are suggesting that such  
24  
25 attributes can be important resources when patients wish  
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27 to participate actively as safe partners in health care.  
28  
29 This perspective draws on Sen's<sup>10</sup> theory of human  
30  
31 capabilities. His capability approach is consistent with  
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33 the notion that patients' personal attributes are  
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35 resources, which can define their capabilities for safe  
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37 functioning in medicine.<sup>11</sup> These capabilities signify  
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39 feasible opportunities for patients to be safe and act  
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41 safely. They permit patients to be free agents of change  
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43 and live the kind of lives they find valuable. However,  
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45 Sen's capability approach emphasizes the capabilities  
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47 (ends) themselves whereas we focus on identifying (and  
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49 weighting) the attributes necessary for capability. Thus,  
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51 the social environment, on which conversion of some  
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53 resources for capability may depend, sits outside the  
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7 scope of our study; as does the ability to assess the  
8 safety that patients have achieved or could achieve.  
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13 Judged in terms of opportunity, the expression 'safe  
14 partner' may imply that the patient does not err,<sup>12</sup> for  
15 example, by not forgetting to take medication,<sup>13</sup>  
16 independently of the issue of moral responsibility.<sup>14</sup>  
17  
18 Alternatively, it may imply that the patient maximizes  
19 the safety of health care by doing 'good' (in the  
20 philosophical sense of doing what is important or  
21 valuable). For example the patient might report an error  
22 to their health provider; this distinction resembles the  
23 difference between non-maleficence and beneficence.  
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34 For our purpose the first meaning is timid and too  
35 restrictive. It is also subsumed within the second  
36 meaning that emphasizes the minimum attributes that  
37 patients need in order to maximize their capability to  
38 partner safely. This perspective resembles the Joint  
39 Commission for Accreditation of Health Care  
40 Organizations' focus on accreditation standards that are  
41 maximally achievable.<sup>15</sup> Thus, we aimed specifically to  
42 identify the most important attributes that patients need  
43 when they wish to maximize their capability to partner  
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7 safely in health care. Rather than reduce the spotlight  
8 on the clinician, this approach widens the spotlight to  
9 encompass patients as co-producers of safe care according  
10 to their capacity and willingness to play that role.  
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#### 15 16 17 **METHOD**

18 We conducted a Delphi study approved by the University of  
19 Auckland Ethics Committee (Ref. 8126, 8 May 2012). The  
20 Delphi method elicits expert judgments through indirect  
21 group interaction. It is suited here to building formal  
22 consensus between participants in the absence of strong  
23 research evidence as to the most important attributes  
24 defining patients as safe healthcare partners. Our  
25 exercise involved geographically isolated experts.  
26  
27 Identified through the authors' extensive work experience  
28 and professional networks, these individuals ~~, who~~ are  
29 recognized internationally as having and applying  
30 in-depth, specialized knowledge and skills in the area of  
31 patient safety. ~~We~~ ~~it~~ involved these experts in a  
32 structured, on--line, two-round survey in late 2012.  
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50 Physicians have been reported to typify individual  
51 patients as 'good' or not on the basis of their adherence  
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7 to unwritten rules of conduct.<sup>16</sup> However, from literature  
8  
9 spanning health care and philosophy - specifically in  
10 areas including patient safety, patient participation,  
11 and ethical theory and principles such as personhood -  
12  
13 we identified 10 preliminary domains of five patient  
14  
15 attributes. ~~for participants to rate in the first round~~  
16  
17 ~~Delphi questionnaire.~~ Figure 1 shows these domains and  
18  
19 attributes. Each participant was asked to rate each of  
20  
21 the 50 attributes, by domain, on a 9-point Likert scale  
22  
23 of importance ranging from 1, clearly unimportant, to 9,  
24  
25 clearly important; and was given at in the end of second  
26  
27 round 1, an opportunity to comment on the survey  
28  
29 questionnaire as a whole and ~~revise attributes and~~  
30  
31 suggest changes to the attributes assessed ~~new ones.~~  
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36  
37 In round two, the participants were sent a  
38  
39 questionnaire that revised the wording of some attributes  
40  
41 on the basis of feedback received from round one; but  
42  
43 that retained the same thematic structure. They also  
44  
45 received their own ratings of each first round attribute  
46  
47 in relation to the group distribution. In search of group  
48  
49 consensus, this statistical feedback was intended to  
50  
51 inform the second round ratings of individual attributes;  
52  
53 and to reduce 'disagreement', as defined by a median  
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7 rating in the top tertile (7-9) and two or more panelists  
8 rating the attribute in the bottom tertile (1-3).  
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11 Attributes with a median rating of 7 to 9 on the scale of  
12 importance, without disagreement, make up the study's  
13 final list of patient attributes. The amount and  
14  
15 direction of change occurring in the ratings between the  
16  
17 rounds was assessed by summarizing differences between  
18  
19 median ratings, and absolute differences between median  
20  
21 ratings.  
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## 27 RESULTS

28  
29 Seventeen safety experts were invited to participate in  
30 the study. Thirteen responded, of whom 12 agreed to take  
31 part and completed round 1. Table 1 shows that 11 (65%)  
32 also completed round 2. Appendix 1 lists these  
33 participants and their academic position. All of them  
34 participants were aged at least 40 and nine were men.  
35  
36 Eight were ~~currently~~ residing in the Northern hemisphere.  
37  
38 Panelists' reported multiple forms of involvement in  
39  
40 safety-related work, including most commonly academic  
41  
42 employment and clinical practice.  
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50 For each patient attribute, Figure 1 shows the ratings  
51 distribution, by tertile (1 to 3, 4 to 6 and 7 to 9), of  
52 the 11 round 2 participants. Table 2 lists the 13 patient  
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7 attributes that the panel agreed are important in  
8  
9 enabling patients to contribute maximally to safe health  
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11 care. These attributes constitute seven of the 10 domains  
12  
13 of attributes included in the round two questionnaire.  
14  
15 Highest rated are the attributes relating to autonomy, in  
16  
17 particular the 'Ability to speak up'. Next rated highest  
18  
19 are the 'Freedom to act' and 'Ability to act  
20  
21 independently', which similarly relate to autonomy, and  
22  
23 'Knowing who, when and how to call for help'. Other  
24  
25 important domains of safe patient attributes respectively  
26  
27 relate to vigilance, and awareness of safety issues. The  
28  
29 table reports no attributes from three domains:  
30  
31 commitment to health; confidence; and humanity. It shows  
32  
33 that between the rounds the median ratings increased for  
34  
35 seven important attributes and decreased for six. The  
36  
37 amount of change between the rounds in median ratings is  
38  
39 generally small; the greatest difference was a decline in  
40  
41 the round two median rating of the importance of a  
42  
43 patient having the ability to decide when to follow  
44  
45 instructions.

## 46 47 48 **DISCUSSION**

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50 Safety discourses in medicine emphasize personal  
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52 attributes of health professionals. However, patients  
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7 vary in their capability and willingness for active  
8 involvement in safety. Therefore this study aimed to  
9 determine, from the perspective of key opinion leaders,  
10 attributes that patients need when they wish to maximize  
11 their capability to partner safely in health care. We  
12 have reported 13 such attributes agreed by our panel.  
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21 It emphasized the importance of the autonomy of the  
22 patient to speak up and choose freely to collaborate or  
23 not for safe health care. These attributes and others  
24 describing awareness, knowledge, rationality and  
25 responsiveness appear to be cognitive or intellectual. In  
26 contrast, important attributes relating to  
27 conscientiousness and vigilance seem better described as  
28 moral attributes, or attributes of character, despite the  
29 relatedness of these two broad domains of patient  
30 attributes. One reason for the importance of the  
31 intellectual attributes may be that their meaning and  
32 importance are less subjective and less contingent on the  
33 particular situation presenting in health care.  
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48 Does this study ask too much of patients? We believe  
49 "no" for two reasons. First, in the tradition of the  
50 philosopher David Hume, the capability approach on which  
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7 we draw is descriptive rather than normative. It does not  
8  
9 prescribe requirements of all patients. Respectful of  
10  
11 patients, it merely indicates attributes that support  
12  
13 their willing capability to partner safely. Second, we  
14  
15 have focused on personal attributes that can enable  
16  
17 patients to do the right thing, rather than necessarily  
18  
19 do the right thing *for the right reasons*. For example, we  
20  
21 have listed honesty as a potential attribute without  
22  
23 distinguishing between truth-telling, as a behavior, and  
24  
25 authenticity as a virtuous disposition of character.  
26  
27 Despite a small amount of literature on the patient  
28  
29 virtues,<sup>17-20</sup> a focus on virtue was beyond the scope of  
30  
31 this study.

### 32 33 34 **Strengths and limitations**

35  
36 This study respects patients as people, whose personal  
37  
38 attributes warrant as much as consideration as those of  
39  
40 health professionals, for their capacity to maximize  
41  
42 safety in health care. In the absence of research  
43  
44 evidence for the importance of different patient  
45  
46 attributes, we have conducted a Delphi study. It allowed  
47  
48 systematic, indirect interaction between international  
49  
50 experts with knowledge of patient safety. All the round 2  
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52 ratings received equal consideration in this exercise.  
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Nevertheless this small study has limitations. In the context of experts' subjective judgments of the importance of individual attributes, one panelist expressed concern that many attributes can be interpreted in different ways, and their importance depends on the context. However, the same criticism can be leveled at common attempts, within philosophy, to define virtues of character; for example, humility is typically considered a virtue even though Aristotle considered it a vice. Therefore, the key issue, we suggest, is not whether interpretations vary owing to their abstractness (they frequently do vary) but whether this variation matters. From our perspective, the variation is unimportant because each attribute contains an implicit clause of *ceteris paribus*: all other things being equal, humility is generally now seen to be desirable and its importance can be assessed alongside that of other human attributes.

Among other limitations is that some attributes, such as "ability to speak up" could also be grouped into different domains. In turn, the domains themselves may overlap. However, whereas from a classical perspective, domains are discrete entities, a "cognitive approach"

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7 recognizes their tendency to be fuzzy at their boundaries  
8 and inconsistent in their constitution. They merely  
9 comprise the best-fitting attributes, called prototypes.  
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21 ~~Other limitations of the study design include the~~  
22 ~~small size of the Delphi panel.~~ The concept of 'experts'  
23 has also been contested when restricted to professionals  
24 and applied to patients.<sup>21</sup> Our Delphi panel was a small  
25 select group. Its opinions may be biased but this concern  
26 limits all such exercises. Moreover, although sound  
27 inquiry requires self-reflection, the extent to which  
28 bias is problematic hinges on "assumptions about  
29 objective method".<sup>22</sup> The opinions of the panel are  
30 enabling, not least because they command respect, coming  
31 from experts who have experience in applying knowledge of  
32 human factors to the design and management of safe  
33 healthcare systems.  
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48 That said, ~~In addition,~~ the study lacked a concerted  
49 lay voice, ~~although~~. ~~Eliciting judgments from experts~~  
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7 ~~may, however, add credibility to, and support uptake of,~~  
8 ~~our findings.~~

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13 ~~— experience as a mental health service user and~~  
14 ~~activist has informed the contributions of one panelist.~~

15 Her feedback and that of others on the round 1  
16 questionnaire guided changes to, and ratings of, the  
17 round 2 questionnaire. There is a lack of literature on  
18 attributes of safe patients, with which to compare our  
19 findings. However, these findings are consistent with  
20 growing interest in goods internal to the practice of  
21 medicine, including attributes of safe practitioners.<sup>7</sup>

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31 Other limitations of the study include the use of  
32 formal consensus-building to manage limits to expert  
33 knowledge. This approach is susceptible to manipulation,  
34 but movement in the median ratings between the rounds was  
35 generally small and not saliently upwards. The Delphi  
36 process thus apparently enabled panelists to share  
37 differences and similarities in their thinking, without  
38 feeling group pressure to conform in round two to the  
39 round one ratings fed back to them.<sup>23</sup> Note, however, that  
40 for round two, some attributes were slightly reworded,  
41 the context and purpose of the study were clarified, and  
42 the term 'safe partner' was explicitly defined.

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11 The panelists' anonymity to each other in their  
12 ratings facilitated their freedom of expression but could  
13 have reduced their sense of group accountability and  
14 denied them benefits of direct group interaction. The two  
15 rounds could also have sapped panelist motivation, since  
16 one panelist did not complete the second round. However,  
17 the rounds were short and three months apart. We accept  
18 that the attributes rated are not necessarily stable  
19 within individuals and across situations, but consensus  
20 on important attributes spans millennia and cultures.<sup>24</sup>  
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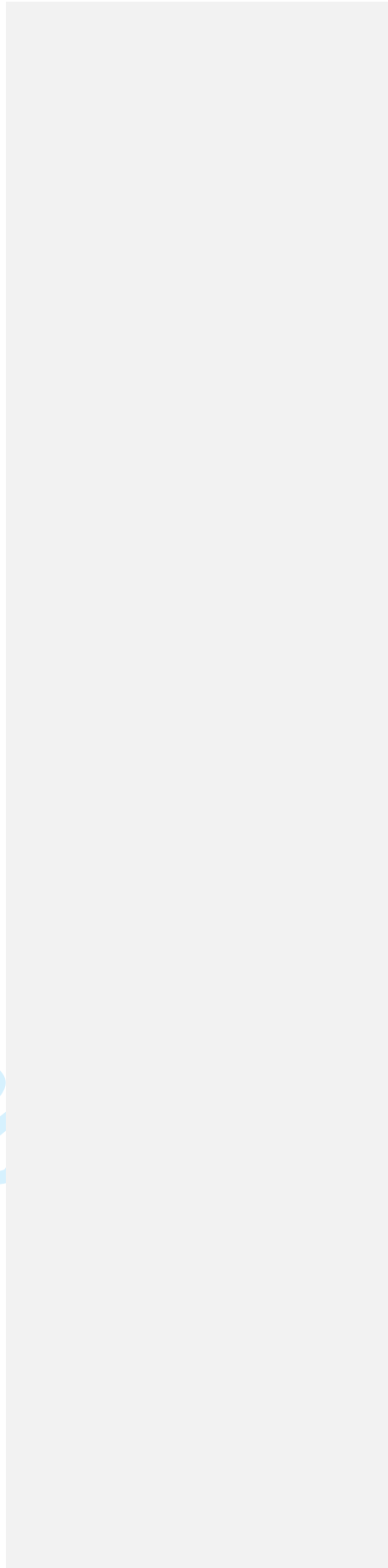
32 We have entered a contentious and underexplored area  
33 of research in which difficulties will continue to  
34 emerge. There is clearly a need for further research. The  
35 next step is to ask patients themselves about the  
36 attributes that may enable patients to maximize their  
37 capability to partner safely in health care. Also needed  
38 are studies that can support understanding of the  
39 findings that describe important patient attributes, and  
40 that assess the readiness and willingness of  
41 professionals and patients to cultivate these attributes  
42 at all levels of health care. Our findings are  
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preliminary but as a starting resource, we believe that they indicate patient attributes whose further investigation and development may help to maximize the ~~patients'~~ capability of patients to partner safely in health care.

For peer review only



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8 **Table 1** Attributes of round 2 Delphi panelists  
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<b>Sex</b>	
Female	9
Male	2
<b>Age group</b>	
40-49	2
50-59	7
60 or older	2
<b>Ethnicity</b>	
White	11
<b>Country of residence</b>	
Australia	1
New Zealand	2
United Kingdom	4
Europe	1
United States	3
<b>Safety related work</b>	
Academic	10
Clinical practice	5
Consumer representation	1
Health management	2
Health policy	2

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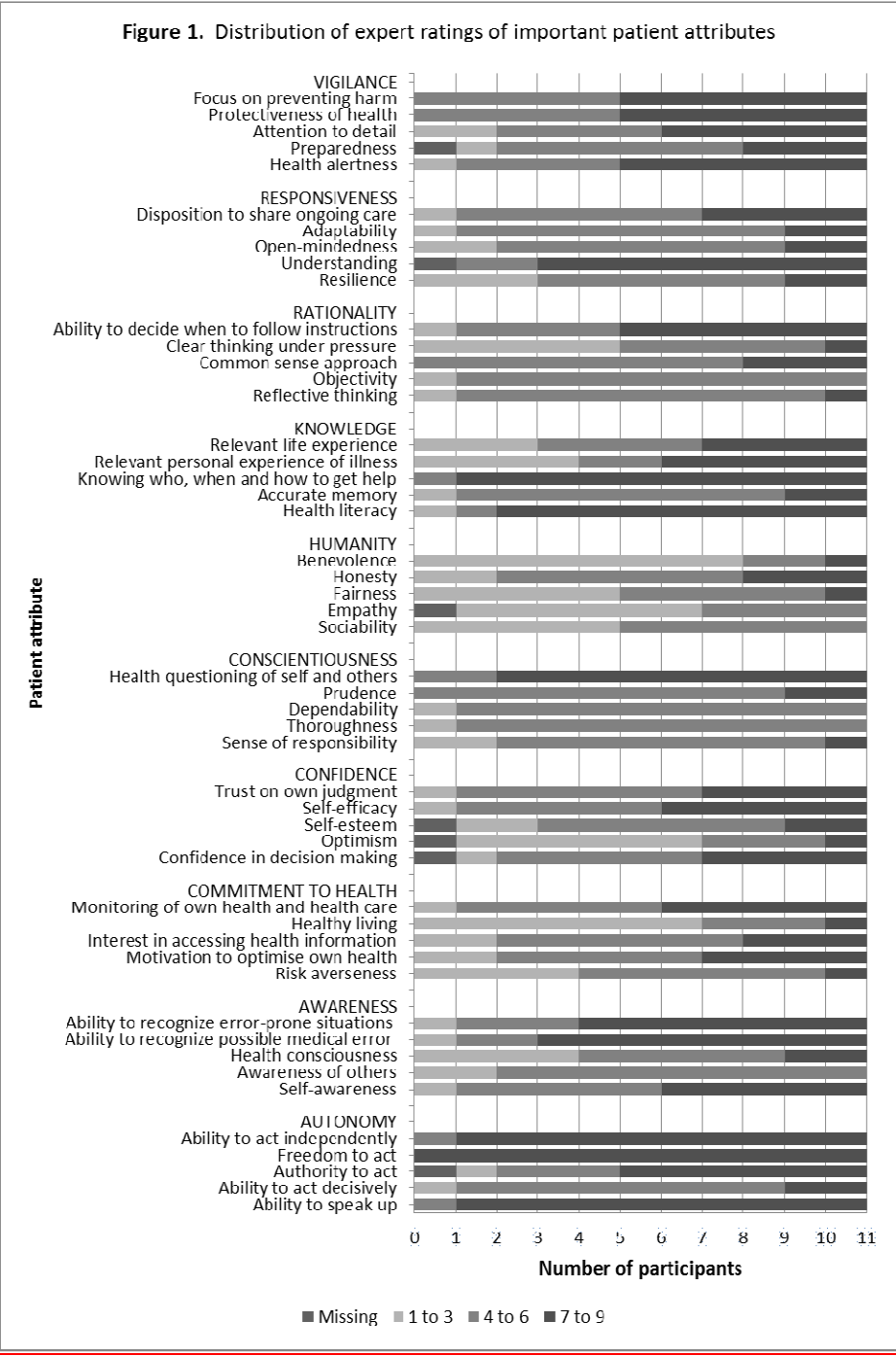
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Table 2 Ratings of the importance of patient attributes for maximal involvement in safe health care

Domain	Attribute	Round 2		Difference between medians of rounds 1 and 2			Absolute difference between medians of rounds 2 and 1		
		Median	Range	Mean	Min.*	Max.*	Mean	Min.	Max.
Autonomy	Ability to speak up	9	3	-0.2	-3	2	0.7	0	3
	Freedom to act	8	1	0.8	-1	4	1.0	0	4
	Ability to act independently	8	4	1.2	-1	5	1.4	0	5
Awareness	Ability to recognize possible medical error	7	7	-0.9	-3	2	1.2	0	3
	Ability to recognize error-prone situations	7	8	-0.2	-3	2	1.1	0	3
Conscientiousness	Questioning of self and others	7	5	0.8	-2	5	1.4	0	5
Knowledge	Health literacy	7	8	-0.2	-8	3	1.5	0	8
	Knowing who, when and how to call for help	8	2	0.3	-1	2	0.5	0	2
Rationality	Ability to decide when to follow instructions	7	8	-2.2	-6	0	2.2	0	6
Responsiveness	Understanding	7	4	-1.6	-4	0	1.6	0	4
Vigilance	Health alertness	7	6	0.4	-2	5	0.9	0	5
	Protectiveness of health	7	5	1.4	-1	5	1.5	0	5
	Focus on preventing harm	7	4	1.0	-1	3	1.2	0	3

\* Min. = minimum value; max. = maximum value

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Appendix 1

The panel comprised: **Richard Baker**, Professor of Quality in Health Care, University of Leicester, UK; **Glyn Elwyn**, Visiting Professor, Dartmouth Center for Health Care Delivery Science, USA; **Vikki Entwistle**, Professor of Health Services Research and Ethics, University of Aberdeen, UK; **Anton Kuzel**, Professor of Family Medicine, Virginia Commonwealth University, USA; **Alan Merry**, Professor and Head of the School of Medicine, University of Auckland, NZ; **Ron Patterson**, Professor of Health Law and Policy, University of Auckland, NZ, and NZ Health and Disability Commissioner 2000-2010; **William Runciman**, Professor in Patient Safety and Healthcare Human Factors, University of South Australia, Australia; **David Schwappach**, Scientific head of the Swiss Patient Safety Foundation, Zurich, Switzerland; **Charles Vincent**, Professor of Clinical Safety Research, Imperial College London, UK; Dr. **Janet Walcraft**, Honorary Fellow, University of Birmingham, UK; and **Saul Weingart**, Associate Professor of Medicine, Harvard Medical School, USA.

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