BMJ open

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

| | |
|---|---|
| Journal: | *BMJ Open* |
| Manuscript ID: | bmjopen-2013-003104 |
| Article Type: | Research |
| Date Submitted by the Author: | 24-Apr-2013 |
| Complete List of Authors: | Buetow, Stephen; University of Auckland, General Practice and Primary Health Care<br>Davis, Rachel; University College London,<br>Callaghan, Kathleen; Z Energy,<br>Dovey, Susan; University of Otago, Department of General Practice and Rural Health |
| Primary Subject Heading: | Patient-centred medicine |
| Secondary Subject Heading: | Patient-centred medicine, Health services research |
| Keywords: | Health & safety < HEALTH SERVICES ADMINISTRATION & MANAGEMENT, Quality in health care < HEALTH SERVICES ADMINISTRATION & MANAGEMENT, MEDICAL ETHICS |
| | |

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

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

**ABSTRACT**

**Objective:** Little is known about which attributes the patients need when they wish to maximize their capability to partner safely in health care. We aimed to identify these attributes from a key opinion leaders' perspective.

**Design:** Delphi study involving indirect, group interaction through a structured two-round survey.

**Setting:** International electronic survey.

**Participants:** 11 (65%) of the 17 invited, internationally recognized experts on patient safety completed the study.

**Outcome measures:** Patient attributes agreed by the Delphi panel to contribute maximally to safe health care.

**Results:** The panelists agreed that 13 attributes are important for patients who want to maximize the role of safe partners. These domains relate to: autonomy, awareness, conscientiousness, knowledge, rationality,

responsiveness and vigilance; for example, important attributes of autonomy include the ability to speak up, freedom to act and ability to act independently. Spanning 7 domains, the attributes emphasize intellectual attributes and to a lesser extent moral attributes.

**Conclusions:** Whereas current safety discourses emphasize attributes of *professionals*, this study identified *patient* attributes that key opinion leaders believe can maximize the capability of patients to partner safely in health care. Further research is needed that asks patients about the attributes they believe are most important.

## 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

attributes that enable *patients* to maximize their capability to serve as safe healthcare partners.

- However, this study was small, individual attributes can be interpreted in different ways, and there is a need to ask patients themselves about the attributes that patients need in order to partner most safely.

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

## INTRODUCTION

Patient safety policies and discourses promote safety initiatives that enable patients (and their families) to be active partners in health care,[1] for example by detecting and reporting possible safety events.[2] This kind of patient involvement respects and empowers patients as people – rather than as dehumanized by-products of the 'medical gaze'[3] – and may improve the quality and outcomes of health care.[1] Research has explored factors that influence the willingness[4 5] and motivation[6] of patients to participate in safety initiatives. Little is known however about which personal attributes of patients are important when they wish to maximize their safe participation in health care.

Long et al.[7] identified attributes and qualities of safe health professionals within complex and imperfect health systems. Davis et al.[8] earlier identified patient- and illness-related factors associated with patient involvement in health safety.[2] And Coulter and Ellins[1] had highlighted the importance of health literacy to

patients' obtaining and understanding basic health information. More widely, however, safety experts have yet to identify and agree explicitly on key personal attributes of safe patients. This lack of agreement persists despite variation in the capacity of patients to act for safety and in the levels of support they need.[9]

We are not assuming here that patients should have certain attributes. Rather, we are suggesting that such attributes can be important resources when patients wish to participate actively as safe partners in health care. This perspective draws on Sen's[10] theory of human capabilities. His capability approach is consistent with the notion that patients' personal attributes are resources, which can define their capabilities for safe functioning in medicine.[11] These capabilities signify feasible opportunities for patients to be safe and act safely. They permit patients to be free agents of change and live the kind of lives they find valuable. However, Sen's capability approach emphasizes the capabilities (ends) themselves whereas we focus on identifying (and weighting) the attributes necessary for capability. Thus, the social environment, on which conversion of some resources for capability may depend, sits outside the

scope of our study; as does the ability to assess the safety that patients have achieved or could achieve.

Judged in terms of opportunity, the expression 'safe partner' may imply that the patient does not err,[12] for example, by not forgetting to take medication,[13] independently of the issue of moral responsibility.[14] Alternatively, it may imply that the patient maximizes the safety of health care by doing 'good' (in the philosophical sense of doing what is important or valuable). For example the patient might report an error to their health provider; this distinction resembles the difference between non-maleficence and beneficence.

For our purpose, the first meaning is timid and too restrictive. It is also subsumed within the second meaning that emphasizes the minimum attributes that patients need in order to maximize their capability to partner safely. This perspective resembles the Joint Commission for Accreditation of Health Care Organizations' focus on accreditation standards that are maximally achievable.[15] Thus, we aimed specifically to identify the most important attributes that patients need when they wish to maximize their capability to partner

safely in health care. Rather than reduce the spotlight on the clinician, this approach widens the spotlight to encompass patients as co-producers of safe care according to their capability and willingness to play that role.

## METHOD

We conducted a Delphi study approved by the University of Auckland Ethics Committee (Ref. 8126, 8 May 2012). The Delphi method elicits expert judgments through indirect group interaction. It is suited here to building formal consensus between participants in the absence of strong research evidence as to the most important attributes defining patients as safe healthcare partners. Our exercise involved geographically isolated experts, who are recognized internationally as having and applying in-depth, specialized knowledge and skills in the area of patient safety. It involved these experts in a structured, two-round electronic survey in late 2012.

Physicians have been reported to typify individual patients as 'good' or not on the basis of their adherence to unwritten rules of conduct.[16] However, from literature spanning health care and philosophy, we identified 10 preliminary domains of five patient attributes for

participants to rate in the first round Delphi questionnaire. Figure 1 shows these domains and attributes. Each participant was asked to rate each of the 50 attributes on a 9-point Likert scale of importance ranging from 1, clearly unimportant, to 9, clearly important; and was given in the second round an opportunity to revise attributes and suggest new ones.

In round two, the participants were sent a questionnaire that revised the wording of some attributes on the basis of feedback received from round one; but that retained the same thematic structure. They also received their own ratings of each first round attribute in relation to the group distribution. In search of group consensus, this statistical feedback was intended to inform the second round ratings of individual attributes; and to reduce 'disagreement', as defined by a median rating in the top tertile (7–9) and two or more panelists rating the attribute in the bottom tertile (1–3). Attributes with a median rating of 7 to 9 on the scale of importance, without disagreement, make up the study's final list of patient attributes. The amount and direction of change occurring in the ratings between the rounds was assessed by summarizing differences between

median ratings, and absolute differences between median ratings.

**RESULTS**

Seventeen safety experts were invited to participate in the study. Thirteen responded, of whom 12 agreed to take part and completed round 1. Table 1 shows that 11 (65%) also completed round 2. All the participants were aged at least 40 and nine were men. Eight were currently residing in the Northern hemisphere. Panelists' reported multiple forms of involvement in safety-related work, including most commonly academic employment and clinical practice.

For each patient attribute, Figure 1 shows the ratings distribution, by tertile (1 to 3, 4 to 6 and 7 to 9), of the 11 round 2 participants. Table 2 lists the 13 patient attributes that the panel agreed are important in enabling patients to contribute maximally to safe health care. These attributes constitute seven of the 10 domains of attributes included in the round two questionnaire. Highest rated are the attributes relating to autonomy, in particular the 'Ability to speak up'. Next rated highest are the 'Freedom to act' and 'Ability to act independently', which similarly relate to autonomy, and 'Knowing who, when and how to call for help'. Other

important domains of safe patient attributes respectively relate to vigilance, and awareness of safety issues. The table reports no attributes from three domains: commitment to health; confidence; and humanity. It shows that between the rounds the median ratings increased for seven important attributes and decreased for six. The amount of change between the rounds in median ratings is generally small; the greatest difference was a decline in the round two median rating of the importance of a patient having the ability to decide when to follow instructions.

**DISCUSSION**

Safety discourses in medicine emphasize personal attributes of health professionals. However, patients vary in their capability and willingness for active involvement in safety. Therefore this study aimed to determine, from the perspective of key opinion leaders, attributes that patients need when they wish to maximize their capability to partner safely in health care. We have reported 13 such attributes agreed by our panel.

It emphasized the importance of the autonomy of the patient to speak up and choose freely to collaborate or

not for safe health care. These attributes and others describing awareness, knowledge, rationality and responsiveness appear to be cognitive or intellectual. In contrast, important attributes relating to conscientiousness and vigilance seem better described as moral attributes, or attributes of character, despite the relatedness of these two broad domains of patient attributes. One reason for the importance of the intellectual attributes may be that their meaning and importance are less subjective and less contingent on the particular situation presenting in health care.

Does this study ask too much of patients? We believe "no" for two reasons. First, in the tradition of the philosopher David Hume, the capability approach on which we draw is descriptive rather than normative. It does not prescribe requirements of all patients. Respectful of patients, it merely indicates attributes that support their willing capacity to partner safely. Second, we have focused on personal attributes that can enable patients to do the right thing, rather than necessarily do the right thing *for the right reasons*. For example, we have listed honesty as a potential attribute without distinguishing between truth-telling, as a behavior, and

authenticity as a disposition of virtuous character. Despite a small amount of literature on patient virtues,[17-20] a focus on virtue was beyond the scope of this study.

**Strengths and limitations**

This study respects patients as people, whose personal attributes warrant as much as consideration as those of health professionals, for their capacity to maximize the coproduction of safety in health care. In the absence of research evidence for the importance of different patient attributes, our Delphi study allowed systematic, indirect interaction and consensus building between international experts with knowledge of patient safety. All the round 2 ratings received equal consideration in this exercise.

Nevertheless this 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.

Other limitations of the study design include the small size of the Delphi panel. The concept of 'experts' has also been contested when restricted to professionals and applied to patients.[21] In addition, the study lacked a lay voice. Eliciting judgments from experts may, however, add credibility to, and support uptake of, our findings.

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.[22] 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.[23]

We have entered a contentious and underexplored area of research in which difficulties will continue to emerge. There is clearly a need for further research. The next step is to ask patients themselves about the attributes that may enable patients to maximize their capability to partner safely in health care. Also needed are studies that can support understanding of the

findings that describe important patient attributes, and that assess the readiness and willingness of professionals and patients to cultivate these attributes at all levels of health care.[25] Our findings are preliminary but as a starting resource, we believe that they indicate patient attributes whose further investigation and development may help to maximize patients' capability to partner safely in health care.

**Table 1** Attributes of round 2 Delphi panelists

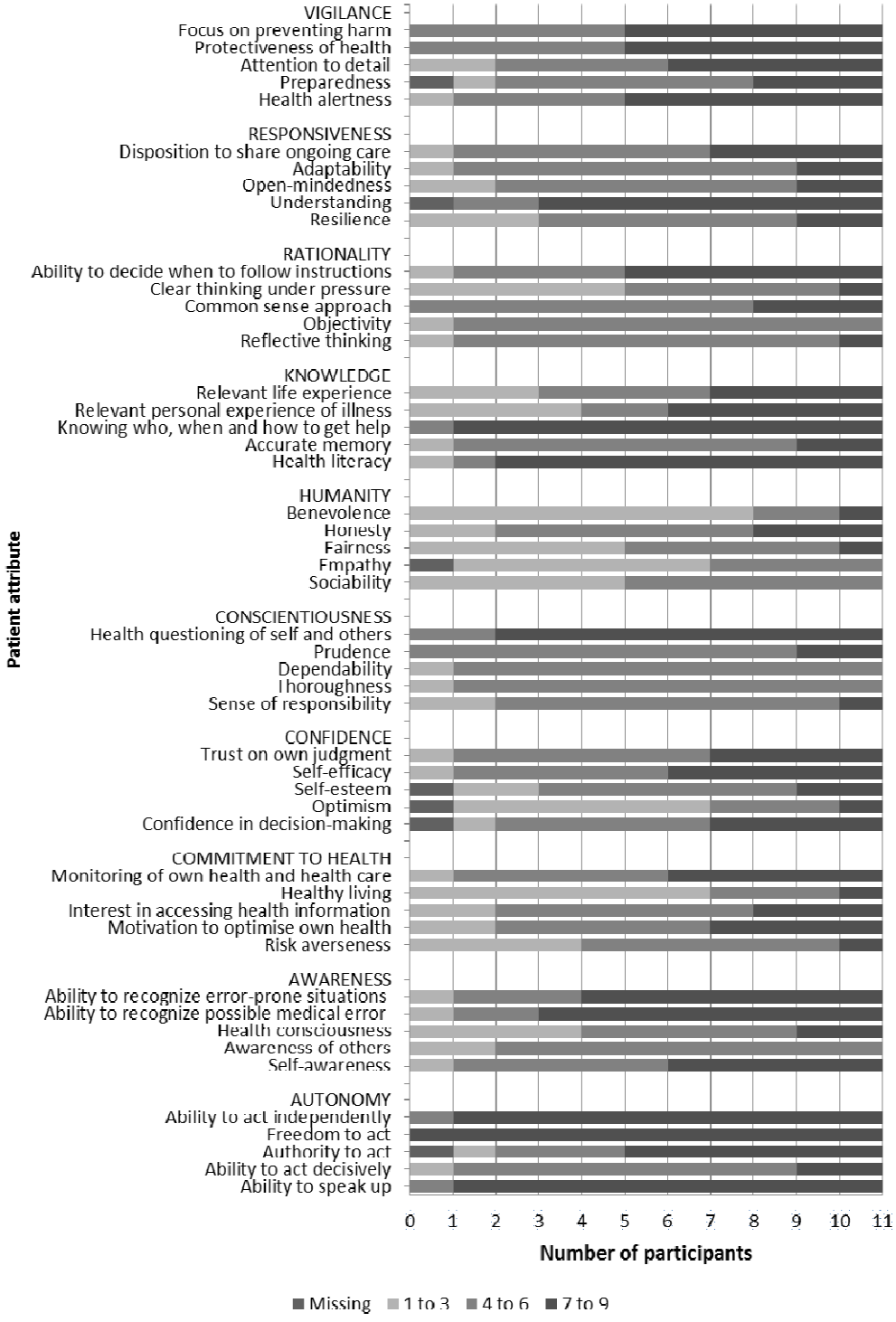
| | |
|---|---|
| **Sex** | |
| Female | 9 |
| Male | 2 |
| **Age group** | |
| 40-49 | 2 |
| 50-59 | 7 |
| 60 or older | 2 |
| **Ethnicity** | |
| White | 11 |
| **Country of residence** | |
| Australia | 1 |
| New Zealand | 2 |
| United Kingdom | 4 |
| Europe | 1 |
| United States | 3 |
| **Safety related work** | |
| 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 |
| | 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

**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.

**REFERENCES**

1. Coulter A, Ellins J. *Patient-focused interventions: a review of the evidence*. London: Health Foundation, 2006.
2. Agency for Healthcare Research and Quality. The role of the patient in safety. Rockville, MD: US Department of Health and Human Services, 2012.
3. Foucault M. *The Birth of the Clinic: An Archaeology of Medical Perception*. New York: Vintage, 1963.

4. Davis R, Sevdalis N, Rosamond J, *et al*. An examination of opportunities for the active patient in improving patient safety. *J Patient Saf* 2012;8:36-43.

5. Davis R, Sevdalis N, Vincent C. Patient involvement in patient safety: How willing are patients to participate? *Qual Saf Health Care* 2011;20:108-14.

6. Schwappach D. Engaging patients as vigilant partners in safety: a systematic review. *Med Care Res Rev* 2010;67:119-48.

7. Long S, Akora S, Moorthy K, *et al*. Qualities and attributes of a safe practitioner: identification of safety skills in healthcare. *Qual Saf Health Care* 2011;20:483-90.

8. Davis R, Jacklin R, Sevdalis N, *et al*. Patient involvement in patient safety: what factors influence patient participation and engagement. *Health Expectations* 2007;10:259-67.

9. Entwistle V, Mello M, Brennan T. Advising patients about patient safety. *Jt Comm J Qual Patient Saf* 2005;31:483-94.

10. Sen A. *Inequality reexamined*. Cambridge, MA: Harvard University Press, 1992.

11. Muir Gray J. *The resourceful patient*. Oxford: eRosetta Press, 2002.
12. Buetow S, Elwyn G. Patient safety and patient error. *Lancet* 2007;369:158-61.
13. Buetow S, Kiata-Holland L, Liew T, Kenealy T, Dovey S, Elwyn G. Patient error: a preliminary taxonomy. *Ann Fam Med* 2009;7:223-31.
14. Buetow S, Elwyn G. Are patients morally responsible for their errors? *J Med Ethics* 2006;32:260-2.
15. Joint Commission on Accreditation of Health Organizations (JCAHO). *Welcome to the Joint Commission Homepage*. Oakbrook Terrace, IL, 2002. http://www.jcaho.org/ (accessed 7 March 2013)
16. Stokes T, Dixon-Woods M, Williams S. Breaking the ceremonial order: patients' and doctors' accounts of removal from a general practitioner's list. *Sociol Health Illness* 2006;28:611-36.
17. Campbell A, Swift T. What does it mean to be a virtuous patient? Virtue from the patient's perspective. *Scot J Healthcare Chaplaincy* 2002;5: 29-35.
18. Shelp E. Courage: a neglected virtue in the patient-physician relationship. *Soc Sci Med* 1984;18:351-60.

19. Lebacqzk K. The virtuous patient. In: Shelp E, ed. *Virtue and medicine*. Dordrecht: Kluwer Academic Publishers, 1985:275-88.

20. Waring D. The virtuous patient: Psychotherapy and the cultivation of character. *Philos, Psychiatr, Psychol* 2012;19:25-35.

21. Prior L. Belief, knowledge and expertise: the emergence of the lay expert in medical sociology. *Sociol Health Illness* 2003;25:41-57.

22. Woudenberg F. An evaluation of Delphi. *Technol Forecast Soc* 1991;40:131-50.

23. Peterson C, Seligman M, eds. *Character strengths and virtues. A handbook and classification*. Oxford: Oxford University Press, 2004.

24. Vincent C, Coulter A. Patient safety: what about the patient? *Qual Saf Health Care* 2002;11:76-80.

25. Buetow S, Elwyn G. The window mirror: a new model of the patient-physician relationship. *Open Med* 2008;2: E20-5.

BMJ open

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



| | |
|---|---|
| Journal: | *BMJ Open* |
| Manuscript ID: | bmjopen-2013-003104.R1 |
| Article Type: | Research |
| Date Submitted by the Author: | 11-Jun-2013 |
| Complete List of Authors: | Buetow, Stephen; University of Auckland, General Practice and Primary Health Care<br>Davis, Rachel; University College London,<br>Callaghan, Kathleen; Z Energy,<br>Dovey, Susan; University of Otago, Department of General Practice and Rural Health |
| Primary Subject Heading: | Patient-centred medicine |
| Secondary Subject Heading: | Patient-centred medicine, Health services research |
| Keywords: | Health & safety < HEALTH SERVICES ADMINISTRATION & MANAGEMENT, Quality in health care < HEALTH SERVICES ADMINISTRATION & MANAGEMENT, MEDICAL ETHICS |
| | |

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

**Authors:** Stephen Buetow,[1] Rachel Davis,[2] Kathleen Callaghan,[3] Susan Dovey.[4]

[1] Department of General Practice and Primary Health Care, University of Auckland, Auckland, New Zealand.

[2] Division of Clinical, Educational and Health Psychology, University College London, London, England.

[3] Z Energy, Auckland, New Zealand.

[4] Department of General Practice and Rural Health, University of Otago, Dunedin, New Zealand.

**Corresponding author:** Dr. Stephen Buetow, Department of General Practice and Primary Health Care, University of Auckland, Private Bag 92019, Auckland Mail Centre, Auckland 1142, New Zealand.

E-mail: s.buetow@auckland.ac.nz Fax: +649-373-7624

**Keywords:** Patient safety, safety management, patient participation.

**Word count:** 2,245; **abstract word count:** 223

**Number of tables:** 2; **Number of figures:** 1

**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 from the corresponding author.

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

**ABSTRACT**

**Objective:** Little is known about which attributes the patients need when they wish to maximize their capability to partner safely in health care. We aimed to identify these attributes from a key opinion leaders' perspective.

**Design:** Delphi study involving indirect, group interaction through a structured two-round survey.

**Setting:** International electronic survey.

**Participants:** 11 (65%) of the 17 invited, internationally recognized experts on patient safety completed the study.

**Outcome measures:** 50 patients attributes agreed by the Delphi panel to contribute maximally to safe health care.

**Results:** The panelists agreed that 13 attributes are important for patients who want to maximize the role of safe partners. These domains relate to: autonomy, awareness, conscientiousness, knowledge, rationality,

responsiveness and vigilance; for example, important attributes of autonomy include the ability to speak up, freedom to act and ability to act independently. Spanning 7 domains, the attributes emphasize intellectual attributes and to a lesser extent moral attributes.

**Conclusions:** Whereas current safety discourses emphasize attributes of professionals, this study identified *patient* attributes that key opinion leaders believe can maximize the capability of patients to partner safely in health care. Further research is needed that asks patients about the attributes they believe are most important.

## 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

attributes that enable *patients* to maximize their capability to serve as safe healthcare partners.

- However, this study was small, individual attributes can be interpreted in different ways, and there is a need to ask patients themselves about the attributes that patients need in order to partner most safely.

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

## INTRODUCTION

Patient safety policies and discourses promote safety initiatives that enable patients (and their families) to be active partners in health care,[1] for example by detecting and reporting possible safety events.[2] This kind of patient involvement respects and empowers patients as people – rather than as dehumanized by-products of the 'medical gaze'[3] – and may improve the quality and outcomes of health care.[1] Research has explored factors that influence the willingness[4 5] and motivation[6] of patients to participate in safety initiatives. Little is known however about which personal attributes of patients are important when they wish to maximize their safe participation in health care.

Long et al.[7] identified attributes and qualities of safe health professionals within complex and imperfect health systems. Davis et al.[8] earlier identified patient- and illness-related factors associated with patient involvement in health safety.[2] And Coulter and Ellins[1] had highlighted the importance of health literacy to

patients' obtaining and understanding basic health information. More widely, however, safety experts have yet to identify and agree explicitly on key personal attributes of safe patients. This lack of agreement persists despite variation in the capacity of patients to act for safety and in the levels of support they need.[9]

We are not assuming here that patients should have certain attributes. Rather, we are suggesting that such attributes can be important resources when patients wish to participate actively as safe partners in health care. This perspective draws on Sen's[10] theory of human capabilities. His capability approach is consistent with the notion that patients' personal attributes are resources, which can define their capabilities for safe functioning in medicine.[11] These capabilities signify feasible opportunities for patients to be safe and act safely. They permit patients to be free agents of change and live the kind of lives they find valuable. However, Sen's capability approach emphasizes the capabilities (ends) themselves whereas we focus on identifying (and weighting) the attributes necessary for capability. Thus, the social environment, on which conversion of some resources for capability may depend, sits outside the

scope of our study; as does the ability to assess the safety that patients have achieved or could achieve.

Judged in terms of opportunity, the expression 'safe partner' may imply that the patient does not err,[12] for example, by not forgetting to take medication,[13] independently of the issue of moral responsibility.[14] Alternatively, it may imply that the patient maximizes the safety of health care by doing 'good' (in the philosophical sense of doing what is important or valuable). For example the patient might report an error to their health provider; this distinction resembles the difference between non-maleficence and beneficence.

For our purpose the first meaning is timid and too restrictive. It is also subsumed within the second meaning that emphasizes the minimum attributes that patients need in order to maximize their capability to partner safely. This perspective resembles the Joint Commission for Accreditation of Health Care Organizations' focus on accreditation standards that are maximally achievable.[15] Thus, we aimed specifically to identify the most important attributes that patients need when they wish to maximize their capability to partner

safely in health care. Rather than reduce the spotlight on the clinician, this approach widens the spotlight to encompass patients as co-producers of safe care according to their capacity and willingness to play that role.

## METHOD

We conducted a Delphi study approved by the University of Auckland Ethics Committee (Ref. 8126, 8 May 2012). The Delphi method elicits expert judgments through indirect group interaction. It is suited here to building formal consensus between participants in the absence of strong research evidence as to the most important attributes defining patients as safe healthcare partners. Our exercise involved geographically isolated experts. Identified through the authors' extensive work experience and professional networks, these individuals are recognized internationally as having and applying in-depth, specialized knowledge and skills in the area of patient safety. We involved these experts in a structured, on-line, two-round survey in late 2012.

Physicians have been reported to typify individual patients as 'good' or not on the basis of their adherence to unwritten rules of conduct.[16] However, from literature

spanning health care and philosophy – specifically in areas including patient safety, patient participation, and ethical theory and principles such as personhood - we identified 10 preliminary domains of five patient attributes. Figure 1 shows these domains and attributes. Each participant was asked to rate each of the 50 attributes, by domain, on a 9-point Likert scale of importance ranging from 1, clearly unimportant, to 9, clearly important; and was given at the end of round 1, an opportunity to comment on the survey questionnaire as a whole and suggest changes to the attributes assessed.

In round two, the participants were sent a questionnaire that revised the wording of some attributes on the basis of feedback received from round one; but that retained the same thematic structure. They also received their own ratings of each first round attribute in relation to the group distribution. In search of group consensus, this statistical feedback was intended to inform the second round ratings of individual attributes; and to reduce 'disagreement', as defined by a median rating in the top tertile (7–9) and two or more panelists rating the attribute in the bottom tertile (1–3). Attributes with a median rating of 7 to 9 on the scale of

importance, without disagreement, make up the study's final list of patient attributes. The amount and direction of change occurring in the ratings between the rounds was assessed by summarizing differences between median ratings, and absolute differences between median ratings.

**RESULTS**

Seventeen safety experts were invited to participate in the study. Thirteen responded, of whom 12 agreed to take part and completed round 1. Table 1 shows that 11 (65%) also completed round 2. Appendix 1 lists these participants and their academic position. All of them were aged at least 40 and nine were men. Eight were residing in the Northern hemisphere. Panelists' reported multiple forms of involvement in safety-related work, including most commonly academic employment and clinical practice.

For each patient attribute, Figure 1 shows the ratings distribution, by tertile (1 to 3, 4 to 6 and 7 to 9), of the 11 round 2 participants. Table 2 lists the 13 patient attributes that the panel agreed are important in enabling patients to contribute maximally to safe health care. These attributes constitute seven of the 10 domains

of attributes included in the round two questionnaire. Highest rated are the attributes relating to autonomy, in particular the 'Ability to speak up'. Next rated highest are the 'Freedom to act' and 'Ability to act independently', which similarly relate to autonomy, and 'Knowing who, when and how to call for help'. Other important domains of safe patient attributes respectively relate to vigilance, and awareness of safety issues. The table reports no attributes from three domains: commitment to health; confidence; and humanity. It shows that between the rounds the median ratings increased for seven important attributes and decreased for six. The amount of change between the rounds in median ratings is generally small; the greatest difference was a decline in the round two median rating of the importance of a patient having the ability to decide when to follow instructions.

## DISCUSSION

Safety discourses in medicine emphasize personal attributes of health professionals. However, patients vary in their capability and willingness for active involvement in safety. Therefore this study aimed to determine, from the perspective of key opinion leaders,

attributes that patients need when they wish to maximize their capability to partner safely in health care. We have reported 13 such attributes agreed by our panel.

It emphasized the importance of the autonomy of the patient to speak up and choose freely to collaborate or not for safe health care. These attributes and others describing awareness, knowledge, rationality and responsiveness appear to be cognitive or intellectual. In contrast, important attributes relating to conscientiousness and vigilance seem better described as moral attributes, or attributes of character, despite the relatedness of these two broad domains of patient attributes. One reason for the importance of the intellectual attributes may be that their meaning and importance are less subjective and less contingent on the particular situation presenting in health care.

Does this study ask too much of patients? We believe "no" for two reasons. First, in the tradition of the philosopher David Hume, the capability approach on which we draw is descriptive rather than normative. It does not prescribe requirements of all patients. Respectful of patients, it merely indicates attributes that support

their willing capability to partner safely. Second, we have focused on personal attributes that can enable patients to do the right thing, rather than necessarily do the right thing *for the right reasons.* For example, we have listed honesty as a potential attribute without distinguishing between truth-telling, as a behavior, and authenticity as a virtuous disposition of character. Despite a small amount of literature on the patient virtues,[17-20] a focus on virtue was beyond the scope of this study.

**Strengths and limitations**

This study respects patients as people, whose personal attributes warrant as much as consideration as those of health professionals, for their capacity to maximize safety in health care. In the absence of research evidence for the importance of different patient attributes, we have conducted a Delphi study. It allowed systematic, indirect interaction between international experts with knowledge of patient safety. All the round 2 ratings received equal consideration in this exercise.

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” recognizes their tendency to be fuzzy at their boundaries and inconsistent in their constitution. They merely

comprise the best-fitting attributes, called prototypes.

The concept of 'experts' has also been contested when restricted to professionals and applied to patients.[21] Our Delphi panel was a small select group. Its opinions may be biased but this concern limits all such exercises. Moreover, although sound inquiry requires self-reflection, the extent to which bias is problematic hinges on "assumptions about objective method".[22] The opinions of the panel are enabling, not least because they command respect, coming from experts who have experience in applying knowledge of human factors to the design and management of safe healthcare systems.

That said, the study lacked a concerted lay voice, although experience as a mental health service user and activist has informed the contributions of one panelist. Her feedback and that of others on the round 1 questionnaire guided changes to, and ratings of, the round 2 questionnaire. There is a lack of literature on attributes of safe patients, with which to compare our findings. However, these findings are consistent with growing interest in goods internal to the practice of medicine, including attributes of safe practitioners.[7]

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.[23] 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.[24]

We have entered a contentious and underexplored area of research in which difficulties will continue to emerge. There is clearly a need for further research. The next step is to ask patients themselves about the attributes that may enable patients to maximize their capability to partner safely in health care. Also needed are studies that can support understanding of the findings that describe important patient attributes, and that assess the readiness and willingness of professionals and patients to cultivate these attributes at all levels of health care. Our findings are preliminary but as a starting resource, we believe that they indicate patient attributes whose further investigation and development may help to maximize the capability of patients to partner safely in health care.

**Table 1** Attributes of round 2 Delphi panelists

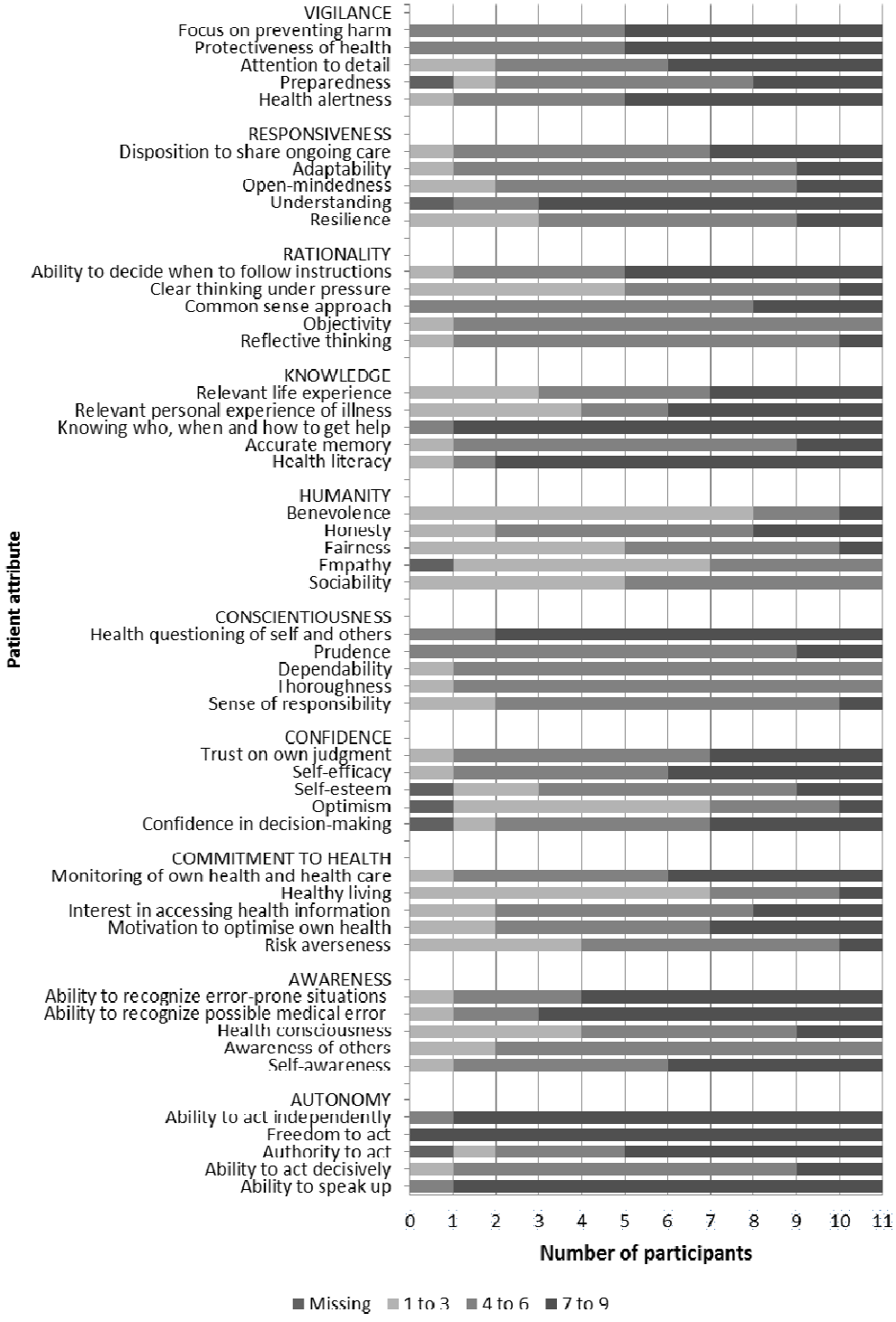
| | |
|---|---|
| **Sex** | |
| Female | 9 |
| Male | 2 |
| **Age group** | |
| 40-49 | 2 |
| 50-59 | 7 |
| 60 or older | 2 |
| **Ethnicity** | |
| White | 11 |
| **Country of residence** | |
| Australia | 1 |
| New Zealand | 2 |
| United Kingdom | 4 |
| Europe | 1 |
| United States | 3 |
| **Safety related work** | |
| 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 |
| | 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

**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.

**REFERENCES**

1. Coulter A, Ellins J. *Patient-focused interventions: a review of the evidence*. London: Health Foundation, 2006.
2. Agency for Healthcare Research and Quality. The role of the patient in safety. Rockville, MD: US Department of Health and Human Services, 2012.
3. Foucault M. *The Birth of the Clinic: An Archaeology of Medical Perception*. New York: Vintage, 1963.
4. Davis R, Sevdalis N, Rosamond J, *et al*. An examination of opportunities for the active patient in improving patient safety. *J Patient Saf* 2012;8:36-43.
5. Davis R, Sevdalis N, Vincent C. Patient involvement in patient safety: How willing are patients to participate? *Qual Saf Health Care* 2011;20:108-14.
6. Schwappach D. Engaging patients as vigilant partners in safety: a systematic review. *Med Care Res Rev* 2010;67:119-48.
7. Long S, Akora S, Moorthy K, *et al*. Qualities and attributes of a safe practitioner: identification of safety skills in healthcare. *Qual Saf Health Care* 2011;20:483-90.

8. Davis R, Jacklin R, Sevdalis N, *et al*. Patient involvement in patient safety: what factors influence patient participation and engagement. *Health Expectations* 2007;10:259-67.

9. Entwistle V, Mello M, Brennan T. Advising patients about patient safety. *Jt Comm J Qual Patient Saf* 2005;31:483-94.

10. Sen A. *Inequality reexamined*. Cambridge, MA: Harvard University Press, 1992.

11. Muir Gray J. *The resourceful patient*. Oxford: eRosetta Press, 2002.

12. Buetow S, Elwyn G. Patient safety and patient error. *Lancet* 2007;369:158-61.

13. Buetow S, Kiata-Holland L, Liew T, Kenealy T, Dovey S, Elwyn G. Patient error: a preliminary taxonomy. *Ann Fam Med* 2009;7:223-31.

14. Buetow S, Elwyn G. Are patients morally responsible for their errors? *J Med Ethics* 2006;32:260-2.

15. Joint Commission on Accreditation of Health Organizations (JCAHO). *Welcome to the Joint Commission Homepage*. Oakbrook Terrace, IL, 2002. http://www.jcaho.org/ (accessed 7 March 2013)

16. Stokes T, Dixon-Woods M, Williams S. Breaking the ceremonial order: patients' and doctors' accounts of

removal from a general practitioner's list. *Sociol Health Illness* 2006;28:611-36.

17. Campbell A, Swift T. What does it mean to be a virtuous patient? Virtue from the patient's perspective. *Scot J Healthcare Chaplaincy* 2002;5: 29-35.
18. Shelp E. Courage: a neglected virtue in the patient-physician relationship. *Soc Sci Med* 1984;18:351-60.
19. Lebacqzk K. The virtuous patient. In: Shelp E, ed. *Virtue and medicine*. Dordrecht: Kluwer Academic Publishers, 1985:275-88.
20. Waring D. The virtuous patient: Psychotherapy and the cultivation of character. *Philos, Psychiatr, Psychol* 2012;19:25-35.
21. Prior L. Belief, knowledge and expertise: the emergence of the lay expert in medical sociology. *Sociol Health Illness* 2003;25:41-57.
22. Schwandt T. *Dictionary of Qualitative Inquiry*. Thousand Oaks: Sage Publications, 2001.
23. Woudenberg F. An evaluation of Delphi. *Technol Forecast Soc* 1991;40:131-50.
24. Peterson C, Seligman M, eds. *Character strengths and virtues. A handbook and classification*. Oxford: Oxford University Press, 2004.

25. Vincent C, Coulter A. Patient safety: what about the patient? *Qual Saf Health Care* 2002;11:76-80.

26. Buetow S, Elwyn G. The window mirror: a new model of the patient-physician relationship. *Open Med* 2008;2: E20-5.

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

**Authors:** Stephen Buetow,[1] Rachel Davis,[2] Kathleen Callaghan,[3] Susan Dovey.[4]

[1] Department of General Practice and Primary Health Care, University of Auckland, Auckland, New Zealand.

[2] Division of Clinical, Educational and Health Psychology, University College London, London, England.

[3] Z Energy, Auckland, New Zealand.

[4] Department of General Practice and Rural Health, University of Otago, Dunedin, New Zealand.

**Corresponding author:** Dr. Stephen Buetow, Department of General Practice and Primary Health Care, University of Auckland, Private Bag 92019, Auckland Mail Centre, Auckland 1142, New Zealand.

E-mail: s.buetow@auckland.ac.nz Fax: +649-373-7624

**Keywords:** Patient safety, safety management, patient participation.

**Word count:** 2,245~~100~~; **abstract word count:** 223

**Number of tables:** 2; **Number of figures:** 1

**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 from the corresponding author.

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

**ABSTRACT**

**Objective:** Little is known about which attributes the patients need when they wish to maximize their capability to partner safely in health care. We aimed to identify these attributes from a key opinion leaders' perspective.

**Design:** Delphi study involving indirect, group interaction through a structured two-round survey.

**Setting:** International electronic survey.

**Participants:** 11 (65%) of the 17 invited, internationally recognized experts on patient safety completed the study.

**Outcome measures:** 50 patients attributes agreed by the Delphi panel to contribute maximally to safe health care.

**Results:** The panelists agreed that 13 attributes are important for patients who want to maximize the role of safe partners. These domains relate to: autonomy, awareness, conscientiousness, knowledge, rationality,

responsiveness and vigilance; for example, important attributes of autonomy include the ability to speak up, freedom to act and ability to act independently. Spanning 7 domains, the attributes emphasize intellectual attributes and to a lesser extent moral attributes.

**Conclusions:** Whereas current safety discourses emphasize attributes of professionals, this study identified *patient* attributes that key opinion leaders believe can maximize the capability of patients to partner safely in health care. Further research is needed that asks patients about the attributes they believe are most important.

## 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

attributes that enable *patients* to maximize their capability to serve as safe healthcare partners.

- However, this study was small, individual attributes can be interpreted in different ways, and there is a need to ask patients themselves about the attributes that patients need in order to partner most safely.

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

**INTRODUCTION**

Patient safety policies and discourses promote safety initiatives that enable patients (and their families) to be active partners in health care,[1] for example by detecting and reporting possible safety events.[2] This kind of patient involvement respects and empowers patients as people – rather than as dehumanized by-products of the 'medical gaze'[3] – and may improve the quality and outcomes of health care.[1] Research has explored factors that influence the willingness[4 5] and motivation[6] of patients to participate in safety initiatives. Little is known however about which personal attributes of patients are important when they wish to maximize their safe participation in health care.

Long et al.[7] identified attributes and qualities of safe health professionals within complex and imperfect health systems. Davis et al.[8] earlier identified patient- and illness-related factors associated with patient involvement in health safety.[2] And Coulter and Ellins[1] had highlighted the importance of health literacy to

patients' obtaining and understanding basic health information. More widely, however, safety experts have yet to identify and agree explicitly on key personal attributes of safe patients. This lack of agreement persists despite variation in the capacity of patients to act for safety and in the levels of support they need.[9]

We are not assuming here that patients should have certain attributes. Rather, we are suggesting that such attributes can be important resources when patients wish to participate actively as safe partners in health care. This perspective draws on Sen's[10] theory of human capabilities. His capability approach is consistent with the notion that patients' personal attributes are resources, which can define their capabilities for safe functioning in medicine.[11] These capabilities signify feasible opportunities for patients to be safe and act safely. They permit patients to be free agents of change and live the kind of lives they find valuable. However, Sen's capability approach emphasizes the capabilities (ends) themselves whereas we focus on identifying (and weighting) the attributes necessary for capability. Thus, the social environment, on which conversion of some resources for capability may depend, sits outside the

scope of our study; as does the ability to assess the safety that patients have achieved or could achieve.

Judged in terms of opportunity, the expression 'safe partner' may imply that the patient does not err,[12] for example, by not forgetting to take medication,[13] independently of the issue of moral responsibility.[14] Alternatively, it may imply that the patient maximizes the safety of health care by doing 'good' (in the philosophical sense of doing what is important or valuable). For example the patient might report an error to their health provider; this distinction resembles the difference between non-maleficence and beneficence.

For our purpose the first meaning is timid and too restrictive. It is also subsumed within the second meaning that emphasizes the minimum attributes that patients need in order to maximize their capability to partner safely. This perspective resembles the Joint Commission for Accreditation of Health Care Organizations' focus on accreditation standards that are maximally achievable.[15] Thus, we aimed specifically to identify the most important attributes that patients need when they wish to maximize their capability to partner

safely in health care. Rather than reduce the spotlight on the clinician, this approach widens the spotlight to encompass patients as co-producers of safe care according to their capacity and willingness to play that role.

**METHOD**

We conducted a Delphi study approved by the University of Auckland Ethics Committee (Ref. 8126, 8 May 2012). The Delphi method elicits expert judgments through indirect group interaction. It is suited here to building formal consensus between participants in the absence of strong research evidence as to the most important attributes defining patients as safe healthcare partners. Our exercise involved geographically isolated experts. Identified through the authors' extensive work experience and professional networks, these individuals ~~, who~~ are recognized internationally as having and applying in-depth, specialized knowledge and skills in the area of patient safety. We~~It~~ involved these experts in a structured, on-~~-~~line, two-round survey in late 2012.

Formatted: Pattern: Clear (White), Tab stops: Not at 0.3"

Physicians have been reported to typify individual patients as 'good' or not on the basis of their adherence

to unwritten rules of conduct.[16] However, from literature spanning health care and philosophy – specifically in areas including patient safety, patient participation, and ethical theory and principles such as personhood –~~,~~ we identified 10 preliminary domains of five patient attributes. ~~for participants to rate in the first round Delphi questionnaire.~~ Figure 1 shows these domains and attributes. Each participant was asked to rate each of the 50 attributes, by domain, on a 9-point Likert scale of importance ranging from 1, clearly unimportant, to 9, clearly important; and was given at ~~in~~ the end of~~second~~ round 1, an opportunity to comment on the survey questionnaire as a whole and ~~revise attributes and~~ suggest changes to the attributes assessed~~new ones.~~ .

In round two, the participants were sent a questionnaire that revised the wording of some attributes on the basis of feedback received from round one; but that retained the same thematic structure. They also received their own ratings of each first round attribute in relation to the group distribution. In search of group consensus, this statistical feedback was intended to inform the second round ratings of individual attributes; and to reduce 'disagreement', as defined by a median

rating in the top tertile (7–9) and two or more panelists rating the attribute in the bottom tertile (1–3). Attributes with a median rating of 7 to 9 on the scale of importance, without disagreement, make up the study's final list of patient attributes. The amount and direction of change occurring in the ratings between the rounds was assessed by summarizing differences between median ratings, and absolute differences between median ratings.

**RESULTS**

Seventeen safety experts were invited to participate in the study. Thirteen responded, of whom 12 agreed to take part and completed round 1. Table 1 shows that 11 (65%) also completed round 2. Appendix 1 lists these participants and their academic position. All of them ~~participants~~ were aged at least 40 and nine were men. Eight were ~~currently~~ residing in the Northern hemisphere. Panelists' reported multiple forms of involvement in safety-related work, including most commonly academic employment and clinical practice.

For each patient attribute, Figure 1 shows the ratings distribution, by tertile (1 to 3, 4 to 6 and 7 to 9), of the 11 round 2 participants. Table 2 lists the 13 patient

attributes that the panel agreed are important in enabling patients to contribute maximally to safe health care. These attributes constitute seven of the 10 domains of attributes included in the round two questionnaire. Highest rated are the attributes relating to autonomy, in particular the 'Ability to speak up'. Next rated highest are the 'Freedom to act' and 'Ability to act independently', which similarly relate to autonomy, and 'Knowing who, when and how to call for help'. Other important domains of safe patient attributes respectively relate to vigilance, and awareness of safety issues. The table reports no attributes from three domains: commitment to health; confidence; and humanity. It shows that between the rounds the median ratings increased for seven important attributes and decreased for six. The amount of change between the rounds in median ratings is generally small; the greatest difference was a decline in the round two median rating of the importance of a patient having the ability to decide when to follow instructions.

**DISCUSSION**

Safety discourses in medicine emphasize personal attributes of health professionals. However, patients

vary in their capability and willingness for active involvement in safety. Therefore this study aimed to determine, from the perspective of key opinion leaders, attributes that patients need when they wish to maximize their capability to partner safely in health care. We have reported 13 such attributes agreed by our panel.

It emphasized the importance of the autonomy of the patient to speak up and choose freely to collaborate or not for safe health care. These attributes and others describing awareness, knowledge, rationality and responsiveness appear to be cognitive or intellectual. In contrast, important attributes relating to conscientiousness and vigilance seem better described as moral attributes, or attributes of character, despite the relatedness of these two broad domains of patient attributes. One reason for the importance of the intellectual attributes may be that their meaning and importance are less subjective and less contingent on the particular situation presenting in health care.

Does this study ask too much of patients? We believe "no" for two reasons. First, in the tradition of the philosopher David Hume, the capability approach on which

we draw is descriptive rather than normative. It does not prescribe requirements of all patients. Respectful of patients, it merely indicates attributes that support their willing capability to partner safely. Second, we have focused on personal attributes that can enable patients to do the right thing, rather than necessarily do the right thing *for the right reasons*. For example, we have listed honesty as a potential attribute without distinguishing between truth-telling, as a behavior, and authenticity as a virtuous disposition of character. Despite a small amount of literature on the patient virtues,[17-20] a focus on virtue was beyond the scope of this study.

**Strengths and limitations**

This study respects patients as people, whose personal attributes warrant as much as consideration as those of health professionals, for their capacity to maximize safety in health care. In the absence of research evidence for the importance of different patient attributes, we have conducted a Delphi study. It allowed systematic, indirect interaction between international experts with knowledge of patient safety. All the round 2 ratings received equal consideration in this exercise.

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"

recognizes their tendency to be fuzzy at their boundaries and inconsistent in their constitution. They merely comprise the best-fitting attributes, called prototypes.

~~Other limitations of the study design include the small size of the Delphi panel.~~ The concept of 'experts' has also been contested when restricted to professionals and applied to patients.[21] Our Delphi panel was a small select group. Its opinions may be biased but this concern limits all such exercises. Moreover, although sound inquiry requires self-reflection, the extent to which bias is problematic hinges on "assumptions about objective method".[22] The opinions of the panel are enabling, not least because they command respect, coming from experts who have experience in applying knowledge of human factors to the design and management of safe healthcare systems.

That said, ~~In addition,~~ the study lacked a concerted lay voice, although ~~. Eliciting judgments from experts~~

~~may, however, add credibility to, and support uptake of, our findings.~~

experience as a mental health service user and activist has informed the contributions of one panelist. Her feedback and that of others on the round 1 questionnaire guided changes to, and ratings of, the round 2 questionnaire. There is a lack of literature on attributes of safe patients, with which to compare our findings. However, these findings are consistent with growing interest in goods internal to the practice of medicine, including attributes of safe practitioners.[7]

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.[23] 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.

Formatted: Tab stops: 0.3", Left

Formatted: Pattern: Clear, Tab stops: Not at 0.3"

Formatted: Font: (Default) Courier New

Formatted: Font: (Default) Courier New

Formatted: Font: (Default) Courier New

Formatted: Font: (Default) Courier New, 12 pt

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.[24]

We have entered a contentious and underexplored area of research in which difficulties will continue to emerge. There is clearly a need for further research. The next step is to ask patients themselves about the attributes that may enable patients to maximize their capability to partner safely in health care. Also needed are studies that can support understanding of the findings that describe important patient attributes, and that assess the readiness and willingness of professionals and patients to cultivate these attributes at all levels of health care. Our findings are

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.

**Table 1** Attributes of round 2 Delphi panelists

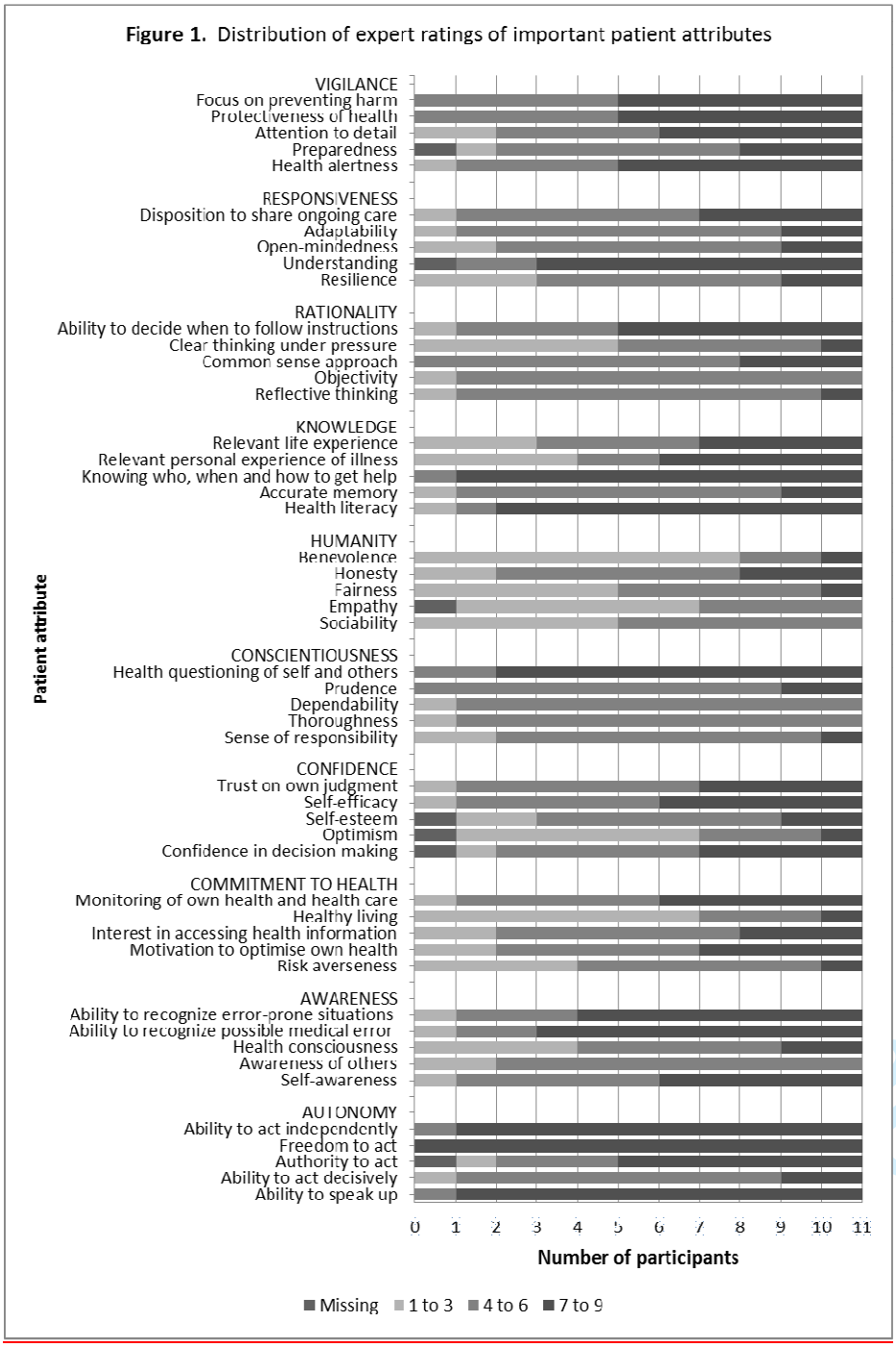
| | |
|---|---|
| **Sex** | |
| Female | 9 |
| Male | 2 |
| **Age group** | |
| 40-49 | 2 |
| 50-59 | 7 |
| 60 or older | 2 |
| **Ethnicity** | |
| White | 11 |
| **Country of residence** | |
| Australia | 1 |
| New Zealand | 2 |
| United Kingdom | 4 |
| Europe | 1 |
| United States | 3 |
| **Safety related work** | |
| 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 |
| | 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

**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.

Formatted: Font: Not Bold
Formatted: Font: Not Bold
Formatted: Font: (Default) Courier New, 12 pt
Formatted: Font: Not Bold
Formatted: Font: (Default) Courier New, 12 pt
Formatted: Font: 12 pt
Formatted: Font: (Default) Courier New, 12 pt
Formatted: Font: Not Bold
Formatted: Font: Not Bold
Formatted: Font: (Default) Courier New, 12 pt
Formatted: Font: (Default) Courier New, 12 pt
Formatted: Font: Bold
Formatted: Font: (Default) Courier New, 12 pt
Formatted: Font: (Default) Courier New, 12 pt
Formatted: Font: Not Bold
Formatted: Font: Not Bold
Formatted: Font: Not Bold
Formatted: Font: (Default) Courier New, 12 pt, Not Bold
Formatted: Font: (Default) Courier New, 12 pt
Formatted: Font: (Default) Courier New, 12 pt, Not Bold
Formatted: Font: (Default) Courier New, 12 pt, Not Bold
Formatted: Font: Not Bold
Formatted: Font: 12 pt
Formatted: Font: Not Bold

## REFERENCES


1. Coulter A, Ellins J. *Patient-focused interventions: a review of the evidence*. London: Health Foundation, 2006.
2. Agency for Healthcare Research and Quality. The role of the patient in safety. Rockville, MD: US Department of Health and Human Services, 2012.
3. Foucault M. *The Birth of the Clinic: An Archaeology of Medical Perception*. New York: Vintage, 1963.
4. Davis R, Sevdalis N, Rosamond J, *et al*. An examination of opportunities for the active patient in improving patient safety. *J Patient Saf* 2012;8:36-43.
5. Davis R, Sevdalis N, Vincent C. Patient involvement in patient safety: How willing are patients to participate? *Qual Saf Health Care* 2011;20:108-14.
6. Schwappach D. Engaging patients as vigilant partners in safety: a systematic review. *Med Care Res Rev* 2010;67:119-48.
7. Long S, Akora S, Moorthy K, *et al*. Qualities and attributes of a safe practitioner: identification of safety skills in healthcare. *Qual Saf Health Care* 2011;20:483-90.

8. Davis R, Jacklin R, Sevdalis N, *et al*. Patient involvement in patient safety: what factors influence patient participation and engagement. *Health Expectations* 2007;10:259-67.
9. Entwistle V, Mello M, Brennan T. Advising patients about patient safety. *Jt Comm J Qual Patient Saf* 2005;31:483-94.
10. Sen A. *Inequality reexamined*. Cambridge, MA: Harvard University Press, 1992.
11. Muir Gray J. *The resourceful patient*. Oxford: eRosetta Press, 2002.
12. Buetow S, Elwyn G. Patient safety and patient error. *Lancet* 2007;369:158-61.
13. Buetow S, Kiata-Holland L, Liew T, Kenealy T, Dovey S, Elwyn G. Patient error: a preliminary taxonomy. *Ann Fam Med* 2009;7:223-31.
14. Buetow S, Elwyn G. Are patients morally responsible for their errors? *J Med Ethics* 2006;32:260-2.
15. Joint Commission on Accreditation of Health Organizations (JCAHO). *Welcome to the Joint Commission Homepage*. Oakbrook Terrace, IL, 2002. http://www.jcaho.org/ (accessed 7 March 2013)
16. Stokes T, Dixon-Woods M, Williams S. Breaking the ceremonial order: patients' and doctors' accounts of

removal from a general practitioner's list. *Sociol Health Illness* 2006;28:611-36.

17. Campbell A, Swift T. What does it mean to be a virtuous patient? Virtue from the patient's perspective. *Scot J Healthcare Chaplaincy* 2002;5: 29-35.

18. Shelp E. Courage: a neglected virtue in the patient-physician relationship. *Soc Sci Med* 1984;18:351-60.

19. Lebacqzk K. The virtuous patient. In: Shelp E, ed. *Virtue and medicine*. Dordrecht: Kluwer Academic Publishers, 1985:275-88.

20. Waring D. The virtuous patient: Psychotherapy and the cultivation of character. *Philos, Psychiatr, Psychol* 2012;19:25-35.

21. Prior L. Belief, knowledge and expertise: the emergence of the lay expert in medical sociology. *Sociol Health Illness* 2003;25:41-57.

22. Schwandt T. *Dictionary of Qualitative Inquiry*. Thousand Oaks: Sage Publications, 2001.

23. Woudenberg F. An evaluation of Delphi. *Technol Forecast Soc* 1991;40:131-50.

24. Peterson C, Seligman M, eds. *Character strengths and virtues. A handbook and classification*. Oxford: Oxford University Press, 2004.

Formatted: Font: (Default) Courier New

Formatted: Line spacing: Double

25. Vincent C, Coulter A. Patient safety: what about the patient? *Qual Saf Health Care* 2002;11:76-80.

26. Buetow S, Elwyn G. The window mirror: a new model of the patient-physician relationship. *Open Med* 2008;2: E20-5.