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A three-talk model for shared decision making: multistage consultation process

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Additional material is published online only. To view please visit the journal online.

Cite this as: *BMJ* 2017;359:j4891
<http://dx.doi.org/10.1136/bmj.j4891>

Accepted: 18 October 2017

ABSTRACT OBJECTIVES

To revise an existing three-talk model for learning how to achieve shared decision making, and to consult with relevant stakeholders to update and obtain wider engagement.

DESIGN

Multistage consultation process.

SETTING

Key informant group, communities of interest, and survey of clinical specialties.

PARTICIPANTS

19 key informants, 153 member responses from multiple communities of interest, and 316 responses to an online survey from medically qualified clinicians from six specialties.

RESULTS

After extended consultation over three iterations, we revised the three-talk model by making changes to one talk category, adding the need to elicit patient goals, providing a clear set of tasks for each talk category, and adding suggested scripts to illustrate each step. A new three-talk model of shared decision making is proposed, based on “team talk,” “option talk,” and “decision talk,” to depict a process of collaboration and deliberation. Team talk places emphasis on the need to provide support to patients when they are made aware of choices, and to elicit their goals as a means of guiding decision making processes. Option talk refers to the task of comparing alternatives, using risk communication principles. Decision talk refers to the task of arriving at decisions that reflect the informed preferences of patients,

guided by the experience and expertise of health professionals.

CONCLUSIONS

The revised three-talk model of shared decision making depicts conversational steps, initiated by providing support when introducing options, followed by strategies to compare and discuss trade-offs, before deliberation based on informed preferences.

Introduction

Shared decision making is a disruptive idea because it demands shifts in the power and control of interactions between clinicians and patients, and this is changing the way medicine is practiced. At the same time views vary widely as to what shared decision making is and how it can be done, which arises in part from the lack of an agreed set of steps to describe the approach.^{1 2} Agreement on a practical model would be an important step to facilitate adoption.³

Instead of assuming that decisions should be guided by scientific consensus about effectiveness, shared decision making proposes that informed preferences—by which is meant what matters to patients and families—should play a major role in decision making processes.⁴ Shared decision making is more than being attentive to patients’ needs or concerns: it represents an important shift in the roles of both patients and clinicians.⁵ Sharing decisions signals an end to the view that “doctors knows best” and the end to making recommendations without considering how these might align with what matters to patients, informed by the best information available from evidence based healthcare. Nevertheless, this change is clearly not easy for clinicians, especially for those whose attitudes are shaped by training, mentorship, and role models who have historically paid less attention to the views and preferences of patients.⁶

The core elements of shared decision making

Despite debates, most descriptions of shared decision making overlap.⁷ At its core, shared decision making is a process in which decisions are made in a collaborative way, where trustworthy information is provided in accessible formats about a set of options, typically in situations where the concerns, personal circumstances, and contexts of patients and their families play a major role in decisions. Shared decision making is easier when options are reasonable, and relevant to clinical situations where it is considered ethical to deliberate carefully.^{8 9} Whether such situations are considered to occur rarely

WHAT IS ALREADY KNOWN ON THIS TOPIC

Definitions and integrated descriptions of shared decision making exist but few attempts have been made to produce a brief model that succinctly portrays the key steps of how to involve patients in healthcare decisions

An earlier version of a three-talk model was found to be helpful, although many believed that there was room for improvement

WHAT THIS STUDY ADDS

This study enabled extensive consultation about a revised three-talk model with key informants, communities of practice, and a sample of medically qualified practitioners from six specialties

The revised model conveys the core principles of shared decision making by proposing easy-to-remember conversational steps, portrayed in a visual format to facilitate use in teaching contexts

or commonly partly depends on the importance given to individual preferences in determining healthcare decisions. Such views are shifting as the scope of personal autonomy and societal expectations change.

Barriers to shared decision making

The idea of shared decision making has been promoted by healthcare policy makers,¹⁰⁻¹² and increasingly in the United States by schemes to incentivize tools that may facilitate shared decision making.¹³ Yet, despite the increase in attention many clinicians find shared decision making difficult to accomplish,¹¹⁴ and most healthcare systems do not view this approach as the standard of care.⁶ Practical problems are often cited as barriers, such as lack of time, poor fit into workflow, and scarce information designed for patient use. A more difficult challenge, however, is the attitude of clinicians, who find it difficult to adopt this approach.⁶

The need to be competent at shared decision making

We do not believe future generations of patients will tolerate important decisions being made without them understanding the key trade-offs between the harms and benefits of interventions.¹⁵ Some patients feel anxious when told about the existence of alternative options and may worry about being abandoned to make decisions alone.¹⁶ However, shared decision making is the solution to this concern, not the cause of it. Shared decision making done well combines different types of expertise—expertise in the world of medicine and expertise in a personal lifeworld where priorities exist.¹⁷ Shared decision making takes into account, among other things, the extent to which patients want involvement in making decisions.¹⁸ Patients may well want to be informed about options without necessarily wanting the entire responsibility for decisions^{19 20}; shared decision making accommodates this method of approaching decisions.

The three-talk model 2012

The initial three-talk model, published in 2012 (fig 1),³ was our attempt to develop agreement around key steps. It was based on our efforts to provide a brief and practical way to train clinicians in busy clinical teams.⁶ Our goal was to help clinicians and, increasingly, those who pay and manage them, to better understand the core processes of shared decision making and how they can be achieved. We wanted a model that could be grasped quickly and was easy to teach. The model illustrates shared decision making in three “speech

acts,”²¹ aligned with a more extensive conceptual model of collaborative deliberation.²²

The three-talk model revisited

Many suggested refinements to the 2012 model and believed that improvements could be made to achieve a wider understanding of shared decision making. The terms “choice talk” and “option talk” were considered too similar. Others found it odd that the model did not mention risk communication or goal setting,²³⁻²⁵ particularly as the idea of coproduction²⁶ gains ground, and reported too little emphasis on exploring patient preferences and context. These critiques also reflected developments in the shared decision making literature. One study argued that illness brings a state of “uncertainty, vulnerability, and loss of power.”²⁷ The researchers advocated shared decision making to enhance or restore a patient’s “autonomous capacity,” to pay more attention to the emotional and relational dimensions of care, and to emphasize the need to support the patient during a process of decision making, given that for most it may well be a novel experience. The 2012 model did not tackle these issues.

To facilitate a wide participation, a three stage consultation process was planned. We describe the process and the resulting revised three-talk model of shared decision making.

Methods

The three step consultation process consisted of commentary by key informants on a revised model, online survey to a wider community of interest to seek views on a proposed revision, and review by medically qualified clinicians in six clinical specialties.

Step 1: Key informant commentary on revised model

The goal of this step was to engage a group of key informants in shared decision making. This group was established by inviting contributors from academia, the authors of the original model,³ and, when missing, a range of countries to ensure representation. The group was given access to a cloud based document in July 2016, divided into three sections: 1, a copy of the original three-talk model (choice, option, and decision talk); 2, revision 1 of the three-talk model (see supplementary appendix figure A); and 3, a draft online survey to be administered in step 2.

Members were invited to add comments and suggest changes to both the model and the draft survey. Both the original model and revision 1 had descriptions of the key elements. When no further comments were forthcoming, one investigator (GE) summarized the suggestions and made changes to revision 1. Revision 2 of the model was included in the proposed survey (step 2). Contributing informants were invited to consider authorship.

Step 2: Distribution of online survey to wider communities of interest

The goal of this step was to gather and react to as many views as possible from individuals, including

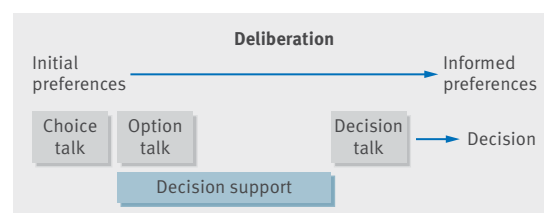


Fig 1 | Three-talk model of shared decision making, 2012³

patients, who are members of communities likely to have an interest in shared decision making. Revision 2 of the model (see supplementary appendix box 1) was inserted into an online questionnaire (Qualtrics), circulated in February 2017, as follows: to the Shared@ Facebook based closed membership group (708 members), a shared decision making listserv (579 members), the Society for Participatory Medicine (about 400 members), a Google group for over-diagnosis (295 members), the evidence based medicine listserv (1500 members), the International Patient Decision Aids Steering Group (112 members), the Shared Decision Making Interest Group of the Society for Medical Decision Making (92 members), and the Health Decision Making Interest Group of the Society of Behavioral Medicine (347 members). We were unable to determine the extent of overlapping membership. One reminder was sent to all groups after two weeks, and the survey closed after four weeks. The results of this step were summarized.

Step 3: Review by medically qualified clinicians in six clinical specialties

The goal of this step was to obtain the views of medically qualified clinicians who are in active practice, unlikely to be engaged in academic discussions about shared decision making, and most likely to meet the model in training contexts. We recognize that other healthcare professionals have opportunities to share decisions with patients. Limiting the sample to one profession was due to budget constraints and because decisions about drugs and clinical procedures are most often made by those with medical qualifications. To obtain these views we included a revised model in a short survey administered by SERMO (a network of 600 000 registered international members in more than 90 specialties). We set a limit of 300 clinician responses, equally divided between the US and UK, and requested quotas of 50 in three surgical specialties (orthopedics, urology, and obstetrics and gynecology) and 50 in three medical specialties (internal medicine, family medicine, pediatrics). We used the results of step 2 to present two modified versions of the model and asked for preference, ease of understanding, helpfulness in clinical practice, and suitability for training purposes.

Analysis plan

Step 1—Three investigators (GE, JS, MAD) summarized the comments according to the issues raised. Revisions were made to the Qualtrics survey document before being administered.

Step 2—One investigator (JS) carried out quantitative analyses using Stata version 13.1. Descriptive statistics were performed to generate a summary of positive and negative opinions on model components. Open text comments were grouped and summarized to indicate concern patterns. After discussions, modified versions were developed (GE, JS, MAD).

Step 3—We used descriptive statistics and χ^2 tests to examine the relation between the respondents' preferred version and other characteristics (sex, years in practice, country, specialty).

Patient involvement

No patients were involved in setting the research question. Patients, by nature of their membership of the various communities of interest, contributed to the development of the model. No patients were asked to advise on interpretation or writing up of results.

Results

Step 1: Commentary on a revised model

Thirty informants were invited, 11 either declined or did not respond, and 19 responded with comments; 11 had clinical qualifications (PKJH, PK, TvdW, PG, ZB, JA, MH, NC, MM, LT, IS), and eight were researchers (LP-P, AL, MAD, HOW, PJB, DF, KT, DG). A linguist (DG) pointed to the proposed “talking” imperative in the step titles, suggesting that supplementary guidance should refer to speech actions where possible. Opinion differed on the use of the term “team talk.” The terms “preference talk,” “goal talk,” and “action talk” were all suggested. Some were concerned that patients do not consider themselves to “be part of a ‘team’ of health professionals,” revealing that it was not clear to respondents that patients were not the target audience for the model. Others preferred the word “team”: for example, one respondent said: “I prefer it, and teach it already . . . the development of a relationship is key to effective shared decision making and the ‘team talk’ part offers that,” and another commented, “I like the word ‘team’ because it brings the patient into the process from the beginning.” A critical comment was the observation that the “new model has lost the essential point, often unrecognized, that there is a decision to be made.” This loss was addressed in subsequent versions.

The term “risk data” generated many concerns that this suggested numerical quantification only. As one researcher commented: “I agree risk is key. But ‘risk data’ doesn’t seem right. ‘Supportive risk communication’ perhaps?” Another said: “I view ‘risk data’ or risk communication as a strategy that is indicated during option talk.” In response, the alternative phrase “risk communication” was used, and the task placed under the term “option talk.” Concerns about over-simplification were made—that it might be misleading to parse a complex dialogue into only three types of talk: “The model can serve various objectives. If it serves an educational goal, then it should be as simple as possible. If it serves an implementation goal, it should recognize the complexity that is experienced in fields such as primary care, rehabilitation, and other settings.” These comments indicated that the goal of the model should be made explicit.

The use of the term “elicit goals” was considered unclear yet at the same time there was agreement that goal setting was a neglected aspect of the previous model: “I like the inclusion of eliciting goals in ‘team talk,’ emphasizing that as a critical initial part of the process.” Awareness of a patients’ goals, in relation to either managing illness, accomplishing daily tasks, or meeting more fundamental milestones was considered important to identify options for the most urgent choice at that moment for the patient.

Table 1 | Step 2: characteristics of respondents to Qualtrics survey

Characteristics	No (%) of respondents (n=153)
Men	58 (38)
Women	93 (61)
Prefer not to say	1 (1)
Role:	
Researcher	65 (42)
Health professional	55 (36)
Patient	7 (5)
Policy maker	5 (3)
Other or prefer not to say	21 (14)
Age (years):	
25-44	54 (35)
45-65	77 (50)
≥65	22 (14)
Education:	
Some college/college graduate	12 (8)
Master's/higher degree	138 (91)
Prefer not to say	2 (1)

*For details see supplementary appendix table A.

One respondent suggested that it would be helpful to clarify the talk terms: “Could we provide a very brief, high level description of each ‘type’ of talk?” Based on a summary of the above comments, revision 2 was developed where descriptions were suggested for each type of talk (see supplementary appendix box 1), more emphasis was placed on providing support, the term “communicate risk and compare alternatives” was used, and the progress arrow to decision was removed, suggesting a less linear process.

Step 2: Distribution of online survey to a wider academic community

Of 269 individuals who opened a public link, 171 completed the first question (64%) and 153 completed every item (57%). Most of those who answered demographic questions were clinicians or researchers (120/153, 78%) and had a master's degree or higher (138/152, 91%). Table 1 presents the respondents' characteristics. Half the respondents were aged between 45 and 65 years. Figure 2 summarizes the responses to questions about the helpfulness of the terms. Of the respondents, 59% (100/170) were previously aware of the model and 61% (103/170)

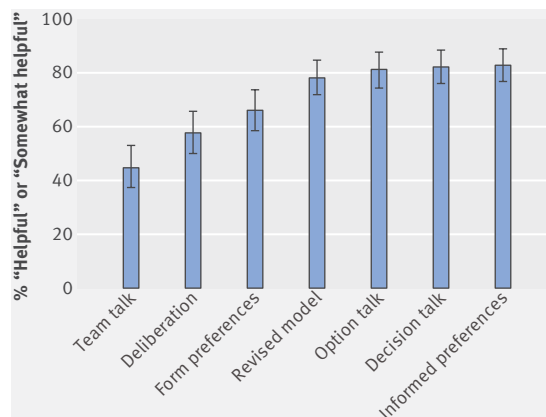


Fig 2 | Step 2 survey showing responses to questions about helpfulness of terms

found it either “very easy” or “somewhat easy” to understand. A majority (134/170, 79%) found the revision helpful or somewhat helpful (for details see supplementary appendix table A).

Qualitative analysis of open ended responses—A total of 130 respondents left at least one text comment (600 unique comments). To summarize, respondents found the model to be an improvement of the previous model. There was general support for the model as a teaching tool, and suggestions for design: “It should be beautiful, like an infographic, with nice colours . . . to capture the eyes, hearts, and minds of healthcare professionals.” However, there were also concerns. Several respondents disliked the implied linear process: “If the model is recursive, might it be better to put the boxes as a circle, or maybe arrows pointing back and forth?” The term “team talk” received the most comments and alternative suggestions, mainly because the intended interpretation of partnership formation was unclear. Opinion was nevertheless split on this issue—for example, “I love the term ‘team talk’ which includes goal setting and establishing support, as this fits nicely into current patient-centered practice.” To illustrate the positive comments, respondents said: “the term ‘team talk’ is helpful because it comprises defining and becoming aware of the different roles and contributions that patients and doctors are expected to make”; “it reinforces the concept of working together to reach a decision and extending beyond the dyad if desired,” and “I like ‘team talk’ better because ‘choice talk’ was a bit confusing alongside the ‘option talk’ term.” Some preferred the original version: “I see no reason to update the model. I have heard many people who find the term ‘team talk’ problematic.”

Some respondents thought that the secondary term “elicit goals” was too vague and that the term “choice awareness” was “too jargonistic.” Several people felt that the phrase “communicate risk” should be replaced by a phrase that conveyed the concept of benefits as well as harms—that is, they did not feel that “risk” would be widely interpreted as describing probability. The depiction of movement from initial preference to informed preference and the term “form preferences” were critiqued: “I don’t think that ‘initial preference’ should be in the ‘decision talk box’, they are present prior to this part of the conversation.” There were also concerns that decision making itself, or deferment, was not explicitly included in the model. Many said that there was a lack of detail about the speech tasks that related to each talk term.

Responses to concerns—To reduce the linear depiction of the model, a graphic was created (GE) that emphasized fluidity between talk steps, with more color and less explicit direction, recognizing that conversations about decisions can be complex and recursive. After this step, we had two potential versions (revisions 3A and 3B), as shown in supplementary appendix figures B and C, which were included in step 3. The term “team talk” was retained because, after consideration of many alternatives, such as “partnership talk,” “team

formation talk,” and “goal talk,” comments overall supported retention of this term. These comments described the vulnerability of patients when confronted with choice, their fear of abandonment, and the angst of facing anticipated regret.²⁷ The “team” term was ultimately considered the best way to briefly convey the need to form a supportive partnership with patients and others, when introducing decisional responsibility. To guide interpretation, we added three short task phrases to clarify the term “team talk.” These were: (a) indicate choice (that is, make patients aware that choices exist), (b) provide support, and (c) identify goals and explore patients’ overall goals in relation to their health issue, especially as decision making relies so much on long term objectives. We removed jargon—for example, the phrasing around risk was modified to “discuss harms and benefits.” Responding to advice to make the model more practical, we added brief descriptions of each talk domain by adding suggested scripts. For example, for team talk we added the phrase “Let’s work as a team to make a decision that suits you best” (GE) and for

decision talk “Tell me what matters most to you for this decision” (HOW).

Step 3: Views of medical practitioners from six specialties

Based on the comments received in step 2, we included revisions 3A and 3B of an updated model in the survey (see supplementary appendix figures B and C). A total of 1470 invitations were sent (867 in the UK and 603 in the US) to obtain 316 (22%) responses: 78% were male and 48% had been in practice between 11 and 20 years (see supplementary appendix B for details). Opinion was split about the preferred versions: 50% (n=158) preferred the less linear depiction, 38% (n=120) preferred the linear version, and 12% (38) did not declare a preference (see supplementary appendix table C for details). For the 278 who had declared a preference, 57% preferred the less linear version. χ^2 test results indicated that there was no statistically significant association between the declared version preference with sex, country, clinical specialty, or time since qualification.

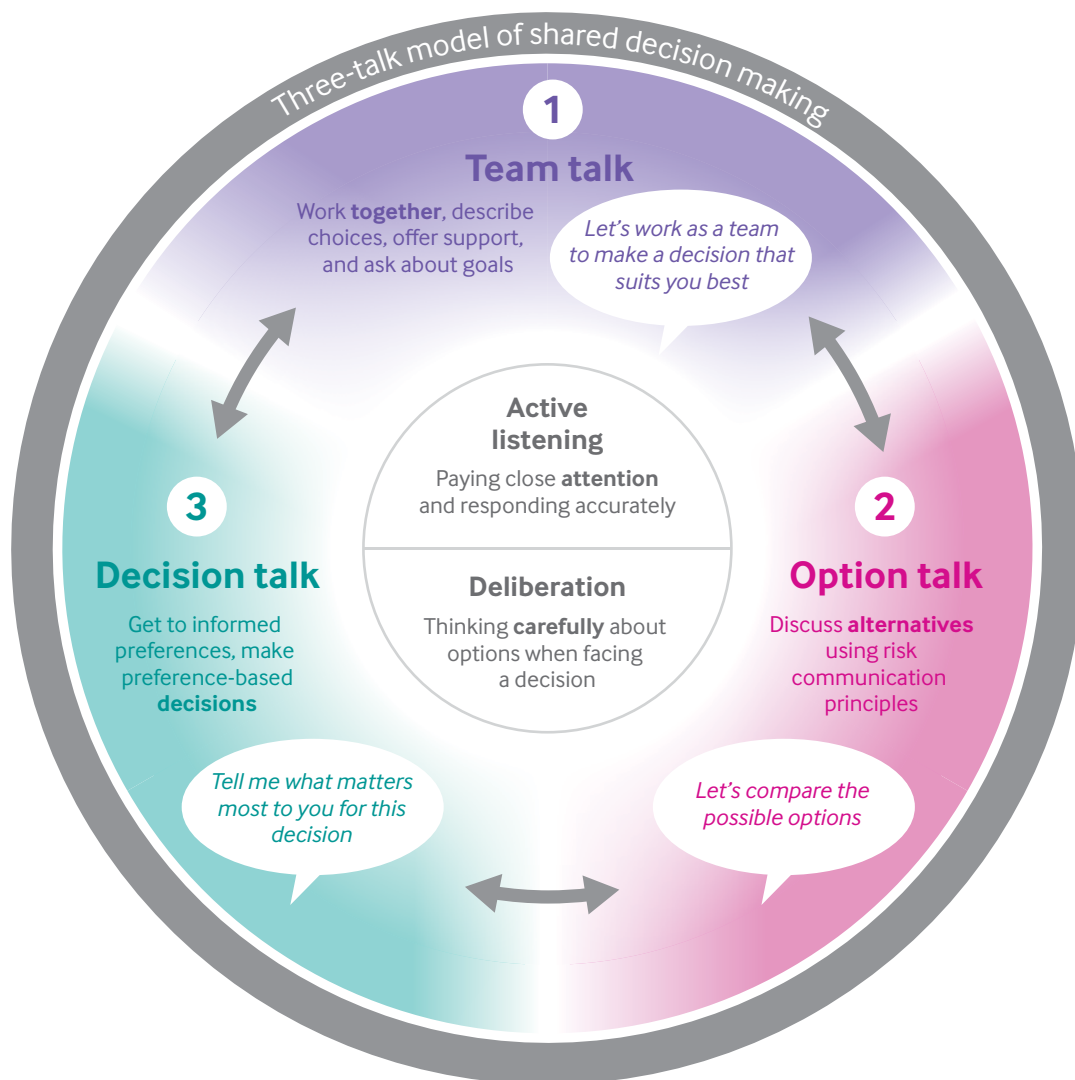


Fig 3 | Three-talk model of shared decision making, 2017

Most but not all 316 respondents agreed or strongly agreed that the three-talk model was “easy to understand” (67%), “could be helpful in clinical practice” (59%), and “could be used to introduce shared decision making to others” (65%). About half of the respondents indicated that the model would require training in its use (54%) (see supplementary appendix table D). Given that the non-linear depiction was favored by a small majority (57%) of clinicians, this version (fig 3) was prepared for adoption by adding superscript numbers to indicate a logical sequence, whereas the graphic indicates that an iterative approach is feasible.

Discussion

The revised three-talk model was viewed positively by the three constituencies consulted, and as a result of the consultation, obtained wide approval, despite being at risk of oversimplifying the complex dynamic interpersonal communication process that is required when undertaking shared decision making into a limited number of discrete steps. Opinions favored a graphic version that suggested the need to view shared decision making as a fluid transition between different kinds of talk (fig 3). Some liked the simplicity of a linear format, especially for those at early stages of their clinical careers. The final version we adopt was developed by using a wide engagement process, and it underwent substantial iterative modification because of comments received over 12 months. Experts in the specialty often hold divergent views about the use of some terms, and it was not possible to accommodate all suggestions while simultaneously meeting the goal of producing a model that is easy to grasp and hopefully memorable. Comments received during peer review led to additional insights, and we added the phrase “active listening” to the model,²⁸ a skill that was presumed but had not been made explicit. The proposed revision is our attempt to pay attention to being visually appealing, conceptually valid, and as self explanatory as possible. The overarching goal was to produce a model that can act as an infographic for clinicians: a primer, a reminder, and a guide to accomplishing shared decision making. We should acknowledge that while it is entirely possible to conduct all three steps in a single encounter, there is often a need to use successive visits to allow for reflection and deliberation, either across time or with different professionals,^{29 30} with or without the use of evidence based tools to support conversations.³¹

Critique of method

Efforts were made to collect a range of views, using a mixture of data collection strategies. Patients are members of many of the lists we contacted, and we are aware that some responded: other input from patients was limited. Health professionals are the target audience of the model, but we concede the need to ensure acceptability by patients. We also recognize the limitation of only seeking the views from medically qualified professionals, and in only two countries.

It is our goal to work with others to translate and, if necessary, adapt the model to other settings. We did not adopt a formal consensus research method because of the need for design decisions that cannot accommodate every viewpoint. We acknowledge that given the potential pool of respondents, we might have expected a higher number of responses. Nevertheless, we obtained more than 150 detailed comments for the second revision, indicating wide participation in the development of the final product and incorporating the perspectives of relevant stakeholders.

Context

Multiple descriptions and definitions of shared decision making exist, as reviewed by Makoul and Clayman in 2006,⁷ and many discussions about what might and might not be consistent with a shared decision making approach. We note that the Agency for Healthcare Research and Quality proposed a five step approach to shared decision making using the acronym SHARE (Seek participation, Help comparison, Assess values, Reach decision, Evaluate decision), which was the basis for a training curriculum.³² We are not aware of other formulations designed to introduce clinicians to the key steps of shared decision making. Shared decision making is sometimes supported by patient decision aids,³³ which often include risk communication formats.³⁴ These would fit naturally in the “option talk” step.

Comparing the proposed update to the 2012 version, the description of the first step in the talk model received the most comments. Opinion was divided, but to reflect recent developments in the shared decision making literature^{23 27} we felt that the term “team talk” best signaled the need to provide support and explore goals. It was also clear that opinion was evenly divided about the linear or less linear depiction. We elected to adopt a version that placed a supportive dialogue as the overall principle for shared decision making, and indicated a typical numerical sequence.

Implications

The high citation count for the 2012 model has indicated substantial use of the model in presentations, training programmes, and workshops using standardized patients. To evaluate this version, we plan to assess its ability to support skill development, with and without additional training, and with and without the use of encounter based patient decision aids. Research will be encouraged in different countries to know whether the model can be translated, adapted, and used in different context and cultures. As others in this consultation process have verified from their experience, operationalizing shared decision making in terms of discrete “talk” elements in a mechanistic way helps learners understand how to translate the idea of shared decision making into practical strategies that promote skill development. By conducting this consultation, we are now able to offer a revised model that is less prescriptive yet still retains a stepwise approach towards improvisation.

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We thank Adrian Edwards, Anne Stiggelbout, Natalie Joseph-Williams, and members of the Preference Laboratory at The Dartmouth Institute for Health Policy and Clinical Practice for comments on this model.

Contributors: GE and MAD conceived and designed the study. GE, MAD, and JS collected, analyzed, and interpreted the data. All authors drafted, critically revised, and gave final approval of the model and article. GE acts as guarantor.

Funding: This work was not supported by an external award.

Competing interests: All authors have completed the ICMJE uniform disclosure form at www.icmje.org/coi_disclosure.pdf and declare: no support from any organization for the submitted work; no financial relationships with any organizations that might have an interest in the submitted work in the previous three years; no other relationships or activities that could appear to have influenced the submitted work.

Ethical approval: This study was approved by the Dartmouth College Committee for the Protection of Human Subjects (STUDY00030085).

Data sharing: No additional data available.

Transparency: The guarantor (GE) affirms that the manuscript is a honest, accurate, and transparent account of the study being reported; that no important aspects of the study have been omitted; and that any discrepancies from the study as planned (and, if relevant, registered) have been explained.

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- Rosenbaum L. The Paternalism Preference--Choosing Unshared Decision Making. *N Engl J Med* 2015;373:589-92.
- Légaré F, Thompson-Leduc P. Twelve myths about shared decision making. *Patient Educ Couns* 2014;96:281-6.
- Elwyn G, Frosch D, Thomson R, et al. Shared decision making: a model for clinical practice. *J Gen Intern Med* 2012;27:1361-7.
- Spatz ES, Krumholz HM, Moulton BW. Prime Time for Shared Decision Making. *JAMA* 2017;317:1309-10.
- Barry MJ, Edgman-Levitan S. Shared decision making--pinnacle of patient-centered care. *N Engl J Med* 2012;366:780-1. doi:10.1056/NEJMp1109283
- Joseph-Williams N, Lloyd A, Edwards A, et al. Implementing shared decision making in the NHS: lessons from the MAGIC programme. *BMJ* 2017;357:j1744.

- Makoul G, Clayman ML. An integrative model of shared decision making in medical encounters. *Patient Educ Couns* 2006;60:301-12. doi:10.1016/j.pec.2005.06.010
- Pollard S, Bansback N, Bryan S. Physician attitudes toward shared decision making: A systematic review. *Patient Educ Couns* 2015;98:1046-57.
- Entwistle VA, Cribb A, Watt IS. Shared decision-making: enhancing the clinical relevance. *J R Soc Med* 2012;105:416-21.
- Härter M, Moumjid N, Cornuz J, et al. Shared decision making in 2017: International accomplishments in policy, research and implementation. *Z Evid Fortbild Qual Gesundheitsw* 2017 May 22;123-4. https://ac-els-cdn-com.dartmouth.idm.oclc.org/S1865921717300995/1-s2.0-S1865921717300995-main.pdf?_tid=d810280e-a543-11e7-b098-00000aacb35f&acdnat=1506709826_75d7963a22724df63e407e11d71a3957
- Senate and House of Representatives. The Patient Protection and Affordable Care Act. Washington, United States of America; 2010. www.hhs.gov/healthcare/rights/law/patient-protection.pdf
- Scotland NHS. Chief Medical Officer for Scotland's Annual Report 2015-16: Realising Realistic Medicine. [cited 2017 Jun 13]. www.gov.scot/Publications/2017/02/3336.
- Center for Medicare & Medicaid Innovation. Beneficiary Engagement and Incentives Models: General Information. [cited 2017 May 4]. <https://innovation.cms.gov/initiatives/Beneficiary-Engagement/>
- Berger Z. Navigating the unknown: shared decision-making in the face of uncertainty. *J Gen Intern Med* 2015;30:675-8.
- Sokol DK. Update on the UK law on consent. *BMJ* 2015;350:h1481.
- Quill TE, Brody H. Physician recommendations and patient autonomy: finding a balance between physician power and patient choice. *Ann Intern Med* 1996;125:763-9. doi:10.7326/0003-4819-125-9-199611010-00010
- Tuckett D, Boulton MG, Olson I, Williams A. *D T, M B, et al. Meetings between experts: an approach to sharing ideas in medical consultations*. Tavistock Publications, 1985.
- Politi MC, Dizon DS, Frosch DL, Kuzemchak MD, Stiggelbout AM. Importance of clarifying patients' desired role in shared decision making to match their level of engagement with their preferences. *BMJ* 2013;347:f7066.
- Schneider C. *The practice of autonomy: patients, doctors, and medical decisions*. Oxford University Press, 1998.
- Landmark AMD, Gulbrandsen PP, Svennevig J. Whose decision? Negotiating epistemic and deontic rights in medical treatment decisions. *J Pragmat* 2015;78:54-69. <https://doi.org/10.1016/j.jpragm.2014.11.007>
- Austin JL. *How to do things with words*. Oxford University Press, 1962.
- Elwyn G, Lloyd A, May C, et al. Collaborative deliberation: a model for patient care. *Patient Educ Couns* 2014;97:158-64. doi:10.1016/j.pec.2014.07.027
- van de Pol MHJ, Fluit CRMG, Lagro J, Slaats YHP, Olde Rikkert MGM, Lagro-Janssen ALM. Expert and patient consensus on a dynamic model for shared decision-making in frail older patients. *Patient Educ Couns* 2016;99:1069-77.
- Reuben DB, Tinetti ME. Goal-oriented patient care--an alternative health outcomes paradigm. *N Engl J Med* 2012;366:777-9.
- Vermunt NPCA, Harmsen M, Elwyn G, et al. A three-goal model for patients with multimorbidity: A qualitative approach. *Health Expect* 2017;00:1-10.
- Batalden M, Batalden P, Margolis P, et al. Coproduction of healthcare service. *BMJ Qual Saf* 2016;25:509-17.
- Gulbrandsen P, Clayman ML, Beach MC, et al. Shared decision-making as an existential journey: Aiming for restored autonomous capacity. *Patient Educ Couns* 2016;99:1505-10.
- Rogers C, Farson R. *Active Listening*. University of Chicago Press, 1957.
- Rapley T. Distributed decision making: the anatomy of decisions-in-action. *Social Health Illn* 2008;30:429-44. doi:10.1111/j.1467-9566.2007.01064.x
- Clayman ML, Gulbrandsen P, Morris MA. A patient in the clinic; a person in the world. Why shared decision making needs to center on the person rather than the medical encounter. *Patient Educ Couns* 2017;100:600-4.
- Montori VM, Kunnean M, Brito JP. Shared Decision Making and Improving Health Care: The Answer Is Not In. *JAMA* 2017;318:617-8.
- Agency for Healthcare Research and Quality. The SHARE Approach. [cited 2017 Jun 13]. www.ahrq.gov/professionals/education/curriculum-tools/shareddecisionmaking/index.html
- Stacey D, Légaré F, Lewis K, et al. Decision aids for people facing health treatment or screening decisions. *Cochrane Database Syst Rev* 2017;4:CD001431.
- Trevena LJ, Zikmund-Fisher BJ, Edwards A, et al. Presenting quantitative information about decision outcomes: a risk communication primer for patient decision aid developers. *BMC Med Inform Decis Mak* 2013;13(Suppl 2):S7.

Supplementary information: Previous versions of the three-talk model and study surveys