

## PSA Testing Decision Quality Instrument User Guide

### I. Purpose:

To measure the extent to which patients are informed, involved in the decision making process and receive treatments that match their goals and preferences.

### II. Versions:

PSA Testing Decision Quality Instrument v1.0, ©2010, updated 2013

Decision Quality Worksheet: For PSA Testing v1.0, ©2010, updated 2013

### III. Timing

The decision quality instrument version is designed to be administered after a decision has been made. Modifications are required (e.g. to instructions and tenses of items) if it is to be used before a decision has been made.

The shorter worksheet version is worded to be used during the decision making process. The knowledge items and goals can be administered at any time, e.g. before or after a visit, before or after a decision aid. The decision process items need to be administered after a provider consult.

### IV. Scoring:

The survey contains three sets of items and results in three scores, a total knowledge score, a concordance score and a decision process score.

**1. Knowledge Score:** The items are located in "Section 2: Facts About PSA Testing." For each fact, a correct response receives one point (see Table 1). Questions with multiple parts (e.g. items 11 and 13 in Table 1) are scaled to total 1 point per item. Missing responses receive 0 points. A total score is calculated for all patients who complete at least half of the items. Total scores are scaled from 0-100%.

**Table 1: Facts** (# indicates items in the brief version)

Question	Correct response
#1. <b>How</b> is the PSA test done?	By a blood sample
2. How will regular PSA tests change the <b>chances that a man will die</b> from prostate cancer?	PSA testing <u>decreases</u> the chances that a man will die from prostate cancer by a very small amount
3. How will regular PSA tests change the <b>chances that a man will find out</b> he has prostate cancer?	PSA testing <u>increases</u> the chances that a man will find out he has prostate cancer
4. A digital rectal exam is a test for prostate cancer where a doctor feels the prostate with his finger.	Usually before they could be found by digital rectal exam

Question	Correct response
<b>At what point</b> can a PSA test find prostate cancer?	
#5. If a PSA test result is higher than normal, <b>what kind of test</b> is done to find out if the man actually has prostate cancer?	A prostate biopsy
6. If 100 men have a PSA result that is higher than normal and get a prostate biopsy, about <b>how many of them will turn out</b> to have prostate cancer?	Less than half
#7. Does having a PSA test result that is higher than normal <b>always</b> mean you have prostate cancer?	No
#8. If the results of a PSA test are normal, <b>is it possible</b> that a man could still have prostate cancer?	Yes
9. Out of every 100 men, about how many do you think will be <b>diagnosed</b> with prostate cancer at some time in their lives?	15-25
10. Out of every 100 men, about how many do you think will <b>die</b> of prostate cancer?	1-5
11a. Does having Inflammatory Bowel Disease increase the chance of getting prostate cancer?	No
11b. Does being African American increase the chance of getting prostate cancer?	Yes
11c. Does having heart disease increase the chance of getting prostate cancer?	No
11d. Does having a brother or a father who has had prostate cancer increase the chance of getting prostate cancer?	Yes
12a. Is radiation a way to manage early stage prostate cancer?	Yes
12b. Is surgery a way to manage early stage prostate cancer?	Yes
12c. Is no immediate treatment of the cancer (watchful waiting or active surveillance) a way to manage early stage prostate cancer?	Yes
12d. Is chemotherapy a way to manage early stage prostate cancer?	No
13a. Is urinary leaking a possible side effect from the treatment of early stage prostate cancer?	Yes
13b. Are bowel problems a possible side effect from the treatment of early stage prostate cancer?	No
13c. Are sexual problems a possible side effect from the treatment of early stage prostate cancer?	Yes
13d. Is hair loss a possible side effect from the treatment of early stage prostate cancer?	No
#14. About <b>how many men</b> with prostate cancer found by a PSA test will eventually die of prostate cancer?	Most will die of something else
15. In general, <b>when</b> is PSA testing for prostate cancer needed?	Only when a man has discussed the benefits and risks with his doctor and decides he wants it

**2. Concordance score:** In “Section 1: What Matters Most To You,” patients rate their goals and concerns on an 11-point importance scale from 0 (not important at all) to 10 (extremely important). These questions and one question about patient’s treatment preference can be used to calculate a concordance score. There are multiple approaches to calculate a concordance score, we describe two below. Note: for those who use the worksheet version, there must be some way to track the treatment that patients received to complete this calculation.

The first is a simple match, and in this direct approach, we use patients’ preferred screening test (assessed with a single time, “What do you want to do to test for prostate cancer?”) and then compare with the screening test received to determine whether they match. Patients who are unsure are not considered to have a screening test that matches. A summary score (0-100%) indicating the percentage of patients who received a screening test that matched their stated preference can be generated.

The second approach uses patients’ ratings of the importance of salient goals and concerns on a 0 to 10 scale in a multiple logistic regression model to generate a predicted probability of treatment. The dependent variable is binary and often collapsed to: Testing versus Non Testing options and the independent variables are the individual goals. Patients with a predicted probability  $>0.5$  and who were tested for prostate cancer or those with a predicted probability  $\leq 0.5$  and who were not tested for prostate cancer, were classified as having treatments matching their goals. A summary score (0-100%) can be generated to reflect the percentage of patients in the sample who received screening tests that matched their goals.

**3. Decision Process Score:** These questions are located in the Decision Quality Instrument in “Section 3: Talking with your Health Care Providers” and in the Decision Quality Worksheet in “Section 3: Making Choices.” Patients are asked about whether they were offered a choice, how much the pros and cons were discussed, and whether the health care provider asked for their preferences. Participants receive 1 point for a response of “yes” or “a lot/some.” The total points are summed and then divided by the total number of items to result in scores from 0-100%, with higher scores indicated a more shared decision making process.

#### **V. Development Process:**

This has been described in detail in Sepucha et al (2008), briefly to generate the survey we:

- Conducted a review of the clinical evidence & of focus groups and interviews with patients to generate a candidate set of facts and goals salient to the decision
- Surveyed a convenience sample of male patients (n=17) and a multidisciplinary group of clinical experts (n=14) to rate the facts and goals for importance, completeness, and accuracy.
- Drafted the instrument and conducted cognitive interviews with male patients who were diagnosed with prostate cancer (n=5) to evaluate items for acceptability and comprehension

## VI. Psychometric Properties:

To date there have been no formal studies that have used this instrument to evaluate the psychometric properties. Other instruments that have followed the same development process have been shown to be acceptable and feasible, with good reliability and validity.

## VII. Appropriate Use

The DQIs are protected by copyright. They are available to use at no cost, provided that you:

- Cite the reference in any questionnaires or publications
- Do not charge for or profit from them
- Do not alter them except for customization for a specific condition and reformatting

## Suggested Citations for the DQIs:

Sepucha KR. PSA Testing Decision Quality Instrument v.1.0. ©Massachusetts General Hospital, 2010, updated 2013.

Sepucha KR. Decision Quality Worksheet: For PSA Testing v.1.0. ©Massachusetts General Hospital, 2010, updated 2013. Downloaded from:

[http://www.massgeneral.org/decisionsciences/research/DQ\\_Instrument\\_List.aspx](http://www.massgeneral.org/decisionsciences/research/DQ_Instrument_List.aspx).

## Suggested Citation of the User Guide:

Sepucha KR and Feibelman S. PSA Testing Decision Quality Instrument User Guide. © 2013.

Available from: <http://www.massgeneral.org/decisionsciences/research/>

## VIII. Selected References

Sepucha K, Fowler F, Mulley A. Policy Support For Patient-Centered Care: The Need For Measurable Improvements In Decision Quality. *Health Affairs*. 2004 Oct 7 [web publication].

Sepucha K, Levin C, Uzogara E, Barry M, O'Connor A, Mulley A. Developing instruments to measure the quality of decisions: Early results for a set of symptom-driven decisions. *Patient Education and Counseling* 2008 73:504-510.

Sepucha K, Stacey D, Clay C, Chang Y, Cosenza C, Dervin G, Dorrwachter J, Feibelman S, Katz JN, Kearing S, Malchau H, Taljaard M, Tomek I, Tugwell P, Levin C. Decision quality instrument for treatment of hip and knee osteoarthritis: a psychometric evaluation. *BMC Musculoskelet Disord*. 2011; 12(1):149.

Sepucha KR, Belkora JK, Chang Y, Cosenza C, Levin CA, Moy B, Partridge A, Lee CN. Measuring decision quality: psychometric evaluation of a new instrument for breast cancer surgery. *BMC Medical Informatics and Decision Making*. 2012; 12: 51 doi: 10.1186/1472-6947-12-51

Sepucha K, Feibelman S, Abdu WA, Clay CF, Cosenza C, Kearing S, Levin CA, Atlas SJ. Psychometric Evaluation of a Decision Quality Instrument for Treatment of Lumbar Herniated Disc. *Spine*. 2012; 37(18):1609-1616.

**IX. Questions or comments?** Please contact us at [decisions@partners.org](mailto:decisions@partners.org) or visit our website at <http://www.massgeneral.org/decisionssciences/research/>.