

## PROMOTING SHARED DECISION MAKING AND INFORMED CHOICE FOR THE EARLY DETECTION OF PROSTATE CANCER: DEVELOPMENT AND EVALUATION OF A GP EDUCATION PROGRAM

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### Abstract

Prostate cancer is the most commonly diagnosed cancer in Australian men. At present, there is no definitive data confirming that widespread screening for prostate cancer will reduce the death rate from this disease. In Australia population based screening for prostate cancer in asymptomatic men is not promoted. However, regardless of public health views on this issue, prostate-specific antigen testing in Australian men is prevalent.

Most guidelines advocate that asymptomatic men seeking prostate-specific antigen testing to detect early prostate cancer should be advised of the pros and cons of testing and make an informed choice. The difficult task of managing consumer demands in the face of conflicting viewpoints and uncertain medico-legal requirements usually falls on general practitioners who until recently have had few resources to assist them.

This paper describes the development and evaluation of a pilot general practitioners education program in Victoria. After attendance, participants' knowledge about prostate-specific antigen testing and level of understanding increased, they were more likely to initiate discussions with patients about the risks and benefits of testing and were more confident in doing so. Participant satisfaction with the program and materials was high. In a health topic characterised by divergent viewpoints, this program provides evidence of the benefits of taking a collaborative and consultative approach and closely linking program development to general practitioners' expressed needs.

Prostate cancer presents a significant public health concern. Cancer of the prostate is the most commonly diagnosed cancer in males. In Australia in 2001 there were 11,191 men diagnosed, while in Victoria, approximately 3000 men are diagnosed with the disease every year. Since 1989, diagnosed rates of prostate cancer cases have more than doubled. This significant rise in prostate cancer incidence is likely to be the result of increased numbers of men undergoing prostate specific antigen (PSA) testing.<sup>1</sup>

There is controversy surrounding the value of population-based screening for prostate cancer with the PSA test. Levels of PSA in the blood only act as an indicator of the disease and there are no definitive data to confirm that PSA testing will reduce prostate cancer mortality.<sup>2,3</sup> However, some research suggests there may be benefit from the early detection and treatment of localised prostate cancer.<sup>4,6</sup> There is also some concern that the quality of men's health may be compromised by not offering individuals the opportunity to be tested. Furthermore, there is support for the position that men should be able to access testing if they are fully informed of the benefits and also the uncertainties related to the efficacy of PSA testing and the risks surrounding treatment outcomes.<sup>7,8</sup> Thus, at this time population-based screening with the PSA test for the early detection of prostate cancer in

asymptomatic men is not recommended by The Cancer Council Australia. This position is supported the Urological Society of Australasia, the Australian Department of Health and Ageing and the Australian Prostate Cancer Collaboration (APCC). On the matter of opportunistic testing, these organisations and most clinical practice guidelines recommend that patients be fully informed of the risks and benefits before making their own choice.<sup>9-11</sup>

Shared decision making is based on patients and health professionals sharing relevant information (eg. about risks, benefits, patient's characteristics and values) and agreeing on decisions. It is most suitable for situations in which there is a diagnostic intervention of low risk and a decision involving two or more acceptable choices.<sup>12</sup> Patient decision aids are "interventions designed to help people make specific and deliberate choices among options by providing information on the options and outcomes relevant to the person's health status".<sup>13</sup> They are usually reserved for circumstances in which patients need to carefully deliberate about the personal value of the benefits and harms of options.<sup>14</sup> Shared decision making and informed choice are currently viewed as the most appropriate approach for men deciding about PSA testing for the purpose of the early detection of prostate cancer and men themselves indicate a preference for shared decision making.<sup>15</sup>

In most cases, the decision to inform men about, and initiate testing, is the responsibility of general practitioners (GPs). Some GPs are likely to perceive this task as complex, demanding and time consuming given that they must consider consumer health demands and uncertain medico-legal requirements among much controversy.<sup>16,17</sup> Although many men express interest in informed choice and shared decision making in regards to PSA testing for the early detection of prostate cancer,<sup>15</sup> others may be tested by their GP as part of routine blood checks without knowledge of the test or the implications of having a positive test. It is vital that men are informed about the advantages and disadvantages of testing and treatments and that they participate in decisions regarding their care. Since GPs are the most likely source of information for PSA testing and subsequent referral, there is also a need for GPs to fully understand screening and treatment issues so that men in their care make informed choices about prostate cancer screening.

The development of workshops up-skilling GPs to provide informed choice for prostate cancer testing was initiated by the Queensland Cancer Fund (QCF) after a 2003 symposium on informed choice organised by the APCC and the National Cancer Control Initiative (NCCI).<sup>18</sup> Recognising the complex health care service environment in which GPs operate, in 2003 the APCC supported the development of a GP education program to facilitate shared decision making and informed choice for men seeking PSA testing for the early detection of prostate cancer. In consultation with this and other medical groups, the QCF developed an education and decision making resource program that aimed to up-skill GPs in order to promote shared decision making within their practices for men considering prostate cancer testing.

With this objective in mind, the program was designed to cover two main areas:

1. The medical context of screening, which includes information about the natural history of the disease; benefits and harm of screening for and treating prostate cancer; use and interpretation of PSA testing; and
2. Shared decision making, which covers the medico-legal requirements of: informed choice; understanding how men make decisions; and effective patient centred education to facilitate informed choice.

An extensive resource kit for participants was also developed, including all relevant brochures and web-based information.

The program was designed to be presented by expert medical professionals in two-and-a-half-hour interactive workshops. The workshop format included two presentations and three case studies that were discussed in small groups, followed by larger group discussions. The medical context of screening and shared decision making presentations, along with the patient show card, aimed to develop participant capabilities in informed choice for prostate cancer testing. A multi-model learning approach was used, consisting of formal presentations, discussion of case scenarios and the role of the interactive decision/summary card in a shared decision making process.

The workshops were accredited for professional development points under the Royal Australian College of General Practitioners' Quality Assurance and Continuing Professional Development Program and the Australian College of Rural and Remote Medicine's Professional Development Program. Workshops were held as part of a pilot study conducted in Queensland by the QCF and in Victoria by The Cancer Council Victoria. In Victoria, three workshops were held in November 2004 in conjunction with Victorian Divisions of General Practice. It is anticipated that this education program will become part of a national strategy to deliver prostate cancer education to GPs.

This report describes findings from three pilot workshops conducted by the Cancer Education Unit of The Cancer Council Victoria.

## Method

Five Victorian Divisions of General Practice (Divisions) hosted three workshops in November 2004 in conjunction with The Cancer Council Victoria; the first workshop was held in partnership with the Northern Division in Preston (3072), the second workshop was held in partnership with Inner Eastern Melbourne Division and Melbourne Division in Hawthorn (3122) and the third workshop was held in partnership with Greater South Eastern Division and Dandenong District Division in Mount Waverley (3149). The five metropolitan divisions participated in the pilot due to their interest in prostate cancer and their capacity to deliver a workshop within the pilot timeframe.

The divisions coordinated the recruitment of GP participants to the workshops using a combination of communication methods including newsletter articles, direct mail and fax streams. GP participants were recruited from within the division boundaries.

The pre and post-workshop questionnaires, developed by Steginga, Pinnock and Baade,<sup>19</sup> assessed confidence, intention to discuss, knowledge and workshop satisfaction. Confidence in and intention to discuss prostate cancer screening with asymptomatic men was assessed using four case-scenario items with five-point Likert scales. Attitude towards discussing the risks and benefits of prostate cancer testing with men was assessed with one item rated on a five-point Likert scale. Knowledge about prostate cancer screening was measured via 17 items consisting of 12 statements to which participants responded true, false, or unsure and four multiple choice questions. One further question was used to assess GPs' level of understanding about the risks and benefits of screening. Finally, participants were requested to complete five questions relating to their behaviours with regard to initiation of discussions about screening, as well as use of resources.

The workshop evaluation questionnaire consisted of a number of questions regarding the usefulness of the workshops, including whether GPs' learning needs had been met. Satisfaction with the workshop's content, delivery and structure were also measured. Open-ended questions were included to give participants the opportunity to comment about ways the workshop could be modified or improved. The resource cards

**Table 1:** Descriptive data for confidence about and intention to initiate a discussion about testing for prostate cancer (N = 28)

| Intention to initiate a discussion about testing for a 45-year-old asymptomatic man with a family history <sup>a</sup> |                    |           |                    |         | Intention to initiate a discussion about testing for a 55-year-old asymptomatic man <sup>a</sup> |          |                    |           |                    |         |    |
|--|--------------------|-----------|--------------------|---------|--|----------|--------------------|-----------|--------------------|---------|----|
| Pre test   |                    | Post test |                    | t value | df   | Pre test |                    | Post test |                    | t value | df |
| Mean   | Standard deviation | Mean      | Standard deviation | -2.00   | 27   | Mean     | Standard deviation | Mean      | Standard deviation | -2.74*  | 27 |
| 4.57   | 0.79               | 4.79      | 0.50               |         |  | 3.61     | 1.40               | 4.14      | 1.15               |         |    |
| Confidence in discussing testing for a 45-year-old asymptomatic man with a family history <sup>b</sup>                 |                    |           |                    |         | Confidence in discussing testing for a 55-year-old asymptomatic man <sup>b</sup>                 |          |                    |           |                    |         |    |
| Pre test   |                    | Post test |                    | t value | df   | Pre test |                    | Post test |                    | t value | df |
| Mean   | Standard deviation | Mean      | Standard deviation | -1.72   | 27   | Mean     | Standard deviation | Mean      | Standard deviation | -3.15** | 27 |
| 4.36   | 0.73               | 4.54      | 0.69               |         |  | 3.89     | 0.96               | 4.46      | 0.58               |         |    |

Note: <sup>a</sup> – intention to initiate a discussion about testing was assessed on a scale from: 1, not at all likely to 3, somewhat likely, to 5, very likely. <sup>b</sup> – confidence in discussing testing was assessed on a scale from: 1, not at all confident to 3, somewhat confident, to 5, very confident.

\* p < .05  
 \*\* p < .01

were evaluated using nine items that included both multiple choice and open-ended questions. Finally, the resource kits for GPs were also evaluated to assess their usefulness in practice.

An evaluation strategy has been built into the program and includes pre and post-workshop questionnaires to assess the effectiveness of the program in improving GP knowledge about the benefits and risks of testing and their confidence in discussing this with men. GP satisfaction with the delivery, structure and content of the workshops and resources was also assessed and we observed any impact of the program on the likelihood that GPs would opportunistically discuss testing with men.

A single arm pre-post test design was used to evaluate the effectiveness of the three Victorian workshops in improving participants' knowledge about prostate cancer testing and their confidence in discussing testing with men. We also assessed self-reported intention to discuss testing opportunistically. Data regarding knowledge and confidence in and intention to discuss prostate cancer testing with asymptomatic men were collected via self-administered mailed questionnaires that participants were requested to complete prior to attending the workshops and four weeks after the workshops. At the conclusion of each workshop, participants were also requested to complete a workshop evaluation form assessing program structure and delivery and an evaluation of the resource cards used during the workshop.

## Results

In total, 70 GPs attended the three workshops. There were 42 (60%) participants who completed the pre-test questionnaire, which measured confidence in and intention to discuss prostate cancer screening with asymptomatic men. Twenty-eight (40%) participants completed the post-test questionnaire, which was designed to assess change in confidence and intention

to discuss prostate cancer screening issues with asymptomatic men four weeks after workshop participation. The workshop evaluation was completed by 63 (90%) participants who attended the workshops and the resource evaluation was completed by 59 (84%) participants.

Before attending the workshop, participants thought they had 'some' to a 'good' level of understanding about the benefits and risks of prostate cancer screening in asymptomatic men (M=3.56, SD=.91). Scores on the actual knowledge scale suggested that some GPs overestimated their knowledge about prostate cancer, with the average score on this scale being around the mid-point (M=8.26, SD=2.58 of a possible total score of 17). Following workshop attendance participants' knowledge scores significantly improved (t(27)=-4.17, P<.01), as did their self-rating of understanding about the benefits and risks of prostate cancer (t(25)=-4.80, p<.01). Participants' rating of the importance of making men aware of the benefits and risks of prostate cancer testing did not change (t(27)=.21, p>.05).

Participants' confidence in and intention to discuss testing with an asymptomatic man significantly increased after attendance. Confidence in and intention to discuss testing with an asymptomatic man with a family history also increased after attendance but did not reach statistical significance. Mean scores and standard deviations for these items from the pre and post-workshop questionnaire are presented in Table 1.

Fifty-nine participants rated the interactive decision card and the summary reference card. The majority of participants (61%) rated the decision card as 'easy' or 'very easy' to follow and 25% reported it as 'somewhat easy'. In line with this pattern of responses, 59% of participants reported that the card would be 'useful' or 'very useful' for their general practice and 29% thought it would be 'somewhat useful'. For the summary reference cards, two-thirds (66%) of participants rated the summary reference card as 'easy' or 'very easy' to

follow and 29% reported that it was 'somewhat easy' to follow. Consistent with this finding, 63% of participants reported that the summary reference card would be 'useful' or 'very useful' for their general practice and 34% thought it would be 'somewhat useful'. Eighty six per cent rated the resource kits as 'good' or 'excellent'.

Participants rated their satisfaction with a number of aspects of the workshop (Table 2). Overall most participants rated the various aspects as 'good' or 'excellent'.

Overall, 59% of participants reported that the workshop was 'very useful' or 'extremely useful' and a further 32% rated it as 'generally useful'. Only 5% of participants reported that the workshop was 'a little useful' or 'not at all useful'. The vast majority of participants (89%) said they learned something new at the workshop and 92% said that they would recommend the workshop to other GPs. The majority of participants (64%) reported that 'most' or 'all' of what was learned in the workshop would lead to an improvement in the quality of care provided to patients. A further 30% said that 'some' of what was learned in the workshop would lead to an improvement in the quality of care provided to patients. Similarly, 67% of participants reported that they would try to implement 'most' or 'all' of what was learned in the workshop into their practice. A further 30% said they would try to implement 'some' of what was learned in the workshop into their practice.

A brief qualitative analysis of responses to the open-ended questions revealed that a small proportion of participants (14%) said that there were areas either not covered or not covered in enough detail. Most of the areas listed by participants related to the treatment of prostate cancer. Three participants mentioned screening issues and one mentioned the patient's psychological response. Many participants anticipated that there would be some barriers to implementing the knowledge obtained in the workshop. The most commonly reported barriers were lack of consultation time and patient understanding and attitudes towards prostate cancer testing. Other barriers that were less commonly

**Table 2:** *Participants' satisfaction ratings with various aspects of the workshop*

|                                 | Good/Excellent |      | Fair/Poor |     |
|---------------------------------|----------------|------|-----------|-----|
|                                 | n              | %    | n         | %   |
| Speaker (medical content)       | 60             | 95.2 | –         | –   |
| Speaker (communication content) | 55             | 87.3 | 5         | 7.9 |
| Workshop content                | 56             | 88.9 | 2         | 3.2 |
| Relevance to practice           | 56             | 88.9 | 3         | 4.8 |
| Length                          | 54             | 85.7 | 5         | 7.9 |
| Timing                          | 54             | 85.7 | 4         | 6.3 |
| Presentation slides             | 57             | 90.5 | 2         | 3.2 |
| GP resource kits                | 54             | 85.7 | 2         | 3.2 |
| Discussion time                 | 53             | 84.1 | 3         | 4.8 |

Note: N=63; Due to missing data percentages may not equal 100.

mentioned included the large volume of relevant information, patient follow-up, the GP's own philosophy and being female, particularly in relation to digital rectal examination. Some participants suggested ways the program could be improved. The most common suggestions related to the workshop content, such as including a brief overview of prostate cancer issues and providing more case studies. A small number of participants commented on the length of the program.

## Discussion

The findings from this evaluation revealed that physician knowledge about the potential risks and benefits of prostate cancer testing increased significantly after attending the workshop. Physician confidence in discussing prostate cancer testing with asymptomatic men over 50 years increased significantly after attending the workshop, as did their intention to discuss testing. There were also small but non-significant increases in physician confidence and intention to discuss prostate cancer testing with asymptomatic men who were younger than 50 years but had a significant family history of prostate cancer.

Overall, the program was well received by GPs and it appeared to meet their needs on a number of levels. A possible explanation for this can be attributed to the delivery of a multi-model learning approach. The results showed that the majority of participants reported that it was very or extremely useful and a further one-third thought the program was generally useful. When participants rated their satisfaction with a number of aspects of the program (including the speaker, workshop content, relevance, length, timing, presentation slides, GP resource kit and discussion time), the vast majority rated each aspect as good or excellent. In line with their satisfaction ratings, almost all participants said that they would recommend the workshop to other GPs. Another encouraging finding was that the majority of participants thought that the information they learned through the workshop would lead to an improvement in the quality of care they provided to patients and that they would implement most or all of what they had learned.

In general, the results for the interactive decision card and the summary reference card were encouraging with the vast majority finding the resources at least somewhat easy to use and at least somewhat useful. While most participants reported that both resources were easy to follow and that they would be useful for their general practice, a small proportion did not agree. These findings suggest that the interactive decision card and summary reference card may need more time dedicated to them in the workshop or they may need to be revised to make them even easier to use. As a consequence of the findings from these workshops, the interactive decision card and the summary reference card have been recently updated.

## Conclusions

In conclusion, the workshops were well received by GPs and were associated with positive changes in knowledge and confidence about shared decision making and informed choice in relation to prostate cancer testing. The potential impact of the education on opportunistic testing was not explored. In this regard, the program did not advocate for or against testing, but rather aimed to educate GPs about the

relevant issues and the need for shared decision making and informed choice. Feedback from the participants suggested that they were very satisfied with the workshop content and the way it was presented. Furthermore, participants reported that the resources provided within the workshop were easy to follow and appropriate for their practice. Nevertheless, there were some issues provided by participants that should be considered in order to improve the workshop. One of the key barriers to using the skills and resources provided in the workshop is the lack of consultation time. Strategies for GPs to use the skills and resources within the time constraints need to be considered. This is an area of further research and will need both changes in the GP environment and new government preventative health strategies. The findings also highlight some aspects of the workshop that might be further developed, such as providing more time for additional practical case studies and giving an initial brief overview of prostate cancer screening and treatment issues.

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A PDF version of the GP/Patient Show Card and GP Reference Card can be downloaded from the NCCI website ([www.ncci.org.au](http://www.ncci.org.au)) or from the *Information for health professionals* page on The Cancer Council Australia's website ([www.cancer.org.au](http://www.cancer.org.au)). □

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## References

1. Australian Institute of Health and Welfare. Cancer in Australia 2001. Canberra: Australian Institute of Health and Welfare, 2004.
2. Coldman AJ, Phillips N, and Pickles TA. Trends in prostate cancer incidence and mortality: An analysis of mortality change by screening intensity. *CMJA*. 2003; 168(1): 31-35.
3. Waxman J and Phandha H. Do we know what's best for prostate cancer? *EJC* 1996; 32(9): 1455-1456.
4. Baade PD, Coory MD, Aitken JF. International trends in prostate cancer mortality: the decrease is continuing and spreading. *Cancer Causes Control* 2004; 15: 237-241.
5. Bill-Axelson A, Holmberg L, Ruutu M, et al. Radical prostatectomy versus waiting in early prostate cancer. *New Engl J Med* 2005; 352(19): 1977-1984.
6. Johansson J, Andren O, Andersson S, et al. Natural risk and history of early, localized prostate cancer. *JAMA* 2004; 291: 2713-2719.
7. Talcott JA. What patients should be told before agreeing to a blood test that could change their lives. *Urology* 2003; 61(1): 7-9.
8. Wilkinson S and Chodak G. Informed consent for prostate-specific antigen screening. *Urology* 2003; 61(1): 2-4.
9. Australian Health Technology Advisory Committee. Prostate Cancer Screening. 1996, Canberra: AGPS.
10. Coley CM, Barry MJ, and Mulley AG. Clinical guidelines part III: Screening for prostate cancer. *Ann Intern Med Online* 1997; 126: 480-484.
11. Harris R and Lohr KN. Screening for prostate cancer: An update of the evidence for the U.S. Preventive Services Task Force. *Ann Intern Med Online* 2002; 137: 917-29.
12. Whitney SN, McGuire AL, McCullough LB. A typology of shared decision making, informed consent, and simple consent. *Ann Intern Med* 2004; 140: 54-9.
13. O'Connor AM, Fiset V, DeGrasse C, et al. Decision aids for patients considering options affecting cancer outcomes: evidence of efficacy and policy implications. *J. Natl. Cancer Inst Monogr* 1999: 67-80.
14. O'Connor A. Using patient aids to promote evidence-based decision making. *EBM* 2001; 6: 100-102.
15. Woolf SH, Krist AH, Johnson RE, et al. Unwanted control: How patients in the primary care setting decide about screening for prostate cancer. *Patient Educ Couns*. 2005; 56: 116-124
16. Bird S. Discussing benefits and risks with patients PSA testing. *Aust Fam Physician* 2004; 33:(4): 266-267.
17. Dunn IB, Kirk D. Legal pitfalls in the diagnosis of prostate cancer. *BJU International* 2000; 86: 304-307.
18. Pinnock C. PSA testing in general practice: can we do more now? *MJA* 2004; 180: 379-381.
19. Steginga S, Pinnock C, Baade P, et al. An educational workshop on the early detection of prostate cancer: A before-after evaluation. *Aust Fam Physician* 2005; 34:889-891.