



RACGP training registrars' perceptions and practice of prostate cancer screening

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AIM

To examine the perceptions, knowledge and reported intended practice of prostate cancer screening by general practice registrars.

METHOD

A descriptive study using a mail survey of all Victorian general practice registrars and supplementary interviews.

RESULTS

The response rate to the questionnaire was 74% (n=148). The reported correct answer for the sensitivity and specificity of digital rectal examination (DRE) and prostate specific antigen (PSA) test was 48% and 52%, and 30% and 35% respectively. Responses to questions about registrar's knowledge of screening guidelines indicated respondents believe that men aged 50 years and over should undergo annual screening. Over 50% of respondents were not familiar with any Australian guidelines for prostate cancer screening. However, reported intended practice was consistent with guidelines, with 73% of respondents indicating they would not perform a PSA test as part of a 55 year old man's check up. Qualitative interviews highlighted the importance of The Royal Australian College of General Practitioners supervisor, peer learning at release sessions, and study group preparation for college examination in their clinical decision making. Online learning and access were seen to be potential areas for further development.

DISCUSSION

While knowledge about the characteristics of tests for prostate cancer and Australian prostate screening guidelines is poor, most registrars practice according to current guidelines. The potential of online learning and increased access to the internet needs further study.

Prostate cancer is the most common form of cancer in men over 55 years of age and is the second leading cause of cancer deaths in males. The role of prostate specific antigen (PSA) testing in the early detection of prostate cancer is controversial. In Australia, evidence based guidelines from The Royal Australian College of General Practitioners (RACGP)¹ and the Australian Health Technology Advisory Committee 1996² recommend that no widespread prostate cancer screening of men should be done. However, the American Urological Association³ recommends prostate cancer screening after informed consent for men who are likely to live for more than another 10 years.

A study of the views and beliefs of Australian general practitioners showed a low level of knowledge of guidelines, and clinical actions contrary to the RACGP and NHMRC guidelines, with a tendency to over perform PSA test and digital rectal examination (DRE).⁴ Most PSA tests (81%) are ordered by GPs, the majority of which are 'one off' tests at a cost of more than AUD10 million per annum.⁵

The accuracy of the PSA test and DRE is wide. A Cochrane review indicates that a positive DRE and PSA test has positive predictive values of 22–29%, and 17–28% for the range of 4–10 ng/mL respectively, and when combined a positive DRE and PSA test improved the positive predictive value to 32–49%.⁶ There is at least a 1 in 10 chance of a false negative result with PSA testing.⁷ In light of this, are general practice registrars better equipped to deal with this controversial area?

Method

We used a descriptive study to develop a

questionnaire adapted from similar studies. General practice registrars and academic general practice staff reviewed draft version questionnaires. Refinements were undertaken after pilot testing. The questionnaire was mailed to all RACGP Victorian registrars in a supervised general practice attachment. It consisted of 17 questions. We tested their knowledge about accuracies of the PSA test and DRE examination. We included the statement: 'From your knowledge of sensitivity: that a positive result is likely to be a true positive; and specificity: that a negative result is likely to be a true negative' to remind registrars about the terms sensitivity and specificity. A clinical scenario was given to ascertain the practice belief of registrars. The case involved a well 55 year old man presenting to the clinic for a check up. The patient was asymptomatic with no family history of prostate cancer.

We sent a reminder notice and second mail out to increase the response rate. We tested the significance of any differences by Pearson's chi-squared statistic or Fisher's exact test. Further evaluation was undertaken through a qualitative arm with semistructured interviews of 10 advanced training registrars on a peer release session.

Results

Out of a total of 205 questionnaires sent, 148 responses were returned (*Table 1*). The correct answer for DRE and PSA sensitivity (ie. between 30–70%) was given by 48% and 52% of respondents, and for DRE and PSA specificity (ie. between 30–70%) by 30% and 35% of respondents. Most (134 registrars, 91%) were correct in saying that combining both DRE and the PSA test improved the

| | | n (%) | | | |
|--------------------------------------|--------------|---------|----------|---------|--------------------|
| Sex | Male | 52 (35) | Female | 96 (65) | |
| Training region | Metropolitan | 92 (62) | Rural | 56 (38) | |
| Stage of training | Basic | 32 (22) | Advanced | 56 (38) | Subsequent 60 (40) |
| Number of doctors in practice | 2 | 11 (7) | 3 | 18 (12) | 4 or more 119 (81) |

| | n (%) |
|----------------------|---------|
| The RACGP guidelines | 47 (32) |
| NHMRC guidelines | 20 (14) |
| Other guidelines | 5 (3) |
| Not aware | 76 (51) |

diagnosis of prostate cancer.

Seventeen registrars (11%) answered correctly that the current NHMRC guidelines recommend no DRE screening, and 52 (35%) answered correctly that PSA screening is also not recommended. Most thought the guidelines recommend that screening of prostate cancer with DRE and PSA testing (80% and 51% respectively) should begin after 50 years of age.

Intended practice for a hypothetical 55 year old man attending for a check up showed that most registrars would perform a cholesterol and glucose test, (96% and 91% respectively), but for PSA testing as a screening tool, only 27% would. We asked registrars about their knowledge of risk factors for prostate cancer; 92% and 84% reported age and family history as important risk factors. About half the registrars (72, 49%) were aware that prostate cancer screening guidelines existed, 47 knew about the RACGP guidelines, 20 stated the NHMRC guidelines and 5 other guidelines (Table 2). Only 59 registrars reported frequently using them in clinical practice.

We compared responses from registrars who used the guidelines to those who did not. Registrars who used the guidelines did not have better knowledge of the accuracies of the PSA test and DRE. Knowledge of guideline information was similar in both groups. There was no statistical significance between the usage of guidelines and the reported use of the PSA test in a health check up. The length of training revealed a statistical significance in guideline use while in advanced/subsequent training ($p=0.003$) (Table 3). In addition, improved knowledge of guide-

| | n (%) | | |
|--------------------------|---------------|------------------|-----------------|
| | Guideline use | Nonguideline use | p value |
| Training term | | | |
| Basic term | 5 (8) | 27 (30) | |
| Advanced term | 24 (41) | 32 (36) | |
| Subsequent term | 30 (51) | 30 (34) | $p=0.003$ |
| Area of training | | | |
| Rural | 22 (37) | 34 (38) | |
| Metropolitan | 37 (63) | 55 (62) | not significant |
| GPs in practice | | | |
| 2 doctors | 6 (10) | 5 (6) | |
| 3 doctors | 14 (24) | 4 (4) | |
| 4 or more doctors | 39 (66) | 80 (90) | $p=0.001$ |

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| Problems with medical guidelines |
| • Inflexibility |
| • Becoming outdated |
| Access to guidelines |
| • Lack of easy access |
| • Hardcopy version difficult to use but increase usage of online resources |
| • Some important guidelines (eg. cholesterol and diabetic screening) usually memorised to combat access issues |
| Prostate cancer screening in relation to preventive health |
| • Informed consent important if patient directly requests the GP |
| • Guidelines vary between different stakeholders |
| • Medicolegal issues are now important |

lines was associated with registrars in practices with four or more doctors ($p=0.001$) (Table 3). Area of training did not influence usage of guidelines (Table 3).

In semistructured interviews, information was ascertained from registrars in the role of guidelines in medicine, access to guidelines and prostate cancer screening in relation to

preventive health. Themes that emerged from these three areas are listed in *Table 4*.

Discussion

The study had three main limitations. First, we investigated registrars in only one state, although the curriculum and the final fellowship exam are identical throughout Australia. Second, the definition of sensitivity and specificity we provided may have confused the registrars. Finally, we did not investigate the medicolegal aspects of prostate cancer screening. This issue emerged in the qualitative part of the study.

We found overall knowledge of the accuracies of DRE and PSA test and awareness of guidelines to be poor. This confirms earlier studies on more experienced GPs. Perhaps this needs to be redressed educationally. On the other hand, in contrast to earlier work that found doctors would undertake PSA testing as routine prevention, these registrars were more consistent with guidelines. This represents a dissonance between correct clinical behaviour despite poor knowledge about either test accuracy or the guidelines. We can only speculate on possible reasons for this.

Ease of access to guidelines seems important. There are several ways this could be achieved. The RACGP registrars interviewed stated their increased usage of online/internet services for medical information. The potential of online/internet learning needs to be further evaluated.

Acknowledgment

Thanks to the RACGP Registrar Research Scholarship Fund for funding, the RACGP Victorian Faculty for research assistance and the participating registrars.

Conflict of interest: none declared.

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