

GPs' Insights into Prostate Cancer Diagnosis and Care in Regional Victoria, Australia

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The aim of this research was to ascertain General Practitioners' (GPs) perceptions and experiences of prostate cancer (PCa) diagnosis, treatment, and care in metropolitan Melbourne and in a regional area of Victoria, Australia, associated with poorer PCa outcomes. Semi-structured qualitative interviews were conducted with GPs (N= 10) practising in the selected region and in metropolitan Melbourne, Australia. GPs thought that most men wanted PSA testing and were willing to undergo rectal examination. Some GPs were troubled by inconsistent screening guidelines from different professional bodies. They identified a need for resources to support them in educating patients about PCa. GPs thought it might be more difficult for young female GPs to care for patients in relation to PCa screening; differences were evident between younger female GPs and older male GPs in the approach they adopted in interviews. Regional GPs often referred patients to services in larger centres because no local specialists were available. GPs also found it hard to explain differences in PCa outcomes in regional and metropolitan areas. Potential age and gender differences in GPs in relation to prostate care warrant further examination. Although GPs were able to offer only limited insights into the poorer outcomes in regional areas, they identified ways in which they could be assisted to provide best-practice care. Multidisciplinary care, resources for patients, and consistent guidelines for the detection and treatment of PCa should contribute to better care in all areas. Keywords: Prostate Cancer, General Practitioners, Regional, Screening, Diagnosis, Care, Qualitative Research

Prostate cancer (PCa) is the most commonly diagnosed and prevalent tumour reported to cancer registries in Australia and globally (Smith et al., 2009; Evans et al., 2013). While long term survival following a diagnosis of PCa is relatively good (~92% at 5 years), there is considerable morbidity associated with the treatment and management of PCa. Survival differs according to disease stage at diagnosis. There is evidence that patients with locally advanced disease (as denoted by a prostate specific-antigen [PSA] level of greater than 10ng/mL, local histologic findings, and stage) will benefit from surgical treatment compared with men who have no active treatment (Wilt et al., 2012). Health-related quality of life (QoL) outcomes after treatment are of critical concern to patients, their partners, and physicians (Glaser et al., 2013; Lev et al., 2004; Skevington & McCrate, 2012; Smith et al., 2009; Storas et al., 2014; Wei et al., 2002).

It is important to detect prostate cancer as early as possible to enable optimum outcomes and potential cure. General Practitioners (GPs) are often the first health professionals to hold discussions with men about whether to undertake screening of PCa and, following diagnosis, which treatment to choose. A key role of GPs is to ensure that screening and treatment options

have been explained to and understood by the patient and to act as the patient's advocate in choosing the most appropriate treatment.

GPs are usually also involved in post-treatment care, including managing comorbidities, monitoring disease recurrence and side-effects of treatment, and provision of psychosocial support. According to Emery (2014), good "survivorship" care requires clear channels of communication among the specialist, GP, and patient. The provision by GPs of good communication, clear guidance, and access to specialist care may reduce the reliance on specialists by many cancer survivors. Longitudinal data from the UK on nearly 5000 survivors with PCa (alive at least 5 years post diagnosis) showed that survivors consulted their GP up to three more times annually compared to healthy controls matched on the basis of age, sex, and primary care practice (Khan, Watson, & Rose, 2011). A similar study in the Netherlands showed that men with PCa see their GP more than controls at 2–5 years after diagnosis for both cancer-related health problems and disease management (Heins, Korevaar, Rijken, & Schellevis, 2013).

Previous studies have revealed high variability in PCa screening habits and techniques amongst GPs (Crowe, Wooten, & Howard, 2015; Drummond, Carsin, Sharp, & Comber 2009; Bowen, Hannon, Harris, & Martin, 2011; Tasian et al., 2012). Broadly, PCa screening approaches can be classified into two categories: (1) GPs who routinely scan patients they believe to be at risk of PCa, and (2) GPs who scan patients in response to a request or to a patient's troubling symptoms (Drummond et al. 2009; Bowen et al. 2011; Crowe, Wooten, & Howard, 2015). Many factors might contribute to this variability. Bowen et al. (2011) noted that common concerns among GPs not detecting PCa at an early stage included the resulting legal ramifications and/or mortalities. Another concern possibly contributing to variability in PCa screening habits was GPs' lack of clarity about when screening for PCa is appropriate (Crowe, Wooten, & Howard, 2015; Drummond et al., 2009).

Variability in clinical guidelines in Australia and overseas is also believed to contribute to GPs' inconsistent screening techniques (Bowen et al. 2011; Crowe, Wooten, & Howard, 2015; Drummond et al., 2009; Jessen, Sondergaard, Larsen, & Thomsen 2013). Identified causes of deviations from established PCa screening guidelines potentially include insufficiently clear guidelines, patient requests for screening, past experience with men diagnosed with PCa, various co-morbidities, and the fear of litigation by and mortality of men with PCa.

An association between elevated incidence rates of prostate cancer and poorer awareness of the disease have been found in regional areas in the US, along with men's misconceptions about prostate cancer and a tendency not to discuss the topic with their GPs (Sanderson, Wijesinha, & Jones, 2013). Men in Australia have also been found not to raise the topic with their GP, even when they are aware of a family history of PCa (RACGP, 2012). According to the Royal Australian College of General Practitioners (RACGP) Guidelines, developed for use by GPs in Australia, PCa screening is not recommended unless the man specifically requests it ("Screening for prostate cancer is not recommended unless: 1. The man specifically asks for it; and 2. he is fully counselled on the pros and cons") (RACGP 2012). Thus, if men do not raise the topic of PCa and GPs follow the RACGP's Guidelines, it is possible that prostate cancer will not be discussed.

Residents of rural and remote communities in Australia have poorer health outcomes than metropolitan residents (Baade, Youlden, Coory, Gardiner, & Chambers, 2011; Coory & Baade, 2005; Henry et al., 2014; Obertová, Hodgson, Scott-Jones, Brown, & Lawrenson, 2016). There is limited evidence of the degree to which GPs raise the topic of PCa screening and care, including in regional and rural areas where men may have limited access to healthcare services. Despite recent regional health initiatives in Australia, the healthcare needs of many regional communities are still not adequately met (Humphreys & Wakerman, 2008).

In summary, we know that GPs are important in the detection of prostate cancer and in the care of men diagnosed with prostate cancer. It is recognised internationally that GPs may be uncertain about when screening is appropriate and that men may not raise the topic with their doctors. We also know that men in regional areas often have poorer health outcomes than men in metropolitan areas, including in Australia where our research was conducted. In research in which some of us were engaged, we were concerned to discover differences in care and treatment outcomes for men diagnosed with PCa between one Victorian regional area and metropolitan Melbourne (Ruseckaite, Sampurno, Millar, Frydenberg, & Evans 2016). This area covers more than 18% of Victoria's total landmass. In 2011, the region's estimated resident population was 270,512 and represented ~5% of Victoria's total population (ABS 2015). By 2026, its population is projected to increase by 21% compared with an overall state average increase of 23%. This region incorporates 16 health services. Men in the region are more likely to be diagnosed at an older age with more advanced disease and to have a longer time interval between diagnosis and treatment (Ruseckaite, Sampurno, Millar, Frydenberg, & Evans, 2016). There are no local explanations for these discrepancies.

Given the significance of GPs in prostate cancer detection and care, we decided to seek the views of GPs practising in regional and metropolitan Victoria, drawing on the wider literature to inform our consultations with them. Our aim was to ascertain GPs' perceptions and experiences of PCa diagnosis, treatment, and care and their explanations for the observed regional-metropolitan discrepancy. It was planned that the results would contribute to improving policy and practice in Australia, not only by informing medical practitioners but also through our links with Prostate Cancer support and fundraising groups. Given the international observations of differences in prostate cancer care and outcomes according to area of residence, we hoped that our work would be relevant to a wider audience of people concerned with men's health. Because our research questions concerned experience, meaning and perspective from the participants' standpoint, a qualitative approach was essential (Hammarberg, Kirkman, & de Lacey, 2016). Because we had specific topics we wanted to explore, semi-structured interviews were the most appropriate technique to choose (Smith, 1995).

Method

The Research Team

We are a multidisciplinary group of researchers and clinicians working in public health in a major Australian university. This research was initiated when troubling data were identified in the large multinational PCa clinical quality registry led by SE (a clinical epidemiologist) and JM (an oncologist). The registry team approached DM, as head of the Department of General Practice, to contribute her expertise in the work of GPs. RR is a quantitative research specialist who was part of the team working on the registry data and who conceived of the idea of consulting GPs. The team brought in SH, JF, and MK as experts in psychosocial research and qualitative research methods. All authors contributed to the design of the research and interpretation of the results. SH conducted the interviews with GPs. Team members are committed to a social model of health and seek evidence that will contribute to health and wellbeing: in this case, of men who have been or might be diagnosed with prostate cancer. We are planning the next stage of research to extend our knowledge beyond Victoria and to include partners and informal careers of men with prostate cancer.

Eligibility, Recruitment, and Data Collection

GPs were eligible for inclusion if they practised in the identified regional area or in metropolitan Melbourne, Australia. Because this research was designed to illuminate large-scale epidemiological data and not to initiate a phenomenological investigation, it was expected that interviews with 10 GPs would provide the information sought. GPs were invited to participate in the research by emails and letters distributed to clinics. Invitations were sent to 50 general practices in the selected study area and to 50 general practices in metropolitan Melbourne with contact details available online. Participant Information and Consent documents were sent to GPs who contacted the researchers to express interest in participating. The first 10 volunteers were accepted for interview. Because interviews were conducted during consultation hours, GPs were reimbursed \$200, reflecting the average hourly consultation rate.

Our choice of semi-structured qualitative interviews, while focusing on particular aspects of a topic, does not confine participants to response categories defined in advance by researchers and is particularly appropriate when there is limited evidence on a phenomenon (Hammarberg et al., 2016). We developed the interview guide using the questions that prompted the research and our knowledge of the literature. Our open-ended questions asked GPs about their experience of prostate consultations, screening, diagnosis, and referral, as well as their reflections on regional differences and barriers, and enablers in prostate care. We also invited them to comment further on any topic they thought was important to men with prostate cancer and the role of GPs.

A member of the research team (SH) conducted interviews by telephone during March to June 2015 in Victoria, Australia. GPs gave oral consent at the beginning of the interview.

Data Management and Analysis

We audio-recorded the interviews (with permission from interviewees). An experienced transcriber who had signed a confidentiality agreement transcribed the recordings verbatim. SH and MK analysed the transcripts thematically using a well-established method (Braun & Clarke, 2006). We first categorised responses to the themes implicit in the questions, then searched for any new themes raised by interviewees. Four members (RR, MK, SH, and JF) of the research team negotiated and finalised the emerging thematic structure; SH and MK rechecked the transcripts to ensure that the analysis was accurate and comprehensive. The team discussed and agreed on the interpretation and selection of exemplary quotations. Approval to conduct this research was granted by the Monash University Human Research Ethics Committee.

Results

Each interview took from 15 to 30 minutes to complete. In our analysis of the transcripts, we identified four major themes arising from the questions we asked of GPs: the relevance of GP gender and age; men's awareness of PCa and of PCa screening initiatives; the role of the GP in PCa screening; GPs' information needs and their assessment of guidelines; and potential regional differences. We were unable to identify any additional themes. Before presenting details of each theme, we summarise characteristics of the participating GPs.

The General Practitioners

Four of the interviewed GPs practised in the regional area and six in metropolitan Melbourne. There were six female GPs and four male GPs. The women tended to have

qualified more recently (average 16 years since graduation) and thus to be younger than the men (average 33 years since graduation). The number of men with prostate cancer that GPs reported seeing each year ranged from two to 30; most GPs saw about two or three men with PCa. On average, GPs thought that about 10% of their male patients were at risk of PCa. Details of individual GPs have not been tabulated to maintain confidentiality.

GP Gender and Age

In general, GPs assessed PCa screening as varying according to characteristics of the GPs themselves, particularly their age and sex. Older, male GPs tended to be perceived as being more comfortable discussing or performing digital rectal examinations than younger, female GPs:

I think, like a lot of practices, it really depends on the demographics of the doctors at the time, so I think our prostate cancer care was much better when we had a 55-year-old [male] GP working here. So I have to say that I think that decreased when he left the practice. (Regional GP, female)

Some GPs also thought that men can be uncomfortable consulting a young female doctor about PCa screening, especially when they knew that it could result a digital rectal examination. These views came from women and men and referred also to GPs' embarrassment (as in the first example) and disgust (as in the second).

I think some females might be reluctant to do the DR [digital rectal] exam, and understandably so if it's awkward. And yeah, it can be awkward in the situation of a younger female GP if the man accidentally has an erection when you're doing that; that's just a bit worrying and embarrassing. But if you don't think about it and just go ahead and just get it out of the way, it should be fine. (Metropolitan GP, female)

The main barrier, I think, is the yuck factor that goes with the digital rectal test. Men don't like it and, to a certain extent, also I think some doctors don't like to do it. And I suspect, too, that if you're a female GP, your threshold for doing it is higher. I'm not entirely certain of that, but it's just the gut feeling I have, that a number of digital rectal exams done by female GPs would be less than that done by myself. (Metropolitan GP, male)

Analysis also revealed notable differences between the women and men interviewed. It is important to keep in mind that gender differences are confounded by age differences, with the women being, on the whole, more recently qualified than the men.

The male GPs presented themselves as more confident with PCa screening than the women, which could be attributable to their longer experience. The women were more likely to report seeking advice from a urologist about PSA test results and other aspects of testing and diagnosis, and to say that they would welcome more information. The contrast is seen in the following two quotations:

I would usually get phone advice with a PSA that was raised. So I'd usually get some phone advice, or repeat it, and then if it was persistently raised or going up, then I would refer, even just for an opinion. (Regional GP, Female)

I would say, "... There are few ways we can screen this. We can do it by blood. We can do it by finger in the back passage," but I don't try to push for the blood testing. I explain to them, "Look, blood testing is a great way to test for PSA, and don't think that if your blood tests are fine, you're off the hook." So I raise that from about 45 onwards, and I might agree with them that we'll start formal assessment, formal screening at 50 up, unless the family history points me to doing it earlier. Or if they're very insistent that they get a PSA at the age of 42, I'll do it for them, but I'll tell them it's not necessarily a great test. ... My personal view is that the PSA is not a good test, and the finger up the back passage is also not a great test. ... I think that one day we will move to a better way of screening for prostate cancer. (Metropolitan GP, Male)

Differences were also noted in the types of responses and language used by female and male GPs. The women were careful, formal, and respectful in their language. Where male GPs were inclined to use more informal, "blokey" terms, such as "finger up the bum." female GPs referred to "rectal examinations."

Men's Awareness of PCa and Initiatives

GPs thought that, on the whole, men wanted to have a PSA test and were willing to have a rectal examination, telling the GP to "just do it" or "get it over with." This could be characterised as satisfaction with a doctor's professional attention (as in the first example) or compliance with a doctor's insistence (as in the second).

They seem very happy that someone is concerned about their health. (Metropolitan GP, female)

Most [men] are very keen to do the blood test. Not so many are so keen to have the finger in the passage. Nonetheless, if you push the point, and you sort of really want to do it, they won't generally say "no" either. (Metropolitan GP, male)

However, GPs also commented that some men may not raise the topic of PCa screening, either because it does not occur to them or because of active reluctance, and that others prefer not to be tested because they are concerned about the possibility of a false positive or false negative result. Several GPs contrasted PCa screening with active management of women's health:

[Unlike] women who come in and say, "I'm here for my Pap smear," men don't say, "I'm here to talk to you about prostate cancer." The only people who ever do that are those with a very strong history of prostate cancer. (Metropolitan GP, male)

GPs thought that men would benefit from seeing flyers, posters, and other material about PCa in GPs' waiting rooms, designed to act as reminders to ask the GP about their risk of PCa and the need for checks:

When people are sitting there waiting, and they're just staring at other people, perhaps they could stare at the poster instead to remind them, "Have you had any prostate symptoms, such as this, this, and this, and please bring that up

during your consultation.” Because then people would, people often respond to all sorts of posters, even things that you think no-one would be interested in. But someone will say, “I just saw that poster outside,” and they want to talk about it. So I think a poster is a very quiet but powerful way, and a very cost-effective way, of bringing that up. (Metropolitan GP, female)

In regional and rural areas, it was suggested that educational material about PCa could be provided throughout the community, such as in sports clubs and “men’s sheds,” established as part of the health infrastructure that supports programs to improve men’s health and wellbeing in Australia, because it was thought that men outside metropolitan areas tend not to have regular visits to the GP.

GP’s Role in PCa Screening

Most of those interviewed said that GPs had a primary role in the screening and diagnosis of PCa. This was evident in metropolitan and regional areas and was mentioned by female and male GPs:

GPs should be proactive to think about it, much like when we think about Pap smears and breast exams for females. (Metropolitan GP, female)

You’re the first port of call, and, if you can prompt it, and the patient is agreeable for further investigations, I think that’s the most important thing for a GP to do: first of all to raise the issue, and then to do something about it. (Regional GP, male)

GPs reported taking action in relation to PCa screening depending on men’s age and whether they had a family history of PCa:

I usually ask them whether or not they’ve got any risk factors, so family history, and if they do, or if they’ve got any—and then I usually ask if they’ve got any concerns about prostate cancer, if they particularly want to be screened or not, and then I will talk to them about prostate screening, having a PSA and a rectal examination, and inform them that the PSA is a screening test that can miss prostate cancers, and that you can also get false positives with it, and I use that information with their previous PSAs to make a decision about whether or not they think, for them to make an informed decision about whether or not they have screening. None of my patients have screening without, I guess, that discussion. (Regional GP, female)

Female GPs in particular tended to approach PCa screening as part of a routine yearly general and preventative health check for men aged over 50:

It’s not just when someone comes in, or when the wife drags them in, but when they’re here for something else, I tend to just bring it up. (Metropolitan GP, female)

Our patients are usually pretty well trained to come in every 12 months for preventative health care, and it’s usually discussed at that point, so at least annually. (Regional GP, female)

There were some suggestions that GPs could take more initiative in broaching the topic of PCa:

GPs could be asked to be a bit more proactive about asking the questions, and don't feel shy about asking these questions. Because it's like asking the crisis patient about suicide attempts, because we were shy to ask about suicide, but now we don't. We just ask them a straight question: "Have you any suicidal thoughts?" It's the same with the prostate cancer. We can ask them, "Do you have any prostate issues? Do you have any problems waking up at night for going to the toilet?" All those sorts of things you can ask them. (Regional GP, male)

GPs felt that they had a "supportive role" following a definitive treatment that included providing information or advice.

Sometimes the message is not conveyed clearly across in that stressful situation [appointments with specialists], so allowing the patient to come in and reading the correspondence with them, and guiding them through the next steps, would be my main role. (Regional GP, female)

The support also included helping men to manage side-effects of treatment, especially sexual and erectile dysfunction. However, GPs reported experiencing difficulty in identifying the ramifications of prostate cancer for men's wellbeing. Few said that they had encountered patients with mental health problems; these GPs described men as getting "pretty depressed about it" and said that they referred such men to psychologists or counsellors.

GPs' Information Needs and Guidelines

Although GPs asserted the importance of their role in PCa screening, they described several barriers to best practice, including time constraints:

[Some GPs] wouldn't be bothered to [educate men] anyway because of the time factor. (Regional GP, female)

GPs also called for more resources to keep them professionally up to date and to educate men:

[We need] easy printout material ... in a brochure form or something to give to the patient. (Regional GP, female)

[I would like] more literature, and recent data or publications. (Metropolitan GP, female).

They reported seeking guidance from urologists about PSA parameters and frequency:

I tend to make lots of phone calls to urologists about—and I don't feel confident to make any decisions about—at the moment, I get to the point where I don't really feel confident in making a decision about any PSA results. (Regional GP, female)

GPs were not always confident about what constituted best practice:

My understanding keeps shifting every so many years, because there is always this perennial debate about whether we do it the US way or the UK way. (Metropolitan GP, male)

GPs said that they found conflicting advice in guidelines, such as from the RACGP, the Australian College of Pathologists, and the Australian College of Urologists, that left them “confused” about which patients to screen and when. They requested unequivocal guidance on which they could act:

I think we need much more clear guidelines as to whether we go the PSA pathway or the digital rectal exam pathway. I know that one college, the College of Pathologists, traditionally has said one thing, and then the College of GPs has said another. (Metropolitan GP, male)

Regular briefings or seminars for GPs about PCa screening, including which men to screen and how to encourage participation, were identified as important sources of support:

Now that you’ve quizzed me on some of this, I’ve kind of realised how limited my knowledge is. So I think it’s good for us to get a bit more education. (Metropolitan GP, female)

The role of researchers in drawing participants’ attention to a taken-for-granted or previously unconsidered topic is evident in the previous quotation.

Regional Differences

There were obvious differences in metropolitan and regional referral availability. GPs were aware that their colleagues practising in metropolitan areas have access to private urologists for referral, whereas regional GPs tended to have to refer patients to services (usually public) in larger centres, commonly located in Melbourne or Canberra, two to eight hours driving distance away. Nevertheless, few GPs were aware that there are regional differences in PCa mortality rates. It was a challenge for them to suggest possible reasons for higher mortality rates in regional Victoria than metropolitan Melbourne. Female GPs and those who had worked in regional or rural areas were most likely to propose explanations, of which there were four.

The first potential explanation was that men in rural areas are less likely to visit a GP, with an approach that one metropolitan female GP characterised as, “Be tough, and don’t go get your health checked.” Another metropolitan female GP said,

I think maybe we [metropolitan GPs] do a lot more screening and pick it up earlier. ... Yeah, just simply seeing your GP a bit more often, although guys don’t see GPs as often as women, but they still see them more than someone else living out in a rural area, and so, because of that, you would probably have a higher chance of getting your PSA checked, and your prostate as well. (Metropolitan GP, Female)

The regional perspective also asserted men’s relaxed attitude to their health:

[In this rural community], I think that's one of the major problems, that men, and normally, generally are less worried about their health. They have some issue, they say, "Oh, it's okay," and then they just get on with their work, and they don't go to the doctor, really, easily. I think that's the major problem why these things are not diagnosed early. (Regional GP, Male)

The second proposed explanation was that it is more difficult for men in rural or regional areas to access services; patients have to travel to distant cities to see a urologist.

I did study in the country, and I did find that, if anything, the males were maybe even more recalcitrant about presenting. There's less access to primary care, and also less access to specialists and imaging and treatment. I guess it would probably influence treatment decisions if they might have to travel a long way for whatever they decide to do. And even, I guess, some of the watch-and-wait ones, it might be they have to travel a while to have the investigations. So it might be, yeah, it might change the management there. I think access would be a big thing, and maybe health-seeking behaviour. (Metropolitan GP, Female)

A third explanation suggested by GPs was that men in small communities may be uncomfortable having a rectal examination from their GP who may also be someone they know socially.

The reason why is because country folk—look, you've only got a small number of GPs. They know you very well. They've probably known you for a very long time, and it's maybe just a tad too intimate to somebody you know very well offering to put a finger up your bottom. In the metropolitan areas, you've often got two to three to four to five GPs under the same roof, and it's easier to go to that other GP and have him do that, and then go back to your usual GP. But I don't think in regional areas you're going to have that choice. So the threshold, the barrier for doing these things is raised. It gets done at some point, but later than usual, by which time the cancer is a bit more advanced than usual, and therefore it will reflect itself in the mortality stats. (Metropolitan GP, Male)

Finally, it was suggested by one GP that higher regional mortality rates were indirectly caused by the freedom of men to urinate out of doors.

The only one [reason for higher mortality rates] I can think of is the fact that often a lot of men who are working outside, especially if they're in the bush, tend to have much poorer bladder control generally, because they just wee wherever they want. ... It's quite common for farmers to have early lower urinary tract symptoms. (Regional GP, Female)

Suggestions for interventions to reduce the regional mortality rate did not extend beyond education, information, and publicity; it was seen as an intransigent problem:

I guess to reduce [regional prostate cancer mortality rates] would be difficult, because, as we know, it's more to do with family history and age; those are unmodifiable. (Regional GP, Female)

Discussion

This investigation, in which GPs were consulted about prostate cancer screening and care, revealed potential ways to support GPs that could improve practice overall, not just in regional areas with poorer survival outcomes for men with prostate cancer.

Our results about GPs' roles and needs are consistent with the limited relevant literature, which confers face validity. GPs' endorsement of their primary role in screening, for example, echoes the results of Brett et al. (2005) from GPs in regional and metropolitan areas in the UK. In common with Australian research by Ilic, Murphy, and Green (2013), we found that GPs were aware of benefits and limitations in current screening tools; we also found that GPs wanted to be kept up to date with research and advised on how to translate it into practice. It has been noted elsewhere that cancer care in rural and regional Australia is fragmented, with rural and regional patients having less access to health services (Baade et al., 2011). The relative isolation of GPs in regional areas could be contributing to poorer outcomes of men with prostate cancer (Rao, Manya, Azad, Lawrentschuk, Bolton, Davis, & Sengupta, 2014). Potential age and gender differences identified by and in GPs in relation to prostate care, as also found by Gattellari, Young, and Ward (2003), warrant further examination.

Although GPs were able to offer only limited insights into the poorer outcomes in non-metropolitan areas, they identified ways in which they could be assisted to provide best-practice care. Principal among these was the need for consistent guidelines on PCa screening, a need also noted elsewhere (Ranasinghe et al., 2015). In the meantime, GPs can be encouraged to make use of the Optimal Care Pathways developed by the National Cancer Expert Reference Group which was established by the Council of Australian Governments in 2010 (Department of Health, 2012). These pathways act as a reminder that the patient is the constant in this journey and that the health system has a responsibility to deliver care in an appropriate and coordinated manner.

The qualitative approach is a major strength of this study. The semi-structured interviews enabled GPs to reflect on and discuss their work in a nuanced way not amenable to counting and measuring. The main limitation is the small sample size. However, the remarkably similar commentary from GPs on their needs and concerns contributes to understanding how improvements can be made and provides a valuable base for further research. The consistency between our results and previous research suggests that our research can contribute to building a picture of regional and metropolitan prostate cancer care in Australia and elsewhere.

In particular, this research contributes to identifying the need to strengthen communication among GPs, specialists, and consumers (Rüesch et al., 2014). Management of patients with cancer by multidisciplinary teams is recognised internationally as best practice (Carter, Garside et al., 2003). State and regional health services, therefore, should promote and resource multidisciplinary teams to support, communicate with, and guide GPs and their patients newly diagnosed with prostate cancer. Multidisciplinary teams, consistent guidelines for the detection and treatment of prostate cancer, and better communication have potential to contribute to better prostate care in all geographic areas.

References

- ABS: Australian Bureau of Statistics. (2015). Population by age and sex, regions of Australia, 2014. Catalogue number 3235.0. Canberra, Australia: Government of Australia. Retrieved from <http://www.abs.gov.au/ausstats/abs@.nsf/mf/3235.0>
- Baade, P. D., Youlten, D. R., Coory, M. D., Gardiner, R. A., & Chambers, S. K. (2011). Urban-rural differences in prostate cancer outcomes in Australia: What has changed? *Medical*

- Journal of Australia*, 194(6), 293-296.
- Bowen, D. J., Hannon, P. A., Harris, J. R., & Martin, D. P. (2011). Prostate cancer screening and informed decision-making: Provider and patient perspectives. *Prostate Cancer and Prostatic Diseases*, 14(2), 155-161.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 77-101. doi: 10.1191/1478088706qp063oa
- Brett, J., Watson, E., Hewitson, P., Bukach, C., Edwards, A., Elwyn, G., & Austoker, J. (2005). PSA testing for prostate cancer: An online survey of the views and reported practice of general practitioners in the UK. *BMC Family Practice*, 6(1), 24.
- Cancer Council Victoria. (2016). *Optimal care pathway for men with prostate cancer*. Melbourne, Australia: Victorian Department of Health and Human Services: Retrieved from http://www.cancervic.org.au/downloads/health-professionals/optimal-care-pathways/Optimal_care_pathway_for_men_with_prostate_cancer.pdf
- Carter, S., Garside, P., & Black, A. (2003). Multidisciplinary team working, clinical networks, and chambers: Opportunities to work differently in the NHS. *Quality & Safety Health Care*, 12, 25-28.
- Coory, M. D., & Baade, P. D. (2005). Urban-rural differences in prostate cancer mortality, radical prostatectomy and prostate-specific antigen testing in Australia. *Medical Journal of Australia*, 182(3), 112-115.
- Crowe, J., Wootten, A. C., & Howard, N. (2015). Prostate cancer testing: A snapshot of the attitudes and practice of Australian general practitioners. *Australian Journal of Primary Health*, 21(1), 111-114. doi: <http://dx.doi.org/10.1071/PY13078>
- Department of Health. (2012). *National action - cancer control*. Canberra: Australian Government. Retrieved from <http://www.health.gov.au/internet/main/publishing.nsf/Content/cancer-national>
- Drummond, F. J., Carsin, A.-E., Sharp, L., & Comber, H. (2009). Factors prompting PSA-testing of asymptomatic men in a country with no guidelines: A national survey of general practitioners. *BMC Family Practice*, 10(1), 1-12. doi: 10.1186/1471-2296-10-3
- Emery, J. (2014). Cancer survivorship: The role of the GP. *Australian Family Physician*, 43(8), 521-525.
- Evans, S. M., Millar, J. L., Davis, I. D., Murphy, D. G., Bolton, D. M., Giles, G. G., ... McNeil, J. J. (2013). Patterns of care for men diagnosed with prostate cancer in Victoria from 2008 to 2011. *Medical Journal of Australia*, 198(10), 540-545.
- Gattellari, M., J. M. Young, & Ward, J. E. (2003). GP and patient predictors of PSA screening in Australian general practice." *Family Practice*, 20(3), 294-303.
- Glaser, A. W., Fraser, L. K., Corner, J., Feltbower, R., Morris, E. J., Hartwell, G., & Richards, M. (2013). Patient-reported outcomes of cancer survivors in England 1–5 years after diagnosis: A cross-sectional survey. *BMJ Open*, 3(4), e002317. doi: 10.1136/bmjopen-2012-002317
- Hammarberg, K., Kirkman, M., & de Lacey, S. (2016). Qualitative research methods: When to use them and how to judge them. *Human Reproduction*, 31(3), 498-501. doi: 10.1093/humrep/dev334
- Heins, M. J., Korevaar, J. C., Rijken, P. M., & Schellevis, F. G. (2013). For which health problems do cancer survivors visit their general practitioner? *European Journal of Cancer*, 49(1), 211-218.
- Henry, M. J., Jones, P., Morrissy, K., Matheson, L. M., Pitson, G., Healy, P., ... Ashley, D. (2014). Radiotherapy in the Barwon South Western Region: A rural perspective. *Journal of Medical Imaging and Radiation Oncology*, 58(5), 612-617.
- Humphreys, J., & Wakerman, J. (2008). Primary health care in rural and remote Australia:

- Achieving equity of access and outcomes through national reform: A discussion paper. Canberra, National Health and Hospitals Reform Commission. Retrieved from <http://www.healthinfonet.ecu.edu.au/key-resources/bibliography?lid=16508>
- Ilic, D., Murphy, K., & Green, S. (2013). What do general practitioners think and do about prostate cancer screening in Australia? *Australian Family Physician*, 42(12), 904-908.
- Jessen, K., Sondergaard, J., Larsen, P. V., & Thomsen, J. L. (2013). Danish general practitioners' use of prostate-specific antigen in opportunistic screening for prostate cancer: A survey comprising 174 GPs. *International Journal of Family Medicine*, 2013(540707).
- Khan, N. F., Watson, E., & Rose, P. W. (2011). Primary care consultation behaviours of long-term, adult survivors of cancer in the UK. *British Journal of General Practice*, 61(584), 197-199.
- Lev, E. L., Eller, L. S., Gejerman, G., Lane, P., Owen, S. V., White, M., & Nganga, N. (2004). Quality of life of men treated with brachytherapies for prostate cancer. *Health and Quality of Life Outcomes*, 2(1), 1-11. doi: 10.1186/1477-7525-2-28
- Obertová, Z., Hodgson, F., Scott-Jones, J., Brown, C., & Lawrenson, R. (2016). Rural-urban differences in prostate-specific antigen (PSA) screening and its outcomes in New Zealand. *The Journal of Rural Health*, 32(1), 56-62. doi: 10.1111/jrh.12127
- RACGP. (2012). *Guidelines for preventive activities in general practice* (8th ed.). East Melbourne, Australia: RACGP Red Book.
- Ranasinghe, W. K., Kim, S. P., Papa, N. P., Sengupta, S., Frydenberg, M., Bolton, D., ...Lawrentschuk, N. (2015). Prostate cancer screening in primary health care: The current state of affairs. *Springer Plus*, 4(1), 1-7. doi: 10.1186/s40064-015-0819-8
- Rao, K., Manya, K., Azad, A., Lawrentschuk, N., Bolton, D., Davis, I. D., & Sengupta, S. (2014). Uro-oncology multidisciplinary meetings at an Australian tertiary referral centre - Impact on clinical decision-making and implications for patient inclusion. *BJU International*, 114(1), 50-54.
- Rüesch, P., Schaffert, R., Fischer, S., Feldman-Stewart, D., Ruzsat, R., Spörri, P., Zurkirchen, M., & Schmid, H. P. (2014). Information needs of early-stage prostate cancer patients: Within- and between-group agreement of patients and health professionals. *Support Care Cancer*, 22(4), 999-1007.
- Ruseckaite, R., Sampurno, F., Millar, J., Frydenberg, M., & Evans, S. (2016). Diagnostic and treatment factors associated with poor survival from prostate cancer are differentially distributed between regional and metropolitan. *BMC Urology*, 16(1), 54.
- Sanderson, R., Wijesinha, S. S., & Jones, K. M. (2013). What men know about the symptoms and treatment of prostate cancer: A study comparing ADF and civilian men. *Journal of Military and Veterans' Health*, 21(3).
- Skevington, S. M., & McCrate, F. M. (2012). Expecting a good quality of life in health: Assessing people with diverse diseases and conditions using the WHOQOL-BREF. *Health Expectations*, 15(1), 49-62.
- Smith, D. P., King, M. T., Egger, S., Berry, M. P., Stricker, P. S., Cozzi, P., ... Armstrong, B. K. (2009). Quality of life three years after diagnosis of localised prostate cancer: Population based cohort study. *BMJ*, 339.
- Smith, J. A. (1995). Semi-structured interviewing and qualitative analysis. In J. A. Smith, R. Harre & L. van Langenhove (Eds.), *Rethinking methods in psychology* (pp. 8-26). London, UK: Sage.
- Storas, A. H., Sanda, M. G., Ferrer, M., Loge, J. H., Dahl, A. A., Steinsvik, E. A., Guedea, F., Cvancarova, M., & Fosså, S. D. (2014). Localized prostate cancer in Norway, the United States, and Spain: Between-country differences of variables before treatment among patients eligible for curative treatment. *Clinical Genitourinary Cancer*, 12(4),

117-125.

- Tasian, G. E., Cooperberg, M. R., Cowan, J. E., Keyashian, K., Greene, K. L., Daniels, N. A., Carroll, P. R., & Chan, J. M. (2012). Prostate specific antigen screening for prostate cancer: Knowledge of, attitudes towards, and utilization among primary care physicians. *Urologic Oncology*, *30*(2), 155-160.
- Wei, J. T., Dunn, R. L., Sandler, H. M., McLaughlin, P. W., Montie, J. E., Litwin, M.S., Nyquist, L., & Sanda, M. G. (2002). Comprehensive comparison of health-related quality of life after contemporary therapies for localized prostate cancer. *Journal of Clinical Oncology*, *20*(2), 557-566.
- Wilt, T. J., Brawer, M. K., Jones, K. M., Barry, M. J., Aronson, W. J., Fox, S., Gingrich, J. R., ... Wheeler, T. (2012). Radical prostatectomy versus observation for localized prostate cancer. *New England Journal of Medicine*, *367*(3), 203-213.

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