

'Probably better than any medication we can give you'

General practitioners' views on exercise and nutrition in cancer

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Background and objective

Exercise and healthy eating patterns are effective in improving health-related quality of life for patients with cancer. However, little is known about general practitioners' (GPs) views and experiences regarding providing exercise and nutrition recommendations to their patients with cancer. The aim of this study was to 1) report GPs' experiences of providing nutrition and exercise advice to their patients and 2) identify perceived barriers and enablers to implementation of exercise and nutrition advice throughout the cancer journey from the GP perspective.

Methods

Twenty-three semi-structured interviews were conducted, and transcripts coded by two independent researchers. A thematic analysis was performed to derive main themes.

Results

Four main themes were identified: the importance of exercise and nutrition recommendations for patients with cancer, the influence of the patient agenda, the influence of additional training or personal interest of the GP, and limitations of the primary care setting.

Discussion

Increased communication between primary and tertiary care, availability of resources, professional development opportunities and access to allied health services is needed to further support GPs to deliver exercise and nutrition information to their patients with cancer. This study provides evidence of GPs' desire to be involved in supporting the healthy exercise and nutrition habits of their patients with cancer and presents avenues for future research and resource development.

OPTIMAL EXERCISE AND NUTRITION are increasingly recognised as important aspects of cancer survivorship that require assessment and modification throughout the cancer journey.^{1,2} Cancer survivorship is described as having three general phases: 1) active treatment and recovery, 2) living after recovery and 3) advanced cancer and end of life, each of which presents different exercise and nutrition needs and challenges for patients.¹ As the positive impacts of exercise and nutrition are increasingly supported by findings from high-level evidence, healthcare professionals are advocating for exercise and nutrition interventions and education to be incorporated into standard clinical care.¹⁻⁴ General practitioners (GPs) have been urged to approach cancer with a holistic lens from diagnosis into survivorship; this includes the need for exercise and nutrition.⁵ However, the role of the GP and their current practice in relation to providing exercise and nutrition guidance has not previously been investigated.

GP advice is well trusted in the general population, with patients perceiving GPs to be a reliable and preferred source of health information.^{6,7} Despite this, exercise and nutrition advice may remain absent from Australian general practice consultations in the general population,^{8,9} with noted barriers including lack of confidence and knowledge levels in providing nutrition information.¹⁰ Additional barriers such as uncertainty of the GP's role,¹¹ poor communication between non-GP specialists and primary care,¹² and available time during consultations¹³ have been suggested in European studies. Australian cancer survivors have expressed a need for more help with physical issues such as fatigue and inability to complete usual activities.¹⁴ They also stressed the importance of knowing that their healthcare professionals have communicated to coordinate their care.¹⁴ However, barriers to patients with cancer receiving exercise and nutrition advice have not been explored within the Australian primary care setting.

The aim of this study was 1) to report GPs' experiences of providing nutrition and exercise advice to their patients, and 2) from the GP perspective, to identify perceived barriers and enablers to further implementation of exercise and nutrition advice throughout the cancer journey. The findings may guide future research and facilitate resources to best support GPs in providing exercise and nutrition recommendations and/or referrals to support their patients.

Methods

Researcher reflexivity and relationship with participants

The primary researcher (JLW) was a female oncology physiotherapist who worked in an oncology-specific hospital. JLW acknowledged the influence her prior clinical experience would have on her perspectives. JLW was conscious of the risk of judging the decision making of the GPs and the influence this may have on her analysis of the data. This risk was managed through regularly comparing analysis with a second reviewer (AA), who did not have clinical experience, throughout the analysis process.

An interprofessional team with diverse experiences conducted the study. JLW undertook recruitment and conducted the interviews. Analysis was conducted by two researchers (JLW and AA). The study was guided by senior researchers with a physiotherapy background (LE and LD) and supported by a senior researcher with a general practice background (MTS).

Study design

This study used a qualitative descriptive approach to explore GPs' views of providing exercise and nutrition recommendations to their patients with cancer^{15,16} and was influenced by grounded theory.¹⁷ This approach was well suited to the recruitment of GPs, a time-pressured group in which access to participants may be limited.¹⁸

Setting and ethical approval

Participants were practising GPs from across Victoria, Australia. The University of Melbourne, Melbourne School of Health Sciences Human Ethics Sub-Committee (Project ID 1750666.1) approved this study, and informed consent was obtained from all participants.

Participants, sampling and recruitment

Purposive sampling was used to recruit GPs across sexes, locations of practice (regional/rural versus metropolitan) and years of general practice experience (<5 years, 5–10 years and >10 years). All participants were required to see at least one patient with cancer per week to be eligible to participate. Participants were recruited using flyers distributed to

general practices, within the Victorian primary care practice-based research and education (VicREN) general newsletters and emails, on social media and via snowball sampling. Reimbursement was offered for participants' time.

Data collection and generation

Individual semi-structured telephone interviews were conducted on the basis of previous research¹⁸ and advice from colleagues within the Department of General Practice at the University of Melbourne regarding the likely limited availability of participants to attend focus groups. The interview schedule (Table 1) was designed by members of the research team including physiotherapists and a dietitian on the basis of clinical experience because of a lack of available research in this area to draw from at the time of conducting the study. The interview schedule was piloted by two GPs with experience working with patients with cancer who provided reflections of their own experience while commenting on question flow and additional possible prompts. A similar procedure was undertaken previously in published work by one of the authors.¹⁹

Data analysis

An inductive thematic analysis of interviews was undertaken to allow 'the process of coding occurring without trying to fit to a pre-existing framework or theory'.^{20,21} All interviews were audio-recorded and proceeded until data saturation was reached and no new codes and/or themes emerged.^{22,23} Data saturation was confirmed by a second researcher (AA). All interviews were reviewed and coded by two independent researchers (JLW and AA). The full dataset was then reviewed, and subthemes were grouped and reviewed to develop themes by two researchers (JLW and AA).

Rigour

In order to improve the interpretative rigour of the analyses, cross-referencing of sections of data was regularly undertaken between two researchers (JLW and AA). Disagreements were discussed until a decision was made. A third researcher (LE)

Table 1. Interview schedule

Q1. What are your views on providing recommendations regarding exercise and nutrition to your patients with cancer?

Do you feel it is your role to discuss exercise and nutrition with your cancer patients?

Prompt: If no, why is this the case?

- If No, proceed to Q5
- If Yes or 'Believe people should', proceed to Q2

Q2. Do these views change during different stages of cancer care (eg at diagnosis, during and after treatment, survivorship)?

- a. Are there any particular time points where you feel it is inappropriate to discuss exercise and nutrition with your patients with cancer?
- b. Do you discuss exercise and nutrition in relation to different cancer systems/conditions (eg cancer cachexia)?
- c. Do your patients complain that it is more difficult to exercise at particular time points in their cancer journey?

Q3. Can you tell me about your experiences of providing exercise or nutrition information to your patients with cancer?

Prompts: What makes this difficult?

What makes this easier?

Q4. Where do you access information on exercise and nutrition to educate your patients with cancer?

Do you refer to any particular guidelines in educating your patients?

- a. What is your experience of accessing information?
- b. Do you provide your patients with any information to take away regarding exercise and nutrition (websites, printed materials)?
- c. What information/resources would be helpful to you?

Q5. Can you tell me about your experiences of referring your patients with cancer to other health professionals for exercise or nutrition services?

Prompts: Whom do you refer to?

What setting do you refer to?

Do your patients provide you with any feedback about their experiences of these referrals?

was available to assist with consensus; however, this was not required.

Results

Twenty-three interviews were conducted with GP participants throughout Victoria. Interviews were an average of approximately 20 minutes in duration.

Demographics

Table 2 shows participant demographics. Approximately half of the participants were male, and half practised in metropolitan Melbourne. The majority had more than 10 years of general practice experience.

Summary of results

Four main themes emerged: 1) the importance of exercise and nutrition recommendations for patients with cancer, 2) the influence of the patient agenda, 3) the influence of additional training or personal interests on GPs' providing exercise and nutrition advice and 4) limitations of the primary care setting.

Theme 1: The importance of exercise and nutrition recommendations for patients with cancer

All participants acknowledged the importance of exercise and nutrition for patients with cancer and identified with their role in providing them.

[P]robably better than any medication that we can give you. (GP20, male, rural, >10 years)

Ideally I think it should be coming from the GP. That's the core business, the sort of lifestyle things and I don't think that should change whether it's cancer patients or not. (GP1, male, rural, <5years)

The evidence for exercise is so overwhelming that I have no problems recommending it and frequently do ... (GP19, male, rural, >10 years)

[I]t is our role as general practitioners to enquire about [exercise and nutrition] and provide support as needed ... (GP4, male, rural, >10 years)

Ongoing discussions regarding exercise and nutrition were also noted as an important part of care.

It's an ongoing process, not sort of a set and forget. (GP17, female, metro, >10 years)

The nature of the advice might change but it's important throughout. (GP9, male, rural, >10 years)

Exercise and nutrition recommendations were perceived as important for general health.

[N]utrition and exercise are the yin and yang of good health, that exercise and nutrition are the foundations of good health. (GP5, male, rural, >10 years)

Important to advise on those general principles of, you know, a good diet and regular exercise not just for their physical health but good for their emotional health as well. (GP18, female, metro, >10 years)

Theme 2: The influence of the patient agenda

Participants spoke about how discussing exercise and nutrition was rarely the reason patients attended the GP.

Often their agenda doesn't include nutrition and physical activity and we have to fit it in somewhere. (GP9, male, rural, >10 years)

Patients have their agenda when they come to the doctor ... the top of their priority list is not always to hear about nutrition, exercise and lifestyle ... but you still try to weave it in ... (GP1, male, rural, <5 years)

Participants also reported that patients source their information from the media and their social networks.

I often find myself engaged with patients who have been approached online to enter into sort of fad diets or nutritional supplements or some sort of not evidence-based courses of action, which is a worry and difficult to counter. (GP8, male, metro, >10 years)

The person who has got cancer is more often going to take notice of what their friends do, or what people on Good Morning Australia are doing ... those sorts of influences seem to be very important ... (GP10, male, rural, >10 years)

Trying to moderate all the information from the complementary and alternative models and patients won't necessarily tell you that they are on these alternative products. (GP18, female, metro, >10 years)

Participants stressed that the approach to providing exercise and nutrition recommendations needed to be sensitive to the situation of patients with cancer.

I don't stick to the guidelines because the dose of exercise that is recommended is very difficult for a lot of people to achieve. (GP19, male, rural, >10 years)

I think you've got to be really careful; I think these people are quite brittle and they feel that they're failing in every aspect, and you also don't want to set something that's too hard. (GP16, female, metro, >10 years)

If I have a very frail elderly person who has never really done exercise in her life and is going through some fairly awful treatment ... then I don't want them to feel that they haven't been able to get up and do things. (GP20, male, rural, >10 years)

Table 2. Participant demographics (n = 23)

Characteristic	n (%)
Sex	
Female	11 (47.8)
Male	12 (52.2)
Practice location	
Metropolitan	12 (52.2)
Regional/rural	11 (47.8)
Experience (years)	
<5	3 (13.0)
5-10	2 (8.7)
>10	18 (78.3)

Theme 3: The influence of additional training or personal interest of the general practitioner

Participants described a lack of GP-specific resources and programs and a need to read relevant journal articles.

I think that's the real issue; I don't think I have a real resource, I'm just using my brain, my common sense. I don't think I've ever had any tuition about diet and cancer. (GP16, female, metro, >10 years)

I do a lot of background readings in this idea so I feel like I have a lot of knowledge on how to work through that but I don't think this is a common thing at all in general practice. (GP5, male, rural, >10 years)

Well, I don't know of any resources. (GP6, male, metro, >10 years)

And ongoing support, continuous professional development in nutrition, I have never, I don't think, been to one; I don't think they're around. (GP5, male, rural, >10 years)

Some participants expressed feelings of being underqualified to prescribe exercise and nutrition to their cancer patients.

[It's] as important as all the pharmacological treatment but probably as GPs we don't do it enough and don't have enough confidence in giving recommendations regarding exercise and nutrition. (GP21, female, rural, <5 years)

I don't think I'm qualified to give very specific dietary advice. But obviously I need to explore the culture of the individual as far as what their ideas are about the nutritional value they have and what exercise model they feel fits with their idea of what they should be doing. (GP18, female, metro, >10 years)

In terms of the dietary area, I'm a bag of ignorance really. (GP10, male, rural, >10 years)

A desire for additional resources to support their ongoing learning was evident.

[T]he college of general practice and other colleges but particularly the department of general practice has the responsibility to start teaching nutrition to GPs. I think presentations through the PHNs [primary health networks] and also through archived web-based learning sites. And that should really be a big part that the Royal Australian College looks at. (GP5, male, rural, >10 years)

I think having resources that are simple and easy to use that are fairly generic so that [they] can be used for most cancers and a handout for patients would be incredibly useful. (GP2, male, metro, >10 years)

Theme 4: Limitations of the primary care setting

Participants described barriers to effective communication in the primary care setting including time and funding pressures.

Ten-minute consultations are simply spinning the wheels in the mud. You can't do anything, because you don't have time to do anything. (GP5, male, rural, >10 years)

Yeah, the fact you don't get funded for spending a lot of time with patients. (GP19, male, rural, >10 years)

You know, dealing with the acute, immediate issue that the patients has come in with ... then not getting the chance to be as holistic as we'd like and getting a chance to talk about things like exercise and nutrition. (GP1, male, rural, <5 years)

Issues with communication between tertiary and primary care settings have been documented in the previous literature,^{12,24} and participants reported a lack of access to patients during treatment. Participants also expressed a lack of referral pathways and funding limiting patient access to affordable allied health services.

They go off to the wilderness, for the 12 months while they are having treatment and then they come back to us ... so that's why I try and get them early. (GP17, female, metro, >10 years)

I haven't referred to exercise physiologists because there aren't that many around and the referral pathways are not well developed in our region. I've certainly referred to physios but usually on an EPC [enhanced primary care] type thing and that's not enough. They need more. (GP19, male, rural, >10 years)

I've never initiated a referral to a dietitian. Ever, which is probably pretty poor ... But I'm also mindful of the cost; I live in a lower-middle class area, so I suppose I potentially leave that to certain cancer teams, and most of my patients don't have private insurance ... (GP14, male, metro, >10 years)

There's almost an entitlement. No one in health wants to pay for anything. Trying to get [the patient] to go see a physio, the first complaint is that 'I have to pay for that'. (GP5, male, rural, >10 years)

Several participants also mentioned a preference to refer patients to clinicians within their own clinic.

I prefer to send them to the people that I know within my own clinic, purely because it makes it easier for assessment, because I know I will get feedback. (GP23, female, metro, <5 years)

I'm not sure; I'm racking my brain, but I don't think I've ever referred someone to an exercise physiologist outside of my clinic. (GP3, female, rural, >10 years)

One participant expressed uncertainty about the experience of allied health clinicians in working with patients with cancer.

I will start them off on a low program myself and get them ... setting their own goals ... I am not sure of the expertise of my physio or EP [exercise physiologist] friends, as to whether they really know what to do around exercise in cancer. Yeah, I don't know. Can they? (GP2, male, metro, >10 years)

Referrals specifically to allied health clinicians with oncology experience or

expertise were not mentioned by any of the participants.

Additional patient quotes are provided in Appendix 1 (available online only).

Discussion

Research in the area of GP involvement in patient education regarding exercise and nutrition is in its infancy, especially research on GPs' views in relation to Australian cancer care. Four themes emerged from the data collected in the present study: the importance of exercise and nutrition recommendations for patients with cancer, the influence of the patient agenda, the influence of additional training or personal interest of the GP, and limitations of the primary care setting.

With respect to the GPs' experiences of providing nutrition and exercise advice, participants identified strongly with their role in providing this information as part of their clinical care of people with cancer. Participants acknowledged that exercise and good nutrition are components of good health and saw ongoing conversations about this as being part of good GP care. Participants stressed that the approach to providing exercise and nutrition recommendations needed to be sensitive to the situations of individual patients, and they were wary of prescribing exercise at a level perceived to be unachievable. Exercise and Sports Science Australia (ESSA) guidelines on exercise medicine in cancer management²⁵ advocate for a comprehensive, individualised and adapted exercise prescription coupled with behaviour change strategies for patients with cancer, rather than a standardised weekly total. This approach may alleviate the concerns noted by GPs regarding compromising mutual trust and rapport when discussing lifestyle factors.²⁶ Improved GP access to key resources, and further research into the use of digital behaviour-change techniques in this setting may help further enable individualised and patient-centred discussions.

Given the lack of time required to affect lifestyle behaviours in the general practice setting, research has suggested health promotion in the primary care

setting be associated with referrals to more comprehensive community-based supports.²⁷ Participants showed a preference for working with clinicians within their own clinic practice, with one participant mentioning he was unsure of allied health clinicians' experience with oncology. Referrals to allied health clinicians with expertise or experience working in oncology were not mentioned by any participants. Cost to patients was reported as a concern by participants. Formalised oncology rehabilitation programs are emerging throughout Australia; however, they are variable in their duration and eligibility criteria.²⁸ The cost of these programs is unknown. Improved access to affordable allied health interventions in conjunction with GPs is needed, especially in lower socioeconomic areas.

Barriers to providing nutrition and exercise recommendations mirrored those reported previously in other chronic health conditions: limited time in the general practice setting^{10,26,27,29} and lack of knowledge or experience.^{13,29,30} Some similar cancer-specific barriers were also identified, including: frustrations at fragmented care and lack of access to patients during treatment,¹² and the lack of communication between the tertiary and primary care settings in the Australian context^{11,31,32} limiting continuity of care.³³ One participant specifically mentioned the lack of detail in written communication. This issue was previously identified in McConnell et al,³² with more than 90% of GPs wanting information regarding cancer type, potential side effects of treatment and recommendations for patient management from their oncologist colleagues but receiving it in less <20% of cases.

Improved healthcare transitions may prevent adverse events, especially for those with chronic or complex healthcare conditions.³⁴ Poor healthcare transitions limit opportunities for GPs to reinforce the importance of exercise and nutrition and facilitate follow-up and referrals for their patients. This contributes to these services being seen as an add-on instead of a part of standard cancer care. Improved communication by treating oncology teams may further facilitate the transition between tertiary and primary

care. Despite these barriers, participants acknowledged the importance of exercise and nutrition information as part of care for people with cancer, and identified with the GP's role in providing this information. However, the barriers identified, similar to those identified for other health conditions^{10,26,27,29,30,33,35} may suggest a need for systems change to support primary care in delivering exercise and nutrition recommendations, especially within vulnerable groups.

Further access to professional development and GP-specific resources, increased access to allied health services and shifting the patients' view towards exercise and nutrition management as essential elements of cancer care have been identified as areas for improvement.

Strengths and limitations

Purposive sampling ensured that GPs of different sexes, years of experience and locations were represented. The interview questions were tested with two practising GPs and refined prior to use with participants. Data collection continued until data saturation was reached. Two reviewers completed analysis independently, thereby reducing bias in the interpretation of findings. The potential for volunteer bias exists as GPs expressed interest in participating in the research study; however, findings are consistent with previous literature.^{9,10,12}

Implications for general practice

- This study confirms GPs' desire to be involved in supporting the healthy exercise and nutrition habits of their patients with cancer.
- Future work should focus on:
 - tailoring exercise and nutrition resources for use within the primary care setting
 - pathways for communication between tertiary and primary care settings
 - access to exercise and nutrition professionals with specialist knowledge of cancer within the community
 - increasing professional development opportunities for GPs interested in these areas.

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Appendix 1. Additional patient quotes

Theme	Additional quotes
1. The importance of exercise and nutrition recommendations for patients with cancer	
Important area	<p>'I think it's a really important area and it's often neglected.' (GP9)</p> <p>'Doing something just before chemo and starting again after ... a lot of people are afraid and that they better rest. It's a bit like the old days when people had back pain and they were in bed for three days. It was really bad so giving them permission to do it but not only is ok but it'll make you feel good and probably better than any medication that we can give you.' (GP20)</p> <p>'Well, I mean it's essential to the management of cancer. Um, so the first thing taking exercise. Making sure they get a daily routine of exercise within their capacity and that might mean a graduated exercise program to build up their strength so that they can manage it, obviously if they are going through chemotherapy that has to be taken into consideration but ultimately enforcing, giving the opinion that exercise is crucial to human health.' (GP5)</p>
Advice is general in practice	'I think it's a one-off kind of general discussion unless things happen ... ' (GP3)
Importance of regular contact	'The point of general practice as opposed to other field is the ability to talk regularly.' (GP5)
2. The influence of the patient agenda	
Rarely a reason to attend the GP	'It is very rare it is part of a consult in its entirety, about diet and nutrition, the patients don't usually just come in to ask about 'what I should eat' in the context of cancer but it is our role as general practitioners to enquire about it and provide support as needed ... ' (GP4)
Other influences	'I think diet is a big thing that really is ... well it was previously, but is under taught to the community as a whole, particularly to families and schools and the old school food pyramid has a lot to blame as well.' (GP11)
Importance of maintaining the relationship	'Well in that I don't want to lecture them. I actually work with a guy, who is a GP who is a vegan who is driving his patients crazy by constantly carrying on about veganism and they really don't want to adopt it or hear about it.' (GP5)
3. The influence of additional training or personal interest of the general practitioner	
Desire for continuous professional development	'We sit here, if you look at [Victorian University] it's the number one nutrition science department in the world, we have the expertise, it just seems that they just can't quite get their act together to give us a curriculum.' (GP5)
Recommendations	<p>'Um, I guess it would be interesting to sort of know what normal caloric intake, um, if there's guidelines on that sort of thing. For a certain height or whatever it is. Or if there's some formula you use to get a rough idea for what calories someone might need.' (GP6)</p> <p>'Um, well. I don't know of any resources. You know, if there are some guidelines that are simple to handle. Yep.' (GP6)</p> <p>'Ah ok, I mean there was, there have been a couple of big papers over the years sort of talking about things like meditation having positive outcomes in breast cancer and there's been some around exercise I think in bowel cancer. These are just articles that I have come across. There are no specific guidelines that I'm aware of that I can use ... ' (GP2)</p> <p>'[I]t'll be really hard to try and find a[n exercise] guideline that would work with that. But I guess that's what you're helping with here ... Nutrition side of things, I think it's probably, a little bit easier and could be handy having a guideline, just saying, even just different stages of the cancer journey ... I'm sure there are studies out there on good nutrition and how it affects your prognosis. Um, but then later on in the journey, in terms of nutrition and, um, how you go about getting adequate nutrition especially in regard to different symptoms that are not enabling you to eat normally, or something like that could be useful.' (GP7)</p>
4. Limitations of the primary care setting	
Limited access to patients during treatment	'[S]ome people you lose, you know if they get diagnosed in casualty and they're off [to] oncology, and unless you know then you get the letter from them saying they've been diagnosed, you then have to contact them to try and get them to come in to discuss all these things, sometimes that's a little bit more tricky.' (GP17)
Time pressures, competing priorities and funding	'Why would that be? Probably because I'm side-tracked by all the other things and it's probably not the first thing that comes to mind.' (GP7)
Preference for known clinicians	'I think it's about a relationship, a trusting relationship with a physio ... ' (GP12)
<i>GP, general practitioner</i>	