Lifestyle risk factors and corresponding levels of clinical advice and counselling in general practice

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Background and objective

The objective of this study was to examine prevalence rates of lifestyle risk factors in the Western Victorian Primary Health Network (WV PHN) general practice patient population and the corresponding levels of clinical advice and counselling.

Method

Analysed data from the Bettering the Evaluation and Care of Health (BEACH) program from April 2011 to March 2015 were examined, providing a comparison of three geographical areas of general practice patients: WV PHN, Victoria and Australia.

Results

Rates of clinical advice and counselling for diet and exercise provided by general practitioners (GPs) in the WV PHN network were significantly lower than Victorian and Australian rates, despite the region's higher obesity rates. Smoking rates were higher in the WV PHN compared with Australia, but there was no difference in the levels of smoking cessation advice disseminated. Across all regions, one in four patients drank alcohol at hazardous levels.

Discussion

GPs in rural practice require further support, encouragement and resources to provide diet and exercise advice to their patients more frequently.

General practitioners (GPs) are at the coalface of primary healthcare in Australia. It is estimated that approximately 85% of the population visit a GP at least once a year.[1] This article focuses on the prevalence of lifestyle risk factors (ie obesity, smoking, alcohol consumption) in general practice and rates of corresponding clinical advice and counselling.

The lifestyle risk factors of obesity, smoking and hazardous alcohol consumption are recognised contributors to a variety of diseases.[2,3] Obesity is a major risk factor for cardiovascular disease, type 2 diabetes mellitus, some musculoskeletal conditions and cancers. Smoking is ranked the number one most preventable cause of death and ill health in Australia.[3–5] The frequency of alcohol-related harm, particularly in the form of chronic disease, is continually rising.[3,5–7]

GPs are ideally placed to address lifestyle risk factors.[8,9] Clinical advice and counselling for modifiable lifestyle risk factors from GPs can have a positive impact on patients making changes.[10–12] For many reasons, advice pertaining to lifestyle risk factors is not disseminated in general practice at a rate that matches their prevalence rates.[13] These reasons include GPs' belief that counselling and advice are often not effective in changing patients' behaviours; time constraints; and GPs' own lack of knowledge of nutrition and exercise.[10,12]

The Royal Australian College of General Practitioners' (RACGP's) *Smoking, nutrition, alcohol, physical activity (SNAP): A population health guide to behavioural risk factors in general practice* is an evidence-based resource for GPs to assist patients in amending lifestyle risk factors.[8] The SNAP guidelines recommend a 5As approach (ask, assess, advise, assist and arrange), highlighting the importance of determining the patient's readiness to make a lifestyle change.[8] GPs are likely to achieve the first two steps of the 5As approach (ie ask, assess), but may find it more challenging to deliver the remaining three steps (ie advise, assist, arrange).[9] Furthermore, GPs more readily address smoking and alcohol consumption than they do diet and exercise behaviours.[9]

Population-based data indicate that rural Australians are more likely to be obese, smoke and consume alcohol at hazardous levels in comparison with metropolitan Australians.[14] However, there is limited research into whether the higher prevalence of lifestyle risk factors in rural Australia could be associated with lower levels of lifestyle clinical advice provided by rural GPs compared with metropolitan GPs. A small-scale study in 2010, focusing primarily on cardiovascular risk factors in general practice, evaluated self-reported preventive practices in rural and urban areas.[15] Analysis of the SNAP principles showed that only smoking cessation advice was provided at a statistically significant lower rate in rural general practices, compared with metropolitan general practices.[15]

Primary Health Networks (PHNs) are geographical areas that have been established in Australia to facilitate better access to health services for patients, particularly population groups that are identified as being at risk of poorer health outcomes.[16] The Western Victorian (WV) PHN, which includes the regional centres of Geelong, Warrnambool, Ballarat and Horsham, extends west from Geelong to the South Australian border, and north encompassing the Yarriambiack Shire.[17] This region was selected as its demographics and burden of chronic disease have been identified as being characteristic of, and transferrable to, other regional, rural and farming communities.[17]

Methods

This study was based on data collected in the Bettering the Evaluation and Care of Health (BEACH) program between April 2011 and March 2015 inclusive.[1] The BEACH program collected data from ever-changing samples of 1000 GPs every year, providing parameters for 100 consecutive patient encounters with consenting patients on structured paper encounter-recording forms.[1] Additionally, subsamples investigating Supplementary Analysis of Nominated Data (SAND) captured patient aspects of health (eg smoking status, weight). A detailed explanation of the BEACH program's methods (including SAND methodology) used to collect and analyse these data are discussed in detail elsewhere.[1] BEACH data used in this study were:

- all recorded encounters from each area over the study period
- risk factor data from a continuous SAND-based substudy of patient-reported (to the GP) height and weight, current smoking status and alcohol consumption levels.

Data were analysed for the WV PHN, Victoria and Australia.

BEACH has a single-stage cluster design, with each GP having 100 patients clustered around them. Survey procedures (SAS 9.3) were used to account for the effect of this clustering. Significant differences were determined by non-overlapping 95% confidence intervals (CIs), which is a more conservative measure of significance than the usual $P < 0.05$.

Ethics approval for the BEACH program and its analyses was obtained through the University of Sydney's Human Research Ethics Committee (reference 2012/130).

Parameters

The parameters of patient demographics and recorded evidence of clinical management pertaining to lifestyle risk factors (ie diet and exercise, lifestyle, smoking) were compared. Data on clinical treatments are presented as a proportion of encounters where at least one was provided with 95% CI.

Height, weight, smoking status and alcohol consumption levels were all self-reported to the GP by the patients.[1] GPs were provided with a drinks chart to assist the patient understand what a 'standard drink' meant. To assess at-risk alcohol consumption, BEACH used the Alcohol Use Disorders Identification Test (AUDIT-C) tool.[18] Hazardous alcohol consumption was defined as a score of ≥5 for males or ≥4 for females.[18]

Results

The sample size was as follows:

- WV PHN – 10,100 (101 GPs)
- Victoria – 89,700 (897 GPs)
- Australia 391,600 (3916 GPs).

A comparison of the demographics of WV PHN, Victoria and Australia is illustrated in Table 1.

The prevalence of obesity (body mass index [BMI] ≥35 kg/m^2; Table 2) was significantly higher, and the prevalence of 'normal' weight (BMI = 18.5–24.9 kg/m^2) significantly lower, in the WV PHN compared with patients at Victorian or Australian encounters. By contrast, there were significantly lower levels of clinical treatments regarding diet and exercise counselling in WV PHN compared with Victorian and Australian encounters (Table 3).

The prevalence of daily smoking (Table 2) in the WV PHN was significantly higher than that of Australian averages. Furthermore, rates of smoking cessation advice given by GPs in the WV PHN did not differ from the rates in Victoria and Australia (Table 3).

There were no differences between WV PHN, Victorian and Australian encounters for hazardous alcohol consumption, with an average of one in four patients self-reporting drinking alcohol at hazardous levels.

Discussion

BEACH encounters demonstrated that despite a higher prevalence of obesity in WV PHN compared with Victorian and Australian rates, there were significantly lower frequencies of clinical advice and counselling relating to diet and exercise provided to patients. Lower rates of clinical advice for diet and exercise may be attributed to rural GPs having less access to other healthcare professionals in this field (eg dietitians, exercise physiologists, psychologists).[14,15] This not only limits referral services, but also creates a shortage of opportunities for professional education and support to assist GPs in successfully managing patients who are obese.[15] Assessment and amendment

Table 1. Demographic data for patient encounters in the Western Victoria Primary Health Network, compared with Victoria and Australia

Demographics	Western Victoria Primary Health Network	Victoria	Australia
Males	38.8% (35.9, 41.6)	39.5% (38.5, 40.4)	40.4% (40.0, 40.9)
Females	61.2% (58.4, 64.1)	60.5% (59.6, 61.5)	59.6% (59.1, 60.0)
<1 year	1.6% (1.3, 1.9)	1.6% (1.5, 1.8)	2% (1.9, 2.0)
1–4 years	3.4% (2.8, 4.0)	3.8% (3.6, 4.1)	4.4% (4.3, 4.6)
5–14 years	5.1% (4.4, 5.7)	4.8% (4.6, 5.0)	5.1% (5.0, 5.3)
15–24 years	9.2% (7.8, 10.5)	8.4% (8.0, 8.8)	8.1% (7.9, 8.3)
25–44 years	20.7% (18.8, 22.6)	24.3% (23.4, 25.1)	22.2% (21.9, 22.6)
45–64 years	27.7% (26.4, 29)	27% (26.4, 27.5)	27.3% (27.0, 27.6)
65–74 years	14.2% (12.9, 15.5)	13.5% (13.0, 14.1)	14.1% (13.8, 14.3)
≥75 years	18.2% (15.8, 20.6)	16.5% (15.7, 17.4)	16.8% (16.4, 17.2)
CHCC	53.1% (49.8, 56.4)*	46% (44.5, 47.4)	44.7% (44.0, 45.4)
NESB	2% (0.9, 3.2)†	10.1% (8.9, 11.4)	8.9% (8.3, 9.5)
Aboriginal and Torres Strait Islander	1.1% (0, 2.6)	0.7% (0.4, 0.9)	2% (1.7, 2.3)

**Significantly higher*
†Significantly lower
CHCC, Commonwealth Health Care Card; NESB, non–English-speaking background

of diet and exercise behaviours are challenging for professionals in this field. They have been demonstrated to be even more complex and demanding within a general practice environment, as they are time-consuming and acute problems take precedence.[9,10]

Further, user-friendly support services and resources require development in consultation with rural GPs to address this gap in service. GPs have previously concluded that clinical guidelines for obesity in general practice are complex and exhaustive.[11] A review of Australian guidelines for managing patients who are obese in general practice found that guidelines were not presented in a usable format and, although they provided a plethora of information, they did not offer clear, concise, practical advice on how GPs should manage their patients.[11]

Another barrier for obesity management in rural general practice may be the result of the maldistribution of the Australian medical workforce.[19,20] There are fewer GPs per head in rural Australia compared with metropolitan areas.[19] As such, there is a greater demand for their services, ultimately increasing wait times for appointments and decreasing the time GPs have with patients.[19]

The reasons as to why frequency of weight loss advice and counselling do not match the prevalence of obesity require further research in rural and metropolitan Australia. Previous research demonstrated that patients respond positively to diet and exercise advice from GPs; therefore, it is an area that requires continued focus.[8,9] GPs and patients frequently fail to correctly identify when a patient is overweight or obese.[9] As rural GPs see patients with higher BMIs more regularly, compared with metropolitan GPs, their ability to correctly identify when a patient requires diet or exercise advice may be further compromised. As such, routinely recording a patient's height and weight to calculate BMI, and measuring waist circumference, can greatly improve the GP's ability to recognise patients who require clinical counselling for diet and exercise.[8,9] Education and resources specific to rural GPs and management of patients who are obese is warranted, as such initiatives may diminish the disparity between obesity prevalence in rural and urban Australia.

Daily smoking rates were higher in WV PHN compared with Australian rates, yet cessation advice was similar between all geographical areas. For all areas, rates of smoking cessation advice were deemed low when compared with the proportion of patients who reported being daily smokers. Smoking cessation advice in general practice should be enhanced, considering it has been identified that patients are twice as likely to quit smoking if they are provided with cessation advice and support from their GP.[7] It is important to acknowledge that this result may be confounded as practice nurses play an important role in smoking cessation in general practice, and they may provide the support instead of the GP.[7]

No difference in the level of alcohol consumption was observed in WV PHN, Victorian and Australian encounters. Previous studies have established that alcohol consumption differs among geographical areas and socioeconomic groups.[3,15] Adults in outer regional and remote areas are 1.22 times more likely to exceed alcohol consumption guidelines as those in major cities.[15] Despite this, the number of general practice patients who report that they consume alcohol at hazardous levels is alarming; GPs need to be encouraged to routinely record levels of alcohol consumption. It is estimated that only 20% of patients are routinely asked about their drinking habits.[9]

Limitations

Measures such as weight, height, smoking status and alcohol consumption were all self-reported. Self-reported health status may not be consistent with measurements performed by a health professional, but the Audit-C tool used for this study has been found to be a reliable

Table 2. Percentage of patient encounters in the Western Victoria Primary Health Network (WV PHN), compared with Victoria and Australia for body mass index, smoking and alcohol consumption

Lifestyle factor	WV PHN	Victoria	Australia
Weight (kg/m²)			
Underweight (<18.5)	1.9% (1.33, 2.44)	2.4% (2.16, 2.59)	2.4% (2.27, 2.46)
Normal (18.5–24.9)	32.2% (30.14, 34.3)†	36.8% (35.89, 37.66)	35.7% (35.33, 36.16)
Overweight (25–29.9)	35.2% (33.42, 37.04)	34.2% (33.56, 34.86)	34.7% (34.34, 34.96)
Obese (30–34.9)*	17.6%* (15.91, 19.22)	16.4% (15.88, 16.98)	17.0% (16.69, 17.2)
Obese (35–39.9)*	8.1% (7.08, 9.09)*	6.5% (6.12, 6.79)	6.5% (6.36, 6.69)
Obese (≥40)*	5.0% (4.14, 5.89)*	3.8% (3.50, 4.02)	3.8% (3.65, 3.9)
Smoking			
Never	53.4% (50.67, 56.08)	55.7% (54.71, 56.64)	55.4% (54.95, 55.92)
Previous	27.4% (25.19, 29.63)	26.7% (25.93, 27.46)	28.0% (27.61, 28.4)
Occasional	1.9% (1.27, 2.46)	2.5% (2.19, 2.7)	2.4% (2.27, 2.51)
Daily	17.4% (14.93, 19.76)*	15.2% (14.42, 15.9)	14.2% (13.84, 14.51)
Alcohol			
Non-drinker	30.8% (27.7, 33.95)	32.6% (31.47, 33.78)	32.6% (32.04, 33.13)
Responsible	43.9% (41.33, 46.41)	44.9% (43.92, 45.81)	43.7% (43.24, 44.13)
Hazardous	25.3% (22.82, 27.79)	22.5% (21.65, 23.38)	23.7% (23.31, 24.16)

**Significantly higher*
†Significantly lower

Table 3: Percentage of clinical treatment advice on diet/exercise and smoking for patient encounters in the Western Victoria Primary Health Network (WV PHN), compared with Victorian and Australian encounters

Clinical advice	WV PHN (n = 3290 and 3296 respectively)	Victoria (n = 29630 and 29722 respectively)	Australia (n = 128151 and 128101 respectively)
Diet	2.3% (1.7, 2.9)*	3.48% (3.17, 3.84)	3.84% (3.67, 4.1)
Smoking	0.69% (0.5, 0.9)	0.63% (0.55, 0.67)	0.69% (0.64, 0.72)

**Significantly lower*

assessment tool, and using the GP as an expert interviewer (usually with knowledge of the patient's health problems) may be more reliable than self-reporting to a stranger.[18] It is important to acknowledge that recording BMI alone is potentially an inaccurate indicator of obesity when dealing with patients such as the elderly or those who are overly muscular.[8] Patients in the WV PHN were more likely to hold a Commonwealth Health Care Card. This indicates a lower socioeconomic index, which is also associated with higher rates of lifestyle risk factors.[3]

Conclusion

The prevalence of obesity is significantly higher in the WV PHN potentially because of limited clinical advice and counselling on diet and exercise provided by GPs to their patients. Further research is required to determine why clinical advice regarding diet or exercise was provided less frequently in WV PHN and whether this is similar to other rural areas. Research into this area may provide a clearer understanding of these issues, and may result in the development of more practical, user-friendly tools for GPs to use, particularly in relation to obesity management.

Key points

- Clinical advice for diet and exercise was provided at a significantly lower rate in rural general practice despite the higher rates of obesity.
- GPs, particularly in rural practices, need to be further supported to address lifestyle risk factors with their patients.

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