RNZCGP DIGEST

The Royal New Zealand College of General Practitioners
Te Whare Tohu Rata o Aotearoa

THE ROYAL NEW ZEALAND COLLEGE OF GENERAL PRACTITIONERS

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IN THIS ISSUE

Welcome to the RNZCGP digest. The digest contains a selection of recent New Zealand and overseas journal articles and other publications that might be of interest to general practice and to those working in the primary care sector. Some of the articles are available in full via the links provided. Others require an online subscription.

Health workforce

Approved CME activity
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A systematic review of strategies to recruit and retain primary care doctors

FREE

Authors: Verma P, Ford JA, Stuart A, et al.

This paper presents the findings of a systematic review of interventions aimed at recruiting or retaining primary care doctors in high-income countries. The researchers searched MEDLINE, EMBASE, CENTRAL and grey literature from inception to January 2015.

Fifty-one studies assessing 42 interventions were retrieved. The authors found that overall the studies were of low methodological quality with no randomised controlled trials. Only 15 studies included a comparison group.

The interventions were categorised into the following 13 groups:

- **Financial incentives** (n=11): the strongest evidence overall was for this intervention.
- **Recruiting rural students** (n=6): a lack of comparison groups made it difficult to determine what would have happened if recruitment from rural areas had not taken place.
- **International recruitment** (n=4) such as waiving visa/work requirements to enable international medical graduates to work in rural areas: three studies found a significant number of IMGs did not stay in rural practice or complete the three-year obligation period.
- **Rural or primary care–focused undergraduate placements** (n=3).
- **Rural or underserved postgraduate training** (n=3).
- **Wellbeing or peer support initiatives** (n=3) such as the provision of social and emotional support to rurally isolated doctors.
- **Marketing** (n=2): a promotional video marketing in the US was associated with lower recruitment; a blog posting views and experiences of current primary care trainees in the north of Scotland positively influenced choice of location for primary care training.
- **Mixed interventions** (n=5) that combined continued medical education, financial and undergraduate placement incentives had mixed results.
- **Support for professional development or research** (n=5) included providing GPs with increased academic skills, especially in teaching and research.
- **Retainer schemes** (n=4) allowed GPs to work reduced hours with an educational component for up to five years. Studies showed high retention of primary care doctors.
- **Re-entry schemes** (n=1) to help doctors return to general practice as a partner.
- **Specialised recruiters or case managers** (n=2): weakest evidence overall for their use to recruit doctors to rural areas.
- **Delayed partnerships** (n=2) such as adding two years of post-vocational training or extra training that includes exposure to financial and managerial aspects of partnership.

Health workforce

According to the authors there is evidence (albeit weak) to support undergraduate and postgraduate placements in underserved areas, and selective recruitment of medical students from rural areas. However, they conclude that more high-quality research is needed. Furthermore, the other initiatives may have potential to improve recruitment and retention of primary care doctors, but their effectiveness has not been established.

References: BMC Health Serv Res. 2016;16:126. doi:10.1186/s12913-016-1370-1

Rural practice

The rural medical generalist workforce: The Royal New Zealand College of General Practitioners' 2014 workforce survey results

Authors: Wong DL, Nixon G.

This study aimed to provide a snapshot of the New Zealand rural medical generalist workforce based on The Royal New Zealand College of General Practitioners' (RNZCGP's) 2014 workforce survey. It also sought to make comparisons with the urban medical generalist workforce and to assess future workforce losses.

The survey was conducted in March/April 2014 using the SurveyMonkey tool and had a response rate of 55.9% of RNZCGP members (2525/4514). Of the 2203 working respondents, 17.1% self-identified as rural, working in rural general practice or rural hospital medicine. The study found that compared with urban respondents, more rural generalists were male (57.5% rural vs 45.5% urban; $P<0.01$), aged 55 years or older (38.2% rural vs 32.6% urban; $P=0.04$) and involved in teaching (53.0% rural vs 30.0% urban; $P<0.01$). International medical graduates were an integral part of the rural generalist workforce (52.8% rural vs 38.7% urban; $P<0.01$). Only 3.7% (14/377) of rural respondents identified as Māori and 1.1% (4/377) as Pasifika (cf 4.0% and 2.4% of urban respondents, respectively). More rural generalists worked 36 hours or more per week (66.8% rural vs 50.4% urban; $P<0.01$) and they were more likely to be intending to retire within the next 10 years (40.4% rural vs 34.7% urban; $P=0.0417$).

The authors indicate that, compared to the RNZCGP's 2007 survey data, this study suggests the rural generalist workforce is older, implying inadequate recent recruitment of young medical graduates to rural areas. Further, the underrepresentation of Māori doctors remains a concern, particularly given Māori make up a higher proportion of the population of highly rural and remote areas. The authors say the anticipated loss of rural generalist doctors due to high intention to retire rates gives added importance to ensuring adequate support for those already in practice. They highlight the overall fragility of the rural medical workforce and the need for renewed efforts to improve recruitment and retention.

Reference: J Prim Health Care. 2016 Sept 7. doi:10.1071/HC15055

Rural practice

'Poorly defined': unknown unknowns in New Zealand Rural Health

Authors: Fearnley D, Lawrenson R, Nixon G

This paper examines the problems of defining 'rurality'. The authors argue that ensuring equity of access to health services and outcomes for rural people in New Zealand is compromised by Statistics NZ's definition of rurality, which is not suitable for health research. The geographic definition does not take into account health service access, and the population defined as 'rural' differs from those who actually receive 'rural health care'.

The authors explain that around 40% of the people who actually access rural health services are currently classified as 'urban', and that 20% of those defined as 'rural' actually receive urban health care. For example, small towns such as Hanmer Springs and Wairoa are classified as 'urban', while other areas close to major urban centres with ready access to urban health services are classified as 'rural'. The extent of this mismatch masks any inequality in health care access or outcomes that may exist, and hampers current and future research.

Rural versus urban disparities in both access to health services and in health outcomes are well recognised in other similar countries. The authors explain that it is likely these disparities exist in New Zealand, but we do not have the tools to uncover and describe them. Until these disparities are identified, rural health care policy cannot address them. The authors call for the widespread adoption of a consensus definition of rural as a necessary step to allow a better understanding of New Zealand rural health.

Reference: N Z Med J. 2016;129(1439):77–81

Quality improvement

How safe is primary care? A systematic review

FREE

Authors: Panesar SS, deSilva D, Carson-Stevens A, et al.

The authors of this study conducted a systematic review of patient safety incidents in primary care. A patient safety incident was defined as "any unintended or unexpected incident(s) that could have or were judged to have led to patient harm". They searched 18 databases and contacted international experts to identify studies between 1 January 1980 and 31 July 2014. Nine systematic reviews and 100 primary studies were included.

Studies reported between less than one and 24 patient safety incidents per 100 consultations, with record review studies suggesting a median of around two to three incidents per 100 consultations/patient records reviewed. About 4% of these incidents were associated with severe harm, and diagnostic and medication incidents were most commonly associated with harm to patients. Notably, only incidents of commission rather than omission were included.

The authors found that the estimated proportion of patient safety incidents in primary care is lower than the estimated 10% in hospitalised patients. However, they are not easily comparable because hospitalised patients experience multiple clinical encounters during a single admission.

The authors conclude that the overall volume of people using primary care translates into a considerable burden of potential harm, although most is not severe. They also call for a standardised way to classify incidents in primary care settings to allow comparability between studies and research contexts.

Reference: BMJ Qual Saf. 2016;25:544-553. doi:10.1136/bmjqs-2015-004178

Appointment 'no-shows' are an independent predictor of subsequent quality of care and resource utilization outcomes

FREE

Authors: Hwang AS, Atlas SJ, Cronin P, et al

This American research tested the hypothesis that patients with a high propensity to 'no show' for appointments have worse clinical outcomes than patients with a lower propensity. The researchers reviewed the medical records of 140 947 primary care patients in Boston from 1 January 2007 to 31 December 2009. They calculated a no-show propensity factor (NSPF) representing appointment adherence for each patient, and then divided patients into low, intermediate and high NSPF risk groups.

Compared to patients in the low NSPF group (n=105 699), patients in the high NSPF group (n=14 081) were significantly more likely to have incomplete preventative cancer screening (adjusted odds ratio (aOR) 2.41) for colorectal, cervical and breast cancer; above-goal chronic disease measures (aOR 2.64) for HbA1c and LDL; and increased rates of acute care utilisation (adjusted relative risk (aRR) 1.37 for hospitalisation, aRR 1.39 for emergency department visits).

Patients in the high NSPF group were more likely to be young, non-white, and have limited English proficiency, lower socioeconomic status, and higher burden of behavioural health problems (eg depression and alcohol use disorder), suggesting that NSPF may serve as a proxy for psychosocial complexity. The authors conclude that NSPF may help primary care practices to identify high-risk psychosocially complex patients for targeted population management interventions to improve care, achieve performance targets, and reduce acute care utilisation.

Reference: J Gen Intern Med. 2015 Oct;30(10):1426–33. doi: 10.1007/s11606-015-3252-3.

Quality improvement

Continuity of care in primary care and association with survival in older people: a 17-year prospective cohort study

FREE

Authors: Maarsingh OR, Henry Y, van de Ven PM, et al.

This study used data from the Longitudinal Aging Study Amsterdam (LASA) to investigate whether continuity of care in general practice is associated with mortality in older Dutch people. The LASA is an ongoing cohort study of physical, emotional, cognitive and social functioning of older people in the Netherlands.

The study sample consisted of 1712 adults aged 60 and over, who were followed up in three-year cycles between 1992 and 2009. Continuity of care (COC) was defined as the duration of the ongoing therapeutic relationship between patient and GP. The association between COC and survival time was investigated using Cox regression analysis.

A maximum COC was reported by 742 participants (43.3%). The researchers found that among the 759 participants surviving 17 years, 251 (33.1%) still had the same GP. The lowest COC category showed significantly greater mortality than those in the maximum COC category (hazard ratio =1.20, 95% CI=1.01–1.42). The study concludes that low continuity of care in general practice is associated with a higher risk of mortality, strengthening the need to encourage continuity of care.

Reference: Br J Gen Pract. 2016 Aug;66(649):e531-9. doi: 10.3399/bjgp16X686101

Clinical issues

Cardiovascular disease treatment among patients with severe mental illness: a data linkage study between primary and secondary care

Authors: Woodhead C, Ashworth M, Broadbent M, et al.

This British study sought to examine whether characteristics of patients with severe mental illness (SMI) are differentially associated with prevalence and treatment of cardiovascular diseases (CVD). The study used London borough population-based data from a linkage of primary and secondary mental health care records. It compared the care provided to 4056 patients with SMI to the care provided to 270 669 patients who were not known to secondary care psychiatric services.

SMI status was associated with greater prevalence of CVDs, and patients with SMI were less likely to be receiving optimal treatment. CVD risk assessment (eg Framingham risk score) was significantly less common in this patient group. Patients with SMI, coronary heart disease and heart failure experienced reduced prescribing of beta blockers and angiotensin-converting enzyme inhibitor/angiotensin receptor blockers medications. Patients with a diagnosis of schizophrenia, those identified with any indicator of risk or illness severity, and those prescribed depot injectable antipsychotics were least likely to be prescribed these medications.

The authors conclude that the findings deepen the understanding of disparities in morbidity and health care among those with SMI. The results also underline the value of primary and secondary care working closer to improve outcomes for patients with SMI.

Reference: Br J Gen Pract. 2016 Jun;66(647):e374-81. doi:10.3399/bjgp16X685189.

Medicines

Qualitative study to conceptualise a model of interprofessional collaboration between pharmacists and general practitioners to support patients' adherence to medication

FREE

Authors: Rathbone AP, Mansoor SM, Krass I, et al.

This Australian qualitative study looked at interprofessional collaboration between community pharmacists and GPs to support patients' adherence to medications in primary care. Community pharmacists and GPs in Sydney were recruited using a market research company. Three focus groups were conducted with pharmacists (n=23) and three with GPs (n=22) with discussions specifically around supporting their patients' medication adherence.

From the perspectives of pharmacists and GPs, successful collaboration was characterised by regular, face-to-face proactive interactions, while poor collaboration occurred when interactions were irregular and infrequent. Participants reported that written, computer-aided communication might also be helpful for collaboration where regular, face-to-face interaction is not possible. Co-location was reported as a significant facilitator of regular, face-to-face relationship building.

However, in practice, interactions between pharmacists and GPs were infrequent and irregular overall with the majority conducted by telephone, and predominantly focused on issues not related to adherence. The researchers conclude that successful collaboration to improve medication adherence is underpinned by shared paradigmatic perspectives and trust, constructed through regular, face-to-face interactions between pharmacists and GPs.

Reference: BMJ Open 2016; 6(3): e010488. doi:10.1136/bmjopen-2015-010488

ICT health

Using alternatives to face-to-face consultations: a survey of prevalence and attitudes in general practice

Authors: Brant H, Atherton H, Ziebland S, et al.

Alternatives to face-to-face consultation in primary care include telephone, email and internet, but the extent to which they are used is unclear. The aim of this study was to identify the frequency and range of ways in which general practice teams in five areas of the United Kingdom were providing or planning alternatives to face-to-face consultations.

The researchers sent a postal questionnaire survey to each of the GPs and practice managers of 421 practices between January and May 2015. Of the practices approached, 319/421 (76%) practices responded. The majority of the practices reported that they were already conducting telephone consultations frequently (n=211/318, 66%). However, fewer were implementing email consultations (n=18/318, 6%), and most (n=169/318, 53%) had no plans to introduce this. None of the practices were currently using internet video, and 86% (n=273/318) had no plans to introduce internet video consultations. Findings were similar in the reported use of alternatives at the individual GP level.

The researchers note a general reluctance among GPs to implement alternatives to face-to-face consultations. Participants expressed concerns that email or video consultations would be inefficient for the practice, a challenge in terms of privacy and confidentiality, and increase demand and clinical risk. The researchers conclude that despite policy pressure to introduce consultations by email and internet video, there is a substantial gap between rhetoric and reality in the likelihood of certain alternatives (email, video) changing practice in the near future.

Reference: Br J Gen Pract. 2016 Jul;66(648):e460-6. doi:10.3399/bjgp16X685597

Comment: The College's 2016 workforce survey asked respondents about their use of technology for assessing and diagnosing patients. The results of the survey will be released shortly.

Public health

Physical activity and risk of breast cancer, colon cancer, diabetes, ischemic heart disease, and ischemic stroke events: systematic review and dose-response meta-analysis for the Global Burden of Disease Study 2013

FREE

Authors: Kyu HH, Bachman VF, Alexander LT, et al.

The World Health Organization recommends at least 600 metabolic equivalent (MET) minutes of total activity per week for health benefits, ie about 150 minutes of brisk walking or 75 minutes of running per week (MET is the ratio of the working metabolic rate to the resting metabolic rate.) This study aimed to quantify the dose-response associations between total physical activity and risk of breast cancer, colon cancer, diabetes, ischaemic heart disease, and ischaemic stroke events. The researchers conducted a systematic review using data from 174 cohort studies from 1980 to 27 February 2016 to estimate relative risks of diseases for each dose of total physical activity in MET min/week.

The study found that higher levels of total physical activity were significantly associated with lower risk for all outcomes: major gains occurred at lower levels of activity but there were diminishing returns at levels higher than 3000–4000 MET min/week. This pattern was most prominent for ischaemic heart disease and diabetes, and least prominent for breast cancer. For example, individuals with a total activity level of 600 MET min/week had a 2% lower risk of diabetes compared with those reporting no physical activity. An increase from 600 to 3600 MET minutes/week reduced this risk by an additional 19%. An increase of total activity from 9000 to 12 000 MET min/week reduced the risk of diabetes by only 0.6%.

Compared with insufficiently active individuals (total activity less than 600 MET min/week), the risk reduction for those in

Public health

the highly active category (≥8000 MET min/week) was 14% (relative risk 0.863, 95% uncertainty interval 0.829–0.900) for breast cancer; 21% (0.789, 0.735–0.850) for colon cancer; 28% (0.722, 0.678–0.768) for diabetes; 25% (0.754, 0.704–0.809) for ischaemic heart disease; and 26% (0.736, 0.659–0.811) for ischaemic stroke. The researchers conclude that total physical activity needs to be several times higher than the current recommended minimum level of 600 MET min/week to achieve larger reductions in risks of breast cancer, colon cancer, diabetes, ischaemic heart disease, and ischaemic stroke. Furthermore, focusing on a particular domain (eg leisure time physical activity) as was done by most studies, restricts the scope of applicability of the findings in the real world by limiting the opportunity of increasing activity in different domains of daily life.

Reference: BMJ 2016 Aug 9;354:i3857. doi:10.1136/bmj.i3857

Comment: According to an accompanying editorial, 'Meaningless METS: studying the link between physical activity and health', the study by Kyo et al. represents an advance in the handling of disparate data on a lifestyle factor of considerable importance for the prevention of chronic diseases. However, the study is based on the MET, which is a measure of volumes of activity combining intensity, frequency, and duration. Therefore, it does not tell us whether risk reductions would be different with short duration intense physical activity or longer duration light physical activity.

Reference: BMJ 2016;354:i4200. doi: 10.1136/bmj.i4200

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We welcome your comments or suggestions. Please contact the College's Policy Team at **policy@rnzcgp.org.nz**