- Ministry of Health. NZ food NZ children: key results of the 2002 National Children's Nutrition Survey. Wellington: Ministry of Health; 2003.
- Hamilton S, Mhurchu CN, Priest P. Food and nutrient availability in New Zealand: an analysis of supermarket sales data. Public Health Nutr. 2007;10(12):1448–55.
- Vartanian LR, Schwartz MB, Brownell KD. Effects of soft drink consumption on nutrition and health: a systematic review and meta-analysis. Am J Public Health. 2007;97(4):667–75.
- 23. Tinanoff N, Palmer CA. Dietary determinants of dental caries and dietary recommendations for preschool children. J Public Health Dent. 2000;60(3):197–206.
- Peres RC, Coppi LC, Volpato MC, Groppo FC, Cury JA, Rosalen PL. Cariogenic potential of cows', human and infant formula milks and effect of fluoride supplementation. Br J Nutr. 2009;101(3):376–82.
- Reynolds EC. Anticariogenic complexes of amorphous calcium phosphate stabilized by casein phosphopeptides: a review.
 Spec Care Dentist. 1998;18(1):8–16.
- Dashper SG, Saion BN, Stacey MA, Manton DJ, Cochrane NJ, Stanton DP, et al. Acidogenic potential of soy and bovine milk beverages. J Dent. 2012;40(9):736–41.
- Salanitri S, Seow WK. Developmental enamel defects in the primary dentition: aetiology and clinical management. Aust Dent J. 2013;58:133–40.
- Elfrink M, Ten Cate J, Jaddoe V, Hofman A, Moll H, Veerkamp J. Deciduous molar hypomineralization and molar incisor hypomineralization. J Dent Res. 2012;91(6):551–5.
- 29. Mahoney E, Morrison D. Further examination of the prevalence of MIH in the Wellington region. N Z Dent J. 2011;107(3):79.
- Elfrink ME, Schuller AA, Veerkamp JS, Poorterman J, Moll H, Ten Cate J, et al. Factors increasing the caries risk of second primary molars in 5-year-old Dutch children. Int J Paediatr Dent. 2010;20(2):151–7.
- Habibian M, Roberts G, Lawson M, Stevenson R, Harris S. Dietary habits and dental health over the first 18 months of life. Community Dent Oral Epidemiol. 2001;29(4):239–46.

- 32. Widmer RP. Oral health of children with respiratory diseases. Paed Resp Rev. 2010;11(4):226–32.
- Sheiham A. Dental caries affects body weight, growth and quality of life in pre-school children. Br Dent J. 2006;201(10):625–6.
- Unkel J, Fenton SJ. Comparison of odontogenic and nonodontogenic facial cellulitis in a pediatric hospital population. Pediatr Dent. 1997;19(8):476–479.
- 35. Pine CM, Harris RV, Burnside G, Merrett MC. An investigation of the relationship between untreated decayed teeth and dental sepsis in 5-year-old children. Br Dent J. 2006;200(1):45–7.
- Anderson H, Drummond B, Thomson WM. Changes in aspects of children's oral health related quality of life following dental treatment under general anaesthesia. Int J Paediatr Dent. 2004;14(5):317–25.
- Malden P, Thomson W, Jokovic A, Locker D. Changes in parent-assessed oral health-related quality of life among young children following dental treatment under general anaesthetic. Community Dent Oral Epidemiol. 2008;36(2):108–17.
- 38. Gaynor W, Thomson WM. Changes in young children's OHRQoL after dental treatment under general anaesthesia. Int J Paediatr Dent. 2012;22(4):258–64.
- 39. Featherstone JD. The science and practice of caries prevention. J Am Dent Assoc. 2000;131(7):887–900.
- Slade GD, Sanders AE, Do L, Roberts-Thomson K, Spencer AJ. Effects of fluoridated drinking water on dental caries in Australian adults. J Dent Res. 2013;92(4):376–82.
- Walsh T, Worthington HV, Glenny AM, Appelbe P, Marinho VC, Shi X. Fluoride toothpastes of different concentrations for preventing dental caries in children and adolescents. Cochrane Database Syst Rev. 2010 (1):CD007868.
- 42 New Zealand Guidelines Group. Guidelines for the use of fluoride. Wellington: Ministry of Health; 2009.
- Australasian Academy of Paediatric Dentistry (Inc). Standards of Care. Perth, Western Australia: Australasian Academy of Paediatric Dentistry (Inc.); 2002.

COMPETING INTERESTSNone declared.

LETTERS TO THE EDITOR

Influencing medical students' career decisions

As a family of three generations of medical professionals, including two general practitioners (GPs) and a current fifth-year medical undergraduate, all of whom have spent part of their careers within the UK and New Zealand (NZ) health care systems, we read with interest the articles discussing the influences on medical students' career decisions.

Our collective personal experiences of undergraduate general practice exposure involved two lectures and a final-year voluntary attachment in the 1950s, to a week of public health and primary care lectures and a fifth-year, one-week stay with a GP in the 1980s, to the current-day regular general practice attachments from first year onwards.

Over our collective 57 postgraduate years, we have seen the role of the GP change greatly. It has gone from mainly one of a sole practitioner working from home, with 24/7 individual contractual responsibility with limited access, to open-access appointments and health advice through patient portals and e-health. Many salaried doctors now work in larger partnerships, using formalised referral pathways and stricter surveillance of prescribing, in purpose-built group health centres. There has been the development of undergraduate and postgraduate general practice attachments and the establishment of professo-

rial departments of primary care and professional body-audited continuing medical education (CME), appraisal and a re-registration process.

General practice is a dynamic, engaging field of work that is in a unique position to provide cradle-to-grave medicine—an aspect that medical students often miss during their placements. As Parker et al.¹ reported, clinical tutors have a huge potential for influence over medical students' perceptions and subsequent career choice. The aspect of inspirational role models and vocational dedication are the characteristics in so many professions and career choices, none more so than in general practice.

Most of the University of Otago students in the Parker et al.¹ study reported that general practice was under-represented in the medical school curriculum. The authors stated that adequate responsibility being given to medical students might play an important role in ensuring that the exposure to general practice is positive. Recently, a shift in medical education in the UK has been to one of early general practice placements, with many medical students now having these starting in the first year of study. This, coupled with specified clinical and consultation competencies to be gained by the end of each attachment, leads to a more direct involvement with patient care, procedures and practice staff.

Not reflected in the Parker et al.¹ study is the opportunity to undertake postgraduate qualifications, diplomas, or to work as a GP with special interests or teaching commitments. These can be of significant personal, professional and, ultimately, patient benefit. Our experience of locums, sabbaticals, as well as extended settled periods as partners in practices in both the UK and NZ shows how, as a career pathway, general practice provides the opportunity and ability for travel and achievement of work-life balance at different stages of a career. These factors were recognised as important by Lambert et al.,² and perhaps need to be brought to the attention of undergraduates.

During our careers, NZ primary health care has often followed the changes that have been made in the UK. In the past decade, there has been a successive increase in GPs' workload. As Lambert et al.² have shown, hours and working conditions are particularly important to prospective GP applicants.² We have concerns that the changes that have occurred in the UK, including the 2004 Quality and Outcomes Framework, the Health and Social Care Act 2012, and the introduction of the current UK government plan for return to 'proper family

doctors', will further deter current students from a career in general practice.

Research in NZ published in 2010 demonstrated that current medical graduates are unlikely to fill the NZ general practice workforce requirements, with fewer than 30% expressing a wish to pursue a career in general practice.³ Following on from this, Poole et al.⁴ suggested that '…setting inappropriately high cut-points for medical school selection may exclude applicants with a propensity for general practice.'

Although intention of career choice one year after graduation from medical school has been shown to be predictive of career choice, we are sceptical of these findings. Career choice on exit from medical school has also been shown to vary greatly according to the institution that the student has studied at, suggesting that experience of the specialty at undergraduate level may have a greater impact than intrinsic motivation at entry.⁵

GPs are in a unique position to influence students' career choices. Engaging students on placement and discussing the benefits of a career in general practice may go some of the way to increasing recruitment and retention in primary care.

Lewis Raiman BSc (Hons), fifth-year medical undergraduate student, Barts and The London Medical School, London, UK ba09013@qmul.ac.uk

Alistair Raiman BSc (Hons), MBBS, Dip Occ Med, Dip Sports Med, FRNZCGP

John Raiman MRCS, MBBS, DRCOG, FRCGP

References

- Parker JE, Hudson B, Wilkinson TJ. Influences on final year medical students' attitudes to general practice as a career. J Prim Health Care. 2014;6(1):56–63.
- Lambert T, Goldacre R, Smith F, Goldacre MJ. Reasons why doctors choose or reject careers in general practice: national surveys. Br J Gen Pract. 2012;62(605):e851–8.
- 3. Poole P, Bourke D, Shulruf B. Increasing medical student interest in general practice in New Zealand: where to from here?. N Z Med J 2010;123(1315):6–8.
- 4. Poole P, Shulruf B. Shaping the future medical workforce: take care with selection tools. J Prim Health Care. 2013;5(4):269–275.
- Lambert T, Goldacre M. Trends in doctors' early career choices for general practice in the UK: longitudinal questionnaire surveys. Br J Gen Pract. 2011;61:e397–403.

Letters may respond to published papers, briefly report original research or case reports, or raise matters of interest relevant to primary health care. The best letters are succinct and stimulating. Letters of no more than 400 words may be emailed to: editor@rnzcgp.org.nz. All letters are subject to editing and may be shortened.