The paper by Kamat and Parker in this issue of the Journal raises some important issues about health services use and access in New Zealand. This research, completed by a neurosurgical registrar and a neurosurgeon, highlights large increases in primary care referrals to the Wellington Regional Hospital neurosurgical service. Only a very small percentage of these referrals resulted in a neurosurgical intervention. The authors have valid concerns about the impact this is having on an important tertiary service. They will not be alone in expressing such concerns, with many secondary and tertiary services struggling to meet growing demand. The authors advocate for referral guidelines or pathways, better neurosurgical education in the undergraduate years and better access to complex diagnostic investigations for primary care, in order to stem this growth.

My work in rural secondary care provides a unique perspective on referral patterns and the generalist–specialist interface. Most of my colleagues working in rural hospitals are medical generalists. We routinely accept referrals from our generalist primary care colleagues and, at the same time, we routinely consult with, and refer to, urban-based specialists. In our secondary care roles, we deal with only the small tip of the health care iceberg: it is important to remember that, as doctors, we never see the considerable health care burden managed beyond our gaze. It is obvious that the factors driving referral behaviour are multiple and complex, but have significant implications for the use of health care resources, equity of health care access, and patient outcomes.

The authors note that referrals from specialists are much more likely to result in neurosurgical intervention. This is not difficult to explain. In contrast to their specialist colleagues, general practitioners (GPs) manage large numbers of undifferentiated patients, with low burdens of serious pathology and, in doing so, they have limited access to investigations. If the referring specialist group had evaluated the same large, undifferentiated patient group as the GPs, with the same limited resources, it is entirely plausible that they would have made more, not fewer, referrals.

Good GPs are particularly skilled at picking the occasional patient with serious pathology who needs further investigation. They become comfortable managing many of the others with considerable diagnostic uncertainty and expectant management. They understand the low pre-test probability of their patient group having serious pathology, and the problems associated with exposing them to modern investigations that, while highly sensitive, often achieve this at the expense of specificity. They understand the risks of over-investigation and over-treatment. These are skills that are not easily learnt in specialist units, something that is obvious to GP teachers preparing young doctors for primary care after their years of hospital experience. However, they are the skills needed to reduce the burden of unnecessary referrals on secondary and tertiary services.

Good GPs continue to practise this way, with parsimonious referrals, despite the expectations of patients who want certainty and are less willing to accept delays in diagnosis and the disincentives of current funding models. Patients can confuse more investigation, treatment and referral with care quality and may be encouraged by the competitive business model of general practice to seek GPs who they perceive as generous investigators and treaters. Our mixed capitation and fee-for-service primary care funding model...
Capitation, by its nature, incentivises referrals and discourages GPs from taking the time to sort through complicated medical problems.

GPs may act as ‘gatekeepers’ to secondary care, but in New Zealand, specialists are the ‘gatekeepers’ to complex investigations. It is significant that one-third of the primary care referrals were discharged from clinic following a radiological investigation. Improving access to complex CT and MRI for primary care would see an immediate and significant reduction in neurosurgical referrals.

There are some excellent examples of clinical pathways development in New Zealand and the authors are correct in saying that they offer an opportunity to improve the quality of referrals by empowering management in primary care and supporting expectant management. The development of guidelines for the management of neurosurgical problems in primary care needs to be led by those working in primary care, in partnership with local neurosurgical services. Such partnerships offer opportunities to explore new models of shared care within the community and to maximise the important role specialists have as consultants. They also provide opportunities for both primary care and hospital-based health care providers to adopt a population-based approach to the neurosurgical problems in their community.

The issues raised in this paper will become increasingly common as New Zealanders age. The solutions lie in the skills of good primary care practice. Despite the increasing influence of specialist medicine, our health care system will be best improved by empowering primary care, more community-based medical education, educating the public about the limitations and risks of modern medicine, and primary–secondary care collaboration.

References