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Unwarranted variation in healthcare organisation and practice for long-term conditions

Sue Wells, Rod Jackson

It has been estimated that people with a long-term conditions account for 50% of all appointments in general practice and 70% of the hospital beds.[1] Therefore we should be experts at managing their health needs and providing evidence-based care that only varies according to patient preferences within a shared decision-making context. Yeah right.

In this issue of the *New Zealand Medical Journal*, Connolly and colleagues[2] describe a stocktake of health services provided by district health boards (DHBs) for major long-term conditions in New Zealand, based on self-reports from senior DHB staff. It is unfortunate that the study was DHB-centric given that most chronic care happens in primary care, although the conclusion would probably have been similar, whoever was questioned. As in most countries, they found marked variation in self-reported accounts of evidence-based service provision for multiple components of care for patients with ischaemic heart disease, congestive heart failure, chronic obstructive pulmonary disease and stroke.

In this study, the five largest DHBs generally reported greater provision of standard care, leadership, patient self-management programmes, case management and audit activity at the patient and service level than the smaller DHBs. There were also marked differences in how interviewees rated their own DHBs in terms of community linkages, focus on inequalities, organisation of chronic care management, collaboration, knowledge transfer and delivery system design.

Professor Jack Wennberg who has pioneered research on healthcare variation in USA[3] has observed that the frequent first response to these types of reports is to state that "the data is wrong". The main findings presented in this publication are simply the presence or absence of key services and strategies as reported by a DHB employee in a managerial or senior clinical position.

The findings do not appear to have been validated from other sources such as primary healthcare organisations (PHO) or Māori primary care providers so they may not be accurate. However, these key informants were those deemed responsible for planning, funding or delivering these services. Furthermore there have been multiple audits of long-term condition care that have identified large evidence-practice gaps in New Zealand.

The second response is usually that "our population is different". While it is true that some DHB populations will have higher rates of chronic diseases due to sociodemographic differences (such as older age structure or serving more disadvantaged populations), we would not expect this to account for the observed variation in the provision of standard care (such as having protocols/guidelines for CHF management).

Clearly not all variation is bad. As AJ Mulley writes: *"If all variation were bad, solutions would be easy. The difficulty is in reducing bad variation, which reflects the limits of professional knowledge and failures in its application, while preserving the good variation that makes care patient centred. When we fail, we provide services to patients who don't need or wouldn't choose them while we withhold the same services from people who do or would."*[4]

It is therefore unwarranted variation that is likely to impact on the equity of access to services, the health outcomes of regional populations and the efficient use of resources.

So why the problem with long-term conditions? It is widely understood that these chronic diseases are eminently preventable by addressing shared risk factors, mainly tobacco use, unhealthy diet and physical inactivity.[5] It has been estimated that appropriate evidence-based lifestyle and medical treatment could reduce future CVD events by more than 50% in well-targeted and well-treated adult patients.[6] However, these interventions are dependent on several key factors; accurate identification of high-risk patients; systematic offering of interventions to these patients and; long-term self-management and maintenance.

This requires a system of care that links patients through the continuum of health from initial screening, risk factor advice and monitoring, medical and surgical interventions, rehabilitation until end-of-life care. Health systems have been slow to provide this patient-centred life course approach. We have tended to see health services defined by buildings and location rather than the patient journey and co-ordination of care across these services.

The cost of the lack of co-ordination, lack of attention to the fidelity by which evidence-based processes are undertaken are huge.[7] They result in patient harm, waste, inequity, failure to prevent the preventable and variation in outcomes. A 2004 report from the US reported that "the abyss between what physicians know should be done for patients and what is actually done accounts for more than $9 billion per year in lost productivity and nearly $2 billion per year in hospital costs."[8] While the magnitude will be different in New Zealand, there will be a large cost (and opportunity cost) daily accruing from the evidence-practice gaps.

A recent Kings Fund report indicated that "*the first step in addressing unwarranted variations in healthcare is the systematic and routine collation and publication of data on such variation.*"[9] However, it is well known that knowledge of variation does not necessarily lead to action and there is little evidence that publication of comparative information on health services will result in improvements.[10] Without action, the analyses of variation are pointless activities- akin to revving a car in neutral. The question remains how the ABCC study can be used to drive improvement.

Notably in the United States and United Kingdom, improvement has been driven down 'selection', 'change' and 'reputation' pathways.[11,12] 'Selection' refers to patients making choices between providers and thus incentivising commercial entities to improve and so attract more patients. Clearly this doesn't fit the New Zealand delivery system very well. The 'change' pathway relates to health professional intrinsic motivation to improve their care. Here local audits of care, measured against agreed standards are important practice improvement tools.

The ABCC study reported audit activities in the five long-term conditions and while this varied by condition was notably underutilised for patient self-management programmes. The 'reputation' pathway is an extrinsic mechanism whereby dissemination of information on performance drives change through a desire to improve one's reputation compared to others. The ABCC study does not name DHBs but given the huge and growing burden of long-term conditions in New Zealand—open and transparent accountability in providing standard practice would seem reasonable.

One obvious service gap that needs to be addressed following on from this study is the integration between the primary and secondary care services in New Zealand. Enabling and incentivising those on either side of the primary-secondary care divide, who are charged with the healthcare of enrolled and regional populations, to work more collectively could be a game changer.

Information technology that links across services (e.g. electronic discharge summaries, shared pharmaceutical and laboratory test data, shared decision support data, shared care plans) has a crucial role. The value of the ABCC study will only be seen if it truly stimulates health providers to explore exposed deficiencies at the local level, engage with communities of care, galvanise action to collaboratively improve regional provision of long-term condition services and remeasure to show that changes have indeed resulted in improvements.

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Author information: Sue Wells, Senior Lecturer in Clinical Epidemiology, Health Iinnovation and Quality Improvement; Rod Jackson, Professor of Epidemiology; Section of Epidemiology and Biostatistics; School of Population Health, University of Auckland

Correspondence: Dr Sue Wells, School of Population Health, University of Auckland, Private Bag 92019, Auckland 1142, New Zealand. Email: s.wells@auckland.ac.nz

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