Multimorbidity and clinical guidelines: problem or opportunity?

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Multimorbidity (the presence of two or more chronic conditions in a single patient) is one of the biggest challenges facing health systems internationally and leads to poorer health outcomes, being associated with high mortality, reduced functional status and quality of life, and increased use of inpatient and ambulatory healthcare. Multimorbidity is a major issue for general practice and primary healthcare: a widely cited Scottish cross-sectional study found that 23% of patients were multimorbid with a prevalence rising to 65% in the 65–84 age group. General practitioners (GPs) face significant challenges delivering care to this increasing group of patients when clinical guidelines and models of healthcare delivery remain focused on dealing with single long-term conditions.

It is therefore timely that this issue of the NZMJ should see a viewpoint article by Dr Millar and colleagues asking the important questions as to whether and how we should use single-disease clinical guidelines when our patients will often have more than one long-term condition. Millar and colleagues set the scene by presenting a hypothetical 72-year-old patient with multimorbidity (diabetes, hypertension, osteoporosis, COPD, depression and moderate cardiovascular risk), discuss the problems such a scenario causes for current disease specific clinical guidelines and offer eight recommendations to improve care for people with multimorbidity in New Zealand.

It is important to recognise the role that single disease clinical guidelines have in promoting high-quality care prior to any discussion of their potential limitations. Clinical guidelines are defined as “recommendations intended to optimise patient care that are informed by a systematic review of evidence and an assessment of the benefits and harms of alternative care options.” Guideline recommendations are based on the best available evidence, which largely comes from studies involving single diseases in selected population groups. They are considered one of the key foundations for quality improvement in healthcare and there are guideline developers who develop high-quality guidance, notably those funded by national health systems such as the UK’s National Institute for Health and Care Excellence (NICE) and Scottish Intercollegiate Guidelines Network (SIGN). International consensus is that guidelines should be developed using an explicit and transparent process; should base recommendations on a systematic review of the existing evidence; should include experts and patient representatives on a multidisciplinary guideline development group; and should consider important patient subgroups and patient preferences.

Given this definition and development process there is no a priori reason why guidelines cannot be developed and used with patients with multimorbidity. Nonetheless, Millar and colleagues are correct to highlight the key problems that can arise from the application of single-disease guidelines to those with multimorbidity. An uncritical application of several guidelines to one patient can, as shown in the hypothetical patient, lead to polypharmacy with the risk of significant drug interactions and attendant harm and also a high treatment burden. A further issue flagged up is that guideline recommendations may be based on evidence from randomised controlled trials (RCTs) in younger patients with fewer comorbidities, and from a secondary care patient population with more severe disease. It has, for example, been estimated that approximately 40% of people newly diagnosed with
type 2 diabetes in Scotland in 2008 would have been excluded from RCTs based on age alone, and these excluded older people had much higher levels of comorbidity such as chronic kidney disease. Questions can thus be asked about the applicability of such recommendations to patients with multiple long-term conditions seen in primary care. A final problem is that guidelines have in general considered evidence of benefits and harms without considering a temporal dimension (“time to benefit”)—in such situations decisions to prescribe, say, a statin to prevent a cardiovascular event in five years’ time may have limited applicability in a patient with limited life expectancy.

Moving on to how these problems can be addressed, the eight recommendations proposed by Millar and colleagues cover the two key questions that clinicians using guidelines need an answer to. The first question is: “how can we better use existing single-disease guidelines in people with multimorbidity?” and the second is “how can we develop clinical guidelines which take better account of multimorbidity?”

To address the first question—“how can we better use existing single-disease guidelines in people with multimorbidity?”—it is in the consultation that clinicians use clinical guideline recommendations and seek to achieve shared decision-making informed by recommended best practice care—this process, in which clinical judgement is brought to bear—is rarely addressed by guideline developers in the context of multimorbidity. There exists, however, consensus-based guidance (the Ariadne principles and American Geriatrics Society—AGS), which provides medical generalists (GPs, general physicians, geriatricians) with practical advice on how to handle multimorbidity within the consultation. The Ariadne principles focus on the need for realistic treatment goals to be shared between practitioner and patient. For this to be achieved, the clinician consulting with a patient with multimorbidity has three key tasks: a) an interaction assessment of the patient’s conditions and treatment, b) prioritisation of health problems that take into account the patient’s preferences—the most and least desired outcomes, and c) individualised management and follow up. The AGS guidelines also emphasise the need to determine and incorporate patient preferences into clinical decision-making for older people with multimorbidity. In particular, they highlight the need for clinicians to recognise when such patients are facing a “preference sensitive” decision. Examples of “preference sensitive” decisions are medication that may improve one condition but make another worse (eg, risk of osteoporosis when using inhaled steroids in COPD), medication that may offer long-term benefit but cause short-term harm (eg, bisphosphonates to prevent osteoporosis) and prescribing multiple medications when there is a need to balance the benefits and harms of each medication. The Ariadne principles and AGS guidance were used to inform the recommendations of the first multimorbidity clinical guideline developed by a national clinical guideline developer (NICE).

In terms of the second question—“how can we develop clinical guidelines which take better account of multimorbidity?”—recent research has shown that it is feasible to address several of the identified problems faced by national guideline developers when seeking to account for multimorbidity in single-disease guidelines. In particular there is scope to: a) use epidemiological data describing the guideline population to inform guideline development group consideration of both likely interactions and the wider applicability and extrapolation of evidence; b) to systematically compare the absolute benefit of long-term preventive treatments in order to inform decision-making in people with reduced life expectancy and/or high treatment burden and c) to ensure health economic models used in guideline development identify the time to accrue a benefit from treatment. It will be interesting to see if future single-disease clinical guidelines from national guideline developers such as NICE will be developed using these approaches and what impact they will have on the wording of clinical guideline recommendations, the expectation being the recommendations will be better able to be used with confidence by practitioners with patients with multimorbidity.
Millar and colleagues are right to argue that at the heart of evidence-based medicine is clinical judgement—as there are always limitations to evidence and decisions need to be individualised to take account of patient preferences. The need to develop and use clinical guidelines with people with multimorbidity does indeed throw up problems but it also offers opportunities for future guidelines to be developed that better support shared decision-making between practitioner and patient in those with multiple long-term conditions.

Competing interests:
Nil.

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REFERENCES: