David Kernick, Carolyn A Chew-Graham and Norma O'Flynn

Clinical assessment and management of multimorbidity:

NICE guideline

D Kernick, MD, FRCGP, GP, St Thomas Medical Group, Exeter. **CA Chew-Graham**, MD FRCGP, professor of general practice research, Research Institute, Primary Care and Health Sciences, Faculty of Medicine and Health Sciences, Keele University, Keele. **N O'Flynn**, PhD, MRCGP, chief operating officer, National Clinical Guideline Centre for Acute and Chronic Conditions, Royal College of Physicians, London.

Address for correspondence

Carolyn Chew-Graham, Research Institute, Primary Care and Health Sciences, Faculty of Medicine and Health Sciences, Keele University, ST5 5BG, UK.

E-mail: c.a.chew-graham@keele.ac.uk

Submitted: 25 November 2016; **Editor's response:** 19 December 2016. **final acceptance:** 3 January 2017.

DOI: https://doi.org/10.3399/bjgp17X690857

INTRODUCTION

The National Institute for Health and Care Excellence (NICE) has published a guideline on the assessment and management of patients with multimorbidity.[1] Multimorbidity is defined as the presence of two or more long-term conditions and is increasingly common as people age.

Two-thirds of people aged >65 years will have multimorbidity, which is associated with reduced quality of life and higher mortality.[2] In older people this is associated with higher rates of physical health conditions, polypharmacy, adverse drug events, high treatment burden, and greater use of health services. In younger people and people from less affluent areas, multimorbidity is often due to a combination of physical and mental health conditions. The guideline emphasises that multimorbidity includes conditions such as sensory problems and pain as well as defined physical and mental health conditions such as diabetes or schizophrenia; ongoing conditions such as learning disability; symptom complexes such as frailty or chronic pain; sensory impairment such as sight or hearing loss; and alcohol and substance misuse.

The aim of this guideline is to support patients and clinicians in optimising care for people with multimorbidity, in particular where there is potential for care to become burdensome or uncoordinated.

THE GUIDANCE

Impact of multimorbidity. Some patients with two or more conditions can manage those conditions and associated treatments in line with single disease guidelines. This guideline suggests that healthcare professionals should consider an approach to care that takes account of multimorbidity, for patients such as those who: find it difficult to manage their treatments for day-to-day activities; are prescribed multiple regular medications; frequently seek unplanned or emergency care; and have frailty (that is, reduction in resilience or biological/physiological reserve).

The guideline suggests that such people might be identified proactively using electronic health records. It is suggested that all patients prescribed >15 medicines should be considered for an approach that takes account of multimorbidity. Patients on <15 medicines may also benefit, particularly where there is likely to be a higher risk of adverse events or drug interactions.

The guideline suggests the use of validated tools to identify patients who might benefit from a multimorbidity approach to care and who may be at risk of unplanned hospital or care home admissions, although it does not recommend any specific interventions to reduce unplanned hospital admissions. QAdmissions (an algorithm to quantify the absolute risk of emergency admission to hospital, which includes established risk factors, and designed to work in primary care) is recommended as a useful tool.[3]

Assessment of frailty. The 'Fit for Frailty' British Geriatrics Society campaign, produced in association with the Royal College of General Practitioners (RCGP),[4] suggests that 'frailty' is a distinctive health state related to the ageing process in which multiple body systems gradually lose their in-built reserves. Around 10% of people aged >65 years have frailty, rising to between a quarter and a half of those aged >85 years. People living with frailty are at risk of adverse outcomes such as dramatic changes in their physical and mental wellbeing after an apparently minor event that challenges their health, such as an

Box 1. Pragmatic assessments of frailty that can be used by the GP

- An informal assessment of gait speed (for example, time taken to answer the door, time taken to walk from the waiting room).
- Self-reported health status (that is, 'how would you rate your health status on a scale from 0 to 10?', with scores of ≤6 indicating frailty).
- A formal assessment of gait speed, with >5 seconds to walk 4 metres indicating frailty.

Box 2. Assessing the impact of multimorbidity on the patient

- How health problems affect quality of life or wellbeing.
- How health problems, or treatments, interact.
- The number and type of appointments a patient has for each of their health problems, where they take place, and whether conflicting advice is given by different clinicians.
- Changes in lifestyle needed due to health problems (for example, diet).
- Non-pharmacological treatments such as diets, exercise programmes, and psychological treatments.
- The number and type of medicines a patient is taking, and any side-effects arising from medications.

Box 3. Elements of a management plan for patients with multimorbidity

- Goals and plans for future care (including advance care planning).
- Agreement about who is responsible for coordination of care.
- Planning how the individualised management plan and the responsibility for coordination of care is communicated to all professionals and services involved.
- Agreement of timing of follow-up and how to access urgent care.
- A review of medicines and other treatments, taking into account evidence of likely benefits and harms for the individual patient and outcomes important to the person.

REFERENCES

1. National Institute for Health and Care Excellence. *Multimorbidity: clinical assessment and management. NG56.* London: NICE, 2016. https://www.nice.org.uk/guidance/ng56 (accessed 17 Mar 2017).
2. Nunes BP, Flores TR, Mielke GI, *et al.* Multimorbidity and mortality in older adults: a systematic review and meta-analysis. *Arch Gerontol Geriatr* 2016; **67:** 130–138. DOI: 10.1016/j.archger.2016.07.008. Epub 2016 Aug 2.
3. Hippersley-Cox J, Coupland C. Predicting risk of emergency admission to hospital using primary care data: derivation and validation of QAdmissions score. *BMJ Open* 2013; **3:** e003482. DOI: 10.1136/bmjopen-2013-003482.
4. British Geriatrics Society. *Fit for Frailty.* http://www.bgs.org.uk/campaigns/fff/fff_full.pdf (accessed 17 Mar 2017).
5. Clegg A, Bates C, Young J, *et al.* Development and validation of an electronic frailty index using routine primary care electronic health record data. *Age Ageing* 2016; **45(3):** 353–360. DOI: 10.1093/ageing/afw039.
6. Mair FS, May CR. Thinking about the burden of treatment. *BMJ* 2014; **349:** g6680. DOI: 10.1136/bmj.g6680.
7. Lewis C, Wallace E, Kyne L, *et al.* Training doctors to manage patients with multimorbidity: a systematic review. *J Comorbidity* 2016; **(6)2:** 85–94.
8. Baker M, Jeffers H. *Responding to the needs of people with multimorbidity: a vision for general practice.* London: RCGP, 2016.

infection or new medication.

The multimorbidity guidance suggests that people with multimorbidity should be assessed for frailty, and offers some useful pragmatic approaches to assessment (Box 1), but cautions against assessment of frailty in a person who is acutely unwell. The electronic frailty index (eFI) uses routine data to identify older people with mild, moderate, and severe frailty, with robust predictive validity for outcomes of mortality, hospitalisation, and nursing home admission. Routine implementation of the eFI could enable delivery of evidence-based interventions to improve outcomes for this vulnerable group.[5]

Principles of managing people with multimorbidity. The guideline suggests assessing treatment burden[6] by discussing with people how their health problems and treatments affect their day-to-day life. Box 2 suggests some areas the GP could explore. The guideline also reminds clinicians to consider associated mental health problems and the presence of pain, both of which are common in people with long-term conditions.

Box 3 shows some important elements of such a plan, which should aim to improve quality of life by reducing treatment burden, adverse events, and unplanned or uncoordinated care, and to improve coordination of care across services, particularly if this has become fragmented. An important outcome is how decisions to stop or change treatment are recorded and how such a plan is shared between healthcare professionals.

Of particular importance is the treatment burden of polypharmacy, especially in patients who are frail or who have limited life expectancy. Healthcare professionals are reminded that most recommended treatments are based on guidance derived from trials in which participants have single health conditions and are younger and fitter than people with multimorbidity. The trial results may be less relevant to, and treatments may offer limited overall benefit to, patients who have multimorbidity. The guideline offers a database on preventive treatments to enable the practitioner to assess the relevance of treatment effects, including information on the duration of treatment trials and populations included in them. Practitioners are recommended to also review symptomatic treatments to check if people are gaining benefit from these.

A search for evidence on effects of stopping treatments was conducted as part of guideline development but little evidence was found for common treatments such as statins and antihypertensive medication. The guideline recommends reviewing continued use of bisphosphonate after 3 years as there is inconsistent evidence of harm or benefit in the next 3 years. Fracture risk and patient choice should be considered as part of any decision. Unfortunately, no evidence was found on benefit or harm to support stopping any other drugs. It is important to note that optimising treatment may include the need to start treatments, particularly in younger people who might otherwise miss out on important preventive treatments because of their multimorbidity.

Comment. The implications of multimorbidity are of increasing importance to both patients and the health service. However, there are a number of problems with attempting to develop guidelines to support management of individual patients with multimorbidity. The majority of exisiting evidence is in populations of older people with little research in younger people with multimorbidity. There was a lack of evidence for planned holistic reviews and for organisational changes that might improve care, and the guideline includes research recommendations in these areas.

There are challenges for practitioners in using information about treatment effectiveness and sharing this appropriately with patients. A recent systematic review found a lack of appropriate training for doctors in managing multimorbidity.[7] The RCGP report emphasises the need for changes in approach at practice, local, and national level to better accommodate the needs of people with multimorbidity.[8] It makes 14 common-sense recommendations that resonate with the NICE guideline on multimorbidity.[1]

Although this NICE guideline might be criticised as merely articulating pragmatic common sense, its importance is that it affirms a patient-centred approach, taking into account patients' wishes, and consolidating management in patients with multimorbidity where the current treatment regimen(s) may be based on single-disease guidelines and no longer sit comfortably with the patient's most important goals.

Funding

Norma O'Flynn is employed at the National Guideline Centre, which is funded to develop guidelines for NICE.

Provenance

Freely submitted; externally peer reviewed.

Discuss this article

Contribute and read comments about this article: **bjgp.org/letters**