This guideline covers optimising care for people with 2 or more long-term health conditions (multimorbidity) by focusing on individual needs, preferences for treatments and health priorities. This tailored approach to care can offer particular benefit to some people with multimorbidity; the guideline sets out how to identify these people and what the tailored care involves. The guideline aims to improve quality of life by reducing treatment burden, harms from medicines and uncoordinated care.

Who is it for?

- Healthcare professionals who care for people with multimorbidity, including generalists (GPs and geriatricians) and specialists
- People with multimorbidity, their families and carers

This version of the guideline contains the draft recommendations, context and recommendations for research. Information about how the guideline was developed is on the guideline’s page on the NICE website. This includes the guideline committee’s discussion and the evidence reviews (in the full guideline), the scope, and details of the committee and any declarations of interest.
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**Recommendations**

People have the right to be involved in discussions and make informed decisions about their care, as described in your care.

**Making decisions using NICE guidelines** explains how we use words to show the strength (or certainty) of our recommendations, and has information about prescribing medicines (including off-label use), professional guidelines, standards and laws (including on consent and mental capacity), and safeguarding.

**1.1 How to use this guideline**

1.1.1 Be aware that the evidence for recommendations in NICE guidance on single health conditions is regularly drawn from people without multimorbidity and taking fewer prescribed regular medicines.

1.1.2 Think carefully about the risks and benefits for people with multimorbidity of individual treatments recommended in guidance for single health conditions. Discuss this with the patient alongside discussion of their preferences for care and for treatment.

**1.2 People with multimorbidity who may benefit from a tailored approach to care**

1.2.1 Consider a tailored approach to care for people with multimorbidity of any age if any of the following apply:

- they find it difficult to manage their treatments or day-to-day activities
- they receive care from multiple services and need care from new additional services
- they have both long-term physical and mental health conditions
- they have frailty (see section 1.5) or falls
- they frequently seek unplanned or emergency care (see also recommendation 1.4.2)
they are prescribed multiple regular medicines (see section 1.4).

1.3 **Principles of a tailored approach to care**

When offering a tailored approach to care, provide the person with multimorbidity with an individualised management plan which focuses on:

- improving quality of life by reducing treatment burden, adverse events, and unplanned care
- the person’s individual needs, preferences for treatments, health priorities and lifestyle
- how the person’s health conditions and their treatments interact and how this affects quality of life
- the benefits and risks of following recommendations from guidelines on single health conditions
- improving coordination of care across services.

1.3.2 Follow these steps when providing a tailored approach to care for a person with multimorbidity:

- Explain to the person the purpose of a tailored approach to care (see recommendation 1.6.2).
- Establish disease and treatment burden (see recommendations 1.6.3 to 1.6.5).
- Establish patient preferences, values and priorities (see recommendations 1.6.6 to 1.6.8).
- Review medicines and other treatments taking into account evidence of likely benefits and harms for the individual patient and outcomes important to the person (see recommendations 1.6.9 to 1.6.16).
- Develop an individualised management plan with the person (see recommendation 1.6.17), including:
  - agreeing goals and plans for future care
  - agreeing who is responsible for coordination of care (involving the patient in the discussion)
1. ensuring that responsibility for coordination of healthcare is
   communicated to all healthcare professionals and services involved
2. agreeing the timing of follow-up for review and how to access urgent
   care.

1.4 How to identify people who may benefit from a tailored
   approach to care

1.4.1 Identify people with multimorbidity who may benefit from a tailored
   approach to care:

   • opportunistically during routine care (for example, when reviewing
     medicines)
   • proactively using electronic health records.

   Use the criteria in recommendation 1.2.1 to guide this.

1.4.2 Consider using primary care electronic health records to identify possible
   markers of increased treatment burden or adverse events, such as:

   • number of regular medicines a person is prescribed
   • risk of unplanned or emergency care using a validated tool such as
     QAdmissions or PEONY, if available.

1.4.3 Use a tailored approach to care for people of any age with multimorbidity
   who are prescribed 15 or more regular medicines, because they are likely
   to be at higher risk of adverse events and drug interactions.

1.4.4 Consider a tailored approach to care for people of any age with
   multimorbidity who:

   • are prescribed 10 to 14 regular medicines
   • are prescribed fewer than 10 regular medicines but are at particular risk
     of adverse events.
1.5 How to assess frailty

1.5.1 Do not use a performance tool to assess frailty when a person with multimorbidity is acutely unwell.

Primary care and community care settings

1.5.2 In primary and community care settings, assess frailty in people with multimorbidity aged 65 years and over using 1 of the following:

- a formal assessment of gait speed, with more than 5 seconds to walk 4 metres indicating frailty
- 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 or less indicating frailty)
- the PRISMA-7 questionnaire, with scores of 3 and above indicating frailty.

1.5.3 In primary and community care settings, consider assessing frailty in people with multimorbidity aged under 65 years in line with recommendation 1.5.2.

Hospital outpatient settings

1.5.4 In hospital outpatient settings, assess frailty in people with multimorbidity aged 65 years and over using 1 of the following:

- a formal assessment of gait speed, with more than 5 seconds to walk 4 metres indicating frailty
- self-reported health status (that is, ‘how would you rate your health status on a scale from 0 to 10?’, with scores of 6 or less indicating frailty)
- the PRISMA-7 questionnaire, with scores of 3 and above indicating frailty
- the 'Timed Up and Go' test, with times of more than 12 seconds indicating frailty.
• self-reported physical activity, with frailty indicated by scores of 56.4 or less for men and 58.8 or less for women using the Physical Activity Scale for the Elderly
• Mini Nutritional Assessment (short form), with scores of 8 or less indicating frailty.

1.5.5 In hospital outpatient settings, consider assessing frailty in people under 65 years in line with recommendation 1.5.4.

1.6 Delivering a tailored approach to care

1.6.1 Follow the recommendations in the NICE guideline on patient experience in adult NHS services which provides guidance on knowing the patient as an individual, tailoring healthcare services for each patient, continuity of care and relationships, and enabling patients to actively participate in their care.

Explain to the person the purpose of a tailored approach to care

1.6.2 Explain to the person that the purpose of a tailored approach to care is to find ways of reducing treatment burden and optimising care. This might include identifying:

• treatments that could be stopped because of limited benefit
• medicines with a higher risk of adverse events (for example, falls, fractures, confusion, gastrointestinal bleeding, acute kidney injury)
• non-pharmacological treatments as possible alternatives to some medicines
• alternative arrangements for follow-up to coordinate or optimise the number of appointments.

Establishing disease and treatment burden

1.6.3 Establish disease burden by talking to people about how their health problems affect their day-to-day life. Include a discussion of mental health and how disease burden affects their wellbeing.
1.6.4 Establish treatment burden by talking to people about how treatments for their health problems affect their day-to-day life. Include in the discussion:

- the number and type of healthcare appointments a person has and where these take place
- the number and type of medicines a person is taking and how often
- any harms from medicines
- non-pharmacological treatments such as diets, exercise programmes and psychological treatments
- any effects of treatment on their mental health or wellbeing.

1.6.5 Be alert to possible depression and anxiety and consider assessing for these conditions and managing them in line with the NICE guideline on common mental health disorders.

1.6.6 Clarify with the patient at the first point of contact whether and how they would like their partner, family members and/or carers to be involved in key decisions about the management of their condition. Review this regularly. If the patient agrees, share information with their partner, family members and/or carers. [This recommendation is from the NICE guideline on patient experience in adult NHS services.]

1.6.7 Encourage people with multimorbidity to clarify what is important to them, including their personal goals and priorities. These include:

- undertaking paid or voluntary work, taking part in social activities and playing an active part in family life
- preventing specific outcomes (for example, stroke)
- reducing harms from medicines
- reducing treatment burden
- lengthening life.
Explore the person’s attitudes to their treatments and the potential benefit of those treatments. Follow the recommendations on involving patients in decisions about medicines in the NICE guideline on medicines adherence.

**Reviewing medicines and other treatments**

When reviewing medicines and other treatments for a person with multimorbidity, use the resource on the likely benefits and harms of commonly prescribed medicines ([Database of treatment effects](#)) to find information on medicines for the conditions that the person has.

Consider using a screening tool (for example, the STOPP/START tool in older people) to identify medicine-related safety concerns and medicines the person might benefit from but is not currently taking. [This recommendation is adapted from the NICE guideline on medicines optimisation.]

When reviewing medicines and optimising treatment, think about any medicines or non-pharmacological treatments that might be started as well as those that might be stopped.

Ask the person if treatments intended to relieve symptoms are providing benefits or causing harms. If the person is unsure of benefit or is experiencing harms from a treatment:

- discuss reducing or stopping the treatment
- plan a review to monitor effects and decide whether any further changes to treatments are needed (including restarting a treatment).

Take into account the possibility of lower likelihood of overall benefit of continuing medicines/treatments that aim to offer prognostic benefit, particularly in people with limited life expectancy or frailty.

Discuss with people who have multimorbidity and limited life expectancy or frailty whether they wish to continue treatments recommended in guidance on single health conditions which may offer them limited overall benefit.
Discuss any changes to treatments that aim to offer prognostic benefit with the person, taking into account:

- their views on the likely benefits and harms from individual treatments
- what is important to them in terms of personal goals and priorities (see recommendation 1.6.7).

Tell a person who is taking bisphosphonate for osteoporosis that there is no consistent evidence of further benefit after 3 years of treatment. Discuss stopping bisphosphonate after this time.

**Developing an individualised management plan**

After a discussion of disease and treatment burden and the person's preferences, values and priorities, agree with the person what actions to take, which could include:

- stopping or changing medicines and non-pharmacological treatments
- prioritising healthcare appointments
- assigning responsibility for coordination of care and ensuring this is communicated to other healthcare professionals and services
- arranging a follow-up and review of decisions made.

Provide the person with copies of any management plan made.

1.7 **Comprehensive assessment in hospital**

Start a comprehensive assessment of older people with complex needs at the point of admission and preferably in a specialist unit for older people.

[This recommendation is from the NICE guideline on transition between inpatient hospital settings and community or care home settings for adults with social care needs.]

1.8 **Terms used in this guideline**

**Tailored approach to care**

A tailored approach to care in people with multimorbidity involves personalised assessment and the development of an individualised management plan. The aim is
to improve quality of life by reducing treatment burden, adverse events, and unplanned or uncoordinated care. The approach takes account of a person’s individual needs, preferences for treatments, health priorities and lifestyle. It aims to improve coordination of care across services, particularly if this has become fragmented.

**Medicines**

Medicines includes topical treatments such as ointments, creams and drops, as well as medicines taken by mouth or injection.

**Comprehensive assessment of older people with complex needs**

A comprehensive geriatric assessment is an interdisciplinary diagnostic process to determine the medical, psychological and functional capability of someone who is frail and old. The aim is to develop a coordinated, integrated plan for treatment and long-term support.

**Putting this guideline into practice**

NICE has produced [tools and resources](#) to help you put this guideline into practice.

Putting a guideline fully into practice can take time. How long may vary from guideline to guideline, and depends on how much change in practice or services is needed. Implementing change is most effective when aligned with local priorities.

Changes recommended for clinical practice that can be done quickly – like changes in prescribing practice – should be shared quickly. This is because healthcare professionals should use guidelines to guide their work – as is required by professional regulating bodies such as the General Medical and Nursing and Midwifery Councils.

Changes should be implemented as soon as possible, unless there is a good reason for not doing so (for example, if it would be better value for money if a package of recommendations were all implemented at once).
Different organisations may need different approaches to implementation, depending on their size and function. Sometimes individual practitioners may be able to respond to recommendations to improve their practice more quickly than large organisations.

Here are some pointers to help put NICE guidelines into practice:

1. Raise awareness through routine communication channels, such as email or newsletters, regular meetings, internal staff briefings and other communications with all relevant partner organisations. Identify things staff can include in their own practice straight away.

2. Identify a lead with an interest in the topic to champion the guideline and motivate others to support its use and make service changes, and to find out any significant issues locally.

3. Carry out a baseline assessment against the recommendations to find whether there are gaps in current service provision.

4. Think about what data you need to measure improvement and plan how you will collect it. You may need to work with other health and social care organisations and specialist groups to compare current practice with the recommendations. This may also help identify local issues that will slow or prevent implementation.

5. Develop an action plan with the steps needed to put the guideline into practice, and make sure it is ready as soon as possible. Big, complex changes may take longer to implement, but some may be quick and easy to do. An action plan will help in both cases.

6. For very big changes include milestones and the business case, which will set out additional costs, savings and possible areas for disinvestment. A small project group should develop the action plan. The group should include the guideline champion, a senior organisational sponsor, staff involved in the associated services, finance and information professionals.

7. Implement the action plan with oversight from the lead and the project group. Big projects may also need project management support.
8. Review and monitor how well the guideline is being implemented through the project group. Share progress with those involved in making improvements, as well as relevant boards and local partners.

NICE provides a comprehensive programme of support and resources to maximise uptake and use of evidence and guidance. See our into practice pages for more information.

Also see Leng G, Moore V, Abraham S, editors (2014) Achieving high quality care – practical experience from NICE. Chichester: Wiley.

**Context**

Multimorbidity is usually defined as when a person has 2 or more long-term health conditions. Measuring the prevalence of multimorbidity is not straightforward because it depends on which conditions are counted. However, all recent studies show that multimorbidity is common, becomes more common as people age, and is more common in people from less affluent areas. Whereas in older people multimorbidity is largely due to higher rates of physical health conditions, in younger people and people from less affluent areas multimorbidity is often due to a combination of physical and mental health conditions (notably depression).

Multimorbidity matters because it is associated with reduced quality of life, higher mortality, polypharmacy and high treatment burden, higher rates of adverse drug events, and much greater health services use (including unplanned or emergency care). A particular issue for health services and healthcare professionals is that treatment regimens (including non-pharmacological treatments) can easily become very burdensome for people with multimorbidity, and care can become uncoordinated and fragmented. Polypharmacy in people with multimorbidity is often driven by the introduction of multiple medicines intended to prevent future morbidity and mortality. However, the case for using these medicines weakens if life expectancy is reduced by other conditions or frailty. The absolute difference made by each additional medicine may also reduce when people are taking multiple preventive medicines. The implications of multimorbidity for organisation of healthcare are highly variable depending on which conditions a person has. Groups
of conditions that have closely related or concordant treatment, such as diabetes, hypertension and angina, pose fewer problems for coordination than conditions needing quite different treatment (for example, physical and mental health conditions).

NICE guidelines have been developed for managing many individual diseases and conditions. The aim of this guideline is to inform patient and clinical decision-making and models of care for people with multimorbidity who would benefit from a tailored approach because of the high impact of their conditions or treatment on their quality of life or functioning. Although this is a particular concern of generalists such as GPs and geriatricians, the guideline is also relevant to specialists because many of the patients they care for will have significant other conditions.

**More information**

To find out what NICE has said on topics related to this guideline, see our web pages on multiple long-term conditions, older people and medicines management.

**Recommendations for research**

The guideline committee has made the following recommendations for research. The committee’s full set of research recommendations is detailed in the [full guideline](#).

1. **Organisation of care**

What is the clinical and cost effectiveness of alternative approaches to organising primary care compared with usual care for people with multimorbidity?

**Why this is important**

The guideline committee felt that primary care was well suited to managing multimorbidity, but agreed that this was often challenging partly because of how primary care is currently organised. However, there was inadequate high-quality research on alternative approaches to organising care for people with multimorbidity. Trials should be undertaken to examine the impact of different strategies on
important clinical outcomes, quality of life and cost effectiveness. The committee believed that no single trial could likely address this research need, because there are many plausible interventions and many defined populations in which such interventions might be of value.

Large, well designed trials of alternative ways of organising general practice based primary care for people with multimorbidity would be of value in defined patient groups (for example, people with multimorbidity who find it difficult to manage their treatment or care or day-to-day activities, people with multiple providers or services involved in their care, people with both long-term physical and mental health problems, people with well-defined frailty, people frequently using unscheduled care, people prescribed multiple regular medicines, and people who are housebound or care home residents).

Such trials should have clear identification and justification of the planned target population, careful piloting and optimisation, and well-described interventions. They need to be sufficiently powered to provide evidence of clinically important effects of interventions on outcomes that are relevant to patients and health and social care services (for example, quality of life, hospital and care home admission, mortality).

2. Holistic assessment in the community

What is the clinical and cost effectiveness of a community holistic assessment and intervention for people living with high levels of multimorbidity?

Why this is important

There was low quality evidence to indicate potential benefit from community assessments based on the principles of comprehensive geriatric assessment in older people. However, the studies were conducted outside the UK and were not aimed at all adults living with multimorbidity. The guideline committee believed that there was some evidence that holistic assessment and intervention in the community may be of benefit for older people, but that the evidence was of low quality and not adequate to inform strong recommendations.

Large, well-designed trials of holistic assessment and intervention in people with multimorbidity would be of value in defined patient groups in the community (for
example, people in nursing homes, people who are housebound, people of all ages with well-defined frailty, people with high levels of multimorbidity or polypharmacy).

Such trials must be rigorous, with clear identification and justification of the planned target population, careful piloting and optimisation, and well-described interventions. They need to be sufficiently powered to provide evidence of clinically important effects of interventions on outcomes that are relevant to patients and health and social care services (for example, quality of life, hospital and care home admission, and mortality).

The guideline committee believed that no single trial could likely address this research need, since there are many plausible interventions and many defined populations in which such interventions might be of value. The committee believed that assessment should follow the principles of Comprehensive Geriatric Assessment or the Standardised Assessment of Elderly People in Europe (STEP) tool, and that interventions would likely involve a multidisciplinary team.

### 3. Stopping preventive medicines

What is the clinical and cost effectiveness of stopping preventive medicines in people with multimorbidity who may not benefit from continuing them?

**Why this is important**

There is good evidence from randomised controlled trials of the medium term (2–10 years) benefit of medicines recommended in guidelines for preventing future morbidity or mortality, including treatments for hypertension, hyperglycaemia and osteoporosis. However, there is much less evidence about the balance of benefit and harm over longer periods of treatment. It is plausible that harms outweigh benefits in some people with multimorbidity (for example, because of higher rates of adverse events in older, frailer people prescribed multiple regular medicines, or because the expected benefit from continuing a preventive medicine is reduced when there is limited life expectancy or high risk of death from other morbidities). These people are unlikely to have been eligible or included in published trials showing initial benefit from preventive medicines. The systematic review undertaken by NICE in 2015 did not find any randomised controlled trials of stopping antihypertensive medicines in people with multimorbidity. The review found 1 small
randomised controlled trial of stopping statins in people with a life expectancy of 1 year, but the committee did not consider this provided enough evidence to make a recommendation. The review found several randomised controlled trials of stopping bisphosphonates (although not clearly in populations with multimorbidity) and a recommendation was made for this, but no randomised controlled trials were found of stopping calcium and/or vitamin D. Recommendations based on robust evidence on the clinical and cost effectiveness of stopping preventive medicines in people with multimorbidity who may not benefit could have significant budgetary implications for the NHS. No ongoing trials have been identified.

The guideline committee considered that 1 or more large, well-designed trials of stopping preventive medicine in people with multimorbidity would be of value in defined patient groups in the community (for example, people in nursing homes, people who are housebound, people with well-defined frailty, people with high levels of multimorbidity or polypharmacy, people with limited life expectancy). Discontinuation could either be complete (all relevant medicines) or partial (for example, reduced intensity of hypotensive or hypoglycaemic treatment). Such trials have to be sufficiently powered to provide evidence of clinically important effects of interventions on outcomes that are relevant to patients and health and social care systems (for example, quality of life, hospital and care home admission and mortality). The committee believed that given the existing evidence, it would be of greater value to evaluate the effects of stopping discrete medicines or drug classes, rather than stopping all preventive medicines at the same time. The committee also believed that no single trial could likely address this research need, since there are many medicines that could be stopped and many defined populations in which this might be of value.

4. Predicting life expectancy

Is it possible to analyse primary care data to identify characteristics that affect life expectancy and to develop algorithms and prediction tools for patients and healthcare providers to predict reduced life expectancy?
Why this is important:
Many people take preventive medicines which are likely to offer small benefits because of reduced life expectancy from other causes. Medicines and other treatments may therefore be adding to treatment burden without adding quality or length of life. The ability to identify people with reduced life expectancy could provide healthcare professionals and people with information that could inform decisions about starting or continuing long-term preventive treatments. Conversely younger people with multimorbidity and reduced life expectancy may benefit from additional preventive treatments. Because this information would be used most often in a primary care setting, the committee considered that a tool derived from information within primary care databases would be most useful.

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