

Multimorbidity: clinical assessment and management

NICE guideline: short version

Draft for consultation, March 2016

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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1 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.

2

3 **1.1 How to use this guideline**

4 1.1.1 Be aware that the evidence for recommendations in NICE guidance on
5 single health conditions is regularly drawn from people without
6 multimorbidity and taking fewer prescribed regular medicines.

7 1.1.2 Think carefully about the risks and benefits for people with multimorbidity
8 of individual treatments recommended in guidance for single health
9 conditions. Discuss this with the patient alongside discussion of their
10 preferences for care and for treatment.

11 **1.2 People with multimorbidity who may benefit from a tailored 12 approach to care**

13 1.2.1 Consider a tailored approach to care for people with multimorbidity of any
14 age if any of the following apply:

- 15 • they find it difficult to manage their treatments or day-to-day activities
- 16 • they receive care from multiple services and need care from new
17 additional services
- 18 • they have both long-term physical and mental health conditions
- 19 • they have frailty (see section 1.5) or falls
- 20 • they frequently seek unplanned or emergency care (see also
21 recommendation 1.4.2)

- they are prescribed multiple regular medicines (see section 1.4).

1.3 Principles of a tailored approach to care

1.3.1 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)

- ensuring that responsibility for coordination of healthcare is communicated to all healthcare professionals and services involved
- 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 • self-reported physical activity, with frailty indicated by scores of 56.4 or
2 less for men and 58.8 or less for women using the Physical Activity
3 Scale for the Elderly
- 4 • Mini Nutritional Assessment (short form), with scores of 8 or less
5 indicating frailty.

6 1.5.5 In hospital outpatient settings, consider assessing frailty in people under
7 65 years in line with recommendation 1.5.4.

8 **1.6 *Delivering a tailored approach to care***

9 1.6.1 Follow the recommendations in the NICE guideline on patient experience
10 in adult NHS services which provides guidance on knowing the patient as
11 an individual, tailoring healthcare services for each patient, continuity of
12 care and relationships, and enabling patients to actively participate in their
13 care.

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

15 1.6.2 Explain to the person that the purpose of a tailored approach to care is to
16 find ways of reducing treatment burden and optimising care. This might
17 include identifying:

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

25 **Establishing disease and treatment burden**

26 1.6.3 Establish disease burden by talking to people about how their health
27 problems affect their day-to-day life. Include a discussion of mental health
28 and how disease burden affects their wellbeing.

1 1.6.4 Establish treatment burden by talking to people about how treatments for
2 their health problems affect their day-to-day life. Include in the discussion:

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

10 1.6.5 Be alert to possible depression and anxiety and consider assessing for
11 these conditions and managing them in line with the NICE guideline on
12 [common mental health disorders](#).

13 **Establishing patient preferences, values and priorities**

14 1.6.6 Clarify with the patient at the first point of contact whether and how they
15 would like their partner, family members and/or carers to be involved in
16 key decisions about the management of their condition. Review this
17 regularly. If the patient agrees, share information with their partner, family
18 members and/or carers. [This recommendation is from the NICE guideline
19 on [patient experience in adult NHS services](#).]

20 1.6.7 Encourage people with multimorbidity to clarify what is important to them,
21 including their personal goals and priorities. These include:

- 22 • undertaking paid or voluntary work, taking part in social activities and
23 playing an active part in family life
- 24 • preventing specific outcomes (for example, stroke)
- 25 • reducing harms from medicines
- 26 • reducing treatment burden
- 27 • lengthening life.

1 1.6.8 Explore the person's attitudes to their treatments and the potential benefit
2 of those treatments. Follow the recommendations on involving patients in
3 decisions about medicines in the NICE guideline on [medicines adherence](#).

4 **Reviewing medicines and other treatments**

5 1.6.9 When reviewing medicines and other treatments for a person with
6 multimorbidity, use the resource on the likely benefits and harms of
7 commonly prescribed medicines ([Database of treatment effects](#)) to find
8 information on medicines for the conditions that the person has.

9 1.6.10 Consider using a screening tool (for example, the STOPP/START tool in
10 older people) to identify medicine-related safety concerns and medicines
11 the person might benefit from but is not currently taking. [This
12 recommendation is adapted from the NICE guideline on [medicines](#)
13 [optimisation](#).]

14 1.6.11 When reviewing medicines and optimising treatment, think about any
15 medicines or non-pharmacological treatments that might be started as
16 well as those that might be stopped.

17 1.6.12 Ask the person if treatments intended to relieve symptoms are providing
18 benefits or causing harms. If the person is unsure of benefit or is
19 experiencing harms from a treatment:

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

23 1.6.13 Take into account the possibility of lower likelihood of overall benefit of
24 continuing medicines/treatments that aim to offer prognostic benefit,
25 particularly in people with limited life expectancy or frailty.

26 1.6.14 Discuss with people who have multimorbidity and limited life expectancy
27 or frailty whether they wish to continue treatments recommended in
28 guidance on single health conditions which may offer them limited overall
29 benefit.

1 1.6.15 Discuss any changes to treatments that aim to offer prognostic benefit
2 with the person, taking into account:
3 • their views on the likely benefits and harms from individual treatments
4 • what is important to them in terms of personal goals and priorities (see
5 recommendation 1.6.7) .

6 1.6.16 Tell a person who is taking bisphosphonate for osteoporosis that there is
7 no consistent evidence of further benefit after 3 years of treatment.
8 Discuss stopping bisphosphonate after this time.

9 **Developing an individualised management plan**

10 1.6.17 After a discussion of disease and treatment burden and the person's
11 preferences, values and priorities, agree with the person what actions to
12 take, which could include:

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

18 Provide the person with copies of any management plan made.

19 **1.7 *Comprehensive assessment in hospital***

20 1.7.1 Start a comprehensive assessment of older people with complex needs at
21 the point of admission and preferably in a specialist unit for older people.
22 [This recommendation is from the NICE guideline on transition between
23 inpatient hospital settings and community or care home settings for adults
24 with social care needs.]

25 **1.8 *Terms used in this guideline***

26 **Tailored approach to care**

27 A tailored approach to care in people with multimorbidity involves personalised
28 assessment and the development of an individualised management plan. The aim is

1 to improve quality of life by reducing treatment burden, adverse events, and
2 unplanned or uncoordinated care. The approach takes account of a person's
3 individual needs, preferences for treatments, health priorities and lifestyle. It aims to
4 improve coordination of care across services, particularly if this has become
5 fragmented.

6 **Medicines**

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

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

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

14 **Putting this guideline into practice**

15 NICE has produced [tools and resources](#) [link to tools and resources tab at
16 [publication](#)] to help you put this guideline into practice.

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

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

25 Changes should be implemented as soon as possible, unless there is a good reason
26 for not doing so (for example, if it would be better value for money if a package of
27 recommendations were all implemented at once).

1 Different organisations may need different approaches to implementation, depending
2 on their size and function. Sometimes individual practitioners may be able to respond
3 to recommendations to improve their practice more quickly than large organisations.

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

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

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

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

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

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

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

27 7. Implement the action plan with oversight from the lead and the project group. Big
28 projects may also need project management support.

1 8. Review and monitor how well the guideline is being implemented through the
2 project group. Share progress with those involved in making improvements, as well
3 as relevant boards and local partners.

4 NICE provides a comprehensive programme of support and resources to maximise
5 uptake and use of evidence and guidance. See our [into practice](#) pages for more
6 information.

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

9 **Context**

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

18 Multimorbidity matters because it is associated with reduced quality of life, higher
19 mortality, polypharmacy and high treatment burden, higher rates of adverse drug
20 events, and much greater health services use (including unplanned or emergency
21 care). A particular issue for health services and healthcare professionals is that
22 treatment regimens (including non-pharmacological treatments) can easily become
23 very burdensome for people with multimorbidity, and care can become
24 uncoordinated and fragmented. Polypharmacy in people with multimorbidity is often
25 driven by the introduction of multiple medicines intended to prevent future morbidity
26 and mortality. However, the case for using these medicines weakens if life
27 expectancy is reduced by other conditions or frailty. The absolute difference made by
28 each additional medicine may also reduce when people are taking multiple
29 preventive medicines. The implications of multimorbidity for organisation of
30 healthcare are highly variable depending on which conditions a person has. Groups

1 of conditions that have closely related or concordant treatment, such as diabetes,
2 hypertension and angina, pose fewer problems for coordination than conditions
3 needing quite different treatment (for example, physical and mental health
4 conditions).

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

12 **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](#).

13

14 **Recommendations for research**

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

17 **1. Organisation of care**

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

20 **Why this is important**

21 The guideline committee felt that primary care was well suited to managing
22 multimorbidity, but agreed that this was often challenging partly because of how
23 primary care is currently organised. However, there was inadequate high-quality
24 research on alternative approaches to organising care for people with multimorbidity.
25 Trials should be undertaken to examine the impact of different strategies on

1 important clinical outcomes, quality of life and cost effectiveness. The committee
2 believed that no single trial could likely address this research need, because there
3 are many plausible interventions and many defined populations in which such
4 interventions might be of value.

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

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

18 ***2. Holistic assessment in the community***

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

21 **Why this is important**

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

29 Large, well-designed trials of holistic assessment and intervention in people with
30 multimorbidity would be of value in defined patient groups in the community (for

1 example, people in nursing homes, people who are housebound, people of all ages
2 with well-defined frailty, people with high levels of multimorbidity or polypharmacy).

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

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

15 **3. Stopping preventive medicines**

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

18 **Why this is important**

19 There is good evidence from randomised controlled trials of the medium term (2–
20 10 years) benefit of medicines recommended in guidelines for preventing future
21 morbidity or mortality, including treatments for hypertension, hyperglycaemia and
22 osteoporosis. However, there is much less evidence about the balance of benefit
23 and harm over longer periods of treatment. It is plausible that harms outweigh
24 benefits in some people with multimorbidity (for example, because of higher rates of
25 adverse events in older, frailer people prescribed multiple regular medicines, or
26 because the expected benefit from continuing a preventive medicine is reduced
27 when there is limited life expectancy or high risk of death from other morbidities).
28 These people are unlikely to have been eligible or included in published trials
29 showing initial benefit from preventive medicines. The systematic review undertaken
30 by NICE in 2015 did not find any randomised controlled trials of stopping
31 antihypertensive medicines in people with multimorbidity. The review found 1 small

1 randomised controlled trial of stopping statins in people with a life expectancy of
2 1 year, but the committee did not consider this provided enough evidence to make a
3 recommendation. The review found several randomised controlled trials of stopping
4 bisphosphonates (although not clearly in populations with multimorbidity) and a
5 recommendation was made for to this, but no randomised controlled trials were
6 found of stopping calcium and/or vitamin D. Recommendations based on robust
7 evidence on the clinical and cost effectiveness of stopping preventive medicines in
8 people with multimorbidity who may not benefit could have significant budgetary
9 implications for the NHS. No ongoing trials have been identified.

10 The guideline committee considered that 1 or more large, well-designed trials of
11 stopping preventive medicine in people with multimorbidity would be of value in
12 defined patient groups in the community (for example, people in nursing homes,
13 people who are housebound, people with well-defined frailty, people with high levels
14 of multimorbidity or polypharmacy, people with limited life expectancy).

15 Discontinuation could either be complete (all relevant medicines) or partial (for
16 example, reduced intensity of hypotensive or hypoglycaemic treatment). Such trials
17 have to be sufficiently powered to provide evidence of clinically important effects of
18 interventions on outcomes that are relevant to patients and health and social care
19 systems (for example, quality of life, hospital and care home admission and
20 mortality). The committee believed that given the existing evidence, it would be of
21 greater value to evaluate the effects of stopping discrete medicines or drug classes,
22 rather than stopping all preventive medicines at the same time. The committee also
23 believed that no single trial could likely address this research need, since there are
24 many medicines that could be stopped and many defined populations in which this
25 might be of value.

26 ***4. Predicting life expectancy***

27 Is it possible to analyse primary care data to identify characteristics that affect life
28 expectancy and to develop algorithms and prediction tools for patients and
29 healthcare providers to predict reduced life expectancy?

1 **Why this is important:**

2 Many people take preventive medicines which are likely to offer small benefits
3 because of reduced life expectancy from other causes. Medicines and other
4 treatments may therefore be adding to treatment burden without adding quality or
5 length of life. The ability to identify people with reduced life expectancy could provide
6 healthcare professionals and people with information that could inform decisions
7 about starting or continuing long-term preventive treatments. Conversely younger
8 people with multimorbidity and reduced life expectancy may benefit from additional
9 preventive treatments. Because this information would be used most often in a
10 primary care setting, the committee considered that a tool derived from information
11 within primary care databases would be most useful.

12 **ISBN:**