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## Too much medicine in older people? Deprescribing through shared decision making

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# Too much medicine in older people? Deprescribing through shared decision making

## Abstract

Too much medicine is an increasingly recognised problem, and one manifestation is inappropriate polypharmacy in older people. Polypharmacy is usually defined as taking more than five regular prescribed medicines. It can be appropriate (when potential benefits outweigh potential harms) but increases the risk of older people experiencing adverse drug reactions, impaired physical and cognitive function, and hospital admission. There is limited evidence to inform polypharmacy in older people, especially those with multimorbidity, cognitive impairment, or frailty. Systematic reviews of medication withdrawal trials (deprescribing) show that reducing specific classes of medicines may decrease adverse events and improve quality of life. Two recent reviews of the literature on deprescribing stressed the importance of patient involvement and shared decision making. Patients and clinicians typically overestimate the benefits of treatments and underestimate their harms. When they engage in shared decision making they become better informed about potential outcomes and as a result patients tend to choose more conservative options (eg, fewer medicines), facilitating deprescribing. However, shared decision making in this context is not easy, and there is little guidance on how to do it. We draw together evidence from the psychology, communication, and decision making literature (see appendix on [thebmj.com](http://thebmj.com)). For each step of the shared decision making process we describe the unique tasks required for deprescribing decisions; identify challenges for older adults, their companions, and clinicians (figure); give practical advice on how challenges may be overcome; highlight where more work is needed; and identify priorities for future research (table).

## Keywords

older, deprescribing, people?, much, too, medicine, making, decision, shared

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## ANALYSIS

# Too much medicine in older people? Deprescribing through shared decision making

**Jansen and colleagues** explore the role of shared decision making in tackling inappropriate polypharmacy in older adults

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Too much medicine is an increasingly recognised problem,<sup>1 2</sup> and one manifestation is inappropriate polypharmacy in older people. Polypharmacy is usually defined as taking more than five regular prescribed medicines.<sup>3</sup> It can be appropriate (when potential benefits outweigh potential harms)<sup>4</sup> but increases the risk of older people experiencing adverse drug reactions, impaired physical and cognitive function, and hospital admission.<sup>5-7</sup> There is limited evidence to inform polypharmacy in older people, especially those with multimorbidity, cognitive impairment, or frailty.<sup>8</sup> Systematic reviews of medication withdrawal trials (deprescribing) show that reducing specific classes of medicines may decrease adverse events and improve quality of life.<sup>9-11</sup>

Two recent reviews of the literature on deprescribing stressed the importance of patient involvement and shared decision making.<sup>12 13</sup> Patients and clinicians typically overestimate the benefits of treatments and underestimate their harms.<sup>14</sup> When they engage in shared decision making they become better informed about potential outcomes and as a result patients tend to choose more conservative options (eg, fewer medicines), facilitating deprescribing.<sup>15</sup> However, shared decision making in this context is not easy, and there is little guidance on how to do it.<sup>16</sup>

We draw together evidence from the psychology, communication, and decision making literature (see appendix on thebmj.com). For each step of the shared decision making

process we describe the unique tasks required for deprescribing decisions; identify challenges for older adults, their companions, and clinicians (figure); give practical advice on how challenges may be overcome; highlight where more work is needed; and identify priorities for future research (table).<sup>17 18</sup>

## Process for deprescribing with older adults

### Step 1: creating awareness that options exist

The clinician and patient acknowledge that a decision can be made about continuation or discontinuation of medicines, and that this requires input from both clinician and patient.

### When to initiate discussions about deprescribing

Prescribing new medicines is often straightforward, driven by a new diagnosis, symptom, or test result. When to consider ceasing medicines is less clear.<sup>12</sup> Possible triggers include the number of medicines taken (perhaps  $\geq 10$ ); a new symptom that may be an adverse effect of a medicine; identifying high risk, ineffective, or unnecessary medicines; apparent non-adherence; or changed treatment priorities.<sup>19</sup> Most of these situations can be identified only by a medicines review. Reviews can be triggered by important life transitions (such as hospital admission, a new diagnosis, or seeing a new doctor) and can be initiated by the clinician or patient, but they are often

underused.<sup>20 21</sup> Importantly, qualitative research suggests that older people may not be aware that deprescribing is possible so it is essential to explain this.<sup>16</sup>

### *Older people's attitudes towards medicine*

Clinicians may be reluctant to initiate discussions about deprescribing with older people, believing that they value medicines highly,<sup>21 22</sup> would resist deprescribing,<sup>23</sup> and may interpret attempted deprescribing as withdrawing care or “giving up.”<sup>22</sup> Substantial evidence shows that older people's attitudes can be internally contradictory: they may be positive about both taking their medicines<sup>24-26</sup> and taking fewer medicines.<sup>27</sup>

Older people's willingness to either tolerate polypharmacy or discontinue a medicine seems to be influenced by the communication skills<sup>24 27</sup> and perceived experience of the clinician,<sup>28</sup> and the degree to which the older person trusts them.<sup>24</sup> Experiencing adverse effects may increase openness to deprescribing.<sup>24 26</sup> In a US study, 62% of older patients (aged ≥65 years) who received a direct-to-consumer educational leaflet about benzodiazepine cessation brought the topic up with their clinician.<sup>29</sup> In an Australian study,<sup>23</sup> over 90% of participants were hypothetically willing to stop a medicine if this was recommended by their clinician.

### *Cognitive biases*

A well recognised cognitive bias is status quo bias: a preference for continuing with the status quo, especially if it has been the default for many years.<sup>30</sup> A related concept in the medical literature is clinical or therapeutic inertia: “recognition of the problem, but failure to act.”<sup>31</sup> Therapeutic inertia is mostly used to explain inappropriate underprescribing but also applies to failure to deprescribe inappropriate medicines.<sup>32</sup> Omission bias—being more willing to risk harms arising from inaction than from action—is another well recognised problem.<sup>33</sup> Paradoxically, once people are taking a medicine, continuing it unchanged is perceived as inaction, while ceasing it is perceived to be an action. Patient resistance to change (as perceived by the clinician) was the most commonly expressed barrier in a recent systematic review of qualitative studies on this topic.<sup>32</sup>

Patients may presume medicines are important if they have been taking them for many years.<sup>28</sup> The language used by clinicians when starting a medicine can be very important. For example, if patients have been told that they would need the medicines for the “rest of their lives,” discussion of possible discontinuation can make them anxious.<sup>26</sup> Clinical guideline developers could help by considering drug-disease and drug-drug interactions in older people with multimorbidity<sup>34</sup> and acknowledging the need for judicious use of medicines in this population. It has also been suggested that guidelines should include the period after which the continued use of a newly started medication should be reviewed.

### *Multidisciplinary decisions and companion involvement*

It can be unclear who should initiate the discussion on deprescribing as older people are often prescribed medicines by multiple clinicians.<sup>27</sup> Qualitative research suggests that deprescribing in primary care can be hampered by lack of communication and cooperation with prescribing specialists,<sup>21-35</sup> and that older patients worry about poor communication about prescribing between clinicians.<sup>24</sup> Research on interdisciplinary shared decision making is still limited,<sup>36</sup> and the role of different types of clinician is likely to vary depending on the context.

The presence of the patient's companion(s) poses another potential challenge for deprescribing.<sup>37</sup> A systematic review of triadic decision making recommends that clinicians encourage the involvement of companions, highlight helpful companion behaviours, and clarify and agree on role preferences of patient and companions.<sup>37</sup>

### **Step 2: discussing the options and their benefits and harms**

This involves ensuring that the patient knows what options are available (including the option to continue medicines) and understands the process of deprescribing, the expected benefits and harms of each option, and how likely they are to occur.

#### *Understanding options*

Age related changes in cognitive and affective processes<sup>38</sup> and comorbidity may influence how older people process and understand information about their medication options.<sup>39-41</sup> Studies suggest that compared with younger people, older people pay attention to fewer options,<sup>42</sup> disproportionately focus on positive information,<sup>41</sup> seek less information,<sup>39</sup> and have greater difficulty understanding information about available options.<sup>43</sup> Few of these studies, however, were in the health domain, and all used highly simplified stimuli in a controlled context, so it is unclear how they apply to real life health decisions. The presence of hearing loss and speech problems may further complicate communication and reduce understanding.<sup>16</sup>

#### *Understanding potential benefits and harms of different options*

Many adults have poor literacy and numeracy skills and have difficulty interpreting quantitative and probabilistic information. Older adults who take multiple medicines often report not being fully informed about the reason for taking their medicines or the potential side effects.<sup>28</sup> One study among people aged ≥75 found a wide variation in their understanding of information on benefits and harms<sup>44</sup>; numerical risk information was especially challenging, suggesting that visual formats such as pictographs may be helpful.<sup>44</sup>

#### *Communicating uncertainty*

One of the challenges of deprescribing decisions is the limited evidence for its benefits and harms. Although randomised clinical trials support deprescribing certain medicines,<sup>9-11</sup> for most medicines used by older people the evidence is still limited. GPs have reported lacking confidence in risk communication, particularly communicating uncertainty.<sup>22</sup> Communication tools such as verbal labels, numbers, or graphics<sup>45 46</sup> may help to explain uncertainty and encourage deeper consideration of personal values. Downsides of communicating uncertainty may include causing cognitive overload, decision avoidance, or worry that could impair decision making.

#### *Distinguishing between different types of medicine*

Deprescribing decisions for preventive treatments (eg, statins or warfarin) are different from those intended to improve current health or quality of life by managing symptoms (eg, asthma drugs or analgesics). In a qualitative study, GPs felt competent in deprescribing medicines once symptoms had been relieved or cured but were less confident about discontinuing preventive medicines.<sup>22</sup> They also feel “under pressure” from clinical guidelines to prescribe preventive medicines despite knowing

that the potential harms of polypharmacy may outweigh possible long term benefits.<sup>21</sup>

### Step 3: Exploring patient preferences for the different options

The aim of this step is to help patients identify their preferences, goals, and priorities regarding deprescribing.

#### *Preferences in older people vary and are unstable*

Elicitation of preferences is complex and debated.<sup>47</sup> The theory of constructed preferences postulates that when people are in complex situations they do not have stable ideas about what is important to them.<sup>48</sup> Rather, people “construct” their preferences as they gain more information. Emotions have an important role in constructing preferences and decision making, especially in older people, and we are likely to use heuristics (rules of thumb) to simplify the complex decision process.<sup>40</sup>

Older people may have a stronger sense of what is important to them because of accumulated healthcare experience. This may make it easier to come to clear agreement on their values.<sup>48</sup> At the same time it has been suggested that preferences are more variable in older than younger people, influenced by factors such as current health and mood.<sup>49</sup>

Some evidence suggests that older patients believe their clinicians already know their preferences.<sup>16</sup> This may reduce their perceived need to be involved in decision making. Methods have been proposed to help people think about the desirability of options or attributes of options so as to identify preferences (eg, values clarification exercises).<sup>47</sup> More research is needed to identify which of these methods are best suited for older people and to determine how age related cognitive and affective changes influence preference elicitation.

#### *Weighing up benefits and harms is more complex in older people*

Decisions about deprescribing need to take account of the evidence on potential benefits and harms in light of decreasing life expectancy. Discussions about this trade-off with older people can be challenging, partly because of lack of evidence.<sup>32 35</sup> Estimates of life expectancy are at best imprecise. Prognostic tools do, however, exist,<sup>50</sup> and self rated health is a good predictor of mortality,<sup>51</sup> so these may be useful guides for clinicians to incorporate in shared decision making.<sup>22</sup>

A qualitative study of GPs found some were concerned that discussing life expectancy may be perceived as threatening while others reported that patients spontaneously talked about the quality of their remaining life, strengthening the GP-patient relationship.<sup>22</sup> In one study about 60% of 214 older adults wanted to discuss life expectancy with their clinician when making decisions, while 40% did not.<sup>52</sup> In a time trade-off study, most participating women (aged 75+) preferred quality of life and independence over adding years to life<sup>53</sup>; however, this cannot be assumed to be the case for all older people. More research on communicating life expectancy and the trade-off between quality and quantity of life is needed.

### Step 4: making the decision

Deciding whether to deprescribe requires integrating the patient's preferences and priorities with information on benefits and harms. Decisions may be made by the patient, made collaboratively, or deferred to the clinician. Algorithms exist to guide the process of deciding which medicines to stop first.<sup>12 13</sup>

### *Preferences for involvement and patient autonomy*

Most older people prefer to participate in medical decision making,<sup>54</sup> although this is influenced by their health.<sup>55</sup> Even those who prefer to delegate decisions to their clinician often want to discuss options, attitudes, and preferences, and receive information.<sup>16-56</sup> Moreover, some may believe they have inadequate skills to participate in decision making, leading to a stated rather than actual preference for lower participation.<sup>16 57</sup> Clinicians and companions can support older people's autonomy by eliciting their goals and values and inviting them to participate in decision making, whether or not they make the final decision.

### *Deprescribing is an ongoing process*

Decisions to cease medicines must be made using a staged approach, with careful monitoring for withdrawal or adverse effects.<sup>13</sup> It is important to clearly communicate that medicine cessation is provisional, not final, and should be continuously reviewed.<sup>12 26</sup>

### Where to go from here?

Deprescribing is an important challenge and not an easy one. Shared decision making should be an integral part of the deprescribing process, but its implementation in clinical practice is complex. Our advice is to, at minimum, inform older people (and their companions) about the option to deprescribe, and invite and support them in expressing their preferences and making the decision. This requires careful tailoring, as preferences for different options and willingness, and ability to be involved in decision making vary widely. Clearly this can be a time consuming process. Protected time, more dedicated resources, and even specific remuneration for medicine reviews may be needed. New evidence is urgently needed to better support clinicians to reduce inappropriate polypharmacy among older adults. In particular, we need to identify better ways to communicate benefits and harms information and to elicit older people's preferences in ways that support shared decisions.

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## Key messages

Deprescribing is a process of planned and supervised tapering or ceasing of inappropriate medicines

Shared decision making should be an integral part of the deprescribing process

Many factors affect this process, including trust in clinicians' advice, contradictory patient attitudes about medication, cognitive biases that lead to a preference for the status quo and positive information, and information processing difficulties

There is uncertainty about the effect of risk communication and preference elicitation tools in older people

Older people's preferences for discussing life expectancy and quality of life vary widely, but even those who wish to delegate their decisions still appreciate discussion of options

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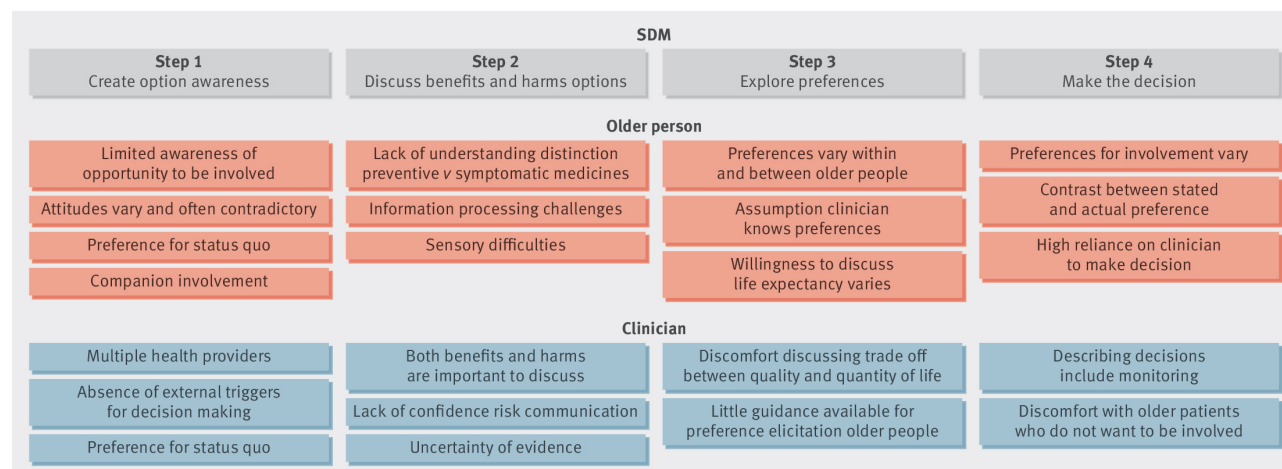
## Table

**Table 1 | Steps for shared decision making (SDM) about deprescribing in older people**

Step	Practical advice	Priorities for future research
Creating awareness that options exist and a decision can be made	<ul style="list-style-type: none"> <li>• Regularly review medicines; ask about problems /concerns to identify deprescribing opportunities</li> <li>• Explain that there are medication options to consider, including tapering or ceasing</li> <li>• Attitudes to medicines and deprescribing vary widely and need to be actively explored</li> <li>• Establish a trusting relationship before discussing deprescribing</li> <li>• Recognise bias towards the status quo rather than deprescribing; acknowledge this discomfort</li> <li>• When companions are present check and agree on their role in decision making</li> <li>• Discuss and agree on the role of the different healthcare providers in the deprescribing process</li> </ul>	<ul style="list-style-type: none"> <li>• Develop and evaluate deprescribing decision aids for older people*</li> <li>• Identify and evaluate strategies to enhance older person-companion-clinician (triadic) SDM and multidisciplinary team SDM</li> </ul>
Discussing the options and their potential benefits and harms	<ul style="list-style-type: none"> <li>• Improve general understanding: use plain language, avoid medical jargon, use active voice/concrete words, avoid long complex sentences, minimise background noise, face the person when speaking, provide written information, use visual aids, verify comprehension (eg, teach back)</li> <li>• Improve probabilistic understanding: use absolute risk, simple percentages, or frequencies with a consistent denominator and pictographs</li> <li>• Discuss potential harms of medicines and deprescribing as well as potential benefits</li> <li>• Explain the difference between medicines for prevention v symptoms, and health v quality of life as this may be unclear</li> </ul>	<ul style="list-style-type: none"> <li>• Identify optimum methods for communicating benefits/harms of medicines and deprescribing*</li> <li>• Develop and evaluate strategies to support understanding and tolerating uncertainty about (deprescribing) decisions in older people</li> <li>• More randomised controlled trials of medicine discontinuation*</li> </ul>
Exploring preferences for (attributes of) different options	<ul style="list-style-type: none"> <li>• Explore preferences and goals in relation to deprescribing after providing information about potential benefits and harms</li> <li>• Frequently review preferences, as they are likely to change over time</li> <li>• Offer to discuss the trade-off between quality and quantity of life but respect those who decline</li> </ul>	<ul style="list-style-type: none"> <li>• Develop and evaluate goal setting/values clarification methods for older people*</li> <li>• Develop and evaluate methods to discuss life expectancy/prognosis</li> </ul>
Making the decision	<ul style="list-style-type: none"> <li>• Collaborate to find option that best fits preferences, emphasise that they are the expert on their own experience and wellbeing</li> <li>• Support autonomy by eliciting goals and values and offering the opportunity to be involved in or make the final decision</li> <li>• Respect those who want to defer the final decision to others, but encourage them to consider reasons for the decision</li> <li>• Clearly communicate that medicine cessation is provisional, not final, and should be continuously reviewed</li> <li>• Agree on which medicines will be ceased or dose reduced first and the frequency of monitoring and follow-up consultations</li> <li>• Reinstating medicines is one of several possible outcomes of the discontinuation trial and not a failure</li> </ul>	<ul style="list-style-type: none"> <li>• Develop and evaluate tools (eg, question prompt lists) to support older person involvement in deprescribing decisions</li> <li>• Develop and evaluate strategies for monitoring and reviewing deprescribing decisions</li> </ul>

\*Also identified as a priority in the outcome statement from the National Stakeholders Meeting: Quality Use of Medicines to Optimise Ageing in Older Australians, 2015<sup>17</sup>

## Figure



Schematic representation of challenges for clinicians and older patients associated with each step of the process of shared decision making about deprescribing