

Improving adherence needs a multipronged approach

Rachel Elliott PhD, MRPharmS

There is no universal formula to help patients with medicines adherence but there are a number of interventions that can help. Rachel Elliott explores some of the options outlined in the existing data.

It is not surprising that a wide range of interventions have been developed and evaluated to attempt to improve medicines adherence. The most recent Cochrane review of randomised controlled trials of adherence-enhancing interventions concluded that '36 of 81 interventions reported in 69 RCTs were associated with improvements in adherence, but only 25 interventions led to improvement in patient outcome.¹ Most effective interventions were complex with modest effects on adherence and patient outcomes.' Since that review the evidence-base has expanded such that subsequent Cochrane reviews focus on particular therapeutic areas, such as lipid-lowering² or patient groups, such as children.³

What are we trying to achieve in these interventions?

Various factors are attributed to causing nonadherence,⁴ usually classed as intentional or unintentional. Many behavioural models have been used to try to explain nonadherence, usually intentional nonadherence.⁵ Reasons for nonadherence are complex, and interventions to improve adherence must be based on these reasons. Interventions should be tailored to meet the needs of patients taking account of the particular perceptual (beliefs and preferences) and practical (eg capacity and resources) factors

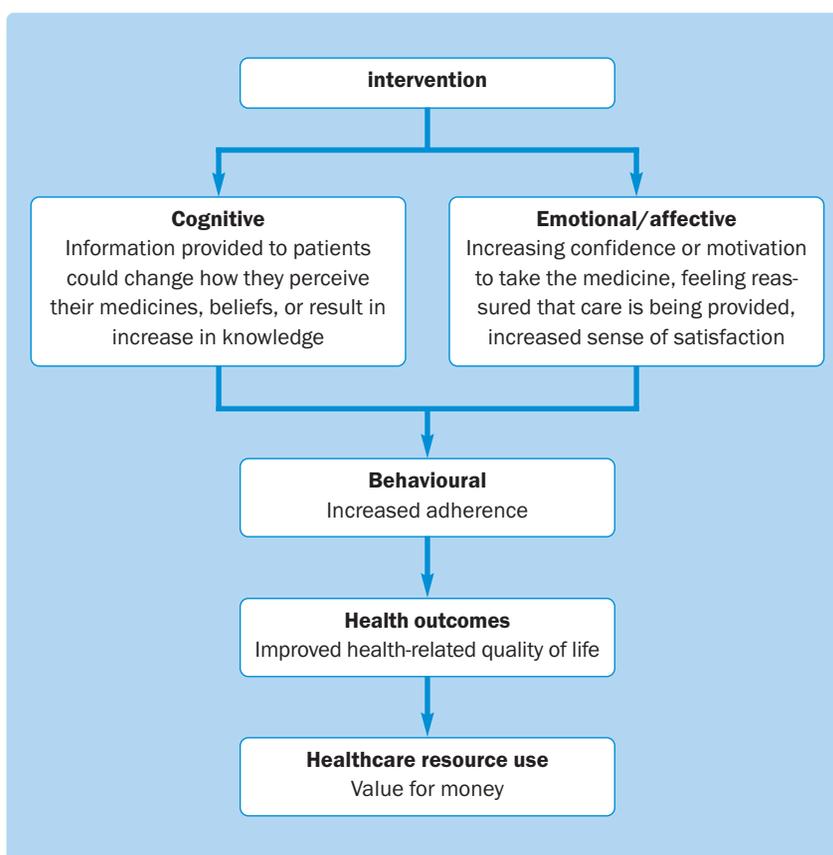


Figure 1. Summary of the range of effects possible from an intervention to improve medicines adherence

influencing intentional and unintentional nonadherence for that individual.

Interventions tend to fall in to three categories. The first, perceptual (information), attempts to influence motivation by changing knowledge, beliefs, or attitudes, typically via written and/or audiovisual information. The second, practical (skills and resources), attempts to change or influence specific patient behaviours, typically by reminder or skill building, or dosage scheduling, or removing barriers to access. The third is a mixture of both approaches.⁶

An intervention to improve medicines adherence can affect different outcomes

ranging from cognitive, emotional behavioural, clinical and economic (see Figure 1). This complicates understanding the evidence base because two studies may evaluate the same intervention differently and come to different conclusions regarding its effectiveness (and cost effectiveness).

What works?

Adherence-enhancing interventions have many designs: more convenient care, information, counselling, reminders, self-monitoring, reinforcement, family therapy, and other forms of additional supervision or attention.¹ One key problem is that studies have provided relatively little information about the content of the interventions. Almost none were based on clearly described theoretical models. This and the absence of enquiry into how the intervention was received by patients, delivered by prescribers or incorporated into existing care pathways means that we do not know why some interventions work and others do not.

Other key design issues are use of intensive multicomponent interventions that are unlikely to be transferable to normal care, and difficulties in defining interventions where effects were due only to changes in medication adherence; for example, family therapy in schizophrenia has therapeutic effects other than just increasing drug adherence.⁷ Furthermore, linking improved adherence to improved outcomes has proved problematic.¹

Overemphasis on the educational needs of patients without considering these other aspects is a weakness of many interventions. The inconsistent link between knowledge and adherence demonstrates that education alone is not sufficient to change behaviours as lay beliefs are not only influenced by information.⁴ Knowledge is likely to be necessary but not sufficient in producing lasting behaviour changes.⁸

The most effective interventions are those that focus more on self-management and thus promote sustained behaviour change.⁹ This may involve adopting more acceptable regimens, removing financial barriers, changing misguided beliefs about the disease and the medicines used to treat it, empowering

- adapt your consultation style to the needs of individual patients, establish the most effective way of communicating with each patient and what level of involvement in decision-making the patient would like
- accept that the patient has the right to decide not to take a medicine, even if you do not agree with the decision, as long as the patient has the capacity to make an informed decision and has been provided with the information needed to make such a decision
- be aware that patients' concerns about medicines, and whether they believe they need them, affect how and whether they take their prescribed medicines
- offer patients information that is easy to understand and free from jargon that is relevant to their condition, possible treatments and personal circumstances
- recognise that nonadherence is common and routinely assess adherence in a nonjudgemental way
- review patient knowledge, understanding and concerns about medicines, and a patient's view of their need for medicine at intervals agreed with the patient, because these may change over time

Table 1. Key principles for helping patients with medicines taking¹¹

patients to self-manage their condition, improving patient-provider relationships and involving other members of the patient's 'social world'. Combining education with self-management is more effective than education alone in both asthma and rheumatoid arthritis.^{9,10}

What can prescribers do to improve adherence?

Navigating this complex and contradictory evidence-base can be frustrating for prescribers looking to implement effective, do-able and affordable interventions in their practice setting.

The 2009 NICE guideline offers prescribers advice on how to involve patients in decisions about prescribed medicines and how to support adherence.¹¹ A few simple principles for prescribers to remember when incorporating considerations of adherence into their routine practice are shown in Table 1.

Which patients should prescribers target?

There is little epidemiological evidence to support identifying patients at risk of nonadherence according to their age, sex or sociodemographic factors such as ethnicity or economic status, although adolescence, lower educational attainment and lack of social support has been linked to lower adherence in some studies.¹² There is some evidence that different diseases are associated with different levels of adherence, eg people

are much more adherent to HIV medicines than diabetic medicines.¹³ Adherence behaviour may even vary between diseases for one patient.¹⁴ It is probably also useful to consider the three stages of medicines taking:⁶

- initiating treatment for new medicines
- maintenance of appropriate adherence patterns and preventing suboptimal adherence
- changing suboptimal adherence once patterns have developed.

For example, studies have established that problems with newly prescribed medicines appear rapidly, are widespread and that a significant proportion of patients on a long-term medication quickly become nonadherent.¹⁵⁻¹⁹ A pharmacist's intervention could significantly reduce reported problems and nonadherence in a cost-effective manner.^{20,21}

Conclusion

The body of evidence for reasons for nonadherence is extensive,⁶ but this evidence is often not used to train prescribers nor to design interventions. Interventions to improve adherence are often not based on the reasons for nonadherence, assume patient education is the (only) action required, or are too complex and will never be embedded into practice.

There are many effective interventions out there, but the important thing to remember is that there is no 'one size fits all' intervention or universal formula.

The most important factors are basing the intervention on the reason for non-adherence and making the intervention deliverable within an existing practice setting. Prescribers need to recognise that nonadherence is common and they should routinely assess adherence in a nonjudgemental way. Patients are often assumed to be passive, powerless, or irrational, but the majority regularly make active assessments about cost, risk, and benefit of healthcare.²² Also, decisions to adhere to treatment are ongoing, dynamic, and influenced by daily context.⁵

Practitioners' strategies to improve medication adherence could include attempting to modify patients' beliefs and perceptions regarding medication effectiveness, and promoting realistic expectations about risk/benefit ratios. Different people will require different levels of intensity of support. Policy makers need to focus on improving access to healthcare by reducing barriers that limit the interaction between patients and the health system.

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Declaration of interests

None to declare.

Rachel Elliott is Lord Trent Professor of Medicines and Health at the School of Pharmacy, University of Nottingham