Medication non-adherence is a widespread concern. It has a significant health and economic impact, resulting in undesirable medication waste, as well as increased hospitalisation and mortality. It is especially an issue in the management of long-term conditions, although poor adherence in the short-term can also be problematic. The suggestion has been made that improving adherence is likely to have a far greater impact on population health than other specific health-care interventions, and it is therefore incumbent upon all prescribers to be aware of the issue and approaches that might be of use for tackling it.

Before moving on, it is perhaps worthwhile considering the definition of medication adherence: ‘the extent to which the patient’s behaviour matches agreed recommendations from the prescriber’. Non-adherence is not simply completely stopping the prescribed pills, but may include any use that differs in some way from that originally intended by the prescriber. The term also reflects the patient’s choice in deciding whether or not to adhere to the clinician’s recommendations, and this is very relevant when thinking about the causes of non-adherence.

Causes
Non-adherence can have both unintentional and intentional causes, and awareness of these is likely to be of value to both clinicians and patients during the process of medication optimisation. Unintentional non-adherence may include personal factors such as cognitive problems, impaired vision or decreased manual dexterity. This may be influenced by complexity of the drug regimen or the degree of patient understanding. In addition patients may simply forget. Unintentional non-adherence may also result from external factors, such as difficulty accessing medicines due to financial or service availability issues, or conflicts with other aspects of patients’ lives such as work.

In contrast, intentional non-adherence stems from patients’ beliefs. Patients may hold considerably different views from prescribers in relation to their medicines, such as concerns about adverse effects (e.g. harmful side-effects, dependence, tolerance, masking of symptoms) and the

Pill organisers are helpful but not the only answer

Understanding can lead to a solution for non-adherence

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There are a variety of reasons for non-adherence, both intentional and unintentional, it is therefore important to understand these reasons if we are to tackle the problem.
perceived necessity of the medication, which may result in them making dose adjustments or taking drug holidays. Patients’ illness experiences and expectations may also influence their perceptions of the need for treatment and its effectiveness.

Other factors also have the potential to influence and modify both unintentional and intentional non-adherence; examples include the availability of practical social support, potentially enabling patients to overcome barriers to adherence, and mental health problems such as depression, which may adversely affect patients’ healthcare beliefs as well as impairing motivation and memory.

**Intervention**

Numerous interventions have been developed in an attempt to address some of these factors and improve adherence. A Cochrane systematic review in 2008 examined a diverse range of complex interventions for improving adherence to longer-term therapy. These included combinations of a range of strategies (eg more convenient care, reminders, self-monitoring, counselling, psychological therapy, supportive care), the effectiveness of which was variable. Indeed the authors concluded that the diversity, complexity and uncertain effects made it difficult to know what worked and what did not. And even the most effective approaches led to only small improvements in adherence and treatment outcomes.

There is thus an on-going need to refine these interventions, determining exactly which components are most effective while being acceptable to patients and prescribers alike. Of course, while patiently awaiting the publication of definitive guidance on this issue, there are a number of things that a prescriber can already do. Several strategies are discussed in the NICE guidance on medicines adherence, and a range of simple approaches has also been touched upon by previous articles in this series. One good example is to keep things simple; the evidence suggests that complex regimens involving multiple drugs and multiple doses over the course of the day, are poorly adhered to, and ideally such situations should be avoided.

**Raising the subject**

However, there is perhaps a more fundamental issue: to think about adherence in the first place. Clinicians are already familiar with potential drug interaction warnings flashing up on the computer screen. Most prescribers will be aware of major contraindications to therapy. And strongly evidenced treatments will be prescribed in a trice. But let’s be honest. Even though many prescribing computer systems have features providing clues about medication adherence, how often is the subject at the forefront of discussions around a patient’s drug therapy?

Even at the annual medication review? Not often enough.

Prescribers need to be more alert to the issue of adherence, as there is a good chance it will not be raised by the patient without prompting. Prescribers may fail to raise the subject with patients, either unintentionally or perhaps deliberately in an effort to avoid confrontation, yet patients are often happy to discuss adherence. There may also be an opportunity to identify potential causes of non-adherence with the patient. Are there memory problems that could lead to unintentional non-adherence? What are the patient’s beliefs, attitudes and expectations, and how do these influence their motivation to persist with the prescribed treatment?

**Conclusion**

Understanding these issues is a key part of good quality care, allowing misconceptions and concerns around treatments to be adequately addressed, and enabling both prescriber and patient to identify effective and acceptable strategies for improving medication adherence.

**References**


**Declaration of interests**

None to declare.

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