Prescribing is a complex adaptive system and so measuring the outcome of treatment with prescribed medicines is difficult. There are a variety of factors that influence an ideal treatment outcome, many of which will not be in the control of the prescriber and most of which evolve independently over time.

It is clear that patients will not benefit from treatments if they do not take them at all, but questions still remain:
- Do we know whether patients receive an adequate explanation to ensure that they have a realistic expectation of what their medicine can do for them?
- Are there any known factors that will affect a patient’s ability to comply with their treatment that should be considered and addressed by the prescriber with the patient every time they prescribe?
- Should there be time set aside in every prescribing consultation specifically for the purpose of identifying and exposing barriers to adherence so that, for example, a patient’s attitudes to their treatment can be explored and any misconceptions addressed?

The degree of difficulty that this adherence challenge presents means that commissioners are more likely to focus on more readily accessible improvement measures in a commissioned service, such as inputs, processes and outputs.

Prescriber May 2014

Our series on adherence with prescribed medications considers how it can be improved and the cost of wasted medicines reduced. Here, the author discusses how better outcomes can be achieved through adherence support services.

OneHeart: a personalised acute coronary syndromes (ACS) patient support programme – supporting medicines optimisation and improved patient self-management in the NHS.

Almost half of ACS patients discontinue their treatment within 12 months after being discharged from hospital. Those that do, double their chance of dying or having a nonfatal MI. In addition, there is only a 44% uptake of cardiac rehabilitation in the UK.

OneHeart is a personalised ACS patient support programme that looks at tackling patient beliefs towards their disease through health psychology techniques.

Effective implementation of the OneHeart programme could deliver outcomes such as reduced hospital admissions, improved uptake of cardiac rehabilitation, improved adherence to medication, improved patient satisfaction and improved patient quality of life.

Figure 1. OneHeart, an example of a nonpromotional adherence support service provided by AstraZeneca as part of a Joint Working framework

But this is not enough on its own, and commissioners now need to refocus on adherence services as a means of achieving improved outcomes and minimising avoidable costs associated with overusage, or indeed underusage if this leads to a more expensive intervention. Is the ‘do-nothing’ option sustainable?

In the era of value-based healthcare the pharmaceutical industry has renewed interest in adherence because the intrinsic value of medicines will not be fully realised unless patients are well motivated and factors that adversely affect adherence are identified.

The tension between the national focus on improving treatment outcomes and the local focus on structures and processes adds an additional dimension to the study of adherence as a proxy of more significant outcomes. Can medicines adherence be adopted as a universal ‘key

prescriber.co.uk

Prescriber 5 May 2014  35
Marketing
- social marketing – to raise awareness of important benefits/patients as partners
- patient and public involvement – IT platforms such as ‘crowd sourcing’ – use of social media to change prevailing attitude and culture toward medicines and their vital role in improving health outcomes and improving productivity of healthcare services
- marketing to create awareness of the need at practitioner, practice and NHS commissioner (CCG/CSU) levels – improved efficiency, effectiveness and economy
- development of thought leaders and knowledge management, to evolve the understanding of the barriers to adherence and how to effectively overcome them

Implementing practice change
- training – building a clinical infrastructure through training that embeds an understanding of the barriers to adherence and how to manage them
- resources – development of patient-centred adherence materials
- evidence-based education – focusing on specific aspects of medicines administration that challenges the achievement of optimal treatment outcomes
- patient peer support for adherence – assuring the quality of peer support in long-term conditions
- training of pharmacists – how to become adept at influencing attitude and behaviour change in an adherence consultation
- matrix working opportunities – workshops that encourage collaboration to improve adherence – systems for linking databases that can provide new insights into problems that patients encounter with medicines, eg the ‘pill burden’, which is the amount of time managing medicines takes each day

Implementing process change
- programme management – experience of systems to support phased roll-out and value stream mapping to identify process barriers to adherence
- development of local clinical partnerships – opening up referral pathways between doctors and pharmacists to drive the uptake of care pathways
- equity and excellence – working with academic health science networks (AHSNs) to build a new strategy for adherence at national level
- business case writing or business planning – medium- to long-term sustainability
- project management of specific objectives of the roll-out of adherence support services
- building the clinical infrastructure – pathways/referral
- performance development – Action Learning Sets
- knowledge management – extend the methodology to support safe, phased and targeted managed entry of innovative medicines based on intensive pharmacist-led pharmacovigilance
- developing a programme to support all levels of competence at all levels of the NHS, ie a commissioning competency matrix
- measurement metrics for medicines optimisation dashboard – QOF metrics measured by Health and Social Care Information Centre (HSCIC)

Table 1. Building, marketing and implementing adherence support services: support functions and services that will enable adherence support services to become established

| Outcomes improvement driver and agreed levels of adherence set for different treatments and conditions? |
| A new adherence service |
Setting targets for adherence to medicines as the basis for a new adherence service is dependent on whether a reliable measure of performance can be agreed and whether a baseline can be established from which targets for improvement can be set.

One of the most significant variables for adherence is the motivation level of patients and this is partly determined by the value that prescribers bestow on the treatment they are prescribing. While setting targets for improvement in adherence can focus on those factors that most affect it, the motivation of prescribers themselves can be adversely affected if they are set adherence targets that are unattainable.

In the context of a new adherence service should we consider three levels of adherence: minimal, achievable and excellent?

Anything less than minimal acceptable adherence should act as a prompt for the prescriber to consider discontinuing treatment in favour of an alternative treatment, as below minimum acceptable levels patients are more likely to incur all the dis-benefits of treatment without any of the benefits.

Minimal acceptable adherence should prompt the prescriber to improve other modifiable factors. For example, patient/carer motivation levels can be improved by providing accessible educational support that emphasises the benefits that drug treatment can bring, eg anticoagulants can reduce stroke in AF patients. Patients can also be provided with cues and prompts using digital (eg care planning apps) and telephony (eg pretimed reminder texts) solutions.

Achievable adherence focuses on the needs of well-motivated patients and maintaining their improved adherence, measured using a treatment diary. Consolidating the changes that have resulted in the measured improvement will be easier if this corresponds with a noticeable improvement in control of symptoms – maintaining a behaviour that drives improved adherence will be harder for disease-modifying treatments whose benefits are less visible.

In this case adherence support will need a concerted effort from both the prescriber and patient/carer working together to demonstrate a sustained response in measurable disease parameters, eg controlling high blood pressure, blood cholesterol or glucose associated with improved adherence. Seeing the improvement will maintain patient motivation when they are taking treatment to modify risk in a long-term condition, eg CHD or diabetes.

Excellent adherence arises when the patient takes responsibility for self-monitoring their treatment and the treatment
plan includes a range of techniques targeting those factors that will diminish adherence if not addressed. This is supported with readily accessible professional support from the prescriber (or pharmacist).

For example, once excellent adherence is achieved, patients can share their experience and provide peer support to other patients so that they too can achieve the transition toward similar control.

**Addressing poor adherence**

There are six steps to a successful strategy for addressing poor adherence.

1. **Start a different conversation about medicines adherence**

This may involve uncovering failing strategies and replacing them with less orthodox approaches that are more effective, eg reframing the question during a consultation from ‘Are you having any problems with your medication?’ to ‘In the last month, did you miss taking your medication either partly or completely?’ and, to support future assessment, encourage patients to use an adherence diary to estimate how many doses are being missed.

If a new medication has recently been prescribed for which there is predictable response, prescribers can chart the patient’s response against the expected response trajectory for the treatment concerned; any separation between ‘actual’ and ‘expected’ response provides a basis for further investigation focusing on adherence.

The new concept of medicines optimisation sets an aspirational level of response and treatment outcome that can be achieved if all confounding factors to achieving excellent levels of adherence are adequately addressed.

Additionally, ‘checking in’ with significant others in the patient’s home may help to validate a patient’s response and uncover whether personal motivation is an issue.

Asking the patient to share their own understanding of the need for treatment and its role in affecting the course of their disease may provide some insight into a patient’s expectation and hence their likely levels of motivation. Helping patients reach a better understanding of the role of their treatment may be a slow, incremental process; however, it will benefit patients hugely by dismantling any misconceptions they have about what the treatment will achieve, and reinforcing a positive perspective.

2. **Importance of review and reinforce**

In preparation for a medication review, prescribers may consider undertaking a snapshot audit to determine whether the number of repeat requests corresponds with the number of months that the patient should have taken their medicines, or whether there is a discrepancy that uncovers significant underuse.

If adherence services

---

Prescriber 5 May 2014

---

**Addressing poor adherence**

There are six steps to a successful strategy for addressing poor adherence.

1. **Start a different conversation about medicines adherence**

This may involve uncovering failing strategies and replacing them with less orthodox approaches that are more effective, eg reframing the question during a consultation from ‘Are you having any problems with your medication?’ to ‘In the last month, did you miss taking your medication either partly or completely?’ and, to support future assessment, encourage patients to use an adherence diary to estimate how many doses are being missed.

If a new medication has recently been prescribed for which there is predictable response, prescribers can chart the patient’s response against the expected response trajectory for the treatment concerned; any separation between ‘actual’ and ‘expected’ response provides a basis for further investigation focusing on adherence.

The new concept of medicines optimisation sets an aspirational level of response and treatment outcome that can be achieved if all confounding factors to achieving excellent levels of adherence are adequately addressed.

Additionally, ‘checking in’ with significant others in the patient’s home may help to validate a patient’s response and uncover whether personal motivation is an issue.

Asking the patient to share their own understanding of the need for treatment and its role in affecting the course of their disease may provide some insight into a patient’s expectation and hence their likely levels of motivation. Helping patients reach a better understanding of the role of their treatment may be a slow, incremental process; however, it will benefit patients hugely by dismantling any misconceptions they have about what the treatment will achieve, and reinforcing a positive perspective.

2. **Importance of review and reinforce**

In preparation for a medication review, prescribers may consider undertaking a snapshot audit to determine whether the number of repeat requests corresponds with the number of months that the patient should have taken their medicines, or whether there is a discrepancy that uncovers significant underuse.

If a new medication has recently been prescribed for which there is predictable response, prescribers can chart the patient’s response against the expected response trajectory for the treatment concerned; any separation between ‘actual’ and ‘expected’ response provides a basis for further investigation focusing on adherence.

The new concept of medicines optimisation sets an aspirational level of response and treatment outcome that can be achieved if all confounding factors to achieving excellent levels of adherence are adequately addressed.

Additionally, ‘checking in’ with significant others in the patient’s home may help to validate a patient’s response and uncover whether personal motivation is an issue.

Asking the patient to share their own understanding of the need for treatment and its role in affecting the course of their disease may provide some insight into a patient’s expectation and hence their likely levels of motivation. Helping patients reach a better understanding of the role of their treatment may be a slow, incremental process; however, it will benefit patients hugely by dismantling any misconceptions they have about what the treatment will achieve, and reinforcing a positive perspective.

3. **Explore outcomes that are important to patients**

From ‘What’s the matter?’ to ‘What matters to you?’ This can uncover powerful incentives to improve adherence.

The importance of acknowledging outcomes that are important to patients is a game changer for a patient’s motivation levels. For example, living on into frail old age is often of far less interest, and therefore has much less motivational potential, to a middle-aged person than staying as fit and healthy as possible so that they can enjoy time with their grandchildren.

Another potential area for closer examination is to offer patients rewards and incentives for patient compliance with a treatment plan. Pilots of exercise programmes that offer subsidised/free gym membership provide a precedent for this. Though this can be very controversial, there may be some circumstances when this is justified if it avoids significant downstream costs associated with non-adherence resulting in treatment failure.

4. **Advocacy for medicines optimisation**

The prescriber should set high standards for adherence with their patients, aligning process goals (ie daily recording of medicines administration) with performance goals (ie achieving long-term condition targets and setting these with each individual patient). Patients trust their doctor, and if doctors strongly advocate the valuable outcomes that medicines can achieve this will drive consistency of patient behaviour. Prescribers need to focus on what they have done right to improve adherence as this is more likely to reproduce improved adherence rates in future.

Medicines optimisation can be embodied in a quality statement that prescribers can adopt and display openly, on behalf of all patients who are prescribed medicines by them: ‘All patients will be given access to information and advice about their prescribed medication so that they can become active partners in their treatment and so that they share our ambition to achieve treatment goals that are among the best in the world.’

5. **Teamwork to deliver medicines optimisation**

Psychologists confirm the importance of making use of different types of goals. The separation of outcome and performance goals opens the opportunity for collaboration with pharmacists who are trained to achieve improved performance of prescribed medicines. They can set ‘SMART’ performance goals (specific, measurable, achievable, relevant and time based) as their training provides them with in-depth knowledge of pharmacology and the role that different delivery devices can play in addressing physical barriers to medicines adherence.

Pharmacists will also effectively address patients’ concerns about side-effects and provide valuable advice to patients to help maintain their motivation levels. The relationship between the patient and pharmacist is key and by working together they can develop strategies to address adherence issues, such as the patient keeping a diary to monitor their daily usage of medicines.

The pharmaceutical industry too can offer valuable support for the roll-out of adherence support services (see Table 1). The Association of the British Pharmaceutical Industry (ABPI) will provide a governance platform for NHS organisations to work in partnership in these areas with pharmaceutical companies. In the future, precise diagnostics with predictably effective therapeutics will dominate the market and so the need to build adherence support solutions will become even more important to the success of treatment and achievement of excellent patient outcomes.
There are already a range of non-promotional adherence support services from pharmaceutical companies, like the OneHeart Programme (see Figure 1), which patients should be directed towards.

6. Keep the adherence issues alive: making every prescriber contact count

Prescribers need to build time to talk about medicines into their consultations or work more closely with other healthcare professionals who can spend time to explore the issues and suggest options for addressing and overcoming adherence barriers with individual patients.

Working closely with pharmacists and other healthcare professionals, like community nurses, can provide a valuable real-world perspective for prescribers wishing to gain insight into the general attitudes and behaviour of patients towards medicines.

Poor monitoring of disease parameters accompanied by minimal adherence to medicines can allow symptoms to gradually manifest leading to treatment failure, sometimes resulting in emergency treatment in hospital. Recovery from these emergency episodes provides an ideal opportunity for prescribers to reinforce the reason for treatment and the importance of achieving and maintaining excellent levels of adherence to prescribed medicines.

Summary

Achieving and maintaining excellent adherence to prescribed medication is not something that prescribers can take for granted. Patients need continual personalised professional advice and support to overcome barriers to adherence and to maintain their personal motivation. It has to be clear to them that prescribing is a precise process that will treat disease in a safe and effective way, and that achieving excellent adherence presents the best opportunity for them to achieve the best from their prescribed medication and a good outcome.

Pharmacist expertise can be harnessed very effectively to deliver an optimal treatment response by engaging patients early in their treatment journey and reinforcing the individual treatment goals agreed with their prescriber.

But commissioners need to recognise that the behaviour change needed to achieve good outcomes can present a significant hurdle, especially when the consequences of nonadherence in chronic disease are deferred. The cost of treating the resulting morbidity can be considerable, which makes the case for recognising adherence support services as a key local improvement driver and a commissioning priority.

The NHS wants to ensure patients feel supported to manage their condition, and NHS England have made this an indicator in the NHS Outcomes Framework 2013/2014. Pharmacists are ideally placed to manage this and they can make adherence support services a game changer that drives quality, significantly improves patient outcomes and reduces health inequalities.

Andrew Riley, regional partnership manager, Association of the British Pharmaceutical Industry