What's in a name?

What's in a name? Medication terms: what they mean and when to use them

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To ensure that patients benefit as much as possible from the treatment prescribed to them, we, as physicians, must consider some of the new and novel approaches to medication-taking behaviour. We will present a brief overview of this topic and discuss some of the developments in our understanding. We will also demonstrate how this has been inextricably linked with our use of language. As terminology in this field has evolved, our ability to understand and engage with patients and the medications we prescribe them has shifted, mirroring the fundamental change in the doctor-patient relationship.

THE PROBLEM IN PERSPECTIVE

Advances in medical therapies increase at an astounding rate, with more diseases than ever amenable to effective treatment. There is, however, a danger that these benefits may not be fully realised as a result of the failure of patients actually to take the medications prescribed for them. It has been estimated that typically up to half of all medications are not taken at all.¹ This situation is not new and the growing body of research undertaken in this field (which amounts to very little when compared with the vast quantities on the effects of the actual medications themselves) reveals a number of issues surrounding medication-taking behaviour. At the heart lie critical matters, such as the language and terminology that healthcare practitioners use with patients, the manner and relationship that are fostered between the two parties, and finally, the perspective of the patient who ultimately has to take the medication.

Although we may be stating the obvious, we must point out that unless patients take their prescribed medication appropriately, their overall health will fail to benefit. As clinical evidence grows, the case for treating conditions becomes clearer and stronger. For example, with regard to the treatment of hypertension, the long-term advantages of pharmacological antihypertensive treatments for

reducing morbidity and mortality from cardiovascular events are well known.² In ophthalmology, an analogous group of chronic disease patients are those with glaucoma. Until recently, convincing evidence was not to hand, but now there are excellent studies that show that lowering intraocular pressure improves the outcome³ and reduces the rate of progression from ocular hypertension to glaucoma.⁴ Lowering the intraocular pressure in the first instance is routinely done pharmacologically with the instillation of topical drops. If the intraocular pressure is reduced adequately then patients are expected to remain on them indefinitely.³

An understanding of medication-taking behaviour is, therefore, desirable. As evidence for this in medicine as a whole, we need look no further than to the impact of non-adherence to therapy in the United States, where estimates of the approximate cost in additional hospital admissions is a staggering US\$100 billion a year.⁵ Given the importance and seriousness of poor adherence to medication regimes, the World Health Organisation published an evidence-based guide in 2003⁶ for healthcare managers and policymakers to improve strategies of adherence. These problems are present in all aspects of medicine and are equally applicable to a wide range of acute and chronic diseases.

EARLY DESCRIPTIONS OF MEDICATION TAKING

Since the time of Hippocrates the effects of various potions have been recorded, along with whether or not the patient had taken them. In the early part of the twentieth century healthcare officials made efforts to control tuberculosis. Uncooperative patients were thought of as behaving irresponsibly and opinions of these people among healthcare professionals were extremely derisive and condescending, with the use of derogatory terms such as "vicious" and "ignorant".⁷ The group attracting most attention were the homeless, male alcoholics who were often mentally ill and frequently found

themselves forcibly detained. Curative antibiotics for the treatment of tuberculosis were available from 1945 and renewed attention was placed on non-adherence when it became clear that patients did not take their treatment after hospital discharge. Patients were expected to obey physician-imposed regimes and attention focused on the most likely non-adherent candidates, "the alcoholic, drug addict, skid-row derelict".⁸ Descriptions of patients were less contemptible, but still emotive in the literature of this era. Terms used included "recalcitrant",⁹ defined as "not susceptible to control or authority"¹⁰ and "faithless",¹¹ "untrustworthy and unreliable".¹² Again these patients were often held against their will contrasting with middle-class non-adherent patients who were rarely detained.¹³ See table 1 for the terms used to describe medication taking.

WHY DOES THIS HAPPEN?

Patients do not take their treatment for many reasons as research has shown.¹⁴ They might simply be forgetful and fail to comply unintentionally, but the majority of reasons may be far more complex and deliberate. This is especially so for a chronic disease such as glaucoma, in which the patient may remain entirely asymptomatic. The fact that a patient is being asked to move from their own perceived state of asymptomatic normality to a morbid and possibly symptomatic state begs the question not "why do patients not take their medications?", but "why do patients take their medications?"

Decisions by patients on whether or not to take treatment are based on many factors. Any perceived benefits of taking treatment are considered against a whole raft of other issues and so-called "barriers". Some that have been identified include the inconvenience of taking medicines, side effects of medication, cost and impact of the regimen on daily life.¹⁵ The quality and source of information on which patients base a decision also play a role and these resources are growing all the time. For example, ubiquitous internet access and a more questioning media fuel a public appetite, eager for opinions on treatments in addition to information supplied by their own physician.¹⁵ There is more of a willingness to question the physician's advice and to canvas the opinion of friends, family, colleagues and other healthcare workers that patients come into contact with in their day-to-day lives.¹⁶ Patients may wish to exert more self-control over their condition and those suffering with chronic disease often "experiment" with their treatments in an effort to reaffirm a sense

Table 1 Terms used to describe medication taking

Term	Origin	Definition*
Compliance	Latin, “complere”	To fulfil or fill up, to act in accordance with a wish or command
Adherence	Latin, “adhaerere”	To stick to, remain faithful to
Concordance	Latin, “concordia” – con- same + cors heart	A state or condition of agreement or harmony
Persistence	Latin, “persistere” – per- intensive + sistere to stand steadfast	The quality of persisting; tenacity

*See Collins Softback English Dictionary.¹⁰

of independence.¹⁷ Questionnaires constructed to elicit reasons of failure to take medication have found that patients felt that to miss a few tablets every week would not bring them to any harm, that they would often take “drug holidays” at weekends and increase their medication-taking around clinic visits, dubbed so-called “white-coat” adherence.¹⁸ The physician’s advice with regard to medication may thus be perceived more by patients as a guideline to be considered rather than as a treatment standard.¹⁹

COMPLIANCE AND ADHERENCE ENTER THE VOCABULARY

A physician-led approach to prescribing of treatment came to be described as “compliance” in the medical literature of the 1950s. This word quickly became unpopular for its judgemental overtones and alternatives were sought. “Adherence” was then introduced and was used interchangeably with compliance.²⁰ Both words fit a little uncomfortably as they arguably exaggerate the physician’s role and influence. In addition, the terms “non-adherence” and “non-compliance” make no distinction between someone who takes some or none of their prescribed treatment. Finally, these terms shed no light on the reasons or motivations for a patient’s medication-taking behaviour.

“MEASURING” COMPLIANCE

Predicting compliance and monitoring medication-taking behaviour is difficult. Even measuring it has proved elusive, with no readily available gold standard test to act as a benchmark. There is also no agreement on what constitutes adequate adherence with regard to taking medications. Both direct and indirect methods have been used but they all have their advantages and disadvantages, not withstanding the fact that they will themselves impact on the behaviour of patients. Direct methods include taking blood measurements or urine samples but are expensive and open to abuse by patients. Indirect methods, such as the use of questionnaires and diaries have some use but often lead to an overestimation of adherence.¹⁴ Various aids,

such as electronic monitoring devices capable of recording and stamping the time of opening bottles, dispensing drops in the case of glaucoma or activating a canister such as in the management of asthma have been used as indirect means of measuring adherence. These are expensive, not routinely available and do not record if they have been used in the correct manner.

Some indicators of poor adherence have been demonstrated but many have been shown to be inconsistent. The main method of detecting poor compliance still appears to be awareness of this as a possibility in a patient not responding in an expected fashion to their prescribed therapy.

PERSISTENCE

Rates of refilling for prescriptions can be a used as a method of measuring adherence and is also another means of testing “persistence”, another term that has entered the pantheon of terminology for medication taking. Its use, certainly in the context of glaucoma is relatively recent, and describes the duration of continuous medication use.²¹ This term is probably of limited value to physicians when describing patient behaviour and may serve a more useful purpose to the pharmaceutical industry, as it commonly relates to how frequently a patient will collect a prescription for a certain treatment, with little regard to its effectiveness or whether it is actually taken or not.

CAN MATTERS BE IMPROVED?

Interventions that attempt to improve adherence are wide ranging but long-term success still remains poor.²⁰ Simpler treatment regimes can sometimes help improve adherence and more complex strategies such as thorough patient instructions and counselling, reminders, close follow-up, supervised self-monitoring and rewards for success may also improve outcomes, but the returns from the amount of time and other resources invested remain low. Matters become a little more muddled when studies looking at improving adherence and outcomes provide equivocal answers as to whether or not additional benefit is gained by

patients. This will vary with the disease in question, for example, a study that directly observed patients taking medication for tuberculosis found no difference in treatment response between the observed and unobserved group.²² There are also many examples of situations in which treatment dosages were subsequently found to be excessive and could still be as effective at reduced levels. Bendroflumethiazide dose reduction from 5 mg a day to 2.5 mg a day for the treatment of essential hypertension is a case in point. With regard to ophthalmology, we know that lowering the intraocular pressure in glaucoma is beneficial, but what level of adherence is strictly necessary?

Several studies have described a strategy of “intelligent non-compliance” in which patients accurately conclude that they can attain the treatment goal by unilaterally reducing their medication dose.^{16 23}

CONCORDANCE – A BETTER TERM, A NEW ERA?

The future of improving this behaviour now appears to require far more appreciation of the patient’s perspective of their condition and the fostering of a working partnership to achieve this. The creation of an agreement between parties as to how to move forward, rather than the mere giving and receiving of instructions is perhaps the most positive approach. Termed “concordance”, this concept has seen an increased usage in the past decade or so to describe a more equal relationship between physician and patient. It describes a change in culture and builds on the idea of a shared responsibility. There are no set rules as to how best to achieve this result but, much as language has been responsible for shaping our view on medication taking, so it seems that the appropriate use of clear, simple to understand strategies, coupled with an appreciation of individual patient needs, may best lead to a satisfactory outcome. The emphasis is more on setting out the goals of therapy and not arbitrarily enforcing a treatment regime. After all, we must never forget that our goal in treating patients is to improve or maintain their health. The implications of this are that the views of the patient take precedence and, therefore, may not always agree with those of the health practitioner. This is certainly a turnaround in terms of conventional thinking and one that conjures up all sorts of questions regarding choice and responsibility. Taking the example of glaucoma treatment, if our job has been done adequately, then patients should have the knowledge and capability of

administering treatment themselves or there should be the means to help them if necessary. A pragmatic, forgiving approach is important, in which it is made clear that the occasional missed dose is nigh on inevitable, but emphasising that it must be taken in the long term to ensure preservation of vision. There are no guidelines to describe best how this is achieved. It may be viewed as a compromise between what is theoretically possible with modern treatments, and what is perceived as acceptable by the patient.

THE PATIENT'S PSYCHE – THE GOOD AND THE BAD

There is evidence to show improved health outcomes for patients who have taken their medication according to the prescribed schedule, even if the treatment is a placebo. A hypothesis put forward to explain this finding by Horwitz and Horwitz²⁴ suggests that patients who take medication as prescribed are better at adapting to a chronic health condition. This lends weight to the idea of reviewing a holistic strategy for behaviour change and the review of medication taking forms part of this. The idea of a patient taking some responsibility for their condition is also highlighted by this hypothesis. If we as physicians have adequately explained and done all we can for a particular patient, is failure on the part of a patient either to respond or take medication a matter of concern for us? Our duty to patients is to honour our side of the agreement and offer the best possible treatment in a way that is acceptable to the patient. Patients are then free to decide for themselves. This can pose problems to the physician that may emotionally, ethically and legally be extremely challenging.²⁵

CONCLUSION

Compliance and adherence as terms are too simplistic in their meaning to explain fully the complexities of medication-taking behaviour.²⁶ The approach that they offer is also outmoded. What is required is a much more realistic and pragmatic approach in which a patient must be taken willingly along a path of treatment when they have a belief and confidence in what is happening, and, more importantly, agree to it. An agreement, or

concordant approach, therefore, seems much more adapted to this need. It is our view that this is a better term and offers us an alternative approach to improving medication-taking behaviour. A change in attitude is at the very heart of this topic and great care must be taken not merely to bubble-wrap compliance and adherence as concordance and waste the opportunity. It thus seems that the careful use of language is still as powerful a tool at treating disease today as the fantastic array of new treatments now available at our disposal. Through simple human discourse and communication in all its forms, we must be able to assess and understand our patients better and in turn educate and enlighten them, preventing them ultimately from going blind.

Br J Ophthalmol 2007;**91**:1422–1424.
doi: 10.1136/bjo.2007.118117

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Accepted 5 June 2007

Competing interests: None.

All authors contributed to the conception and writing of this paper. All authors read the final version and agreed to publication.

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