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# Moving forward to improve medication adherence

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## 1. INTRODUCTION

When patients do not take their medication in the way agreed upon with their healthcare provider, they risk not getting cured or even becoming more sick [1]. Recent studies show that as much as 25–50% of patients who suffer from a chronic disease can be labeled as non-adherers, some on a temporary basis, others more continuously [2,3]. Since decades, a lot of, more-or-less successful, efforts have been devoted to tackle the poor adherence problem, e.g. by developing more easy-to-take medications, by implementing (electronic) reminder services or by stimulating discussions about barriers to medication adherence [4]. Being a complex and multidimensional problem, none of these efforts will ever produce a one-size-fits-all solution for non-adherence. Continuous attention to the question of medication adherence through research and education is therefore warranted. This issue of *Patient Education and Counseling* presents six papers that deal with an important adherence-related aspect in chronic medication use. Each in their own way, these papers contribute to the aim of making the adherence problem more manageable, some by examining the effect of group education [5], conflicting medication information [6] or provider support [6,7], others by looking at patients' risk profiles [8,9] or at the clinical impact of nonadherence [10]. Interesting papers which all together take us a big step further in finding a solution for the complex adherence problem. In the papers, several common features can be identified that will be highlighted in this editorial.

## 2. PROVIDER SUPPORT

In accordance with previous studies, several of the present papers show how crucial the contact with a health professional is for improving medication adherence. Apart from the negative influence of conflicting medication information on adherence, Carpenter et al.'s study [6] indicates that the support from a physician contributes to greater adherence by increasing patients' self-efficacy. Whereas Kripalani et al. [9] recommend to more thoroughly investigate the role of self-efficacy, similar promising findings are reported by Cook et al. [7]. Their preliminary study showed that telephone nurse counseling promotes medication adherence in patients with ulcerative colitis. In addition, the randomized controlled trial by Nielsen et al. [5] showed that a multidisciplinary group-based education is superior to a control group for increasing adherence. In a recent study, van Dijk et al. [11] also suggested that the encounter with a health professional is crucial for improving adherence. They found a large variance in the percentage adherent patients between prescribers as well as higher levels of adherence the more often patients visited their provider. What actually does the trick in these encounters, has, however, not been studied much yet; several of the present studies did examine the important concepts of patient satisfaction and the perception of treatment information and explanation [5,6,8] or of perceived adherence support and counseling [6,7], but none of these studies looked at the black box of the provider–patient encounter to find out in what way information and support should ideally be provided. The few observational studies that have been performed before indicate that good medication use and patients' experience with taking medication are only discussed in a minority of regular healthcare visits [12,13]. But if patients do meet a well-communicating provider, their adherence appears to improve substantially [14,15]. This underlines the need to also take the provider–patient relationship into account in future adherence studies.

### 3. MEASURING ADHERENCE

Reading six adherence papers one after another, also makes clear that progress in examining and developing effective adherence interventions is hampered by the fact that there is no golden standard for measuring adherence. Savoldelli et al.'s review [10] indeed point to the large 'heterogeneity of adherence definitions and measurement techniques'. In some of the present papers adherence was defined as months of treatment completed [7] or as taking medication at the appropriate time [5]. Others looked at medication taking behavior during the past four weeks [5] or used the more global self-reported Morisky–Green questionnaire [8,9], sometimes completed with a measure of refill adherence [9]. This means that in some studies, a patient is considered to be a poor adherer after having skipped one daily dose [5,8,9], whereas others could skip up to 20% of their daily doses before being labeled as non-adherers. As different adherence measures do not necessarily yield the same outcomes [9], a comparison of studies that used different measures, is rather pointless. A combination of more objective adherence measures like refill adherence or drop-outs [11] with more subjective, self-reported adherence is therefore to be preferred.

### 4. PATIENT PERSPECTIVE

Although several of the adherence papers in this month's issue of *Patient Education and Counseling* make clear how important it is to take into account patient's perspective and the different phases of medication use when addressing medication adherence, these issues have largely been left out in the present papers. Vrijens and Urquhart [16] have shown that patients go through different phases when using chronic medication. Ideally, patients' perspectives in these different phases should be taken into account when designing and implementing adherence interventions. At first, patients need to adapt to the new situation of being ill and having to take (lifelong) medication. In this phase the emphasis should be on preventing non-adherence and trying to start a discussion about how patients would feel about having to take medication. In the next, execution phase, the main focus should be on looking for cues that point to difficulties with using medication, such as experienced side-effects or incorrect medication beliefs. After all, as one of the authors correctly remarked, 'patients of different ages and with different conditions have different problems to cope with and require different kinds of support in order to maintain adherence' [5]. This suggests that in the first period of being chronically ill, one should label a patient as non-adherer on different grounds than later on, after the patient has had some experience with being chronically ill and having to use medications. This may be interesting to look at in future studies.

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