editorial

Medication adherence: motivate, mobile monitoring and multidisciplinary management!

Job F. M. van Boven[1,2]

In primary care, one of the most frequently applied interventions for patients with chronic diseases is the prescription of medicine. When making this prescription, primary care doctors use combinations of evidence-based guideline recommendations, clinical reasoning, and experience. However, despite how well-thought this prescription might be, there is absolutely no guarantee that patients will actually fill the prescription and initiate the therapy. Moreover, even if they do so, it can be challenging for most patients to correctly implement the regimen and persist with it.[1] Indeed, the World Health Organization (WHO) estimates that around half of all patients on chronic therapies have difficulties adhering to these.[2] In turn, this so-called 'nonadherence' is not only associated with worse disease outcomes, but also with around 200,000 deaths and 125 billion of costs.[3] Fortunately, medication non-adherence can be considered a 'treatable trait', meaning we can do something about it, with primary care having an important role.

Notably, to maximize the probability a patient will actually use a new medicine, the start of a new medicine is very crucial. Making sure the diagnosis is correct and the patient understands the course of the disease and how the medication is influencing this course is crucial for the patient's motivation. To deal with expectations, the drug's onset of action should be highlighted and some of the most common side effects can be mentioned including ways how to deal with those. In case instructions are needed on the method of drug administration, for example for injectables or inhalers, these need to be provided and preferably periodically checked and reinforced.[4] Here, the onus is not only for the physician, but the workload can be shared with primary care colleagues such as nurses and pharmacists. The same is true for the longer-term monitoring and management of medication adherence.

Interestingly, there are nowadays many innovations in medication adherence monitoring opportunities, largely thanks to digital technologies.[5] First, patient management and prescription systems have been largely digitalized, now allowing for systematic assessment of electronic prescription records, where patients with large gaps in prescriptions can be readily identified. Second, there are now novel technologies that allow the tracking of individual medication dispensing events, such as digital pill bottles, electronic blisters, smart inhalers, and digital spacers.[6-7] These devices have sensors and record the exact timing of a dosing event, often accurate on the second. The devices are either add-ons to the original drug packaging or form together with the drug a "drug-device" combination. Devices are often paired with a smartphone or computer to extract and share drug intake data. Sometimes the patient can receive direct feedback based on their own data, e.g. a reminder is being sent once a dose has been missed.[8] Some devices also allow sharing of these data with healthcare professionals. Subsequently, these data can be used to make more informed follow-up treatment decisions in case of suboptimal clinical response. In case of confirmed adherence, a dose increase or add-on therapy may be needed. In case of non-adherence, first adherence should be improved.[9]

1. Department of Clinical Pharmacy & Pharmacology, University Medical Center Groningen, University of Groningen. Groningen, The Netherlands.
2. Medication Adherence Expertise Center of the Northern Netherlands (MAECON). Groningen, The Netherlands.

Enhancing medication adherence once signaled can still be challenging. The very first step is finding out the reason(s) for non-adherence. The WHO distinction in erratic nonadherence, intelligent nonadherence, and unwitting nonadherence can be helpful here.[2] Thereafter a patient-tailored intervention should be provided with for erratic nonadherence reminders and linking drug intake to daily habits being most effective, for intelligent nonadherence motivation is important and for unwitting nonadherence education is essential while acknowledging some overlap. Of note, within Portugal, adherence expertise is widely available and shared within Portugal and beyond.[10] All in all, it is clear that a one-size-fits-all solution to nonadherence is not possible, however, our monitoring arsenal has been greatly improved, allowing for more awareness but also more personalized support to our patients in primary care!

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CORRESPONDING AUTHOR

Job F. M. van Boven
University Medical Center Groningen, Department of Clinical Pharmacy & Pharmacology, Hanzeplein 1 (AP50), 9700 RB Groningen, The Netherlands.
E-mail: j.f.m.van.boven@umcg.nl
https://orcid.org/0000-0003-2368-2262