For instance, the increased attention given to patients who report adverse events may lead to more and longer contact with the treating clinician, thereby exerting a positive impact on the doctor/patient relationship.

It is key to understand that compliance is a dynamic treatment variable. Adherence behaviour changes over time and is also dependent on treatment circumstances. Therefore, compliance monitoring must be an ongoing treatment measure. As patients quickly learn to give expected and accepted answers to questions like “Do you take your medications regularly?”,

alternative approaches have been suggested. These include questions like “When you forget your medication, what do you do?” or “Do you think that taking medication over a prolonged period of time is potentially harmful?” (2).

All of the issues described above, together with those reviewed by Kane et al, underscore the key importance of two factors to ensure optimal compliance behaviour. Both are based on communications strategies, namely, a good clinician/patient relationship and the provision of sound information. Both need to be an integral and

continuous component of the management of patients suffering from severe mental disorders.

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Practical strategies for improving adherence to medication and outcomes

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Kane et al provide an expert overview that identifies the many causes of the problem of non-adherence, and describes ways of addressing it. However, practitioners and treatment teams may still be uncertain as to how to proceed in the everyday treatment environment. Arguably, every act of prescribing in a shared-decision making dialogue should be accompanied by adherence assessment and often intervention. Non-adherence is not the exception but the rule for long-standing disorders in which medication is taken to prevent the onset or recurrence of symptoms (1). In this commentary, we focus on practical steps that can be taken by administrators, treatment teams and patients to improve adherence and outcomes.

One possible approach involves increasing the use of long-acting injectable (LAI) antipsychotic medications. While pharmacological treat-

ments are not the only approaches to address adherence, there are multiple benefits to using LAIs in the context of shared decision-making. Indeed, practitioners cannot prescribe the right medications at the right doses in an atmosphere of uncertain adherence. A recent study of outpatients with schizophrenia found that, while both home delivered environmental supports or electronic medication support significantly improved adherence, symptoms and outcomes remained essentially unchanged (2). These data have several interpretations, but one that is particularly distressing. Without good data about what our patients are actually doing with their medications, we may be making very poor treatment decisions, including prescribing unnecessary increases in doses, concomitant medications and medication switches. For example, raising a dose may be completely unnecessary if an individual missed 30% of his/her doses in the week prior to the visit.

LAIs can be used to disentangle lack of efficacy from poor adherence when patients appear to be inadequately responsive to medication (3). The value of using LAIs to improve the information on which treatment decisions are

based appears to be underestimated, particularly in the US, where prescriptions for LAIs represent less than 10% of those for antipsychotic medications (4). Mirror image studies demonstrate clear improvements in outcomes and decreases in inpatient costs with the use of injectable medications (5). Kane et al's article nicely explains why such dramatic results are unlikely in randomized controlled trials. As we enter a new era in health care focused on value for services, efficient and accountable care, and need to demonstrate improved outcomes, it is likely that there may be a role for mechanisms to increase the appropriate use of LAIs for patients with schizophrenia. Mechanisms might include peer review and clinician or care system incentives for minimizing barriers to LAI access.

There are many reasons for the underutilization of LAIs, but prominent among them is the discomfort on the part of prescribers in making an offer for these medications (6,7). Linguistic analysis of offers of LAIs in community mental health centers demonstrated lack of fluency and other signs of discomfort on the part of practitioners, and a tendency to start an offer by referring to treatment modality

(shot) rather than potential benefit for recovery (7). Training practitioners in how to make appropriate offers of LAIs in a way that strengthens the therapeutic alliance is necessary and would advance shared decision-making. Surveys of practitioners show that many believe LAIs should be used for patients who are poorly adherent. Unfortunately, in mental health centers, only those who refuse medication are clearly identified as poorly adherent. In reality, medication refusers, unwilling to take either oral medications or LAIs, represent a small minority of patients that are fairly easy to identify. Many other patients are willing to take medication, but do not take it regularly due to distraction, forgetfulness, wavering insight and logistical problems. These are the individuals that need to be identified and offered a trial on LAIs. A simple checklist of warning signs that identifies individuals not receiving maximum benefit from their current oral treatments may help prescribers to identify people who may benefit from LAIs. While there are reasons other than poor adherence that could explain poor outcomes, these warning signs should at least get prescribers to consider whether making an offer of LAIs would be appropriate. Such an identification system should be supported by administrators.

Many patients are unaware that LAI medications are a potential treatment and have never been offered these compounds. Patients need to be provided understandable, helpful information regarding the pros and cons of LAIs versus oral medication. Simple decision-aids focused on this issue could be used by case managers

or peer counselors. This effort prior to physician visits could support an improved shared decision-making dialogue between the prescriber and patient during visits.

Concerning psychosocial interventions for adherence, among the most promising are the use of environmental supports to prompt the taking of medication and the creation of habit-behaviors around taking oral medication. We have demonstrated improvements in adherence and outcomes in multiple studies with the use of cognitive adaptation training (2,8). This involves weekly home visits to set up individualized alarms, checklists, and organize belongings to assist individuals in taking medications regularly. We have also shown that effective prompts can be delivered with electronic devices, eliminating the need for home visits (2). Pill counts conducted on unannounced home visits correlate very highly with self-report of adherence, as long as the self-report is dose specific ("Did you take your medication just now?"; "Did you take your medication today?"). Simple cell phone applications could be used to check medication adherence each day with very little cost.

In summary, there are simple, practical measures that can be used to identify potential adherence problems, and solutions that can be applied in community mental health settings.

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Non-adherence and its consequences: understanding the nature of relapse

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The article by Kane et al draws attention to the enormous challenge of non-adherence in treating individuals with psychotic disorders and the

need to devise better ways of dealing with it.

Non-adherence is common to most chronic medical conditions, with