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Special Feature

### Smartphone medication adherence apps: Potential benefits to patients and providers

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#### Objectives

To provide an overview of medication adherence, discuss the potential for smartphone medication adherence applications (adherence apps) to improve medication nonadherence, evaluate features of adherence apps across operating systems (OSs), and identify future opportunities and barriers facing adherence apps.

#### Practice description

Medication nonadherence is a common, complex, and costly problem that contributes to poor treatment outcomes and consumes health care resources. Nonadherence is difficult to measure precisely, and interventions to mitigate it have been largely unsuccessful.

#### Practice innovation

Using smartphone adherence apps represents a novel approach to improving adherence. This readily available technology offers many features that can be designed to help patients and health care providers improve medication-taking behavior.

### Main outcome measures

Currently available apps were identified from the three main smartphone OSs (Apple, Android, and Blackberry). In addition, desirable features for adherence apps were identified and ranked by perceived importance to user desirability using a three-point rating system: 1, modest; 2, moderate; or 3, high. The 10 highest-rated apps were installed and subjected to user testing to assess app attributes using a standard medication regimen.

### Results

160 adherence apps were identified and ranked. These apps were most prevalent for the Android OS. Adherence apps with advanced functionality were more prevalent on the Apple iPhone OS. Among all apps, MyMedSchedule, MyMeds, and RxmindMe rated the highest because of their basic medication reminder features coupled with their enhanced levels of functionality.

### Conclusion

Despite being untested, medication apps represent a possible strategy that pharmacists can recommend to nonadherent patients and incorporate into their practice.



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smartphones; nonadherence; applications

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