Using Technology to Improve Medication Adherence

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Financial Disclosures

Under guidelines established by the Accreditation Council for Pharmacy Education, disclosure must be made regarding financial relationships with commercial interests within the last 12 months.

- I have no relevant financial relationships or affiliations with commercial interests to disclose.
Learning Objectives

At the completion of this activity, pharmacists and pharmacy technicians will be able to:

- Describe the impact of medication adherence on patient health
- Discuss available tools to improve medication adherence
- Identify the pharmacist’s/technician’s role in medication adherence

Among patients with chronic illness, approximately ____ do not take medications as prescribed.

a. 25%

b. 50%
c. 75%
d. 95%
Which of the following tools are used to improve medication adherence?

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"Drugs don’t work in patients who don’t take them."

Former Surgeon General C. Everett Koop

Medication Adherence Statistics

- Among patients with chronic illness, ~50% do not take medications as prescribed.
- Poor adherence is estimated to incur costs of $100-$300 billion/year.
- Nonadherence causes 125,000 deaths annually
Why is adherence a problem?

- Unintentional

Why is adherence a problem?

- Side effects
Why is adherence a problem?

- Misunderstanding

Medication Adherence Tools

- Ingestible Pill Sensors
- Smart Pill Bottles
- Adherence Packaging
  - Not ideal for rapidly changing disease states
- Medication Compliance Programs
Medication Adherence Tools, cont.

- **Mobile Apps**
  - 160 related to medication adherence
  - MediSafe - 81% adherence rate among users
  - Pros: cheap, easily accessible, include medication references
  - Cons: user dependent, indirect measurement, security issues

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Medication Adherence Tools, cont.

- **Mobile Text Messaging**
  - At least 80% of Americans own some type of cell phone
  - Meta-analysis of 16 RCTs showed an increase of 17.8% in adherence rates
The Pharmacist’s Role

- 4,785 active pharmacists registered in Oklahoma
- Adherence rates of 80% or more are needed for optimal therapeutic efficacy
- Adherence rates increase when technology is combined with face-to-face intervention
- Consider medication nonadherence first as the reason a patient’s condition is not under control

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