

# Compliance Enhancement

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“Medications only work if they are taken as prescribed”



	<h2>Objectives</h2>
	<ul style="list-style-type: none"><li>■ Interpret the definition and impact of medication adherence in the elderly</li><li>■ Identify factors affecting medication adherence in the elderly</li><li>■ Utilize helpful assessment tools for medication adherence</li><li>■ Apply intervention strategies to enhance medication adherence</li></ul>

	<h2>Medication-Taking Behavior</h2>
	<ul style="list-style-type: none"><li>■ Compliance – passive following of doctors' orders</li><li>■ <b><u>Adherence</u></b> – the extent to which a person takes medications as prescribed</li><li>■ Concordance – consultative and consensual partnership between the consumer and their doctor</li><li>■ Persistence – a person's ability to continue taking medications for the intended course of therapy</li></ul>

## Non-adherence

- Intentional or accidental
  - Failing to initially fill a prescription
  - Failing to refill a prescription as directed
  - Omitting doses
  - Discontinuing therapy
  - Taking less or more of a medication than prescribed
  - Taking friend/family member's medication
  - Taking outdated medications
  - Storing medications improperly
  - Improperly administering medications requiring devices

## Non-adherence

- 30-60% of consumers are nonadherent to their prescribed medications
- Risk of nonadherence increases as the number of prescribed medications increases

*Williams A, Manias E and Walker R. Interventions to improve medication adherence in people with multiple chronic conditions: a systematic review. Journal of Advanced Nursing. February 2008:1-12.*

## Medication Use

- 90% of Medicare beneficiaries report taking prescription medications
- Community dwelling elderly
  - Average 3.1-7.9 medications
- Nursing home residents
  - Average 7.2 medications



*Col N, Fanale JE, Kronholm P. The role of medication non-compliance and adverse drug reactions in the hospitalizations of the elderly. Arch Intern Med. 1990;150:841-845. Gurwitz JH, Field TS, Harrold LR, et al. Incidence and preventability of adverse drug events among older persons in the ambulatory setting. JAMA. 2003; 289:1107-16.*

## Consequences of Non-adherence

- Increased use of medical resources
  - Physician and Emergency department visits
  - Hospital admissions
    - 10 – 33% of elderly admitted had a history of nonadherence
  - Nursing home admission
    - ~ 25% of admissions may be due to the inability to self-administer medication

*Col N et al. The role of medication noncompliance and adverse drug reactions in hospitalizations of the elderly. Arch Intern Med. 1990;150:841-845. Strandberg LR. Drugs as a reason for nursing home admissions. J Am Health Care Assoc. 1984;10:20-23.*

## Consequence of Non-adherence

- Increased use of medical resources
  - Unnecessary additional treatments
  - Additional laboratory testing
  - Preventable adverse drug reactions
- Treatment failure
- Cost > Benefit
  - \$300 billion annual health care costs

*Col N et al. The role of medication noncompliance and adverse drug reactions in hospitalizations of the elderly. Arch Intern Med. 1990;150:841-845.*

*Strandberg LR. Drugs as a reason for nursing home admissions. J Am Health Care Assoc. 1984;10:20-23.*  
*American Society on Aging and American Society of Consultant Pharmacists Foundation. Adult Medication: Improving Medication Adherence in Older Adults. 2006.*

## Warning Signs

- Not filling a new prescription
  - 25% don't fill new prescriptions
- Not refilling prescriptions for chronic disease states
- Not obtaining refills at appropriate intervals
- Not completing entire course of therapy

*AARP. Prescription drug use among midlife and older Americans. Washington, DC: AARP, December 2004.*

## Main Reasons for Not Filling Prescriptions

Americans Age 50 and Older

Cost of the drug	40%
Side effect of drug	11%
Thought drug wouldn't help much	11%
Didn't think I needed it	8%
Drug did not help	6%
Don't like taking prescription drugs	5%
Condition improved	4%
Already taking too many prescriptions	3%

AARP. Prescription drug use among midlife and older Americans. Washington, DC: AARP, December 2004.

## Assessment Tools for Medication Adherence

- No gold standards
- Most commonly used:
  - Pill counts
  - Refill records
  - Patient self report
  - Drug therapeutic levels
- Indirect:
  - Clinical outcomes

# Morisky Scale

- Validated scale that estimates the risk of medication non-adherence
- Cited in numerous articles since 1986
- Used for many different disease such as HTN, hyperlipidemia, asthma and HIV
- Simple to administer
  - Four Yes or No questions
  - Scoring:
    - Yes = 0
    - No = 1

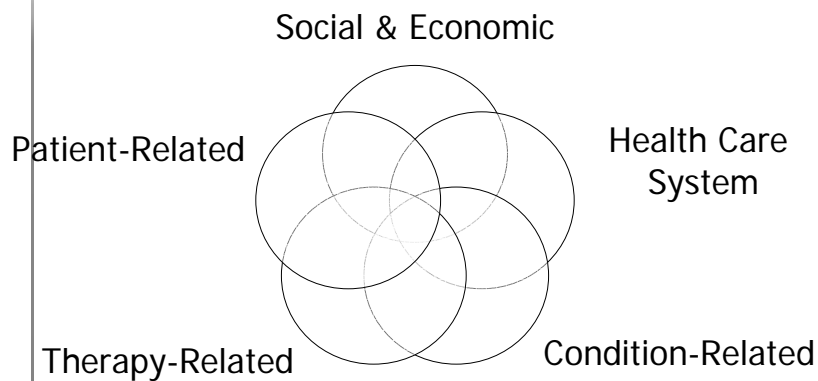
*Morisky DE, Green LW, Levine DW. Concurrent and predictive validity of a self-reported measure of medication adherence. Medical Care 1986;24:67-74*

# Morisky Scale

	Scoring	
	Yes	No
Do you ever forget to take your medicine?	0	1
Are you careless at times about taking your medicine?	0	1
When you feel better do you sometimes stop taking your medicine?	0	1
Sometimes if you feel worse when you take the medicine, do you stop taking it?	0	1
	0	4

*Morisky DE, Green LW, Levine DW. Concurrent and predictive validity of a self-reported measure of medication adherence. Medical Care 1986;24:67-74*

## Factors Affecting Medication Adherence



## Social & Economic

- Lack of family or social support
- Limited English language
- Cultural beliefs
- Low health literacy
- Living conditions
- Limited access to health care
  - Facilities and/or pharmacy
  - Insurance
- Medical costs



## Health Literacy

- The degree to which individuals have the capacity to obtain, process and understand basic health information and services needed to make appropriate health decisions

*World Health Organization, 2003*

## Assessment Tool

### Health Literacy

- Rapid Estimate of Adult Literacy in Medicine, Revised (REALM-R)
  - Brief screening instrument
  - Word recognition test (11-items)
    - Fat\*
    - Flu\*
    - Pill\*
    - Allergic
    - Jaundice
    - Anemia
    - Fatigue
    - Directed
    - Colitis
    - Constipation
    - Osteoporosis

	<b>Strategies</b> Low Health Literacy and English Proficiency
	<ul style="list-style-type: none"><li>■ Utilize translators</li><li>■ Reinforce information with family member</li><li>■ Provide information in relevant language</li><li>■ Create a shame free environment</li><li>■ Simplify reading level to the 5<sup>th</sup> grade</li></ul>

	<b>Strategies</b> Low Health Literacy and English Proficiency
	<ul style="list-style-type: none"><li>■ Use teach back and show back techniques</li><li>■ Limit information to two or three important points at a time</li><li>■ Use drawings, models or devices to demonstrate points</li><li>■ Encourage patients to ask questions</li></ul>

	<h2>Strategies</h2> <p>Cost, Accessibility</p>
	<ul style="list-style-type: none"><li>■ Mail order pharmacy</li><li>■ Pharmacy delivery service</li><li>■ Switch medications to low cost generics or lower cost alternatives</li><li>■ Enroll in Medicare Part D prescription drug plan</li></ul>

	<h2>Health Care System</h2>
	<ul style="list-style-type: none"><li>■ Provider-patient relationship</li><li>■ Communication skills</li><li>■ Disparity between health care beliefs</li><li>■ Capacity for education and follow-up</li><li>■ Formularies</li><li>■ Lack of continuity of care</li><li>■ Missed appointments</li><li>■ Wait times</li><li>■ Written patient care information</li></ul>

## Strategies

### Provider-Patient Relationship

- Establish trusting relationship with patient
- Assess patient understanding of disease state and treatment
- Involve patient in setting treatment goals
- Assess patient's readiness to adhere to plan
- Tailor regimens to fit within daily routine
- Provide written instructions
- Recognize cultural beliefs
  - Nontraditional therapies

## Strategies

### Formularies and Continuity of Care

- Develop process for insurance formulary interactions and prevention
  - Insurance company website/link
  - Pre-defined letters
- Acquire physician information from patients



## Condition-Related

- Chronic conditions
- Lack of symptoms
- Severity of symptoms
- Depression
- Psychotic disorders
- Mental retardation/developmental disabilities
- Cognitive impairment

## Strategies

**Chronic Conditions, Lack of symptoms**

- Education about disease state
  - Treatment
  - Prevention
  - Consequences



## **Strategies**

### **Mental Illness**

- Discuss as common and treatable
- Refer to disease state as a medical condition
- Discuss chemical basis
- Discuss delayed onset of therapeutic effects
  - Minimize impact of side effects
- Discuss importance of adequate duration to prevent relapse
- Educate and involve family if appropriate

## **Therapy-Related**

- Complexity of medication regimen
  - Number of medications and/or daily doses
- Administration techniques of medications
- Duration of therapy
- Changes in medication regimen
- Social stigma associated with medication use
- Side effects
- Lifestyle or behavioral changes

	<h2 style="margin: 0;">Strategies</h2> <h3 style="margin: 0;">Burdensome Medication Regimen</h3>
	<ul style="list-style-type: none"> <li>■ Identify and discontinue unnecessary medications</li> <li>■ Reduce dose frequency <ul style="list-style-type: none"> <li>– Long-acting formulations</li> </ul> </li> <li>■ Consider combination medications</li> <li>■ Identify opportunities to use one medication for multiple conditions</li> <li>■ Identify medications solely being used to treat side effects of other medications</li> </ul>

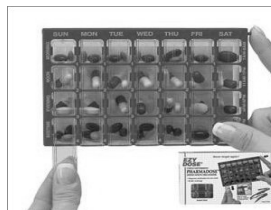
	<h2 style="margin: 0;">Strategies</h2> <h3 style="margin: 0;">Burdensome Medication Regimen</h3>
	<ul style="list-style-type: none"> <li>■ Use teach/show to increase mastery of administration devices</li> <li>■ Link medication regimen to daily activities</li> <li>■ Recommend compliance aids and/or reminders <ul style="list-style-type: none"> <li>– Cell phone</li> </ul> </li> <li>■ Encourage updated written medication list (including herbals and OTC products) <ul style="list-style-type: none"> <li>– Share with each health care provider</li> </ul> </li> </ul>

## Effective Patient Adherence Tools

- Medication Organizers
- Electronic Pager/Timers



## Medication Organizers

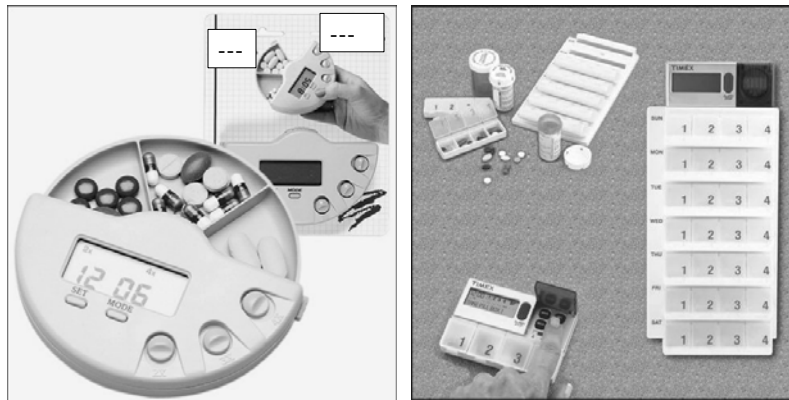




# Medication Organizers



# Electronic Pagers/Timers



## Electronic Pagers/Timers



## Strategies

Perceived lack of benefit or side effects, chronic therapy

- Educate about treatment plan
- Suggest ways to manage minor side effects
- Explore concerns with treatment regimen

	<h2>Patient-Related</h2>
	<ul style="list-style-type: none"><li>■ Physical<ul style="list-style-type: none"><li>– Visual impairment</li><li>– Hearing impairment</li><li>– Cognitive impairment</li><li>– Impaired mobility or dexterity</li><li>– Swallowing problems</li></ul></li></ul>

	<h2>Patient-Related</h2>
	<ul style="list-style-type: none"><li>■ Psychological/Behavioral<ul style="list-style-type: none"><li>– Motivation</li><li>– Knowledge about disease state<ul style="list-style-type: none"><li>■ Importance of medication</li><li>■ Expectations toward disease state and/or medication</li><li>■ Perceived benefit of treatment</li><li>■ Perceived risk of adverse effects</li></ul></li><li>– Stigma of disease</li><li>– Alcohol or substance abuse</li></ul></li></ul>

	<b>Strategies</b> <b>Physical – Visual Impairment</b>
	<ul style="list-style-type: none"><li>■ Communicate with patient</li><li>■ Tape record instructions</li><li>■ Pre-measure and pre-cut<ul style="list-style-type: none"><li>– Check with pharmacy</li></ul></li><li>■ Increase font size</li><li>■ Color code medication bottles</li></ul>

	<b>Strategies</b> <b>Physical – Hearing Impairment</b>
	<ul style="list-style-type: none"><li>■ Use interpreter</li><li>■ Use regular voice volume and lip movement</li><li>■ Maintain eye contact</li><li>■ Write if preferred method of communication</li><li>■ Supplement with written information</li><li>■ Use quiet area for counseling</li><li>■ Speak to better ear</li><li>■ Turn up hearing aids</li><li>■ Repeat yourself when necessary</li></ul>

	<b>Strategies</b> Mobility and Dexterity
	<ul style="list-style-type: none"><li>■ Mail order or pharmacy delivery service</li><li>■ Store medications in easily accessible location</li><li>■ Easy-open tops</li><li>■ Pre-cut, pre-measured medications</li><li>■ Dosage forms that are easy to administer</li></ul>

	<b>Strategies</b> Swallowing
	<ul style="list-style-type: none"><li>■ Utilize alternative dosing formulations<ul style="list-style-type: none"><li>– Liquids, transdermal products, ODT</li></ul></li><li>■ Prescribe crushable tablets or capsules that can be opened and mixed with soft foods<ul style="list-style-type: none"><li>– Check medication list and inquire about crushing, etc. of medications at each visit</li></ul></li></ul>

	<h2>Strategies</h2> <p>Psychological/Behavioral</p>
	<ul style="list-style-type: none"><li>■ Knowledge of disease state<ul style="list-style-type: none"><li>– Help break stigma</li></ul></li><li>■ Motivation<ul style="list-style-type: none"><li>– Involve patient in decisions</li><li>– “roll” with resistance</li><li>– Provide alternatives</li><li>– Set reasonable goals</li></ul></li><li>■ Alcohol and Substance Abuse<ul style="list-style-type: none"><li>– Ask directed questions</li></ul></li></ul>

	<h2>Summary</h2>
	<ul style="list-style-type: none"><li>■ Medication non-adherence is a significant problem</li><li>■ Adherence to medications as prescribed can slow disease progression and reduce the costs of health care in the presence of multiple chronic conditions</li></ul>

	<h2><b>Patient Prerequisites for Adherence</b></h2>
	<ul style="list-style-type: none"><li>■ Understand diagnosis and potential impact</li><li>■ Believe the treatment will be beneficial</li><li>■ Understand medication administration and duration of treatment</li><li>■ Treatment favors benefit over cost</li><li>■ Confidence in health care practitioners</li></ul>

	<h2><b>Provider Steps to Increase Adherence</b></h2>
	<ul style="list-style-type: none"><li>■ Assess understanding of disease state and treatment plan<ul style="list-style-type: none"><li>– Supplement with additional education</li></ul></li><li>■ Link medication to daily routines</li><li>■ Employ use of adherence aids</li><li>■ Simplify medication regimen</li><li>■ Recognize patient specific issues that may affect adherence</li></ul>

	<p>“Effective ways to help people follow medication regimens could have far larger effects on health than any other treatment”</p> <p>Haynes et al. 2005</p>