Compliance Enhancement

Angel L. Wolf, M.B.A., Pharm.D., BCPP
Assistant Professor of Pharmacy
Florida A&M University - COPPS
Assistant Professor of Medicine/Clinical Pharmacist
University of South Florida
Department of Psychiatry and Behavioral Medicine

“Medications only work if they are taken as prescribed”
Objectives

- Interpret the definition and impact of medication adherence in the elderly
- Identify factors affecting medication adherence in the elderly
- Utilize helpful assessment tools for medication adherence
- Apply intervention strategies to enhance medication adherence

Medication-Taking Behavior

- Compliance - passive following of doctors’ orders
- **Adherence** - the extent to which a person takes medications as prescribed
- Concordance - consultative and consensual partnership between the consumer and their doctor
- Persistence - a person’s ability to continue taking medications for the intended course of therapy
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  - Taking outdated medications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

30-60% of consumers are nonadherent to their prescribed medications

Risk of nonadherence increases as the number of prescribed medications increases

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


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

### 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


### 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

## Main Reasons for Not Filling Prescriptions

**Americans Age 50 and Older**

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of the drug</td>
<td>40%</td>
</tr>
<tr>
<td>Side effect of drug</td>
<td>11%</td>
</tr>
<tr>
<td>Thought drug wouldn’t help much</td>
<td>11%</td>
</tr>
<tr>
<td>Didn’t think I needed it</td>
<td>8%</td>
</tr>
<tr>
<td>Drug did not help</td>
<td>6%</td>
</tr>
<tr>
<td>Don’t like taking prescription drugs</td>
<td>5%</td>
</tr>
<tr>
<td>Condition improved</td>
<td>4%</td>
</tr>
<tr>
<td>Already taking too many prescriptions</td>
<td>3%</td>
</tr>
</tbody>
</table>


## 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

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**Scoring**

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you ever forget to take your medicine?</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Are you careless at times about taking your medicine?</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>When you feel better do you sometimes stop taking your medicine?</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Sometimes if you feel worse when you take the medicine, do you stop taking it?</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

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*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*

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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
<table>
<thead>
<tr>
<th>Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low Health Literacy and English Proficiency</strong></td>
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</table>

- Utilize translators
- Reinforce information with family member
- Provide information in relevant language
- Create a shame free environment
- Simplify reading level to the 5th grade

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- Use teach back and show back techniques
- Limit information to two or three important points at a time
- Use drawings, models or devices to demonstrate points
- Encourage patients to ask questions
| Strategies  
<table>
<thead>
<tr>
<th>Cost, Accessibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>■ Mail order pharmacy</td>
</tr>
<tr>
<td>■ Pharmacy delivery service</td>
</tr>
<tr>
<td>■ Switch medications to low cost generics or lower cost alternatives</td>
</tr>
<tr>
<td>■ Enroll in Medicare Part D prescription drug plan</td>
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<table>
<thead>
<tr>
<th>Health Care System</th>
</tr>
</thead>
<tbody>
<tr>
<td>■ Provider-patient relationship</td>
</tr>
<tr>
<td>■ Communication skills</td>
</tr>
<tr>
<td>■ Disparity between health care beliefs</td>
</tr>
<tr>
<td>■ Capacity for education and follow-up</td>
</tr>
<tr>
<td>■ Formularies</td>
</tr>
<tr>
<td>■ Lack of continuity of care</td>
</tr>
<tr>
<td>■ Missed appointments</td>
</tr>
<tr>
<td>■ Wait times</td>
</tr>
<tr>
<td>■ Written patient care information</td>
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</tbody>
</table>
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
<table>
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<tbody>
<tr>
<td>Mental Illness</td>
</tr>
<tr>
<td>- Discuss as common and treatable</td>
</tr>
<tr>
<td>- Refer to disease state as a medical condition</td>
</tr>
<tr>
<td>- Discuss chemical basis</td>
</tr>
<tr>
<td>- Discuss delayed onset of therapeutic effects</td>
</tr>
<tr>
<td>- Minimize impact of side effects</td>
</tr>
<tr>
<td>- Discuss importance of adequate duration to prevent relapse</td>
</tr>
<tr>
<td>- Educate and involve family if appropriate</td>
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<table>
<thead>
<tr>
<th>Therapy-Related</th>
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<tbody>
<tr>
<td>- Complexity of medication regimen</td>
</tr>
<tr>
<td>- Number of medications and/or daily doses</td>
</tr>
<tr>
<td>- Administration techniques of medications</td>
</tr>
<tr>
<td>- Duration of therapy</td>
</tr>
<tr>
<td>- Changes in medication regimen</td>
</tr>
<tr>
<td>- Social stigma associated with medication use</td>
</tr>
<tr>
<td>- Side effects</td>
</tr>
<tr>
<td>- Lifestyle or behavioral changes</td>
</tr>
</tbody>
</table>
Strategies
Burdensome Medication Regimen

- Identify and discontinue unnecessary medications
- Reduce dose frequency
  - Long-acting formulations
- Consider combination medications
- Identify opportunities to use one medication for multiple conditions
- Identify medications solely being used to treat side effects of other medications

Strategies
Burdensome Medication Regimen

- Use teach/show to increase mastery of administration devices
- Link medication regimen to daily activities
- Recommend compliance aids and/or reminders
  - Cell phone
- Encourage updated written medication list (including herbals and OTC products)
  - Share with each health care provider
**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
**Patient-Related**

- **Physical**
  - Visual impairment
  - Hearing impairment
  - Cognitive impairment
  - Impaired mobility or dexterity
  - Swallowing problems

- **Psychological/Behavioral**
  - Motivation
  - Knowledge about disease state
    - Importance of medication
    - Expectations toward disease state and/or medication
    - Perceived benefit of treatment
    - Perceived risk of adverse effects
  - Stigma of disease
  - Alcohol or substance abuse
## Strategies
### Physical - Visual Impairment

- Communicate with patient
- Tape record instructions
- Pre-measure and pre-cut
  - Check with pharmacy
- Increase font size
- Color code medication bottles

## Strategies
### Physical - Hearing Impairment

- Use interpreter
- Use regular voice volume and lip movement
- Maintain eye contact
- Write if preferred method of communication
- Supplement with written information
- Use quiet area for counseling
- Speak to better ear
- Turn up hearing aids
- Repeat yourself when necessary
### Strategies
**Mobility and Dexterity**
- Mail order or pharmacy delivery service
- Store medications in easily accessible location
- Easy-open tops
- Pre-cut, pre-measured medications
- Dosage forms that are easy to administer

### Strategies
**Swallowing**
- Utilize alternative dosing formulations
  - Liquids, transdermal products, ODT
- Prescribe crushable tablets or capsules that can be opened and mixed with soft foods
  - Check medication list and inquire about crushing, etc. of medications at each visit
### Strategies

#### Psychological/Behavioral

- **Knowledge of disease state**
  - Help break stigma
- **Motivation**
  - Involve patient in decisions
  - “roll” with resistance
  - Provide alternatives
  - Set reasonable goals
- **Alcohol and Substance Abuse**
  - Ask directed questions

### Summary

- Medication non-adherence is a significant problem
- Adherence to medications as prescribed can slow disease progression and reduce the costs of health care in the presence of multiple chronic conditions
### Patient Prerequisites for Adherence

- Understand diagnosis and potential impact
- Believe the treatment will be beneficial
- Understand medication administration and duration of treatment
- Treatment favors benefit over cost
- Confidence in health care practitioners

### Provider Steps to Increase Adherence

- Assess understanding of disease state and treatment plan
  - Supplement with additional education
- Link medication to daily routines
- Employ use of adherence aids
- Simplify medication regimen
- Recognize patient specific issues that may affect adherence
“Effective ways to help people follow medication regimens could have far larger effects on health than any other treatment”

Haynes et al. 2005