Importance of Medication Adherence in the Elderly

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Objectives:
- Explain importance of medication adherence
- Identify factors affecting medication adherence
- Discuss helpful assessment tools for medication adherence
- Review intervention strategies to enhance medication adherence

Former Surgeon General Dr. C. Everett Koop
- Drugs don’t work in patients who don’t take them
- Prescription medications are only effective when they are taken

Terminologies
- **Compliance** – the degree to which a patient correctly follows medical advice
- **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

Background
- Approximately 125,000 people with treatable ailments die each year in the US because they do not take their medication properly
- 14 - 20% of patients never fill their original prescriptions
- 60% of all patients cannot identify their own medications
- 30 - 50% of all patients ignore or otherwise compromise instructions concerning their medication
- 12 - 20% of patients take other people’s medicines

Non Adherence
- Failing to initially fill/refill a prescription
- 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- Taking outdated medications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
Elderly Average Medication Usage

- 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
- Treatment failure
- Cost > Benefit
- Tackling the adherence issue has almost no downside because every one percent improvement in adherence results in $2 billion in savings to the U.S. healthcare system

Reasons for Not Filling Prescriptions

<table>
<thead>
<tr>
<th>Americans Age above 55:</th>
<th></th>
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</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>

Adherence Assessment Tools

- 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 Scale Interpretation:

- Score 1 point for every YES answer
  - 0 points = high adherence
  - 1-2 points = intermediate

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

- The Five Dimensions of Adherence


Social & Economic

- Lack of family or social support
- Language barriers
- Cultural beliefs
- Low health literacy
- Living conditions
- Limited access to health care
- High medical costs or co-pay

Assessment Tool Health Literacy

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

Assessment Tool Health Literacy

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

Strategies Low Health Literacy and English Proficiency

- Utilize translators
- Reinforce information with family member
- Provide information in relevant language
- Create a shame free environment
- Simplify reading level to the 5th grade
- Use teach back and show back techniques
- Limit information to two or three important points
- Use drawings, models or devices to demonstrate points
- Encourage patients to ask questions

Strategies Cost, Accessibility

- Mail order pharmacy
- Pharmacy delivery service
- Switch medications to low cost generics or lower cost alternatives
- Enroll in Medicare Part D prescription drug plan
Health Care System

- Provider-patient relationship
- Communication skills
- Disparity between health care beliefs
- Capacity for education and follow-up
- Formularies
- Lack of continuity of care
- Missed appointments
- Wait times
- Written patient care information

Strategies
Provider-Patient Relationship

- Establish trusting relationship with elderly patient
- Assess elderly understanding of disease state and treatment
- Involve elderly in setting treatment goals
- Assess elderly 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-Elderly Related

- Chronic conditions
- Lack of symptoms
- Severity of symptoms
- Depression
- Psychotic disorders
- 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 (Critical)
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

Strategies
Burdensome Medication Regimen
- Identify and discontinue unnecessary medications
- Reduce dose frequency
  - Long-acting formulations
- Consider combination medications
- Identify opportunities to use one medication
- Identify medications solely being used to treat side effects of other medications
- Teach to increase mastery of administration devices
- Link medication regimen to daily activities
- Recommend compliance aids and/or reminders
- Encourage updated written medication list

Effective Patient Adherence Tools
- Medication Organizers
- Electronic Pager/Timers

Strategies
Perceived lack of benefit or side effects
- 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

Patient-Related
- 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 elderly 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 elderly patient in decisions
  - "roll" with resistance
  - Provide alternatives
  - Set reasonable goals
- Alcohol and Substance Abuse
  - Ask directed question

Elderly 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

Questions

- High medications cost or co-pay of a prescription is an example of a medication-related factor.
  - True
  - False
- Directly observed therapy as a means of medication adherence is impractical in most clinical situations.
  - True
  - False
- Concordance is generally used as a way to define the treatment continuum from the initial prescription fill to the ongoing taking & refilling of the drug.
  - True
  - False

CASE STUDY

You have implemented an alert with the pharmacy computer system that will identify patients who have not refilled prescriptions for cholesterol lowering agents. You receive an alert that LP, a 68 year old Caucasian male who has a diagnosis of hyperlipidemia and diabetes has not filled his prescription for simvastatin. His refill records show the following:

<table>
<thead>
<tr>
<th>Medication</th>
<th>Strength</th>
<th>Call 01</th>
<th>Work Order</th>
<th>Days Supply</th>
<th>Fill Start</th>
<th>Fill End</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simvastatin</td>
<td>40 mg</td>
<td></td>
<td></td>
<td>30</td>
<td>01/01/04</td>
<td>01/02/04</td>
</tr>
<tr>
<td></td>
<td>20 mg</td>
<td></td>
<td></td>
<td>30</td>
<td>01/01/04</td>
<td>01/02/04</td>
</tr>
</tbody>
</table>

CASE STUDY

- Pharmacist: When was your last cholesterol medication refill & your last visit to this doctor?
  - LP: He has not taken the simvastatin because his doctor said his cholesterol is perfect and his diabetes is well-controlled.
- LP: Does not understand that the medication is long-term
- Pharmacist: Like your diabetes, it is important to take your simvastatin every day as well. The simvastatin has brought your cholesterol level down, but in order for you to keep it down you need to keep taking this medicine
- LP: Thought when the doctor told him his cholesterol was good, that he could stop taking the simvastatin
- Pharmacist: Would you be willing to start back on the simvastatin again?
- LP: He did not understand simvastatin was a chronic medication
- Pharmacist: Starting back on the simvastatin will help keep you healthy. Would it be okay if I give you a call in a few weeks to see how things are going?
- LP: Agrees
- Pharmacist: Summarizes his intervention with LP and makes a note to contact him in 3 weeks to see how he is doing on the simvastatin

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 in the elderly population

References: