Medication Teaching in Low Literacy Patients
Best Practices for Improving Medication Adherence

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Objectives
- Discuss adherence - health outcomes - medication regimen relationships
- Identify patients at risk for poor outcomes – low literacy/health literacy populations
- Identify best practices in medication teaching – emphasis on practical methods
- Review/apply techniques learned today

Patient Adherence
The extent to which a person’s behaviour (ie. taking medication, following a diet, and/or executing lifestyle changes) corresponds with agreed recommendations from a health care provider.

Costs of Non-Adherence
- Additional costs for healthcare systems – estimated at $100 billion per year!
  - 10% of all hospital admissions
    - 30% of admissions for patients > 65 yrs
  - 23 - 40% of all nursing home admissions
- Approximately 125,000 deaths occur annually in the United States because of non-adherence with cardiovascular medications

Patient Adherence
The extent to which a patient continues an agreed-upon mode of treatment under limited supervision when faced with conflicting demands.
- Stedman’s Medical Dictionary, 2002 (dictionary.com)

Medication Adherence

22% of US patients take less of their medication than prescribed.

Figure 1. Medication-taking behavior (AHA, 2002).
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**Factors that Affect Adherence**

- Patient Demographics
- Psychosocial/Behavioral Characteristics
- Characteristics of Medication Regimens
- Interface with HealthCare System

**Healthcare System Factors**

- **Increased Adherence**
  - Good relationship with healthcare provider
  - Positive feedback from healthcare provider

- **Decreased Adherence**
  - Patients' lack of knowledge about disease/condition
  - Lack of understanding about why a medication is prescribed
  - Inadequate follow-up or discharge planning
  - Costs of medications or copayments

**Health System Characteristics**

- Increasingly complex health system
  - Multiple providers
  - Greater self-care requirements
  - Informed/shared decision-making
  - More medications for chronic conditions
  - Formulary and manufacturer changes
  - Direct to consumer advertising
  - Medication reconciliation challenges
  - Gaps in coordination of care
Patient Factors

- **Increased Adherence**
  - Older age of patient*

- **Decreased Adherence**
  - *Patient age > 70 yrs
  - Dementia or cognitive impairment
  - Lack of financial resources
  - Limited access to healthcare facilities
  - Burdensome schedules or lifestyles

Adapted from J Am Pharm Assoc 2003;43: 668–79

Medication Factors

- **Increased Adherence**
  - Taking < 4 medications
  - Once (or twice) daily dosing

- **Decreased Adherence**
  - Taking > 4 medications
  - Frequent daily doses
  - Multiple chronic diseases
  - Patients’ belief they cannot follow a regimen/confusion
  - Fear of adverse effects (severe/hard to manage)

Adapted from J Am Pharm Assoc 2003;43: 668–79

Older Patients

- Among medication users ≥ 65 years old
  - 51% take at least five different prescription drugs
  - 25% take between 10 and 19 pills each day

- Majority polled (57%) admit that they forget to take their medications
  - If >5 medications, 63% forget doses
  - If < 5 medications, 51% forget doses

Med Ad News February 2010

High Risk Populations

<table>
<thead>
<tr>
<th>Group</th>
<th>Low Literacy (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>50</td>
</tr>
<tr>
<td>Elderly (≥ 65)</td>
<td>81</td>
</tr>
<tr>
<td>Racial/Ethnic group:</td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>41</td>
</tr>
<tr>
<td>Black</td>
<td>77</td>
</tr>
<tr>
<td>Hispanic</td>
<td>78</td>
</tr>
<tr>
<td>Education level:</td>
<td></td>
</tr>
<tr>
<td>0-8 yrs</td>
<td>96</td>
</tr>
<tr>
<td>9-12 yrs</td>
<td>81</td>
</tr>
<tr>
<td>HS/GED</td>
<td>55</td>
</tr>
<tr>
<td>Immigrants:</td>
<td></td>
</tr>
<tr>
<td>0-8 yrs prior education</td>
<td>91</td>
</tr>
<tr>
<td>9+ yrs prior education</td>
<td>71</td>
</tr>
</tbody>
</table>

Weiss 2005. Adapted from Table 2-1

Literacy and Medication Use

- **Low literacy patients**
  - ↑ Ability to identify their own medications
    - 12-18 x greater odds of making mistake
  - ↑ Understanding of how to take medications
    - Take med every 6 hrs (52% correct)
    - Take med on empty stomach (46% correct)
  - ↑ Misinterpretation of common warning labels
    - 3-4 x more likely to misinterpret


Misinterpretation of Warning Labels

Don’t take when wet
Don’t need water
Don’t drink hot water
Use extreme caution in how you take it
Medicine will make you feel dizzy
Take only if you need it

Davis et al 2006. Adapted from Table 3.
Literacy and MDI Use
- Ability to perform MDI technique

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Communication and Counseling
- Most patient instructions are written
  - Written materials often at 12th grade level or higher
  - Internet resources are variable in quality, readability
- Verbal counseling is limited/rushed
  - Usually delivered at times of transition or illness
  - Time constraints
  - Lack of follow up

Literacy and Medication Use
- Low literacy patients
  - Understanding of drug mechanisms and side effects
    - Warfarin works by thinning blood (70% correct)
    - Bleeding/bruising most common SE (49% correct)
  - Understanding of numerical information
    - If your blood test result for warfarin is just right when it is between 2.0 and 3.0, which of the following results would be "just right"? (29% correct)

Adherence Interventions

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Impact Estimate Median % (Range)</th>
<th>Increase in Refills (per Rx/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adherence devices</td>
<td>6 (0-46)</td>
<td>0.5</td>
</tr>
<tr>
<td>Telephone/postal reminders</td>
<td>6 (1-31)</td>
<td>0.5</td>
</tr>
<tr>
<td>Regimen simplification</td>
<td>15 (6-24)</td>
<td>1.2</td>
</tr>
<tr>
<td>Education and counseling</td>
<td>22 (0-48)</td>
<td>1.7</td>
</tr>
<tr>
<td>Comprehensive management</td>
<td>25 (6-68)</td>
<td>1.9</td>
</tr>
</tbody>
</table>

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Strategies to Improve Communication
1. Explain things clearly in plain language
2. Focus on key messages and repeat
3. Use a “teach back” or “show me” technique to check understanding
4. Effectively solicit questions
5. Use patient-friendly educational materials to enhance interaction
Explain Clearly . . . in Plain Language

- Slow down the pace of your speech
- Use plain, non-medical language
  - “Blood pressure pill” instead of “antihypertensive”
  - Pay attention to patient’s own terms and use them back
- Avoid vague terms
  - “Take 1 hour before you eat breakfast” instead of “Take on an empty stomach”
- Use pictures, diagrams and pictograms to supplement

What could we say instead of...

- Adverse reaction  Side effect
- Hypoglycemia  Low sugar
- PRN  When you need it
- Suppository  Pill that goes in your bottom/behind
- Topical  On skin

Medication List (by Drug)

PRANDIN NON FORMUL 1. MG
TAKE 1. BY MOUTH
TWO TIMES A DAY
TAKE 1/2 HOUR BEFORE LUNCH AND 1/2 HOUR BEFORE DINNER.
DISP QUANTITY: 60
SCRIPT: YES REFILLS: 02 (TWO)

ASPRIN | BAYER | 81. MG
TAKE 1. TABLET BY MOUTH EVERY MORNING.
DISP QUANTITY: 30
SCRIPT: YES REFILLS: 03 (THREE)

CLOPIDOGREL BISULFATE | PLAVIX | 75. MG
TAKE 1. TABLET BY MOUTH EVERY MORNING
DISP QUANTITY: 30
SCRIPT: YES REFILLS: 03 (THREE)

Medication List (by Time)

<table>
<thead>
<tr>
<th>Medication</th>
<th>Breakfast</th>
<th>Lunch</th>
<th>Supper</th>
<th>Bedtime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repaglinide</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aspirin</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clopidogrel bisulfate</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The Psychology of Learning and Motivation 1988;22:261-305

Focus . . . and Repeat

- Limit information
  - Focus on 1-3 key points
- Develop short explanations for common medical conditions and side effects
- Discuss specific behaviors rather than general concepts
  - What the patient needs to do
- Review each point at the end

Pill Cards

ahrq.gov
“Teach Back” . . . and Check

Teach Back Scripts
- I want to make sure I explained everything clearly. If you were trying to explain to your husband how to take this medicine, what would you say?
- Let’s review the main side effects of this new medicine. What are the 2 things that I asked you to watch out for?
- Show me how you would use this inhaler.

Ask Open-Ended Questions
- Say: *What questions do you have?*
- Don’t say:
  - Do you have any questions?
  - *Any questions?*

Choose Patient-Friendly Materials
- Appropriate Content
- Plain Language
- Layout
- Illustrations

Other Practical Tips
- Get to know the patient
  - Work and sleep schedules
  - Caregiving (eg. grandchildren)
- Explore patient knowledge and individualize strategies for adherence
  - Diabetes medications prevent blindness, dialysis
  - Refrigerate eyedrops (coldness on eye)
- Use visual tools and analogies
  - “Balanced plate” method for diabetes

Medication Therapy Management
- Medicare Prescription Improvement and Modernization Act of 2003
- Core elements
  - Medication therapy review
  - A personal medication record
  - A medication action plan
  - Intervention and referral
  - Documentation and follow-up
What questions do you have?

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Hands on Practice!

- In this section, you will divide into groups of 3. Each person in the group will have a role to play:
  1. Provider
  2. Patient
  3. Observer
     - Refer to the handouts for instructions for each role.
     - After each round, the “observer” will provide feedback to the “provider.”

Role Play Discussion

- What was different?
- Was it hard?
- What did you learn?

Wrap Up

- Know which patients are at risk
  - Multiple medications
  - Multiple disease states
  - Complex or high-risk regimens
- Use Strategies to Improve Communication
  - Plain Language
  - Focus on Key Messages
  - Teach Back

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