



Independent-Study Program • Contact Hour Request Form
Provided by the Midwest Center for Home, Hospice & Palliative Care Education

SeniorScript Series: Evaluating Medication Adherence in Older Adults (06/2013)

Objectives:

1. Describe medication adherence issues.
2. Identify the five dimensions of adherence to medications.
3. Discuss assessment tools available to help identify reasons for adherence issues.

Criteria for Successful Completion: Listening to the audio seminar, submitting completed Request Form (evaluation/test) with processing fee of \$10, and achieving a minimum score of 80% on the post test. Upon submittal of the proper forms, this program offers 1 Contact Hour credit for nursing valid nationally (*not valid for Iowa licenses*).

INSTRUCTIONS: After listening to the seminar online, simply complete this form which includes both an evaluation and post test. Once completed, submit it along with a processing fee of \$10 to request credit. In order to qualify for credit, a minimum score of 80% must be achieved on the post test.

Expiration: This program expires on 07/29/15.

Disclosure Information:

The planning committee has declared no conflict of interest. The presenter, Becky Wagner, PharmD, has declared no conflict of interest.

No commercial support was received for this educational activity.

Requesting Credit For: ☐ Nursing

-Upon submittal of the proper forms, this program offers 1 Contact Hour credit for nursing valid nationally (not valid for Iowa licenses).

Part I - Participant Information *(please type or print legibly)*

Date Completed:	
Name:	
Employer:	
Occupation/Credentials: (RN, LPN, SW/C)	
Complete Mailing Address: (Street, City, State, Zip)	
Phone:	
Email Certificate To:	



Thank you to HospiScript Services for the donation of the audio recording.

Independent-Study Program • Contact Hour Request Form
Provided by the Midwest Center for Home, Hospice & Palliative Care Education
Evaluating Medication Adherence in Older Adults (06/2013)

Part II – Evaluation

Were the following objectives met?

1. Describe medication adherence issues. ☐ YES ☐ NO
2. Identify the five dimensions of adherence to medications. ☐ YES ☐ NO
3. Discuss assessment tools available to help identify reasons for adherence issues. ☐ YES ☐ NO
4. Please list 1 learning point you plan to incorporate into your practice: _____

This speaker demonstrated effective teaching on a scale of 5 (excellent) to 1 (poor):

Becky Wagner, PharmD: ☐ 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1

Comments:	
Questions for Speaker:	

Part III - Post Test

1. Which of the following is NOT an example of nonadherence?
 - a. ☐ Failing to fill a prescription
 - b. ☐ Taking more of a medication than prescribed
 - c. ☐ Taking outdated medications
 - d. ☐ Reading patient information leaflet provided for each medication
2. A possible consequence of nonadherence is adverse drug reactions ☐ TRUE ☐ FALSE
3. Lack of immediate benefit from a medication may be a reason patients are nonadherent to that medication.
☐ TRUE ☐ FALSE
4. Which of the following is NOT an example of a Social/Economic factor which influences adherence?
 - a. ☐ Elder abuse
 - b. ☐ Burdensome schedule
 - c. ☐ Lack of access to health care facilities
 - d. ☐ Stable family and support network
5. Patients with difficulty swallowing may have problems with adherence to medications ☐ TRUE ☐ FALSE
6. Which of the following is NOT an example of a patient-related factor that influences adherence?
 - a. ☐ Fear of possible side effects
 - b. ☐ High drug cost
 - c. ☐ Understanding the reason the medication is needed
 - d. ☐ Feeling stigmatized by the disease
7. Medication knowledge assessments are not likely to improve adherence ☐ TRUE ☐ FALSE
8. Having the patient demonstrate the action of using an inhaler may help the practitioner assess adherence ☐ TRUE ☐ FALSE
9. Which of the following are NOT predictors of medication nonadherence?
 - a. ☐ Depression
 - b. ☐ Substance abuse
 - c. ☐ Higher education
 - d. ☐ Lack of insight into illness
10. Visual impairment can be a factor which influences adherence in older adults. ☐ TRUE ☐ FALSE
11. Length of time (IN MINUTES) to complete this self study: _____

To Request Credit:

Send completed form (include both evaluation and test pages) and \$10 processing fee to:
Midwest Care Alliance, 855 S. Wall St., Columbus, OH 43206

Evaluating Medication Adherence in Older Adults

Becky Wagner, PharmD
Clinical Pharmacist, SeniorScript



Objectives

- Describe medication adherence issues
- Identify the 5 dimensions of adherence to medications
- Discuss assessment tools available to help identify reasons for adherence issues

Definitions

- **Adherence**: The extent to which a person's behavior [in] taking medication...corresponds with agreed recommendations from a health care provider
- **Compliance**: Passive following of orders
- **Persistence**: Continue taking medications

World Health Organization, 2003

3

Introduction

- Elderly population: 88.5 million by 2050
- Non-adherence: up to 59% of the elderly
- Multiple comorbidities
 - Greater potential for negative outcomes
 - Accounts for 23% of nursing facility admissions
 - 11% of hospital admissions

Shelton, Et al. Consult Pharm 2012;27:771-81

4

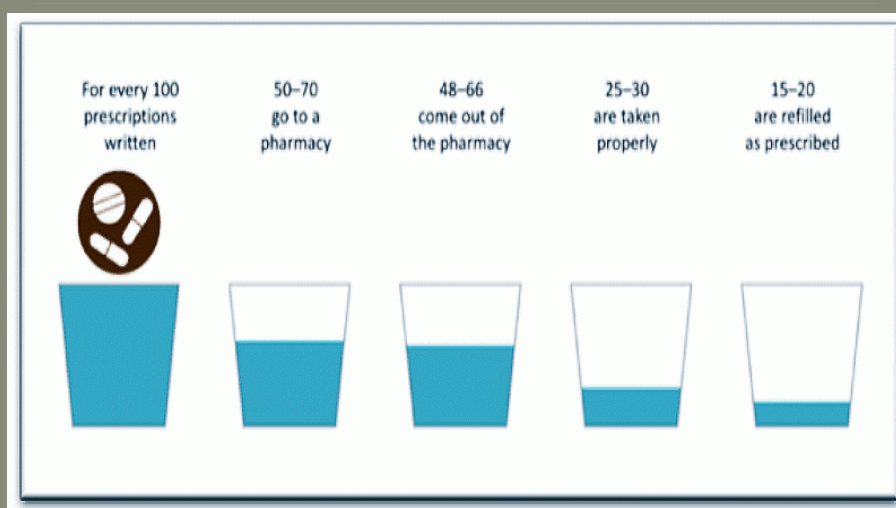
Examples

- Prescription isn't filled
 - 20 to 30%
- Patient doesn't take it
- Patient stops taking it
 - Up to 50%
- Patient takes less than prescribed
- Taking with prohibited foods
- Improper use of medication devices

Osterberg, et al. N Engl J Med 2005; 353(5):487-497

5

Non-adherence



National Association of Chain Drug Stores, Pharmacies: Improving Health, Reducing Costs, July 2010. Based on IMS Health data

6

Cost

- \$100 billion in hospitalizations/year
- \$2,000 per patient/year MD visits
- Avoidable health care spending: \$290 billion per year
 - Non-adherence
 - Suboptimal prescribing and administration

Chrisholm-Burns, M. JAm Pharm Assoc. 2012;52,823-826

7

Statistics

- Rates of medication adherence drop after the first six months
- 51% of Americans treated for hypertension are adherent to their long-term therapy
- 25-50% of patients discontinue statins within one year of treatment initiation

Choudhry, et al. N Engl J Med 2011;365(22), 2088-2097

8

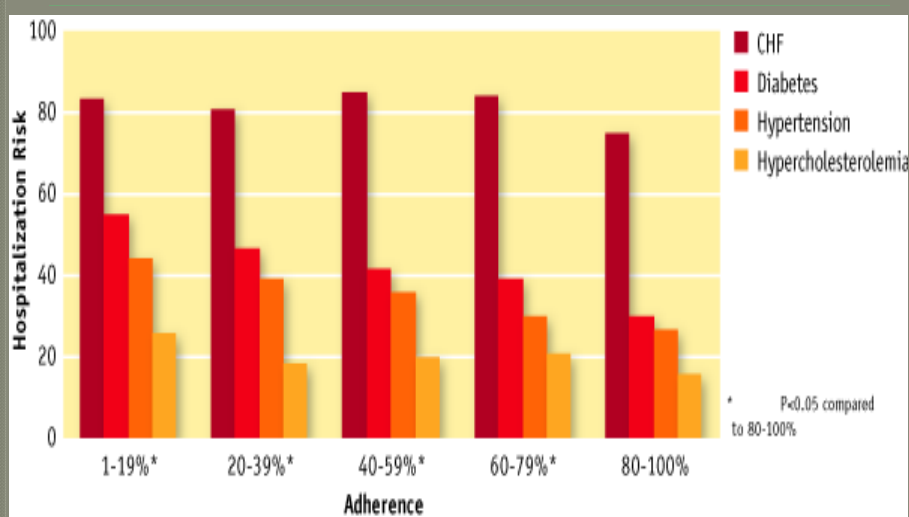
Consequences

- Non-adherence
 - 125,000 deaths annually
- Statin non-adherence
 - Relative risk for mortality increases by 12-25%
- Cardiac non-adherence
 - Cardiac hospitalizations: 10-40%

Ho, et al. Circulation 2009; 119(23):3028-3035

9

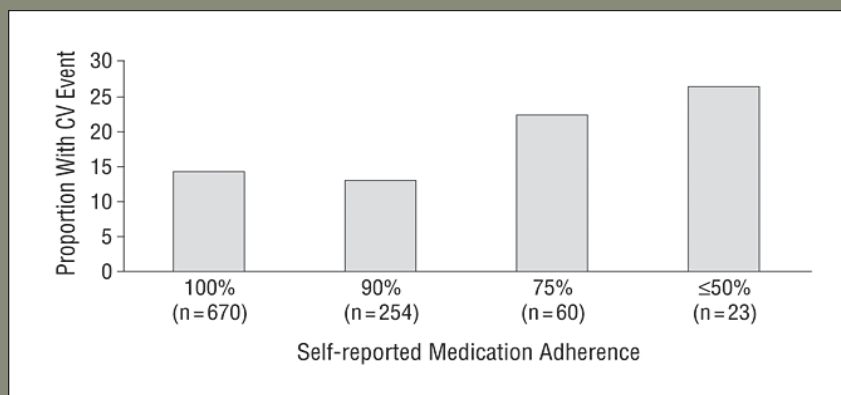
Consequences



Sokol MC, et al. Med Care. 2005;43(6):521-530

10

Adherence and CVD events



CVD = cardiovascular disease

Gehi AK et al. Arch Intern Med. 2007;167:1798-1803

11

Predictors of Non-adherence

- Low literacy
- Cognitive impairment
- Lack of belief in benefit of treatment
- Homelessness
- Depression
- Psychiatric disease
- Substance abuse
- Anger, psychological stress, anxiety

12

Predictors of Non-adherence

- Belief medications are harmful
- Complex medication regimen
- Inconvenient regimen
- Tired of taking medications
- Side effects
- Cost
- Barriers to care or medications
- Inadequate follow-up

13

Measuring Adherence

- Direct
 - Observation
 - Measurement of levels of medication in blood
- Indirect
 - Patient questionnaires
 - Self report
 - Pill counts
 - Electronic MAR
 - Rate of refills

14

Online Tool

• AdultMedication.com

- A web-based program created by American Society on Aging (ASA) and The American Society of Consultant Pharmacists (ASCP) Foundation
- The information from this site is based primarily on the work of the World Health Organization published work "Adherence to long-term therapies: evidence for action."

15

Five Dimensions of Adherence

"Adherence is the extent to which a person's behavior [in] taking medication... corresponds with agreed recommendations from a health care provider"

(World Health Organization, 2003)

Adherence is a multidimensional phenomenon determined by the interplay of five sets of factors, termed "dimensions" by the World Health Organization



16

Social and Economic Factors

- Limited English language proficiency
- Low health literacy
- Lack of family or social support network
- Burdensome schedule
- Limited access to health care facilities
- Lack of health care insurance
- Inability or difficulty accessing pharmacy
- Cultural and lay beliefs about illness and treatment

17

Health Literacy

- Definition: Degree to which individuals obtain, process, and understand basic health information and services needed to make appropriate health decisions
- Inadequate literacy has a negative effect on outcomes, adherence, and management of chronic conditions

Noureldin, et al. Pharmacotherapy 2012;32(9):819-826

18

Health Literacy: REALM-R

Rapid Estimate of Adult Literacy in medicine

- Word recognition test
- “I would like to get an idea of what medical words you are familiar with.”
- Will you tell me the words here on this page?
- FAT, FLU and PILL are not scored
- Score of 6 or less correct considered poor health literacy

Fat	Flu
Pill	Osteoporosis
Allergic	Jaundice
Anemia	Fatigue
Directed	Colitis
Constipation	

Bass, et al. . J Gen Intern Med 2003;18:1036-8

19

Improving Adherence with Low Health Literacy

- Create a safe environment for communication
- Use plain language
- Give clear verbal instructions
- Written information at a fifth grade level
- Use pictures or diagrams
- Use video instruction
- Verify understanding: “teach back”
- Telephone follow-up

20

Visual Cues

www.usp.org/audiences/consumers/pictograms



21

Health Care System Factors

- Provider-patient relationship
- Provider communication skills
- Lack of positive reinforcement
- Lack of knowledge on adherence
- Poor access or missed appointments
- Long wait times

22

Patient-Provider relationship

- Ask me 3
- Patient education program
- Promotes communication
 - “What is my main problem?”
 - “What do I need to do?”
 - “Why is it important for me to do this?”

<http://www.npsf.org/for-healthcare-professionals/programs/ask-me-3/>

23

Condition-Related Factors

- **Chronic conditions**
- Lack of symptoms
- Depression
- Psychotic disorders



24

Improving Adherence in Chronic Conditions

Barrier	Strategy
Therapy for asymptomatic conditions	<ul style="list-style-type: none"> • Inform about disease process • Importance of treatment or prevention • Consequences if not treated
Chronic or long-term therapy	<ul style="list-style-type: none"> • Simplify regimen • Use reminder strategies • Involve family members • Cue medication taking to daily tasks or routine

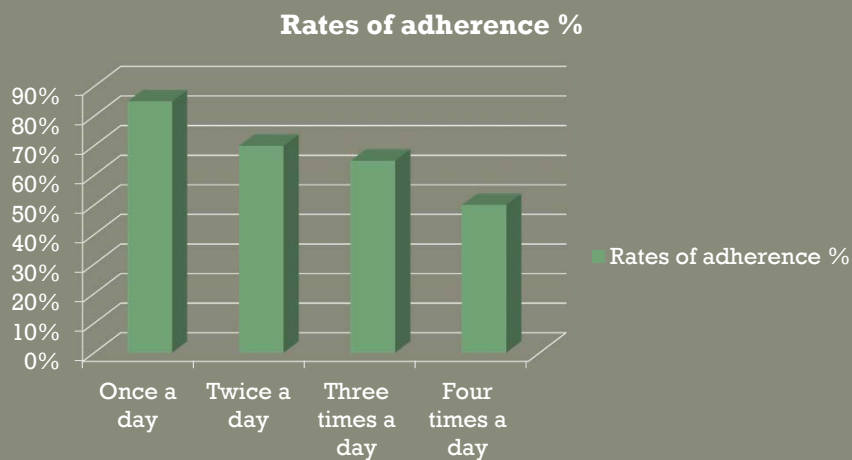
25

Therapy Related Factors

- Complexity of medication regimen
- Treatment requires mastery of technique
- Frequent changes in medications
- Lack of immediate benefit of therapy
- Actual or perceived unpleasant side effects
- Treatment interferes with lifestyle

26

Simplify Schedules



Osterburg L, Blaschke T. NEJM. 2005;353:487-497

27

Improving Adherence with Complex Medication Regimen

Barrier	Strategies
Complexity of medication regimen	<ul style="list-style-type: none"> Discontinue unnecessary medications Reduce frequency Use one drug to treat more than one condition Introduce reminder strategies Provide written list of medications

28

Patient Related Factors

- Physical Factors
 - Visual
 - Auditory
 - Cognitive
 - Mobility/ Dexterity
 - Swallowing

29

Visual Impairment

Barrier	Strategy
Visual Impairment	<ul style="list-style-type: none"> ▪ Use large print ▪ Use black ink on light background (high contrast) ▪ Clear verbal instructions ▪ Color coding ▪ Alarms ▪ Encourage improved lighting

30

Cognitive Impairment

- Mini Mental Status Exam
- Clock – Draw Test
- Others

31

Cognitive Impairment

Barrier	Strategies
Cognition/Memory	<ul style="list-style-type: none">▪ Speak slowly and clearly▪ Repeat and rephrase information▪ Confirm understanding▪ Written instructions▪ Involve caregiver▪ Reminder strategies

32

Patient Related Factors

- Psychological/Behavioral
 - Understanding reason medication is needed
 - Confidence in ability to follow regimen
 - Motivation
 - Fear of dependence
 - Feeling stigmatized by the disease
 - Psychosocial stress

33

Medication Knowledge Assessment

- Name of the medication
- Why are you taking the medication?
- How much are you taking?
- When to take the medication?
- Effects to look for (+ and -)
- Where do you keep the medication?
- When is the next refill due?

34

Medication Knowledge Assessment

- Used to determine knowledge gaps
- Develop improvement plan
- **Example:**
 - Bottle of medication says Metoprolol 25 mg BID, patient reports taking medication once per day
 - Determine correct instructions and verbally as well as with written instruction reinforce with the patient and/or caregiver

35

Medication Non-adherence Risk Assessment

Medication	Directions	Indication	Efficacy	Problems	Necessity
			1: Very helpful		
			2: Helpful		
			3: Not sure		
			4: Not helpful		

36

Medication Non-adherence Assessment

- **Step 1:** Determine what patient knows about their medications
 - “What is the name of this medication?”
 - “Why do you take this medication?”
 - “How much and how often do you take this medication?”
- **Step 2:** Label reading
 - Have patient read the prescription label
 - Ask them to tell you how many refills are left

37

Medication Non-adherence Assessment

- **Step 3:** Efficacy and Safety
 - “How well do you believe this medicine is working for you?”
 - “Have you had any side effects or problems taking this medication?”
 - Do you think this medicine is necessary for you?
- **Step 4:** Demonstration
 - Can patient open bottle, blister pack, pill box?
 - “Show me how much medicine you take.”
 - Demonstrate inhaler or eye drop use
- **Step 5:** Other screening tools

38

SIMPLE

- **S**— Simplify the regimen
- **I** — Impart knowledge
- **M**— Modify patient beliefs and behavior
- **P** — Provide communication and trust
- **L** — Leave the bias
- **E** — Evaluate adherence

Atreja Medacapt Gen Med. 2005;7(1): 4

39

Simplify the Regimen

- Adjust timing, frequency, amount
- Match regimen to patients' ADL
- Avoid special requirements
- Simple steps
- Medication organizers
- Change the situation vs. changing the patient

40

Impart Knowledge

- Patient-provider shared decision making
- Clear instructions
- Involve family and friends
- Reinforce discussions

41

Modify Patient Beliefs and Human Behavior

- Empower patients to self-manage
- Ensure patient understands risks
- Address fears and concerns
- Provide praise for adherence

42

Provide Communication and Trust

- Improve interviewing skills
- Practice active listening
- Provide emotional support
- Elicit patient's input in treatment decisions

43

Leave the Bias

- Learn about low-health literacy
- Address patient-provider ethnicity and language barriers
 - Cultural barriers
 - Attitudes about medications
 - Tailor education to patient's level

44

Evaluating Adherence

- Self-reporting
 - Ask patient directly
 - Ask at every encounter
- Pill counts
- Refill dates

45

Summary

- Medication adherence is a complex issue
- Dimensions of adherence can be categorized into 5 areas for identification and targeting interventions
- Several tools available to help identify areas for intervention as it relates to medication adherence
 - Adultmedication.com

46

References

- World Health Organization, Adherence to long-term therapies: evidence for action. Geneva: World Health Organization; 2003.
- Osterberg L, Blaschke T. Adherence to medication. *N Engl J Med* 2005; 353(5):487-497.
- Casula M, Tragni E, Catapano AL. Adherence to lipid-lowering treatment: the patient perspective. *Patient Prefer Adherence* 2012; 6:805-814.
- Ho PM, Bryson CL, Rumsfeld JS. Medication adherence: its importance in cardiovascular outcomes. *Circulation* 2009; 119(23):3028-3035.
- Choudhry NK, Avorn J, Glynn RJ, Antman EM, Schneeweiss S, Toscano M, et al. Full coverage for preventive medications after myocardial infarction. *N Engl J Med* 2011;365(22), 2088-2097.
- Shelton, P. Et al. Measuring adherence in a community-based elderly population. *Consult Pharm* 2012;27:771-81
- Chrisholm-Burns, M, et al. The Cost of medication nonadherence: Consequences we cannot afford to accept. *JAm Pharm Assoc.* 2012;52,823-826.
- Bass PF, III, Wilson JF, Griffith CH. A shortened instrument for literacy screening. *J Gen Intern Med.* 2003;18:1036–8
- Gehi AK et al. (2007) Self-reported medication adherence and cardiovascular events in patients with stable coronary heart disease: the Heart and Soul Study. *Arch Intern Med* 167: 1798–1803
- Noureldin, et al. Effect of health literacy on drug adherence in patients with heart failure. *Pharmacotherapy* 2012;32(9):819-826
- Osterberg L, Blaschke T. Adherence to medication. *N Engl J Med.* 2005 Aug 4;353(5):487-97.
- Atreja A, Bellam N, Levy S. Strategies to enhance patient adherence: Making it simple. *Medacapt Gen Med.* 2005;7(1): 4.