Adherence Strategies for Older Adults

AIDS Community Research Initiative of America (ACRIA)

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Modular Objectives

By the end of the module, participants will be able to:

• Define adherence
• Be able to identify strategies for addressing adherence
• Understand modalities for addressing adherence
• Understand issues related to older adults and adherence
What is Adherence?
• Consider it the other drug problem: Millions of people do not take their medicine correctly -- or quit taking it altogether -- and the consequences can be deadly.
• On average, half of patients with chronic illnesses such as heart disease or asthma skip doses or do not use their medication correctly - FAME Study (Federal Study of Adherence to Medications in the Elderly)
• The problem a national crisis costing billions of dollars. - FAME
The Situation

- This goes far beyond the issue of affording prescriptions.
- People often buy their drugs but misunderstand what they are supposed to take, or how.
- Or they forget doses. Or start feeling better and toss the rest of their medicine, or skip doses for fear of side effects.
At least half of people do not take medicines as prescribed.

Older adults are more likely to have chronic conditions that require medication, and are likely to have more, and more complicated, medication regimens.

http://www.talkaboutrx.org/documents/enhancing_prescription_medicine_adherence.pdf
Who is affected by non-adherence?

- In the U.S., non-adherence affects Americans of all ages, both genders and is just as likely to involve higher-income, well-educated people as those at lower socioeconomic levels.

- Of special concern to the public health community is poor adherence among people aged 65 and over, who tend to have more long-term, chronic illnesses--such as arthritis, diabetes, high blood pressure, and heart disease--and therefore, take more different medications as they age.

Who is affected by non-adherence?

(2)

• The impact of poor adherence is also a serious problem among the medically underserved -- those Americans of all ethnic backgrounds who are:
  – poor,
  – lack health insurance,
  – or otherwise have inadequate access to high-quality health care.
Who is affected by non-adherence

(3)

- Furthermore, since lack of medication adherence leads to unnecessary disease progression, disease complications, reduced functional abilities, a lower quality of life, and even premature death, poor adherence has been estimated to cost approximately $177 billion annually in total direct and indirect health care costs.

Barriers to Adherence

• Contributing to America’s other drug problem are numerous behavioral, social, economic, medical, and policy-related factors that must be addressed if medication adherence rates are to improve.
Barriers to Adherence

Moreover, adherence improvement is affected by federal policies that provide insufficient funding for adherence-related research and federal and state laws and regulations that impact the availability of compliance assistance programs.

All of these problems contribute to a rising tide of poor medication adherence and all must be addressed.
Barriers to Adherence

• This includes lack of awareness among clinicians about:
  – basic adherence management principles,
  – poor communication between patients and clinicians,
  – operational aspects of pharmacy and medical practice, and
  – professional barriers.
“Older Adult patients are at risk for medication adherence problems because most have multiple diseases, some of which are asymptomatic, such as high blood pressure,”

– Jeannie Kim Lee, Pharm.D., a clinical pharmacist at Walter Reed Army Medical Center. Federal Study of adherence to Medications in the Elderly (FAME) Study,” funded by the American Society of Health-System Pharmacists (ASHP) Research and Education Foundation,
Adherence and Older Adults

- Age by itself is not a determining factor in medication non-adherence.
- Rather, there are many factors that may combine to render older persons less able to adhere to their medication regimens.
- However, there is evidence to suggest that with the proper motivation, education, and support, older persons can overcome many barriers to medication adherence
Adherence for Older Adults

- Older adults comprise 13 percent of the population, but account for 34 percent of all prescription medicine use and 30 percent of all over-the-counter (OTC) drug use.
- Most older adults—4 out of 5—live with one or more chronic conditions.
- Many take multiple medicines at the same time. A recent survey of 17,000 Medicare beneficiaries found that 2 out of 5 patients reported taking five or more prescription medicines.
  - [http://www.mustforseniors.org/facts.jsp](http://www.mustforseniors.org/facts.jsp) (9/25/08)
Adherence and Older Adults

- Older adults are at increased risk of serious adverse drug events, including falls, depression, confusion, hallucinations and malnutrition, which are an important cause of illness, hospitalization and death among these patients.
- Drug-related complications have been attributed to the use of multiple medicines and associated drug interactions, age-related changes, human error and poor medical management (e.g., incorrect medicines prescribed, inappropriate doses, lack of communication and monitoring).
- Almost 40% of seniors are unable to read prescription label, and 67% are unable to understand information given to them.

  - [http://www.mustforseniors.org/facts.jsp](http://www.mustforseniors.org/facts.jsp) (9/25/08)
Simple definition

• “…the act of seeking medical attention, filling prescriptions, and taking medicines appropriately.”
Adherence

- Taking medications on time
- Taking medications on schedule
- Taking the right dose
- Taking medications the right way
Why Does Adherence Matter?
Adherence

- In order to stop HIV from reproducing, the proper amounts of medications must get into the body.
- Drugs must be taken correctly in order to keep the concentration at the right amount.
- HIV will reproduce if concentration drops below a certain point.
- Resistance can occur.
Adherence

Inhibitory Concentration (IC) = Proper level of drug in the blood
Peak & Trough Levels

Peak

Trough
Peak and Trough Levels (2)

- Peak is a term used to describe when there is the most drug available to your body.
- Trough is a term used to describe when there is the least amount of drug available to your body.
- To maintain IC levels, one needs to take their drugs in intervals or doses.
Resistance and Mutation

- When not enough drug is available to our bodies, diseases can develop a defense referred to as a mutation.
- When there is enough mutation to a drug or drug regimen a disease can no longer be controlled by that drug or drug regimen. This is referred to as resistance.
- The red area in the previous slide indicates when and how mutation and resistance occur.
Resistance

- Wild type virus is that which has not been treated with a drug before.
- Most drugs work on wild type virus.
- Mutant virus is that which has developed a response to treatment.
- Fewer drugs work on mutant virus.
Taking the Right Dose

— The dose is the amount of drug that has to be taken at a particular time

— The dose prescribed by the healthcare provider should not be altered in any way

— Taking the wrong dose regularly can be dangerous:

  Taking too much can cause side effects

Taking not enough will allow the virus to replicate, possibly leading to resistance
Taking Medications the Right Way

- Some medications have dietary requirement for proper absorption
- Some must not be taken with others
Antivirals Taken With Food:

- Aptivus (tipranavir) – with full meal
- Invirase (hard-gel saquinavir) – with meal
- Kaletra (lopinavir) – suggested b/c side effects
- Norvir (ritonavir) – reduce side effects
Antivirals Taken With Food:

• Reyataz (atazanavir) – with full meal
• Viracept (nelfinavir) – with full meal
• Prezista (darunavir, TMC-114) – full meal or snack
• Intelence (etravirine) – after a meal
Antivirals Taken on an Empty Stomach

• Crixivan (indinavir) – take at least one hour before or two hours after a meal

Can be taken with a light snack

Adding Norvir removes the need to take Crixivan on an empty stomach

• Videx (ddl) – do not eat within 2 hours before or 1 hour after taking
Antivirals With No Dietary Restrictions

- Agenerase (amprenavir)
- Combivir (AZT+3TC)
- Emtriva (emtricitabine)
- Epivir (3TC)
- Epzicom (3TC+abacavir)
- Lexiva (fosanprenavir)
- Rescriptor (delaviridine)
- Atripla (efavirenz+emtricitabine+tenofovir)
- Retrovir (AZT)
- Sustiva (efavirenz)
- Trizivir (AZT+3TC+abacavir)
- Truvada (emtricitabine+tenofovir)
- Viramune (nevirapine)
- Viread (tenofovir)
- Zerit (d4T)
- Ziagen (abacavir)
- Isentress (raltegravir)
- Selzntry (maraviroc)
Treatment Readiness
Treatment Readiness

- Evaluate your client/patient’s personal psychological, emotional, and logistical factors before beginning
- Let your client/patient decide when they’re ready
- Someone who is not ready is less likely to adhere to a medication schedule
Independent Predictors

- Race, gender, religion, marital status, sexual orientation, income level, occupation?
- There are no clear independent predictors of adherence
- Studies have found that factors associated with non-adherence include the use of illegal drugs and/or alcohol, not getting along with the healthcare provider, and lower levels of education
Independent Predictors

- Substance use had no effect on a person’s ability to adhere
- Bias that using recreational drugs will lead to non-adherence
Adherence Support

- Picking the right combination for you
- Many times you can decide if a medication regimen may not work
Things to Consider

- Sleeping habits
- Eating habits
- Daily schedule – how many times a day medications have to be taken
- Changes in daily routine – if you have to make too many changes then staying adherent may not work
- Active substance use? Lack of stable housing? Disclosure issues?
Practice

• Try a practice run using jelly beans, tic tacs…
• Keep a record of how you are doing for two-three weeks. If you make more than two mistakes a week, this combination may not be right for you
• Talk with a healthcare provider and try to work out the problems or try a combination with a different dosing schedule
Adherence Support

• Patient education

The more you understand your medications and HIV, the more successful you will be to adhering to a medication schedule.
Creating a Back-Up Plan

• You may not be able to handle the side effects or you could become resistant

• Having a second combination already lined-up will relieve stress
Developing Strategies
Developing Strategies

- Caseworkers and other non-medical providers can work with you to develop strategies
  - Talk about obstacles (storage, disclosure, getting refills *before* you run out, childcare…)
  - They can help you figure out which family and friends can be your support team
  - They can give you information about support groups, housing, drug treatment…
Developing Strategies

- Set-up a system with your caseworker to help remind you about clinic appointments or medication refills

- They can provide practical tips for managing treatment schedule: weekly pill boxes, a calendar, and an alarm clock
Before Leaving HCP or Clinic

• Fully understand the prescriptions you have been given

• Ask provider to make a chart of which medications have to be when, and if there are any special instructions

• If provider is unable, ask the nurse or someone else at the office or clinic to do it before you leave
At the Pharmacy

- Sometimes the instructions on the bottle will differ from what you’ve been told – Always verify

- Recheck with the pharmacist

- Tell your pharmacist of any other drugs you are taking – some drugs interact negatively when together

- Ask for a print out of drug interactions if your pharmacy has one
Adherence Tips
Adherence Tips

• Have a positive attitude

• Plan ahead for problems, like traveling and time changes

• Keep a timer handy or an alarm watch to remind you to take your meds

• Crush or break pills if they are hard to swallow, dissolve in water, or swallow them with a thick liquid such as yogurt, soy milk, a nutritional supplement or applesauce
If you are still having problems swallowing your pills, many medications are available in liquid or powder form:

- Liquid Formulations: Ageneras, Norvir, Sustiva, Retrovir, Epivir, Viramune, Ziagen, and Kaletra

- Powder Formulations (mixed w/ water or juice): Videx, Zerit, and Viracept
Adherence Tips

• Get a pharmacy that delivers or discreetly mails your medicines to your door
• Stay on top of refills – call healthcare provider ahead of time
• Carry extra medication with you when you leave the house at all times
Adherence Tips

• Count out the pills for each day and for the whole week
• Find a treatment buddy
• Get the support of family and friends