The Importance of Medication Adherence

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History of Terminology: Compliance

- Hippocrates believed that patients fake ingestion of their medications.
- Compliance used initially—used as a descriptor for patients’ obedience to recommendations with prescribed treatments (Sackett & Haynes, 1976).
- Gilbert et al (1980) measured clinicians’ ability to detect non-compliance among patients, and revealed that clinicians were accurate with only 10% of patients.
World Health Organization (WHO) introduced the term adherence to change the undertone of blame and paternalism associated with compliance (2003)
Adherence

- Initially the term was synonymous with compliance, which was then criticized for its paternalistic undertones
- The extent to which patients follow instructions (Haynes et al, 2008)
- A collaboration to achieve mutually derived goals (Rose et al, 2000)
What is Medication Adherence?

Adherence = Compliance (medication consumption as instructed, % pills taken) + Persistence (duration of time during which medication is consumed, 1-discontinuation)

The amount of time someone is taking medications as instructed

Adherence/Compliance

• Typical non-adherence to medications is 50%  
  – 24-90% in mental health
• Adherence influenced by  
  – Extent, duration, and severity of disease  
  – Complexity of treatment regimen  
  – Cost of medications  
  – Education, social support

Adherence is Complex and Multifactorial

- Missed appointments
- Psychological problems, especially depression
- Cognitive impairment
- Treatment of asymptomatic disease
- Inadequate follow-up or discharge planning
- Medication side effects
- Patient’s lack of belief in benefit of treatment
- Complexity of treatment
- Cost of medication, copayment, or both
- Poor provider-patient relationship
- Patient’s lack of insight into the illness

Medication adherence is best when...

- The diagnosis is short term/self-limiting
- The symptoms are predictable & improve with the medication
- The medication is taken for a short period of time
- The medication is taken once a day
- The medication does not have side effects
- The medication is inexpensive
Drugs don’t work in patients who don’t take them.

— C. Everett Koop, MD
Former US Surgeon General
Inflammatory Bowel Disease (IBD)

• IBD is a chronic condition, with an unpredictable course characterized by exacerbations & remissions
• No cure
• Impact on lifestyle/socially stigmatizing
• Medications have side effects
• Age: young-independence just developing
• Confusion with goals of therapy

Adherence in IBD

- Typical adherence to medications is 50%\textsuperscript{1}
  - Estimates \sim 60\% for 5-ASAs
  - Estimates \sim 40\% with thiopurines
    - Azathioprine, 6MP
- Effects:
  - More flares, hospitalizations
  - Higher medical costs (despite less medicine costs)

1. Kane SV. Aliment Pharmacol Ther 2006;23:577–85
2. Haynes et al, Cochrane Collaboration, 2008,
Adherence in IBD: Complex

Treatment-related
• Dosage/dosing regimen
• Convenience
• Formulation
• Cost/reimbursement
• Adverse effects
• Effectiveness

Illness-related
• Severity, extent, duration of disease
• Frequency and intensity of flare-ups
• Complications

Patient-related
• Skills/knowledge to follow regimen
• Belief systems
• Psychiatric disorders
• Male gender, non-married status

1. Kane SV. Aliment Pharmacol Ther 2006;23:577–85
Factors that Affect Adherence in IBD

• People who are more likely to adhere to therapy
  – Have less disease flare-ups
  – Are more knowledgeable about their treatment

• Clear instructions and educational materials provided by healthcare professionals increases knowledge about
  – Importance of treatment
  – Risks of non-adherence

Risk Factors for Non-Adherence

- Male
- Marital status
- Recent Procedure
- Greater Extent of Disease
- Taking > 4 medications
- >TID dosing

Males:
- Diagnosis of UC
- Employed

Females:
- Age <30
Nonadherence to 5-ASA Therapy
Clinical Impact

Percent patients remaining in remission

Time (months)

Adherent
Nonadherent *

*P < .0001

What does this mean?

- Those who took their medication as prescribed (adherent) were less likely to flare (or more likely to remain in remission)
- Non-adherence was associated with recurrence
What Do Patients Say?

Study in 2009 by Gray

- 100 patients with UC interviewed
- Most important attribute to therapy is to provide consistent relief (> 95%)
- 76% said important to be convenient
- 60% said once a day very important
- Conclusion: Patients care about effectiveness, safety more than cost, convenience

Nonadherence in Quiescent UC

59/99 Patients (60%) Nonadherent to 5-ASA Therapy

- Forgetfulness: 60%
- Lack of perceived benefit: 20.4%
- Fear of adverse events: 3.4%
- Cost issues: 3.4%

What can providers do to improve adherence....

- Simplify regimen
- Discuss reminder system
- Involve family/significant others
- Stress the importance of honesty
- Facilitate shared decision-making & mutual goal setting
  - Contracting with patients

Kane JM. CNS Spectr 2007;12:10(Suppl 17):21–6
Improving Adherence

- Education on why medications are important:
  - IBD is a lifelong chronic disease
  - Decreased risk of disease progression
  - Decreased risk of flare ups
  - Increased chance of disease regression
  - Possible decreased risk of colon cancer


What can YOU do to improve adherence.....

- Ask about once a day dosing
- Ask when the medication will start to improve symptoms, and which symptoms will improve
- Ask what will happen if symptoms don’t improve at that time
- Have a reminder system
- Involve family/sig others
Time-saving Adherence Methods for Patients

• Smart phone alarms/ reminders
• Combining medications together in one place
  – Pill box
• Put medications with another routine activity (i.e.—toothbrush)
• Chart medications and symptoms
I will no longer skip my medication.
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Summary

• Non-adherence is:
  – Prevalent in IBD patients
  – Clinically relevant- associated with flare ups
  – Multi-factorial/ complex
  – Easy to study, hard to fix

• Non-adherence will not improve without education
It’s important to stay on your medication even if you feel better.