

WISCONSIN PHARMACISTS ASSOCIATION
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**ONGOING PATIENT EVALUATION:
OPTIMIZING PATIENT ADHERENCE**

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EDUCATIONAL OBJECTIVES

- **Summarize** the main findings from recent, large scale studies of adherence
- **Identify** the three components of the theory of reasoned action
- **Identify** the health beliefs that are most relevant to adherence
- **Understand** the importance of patient involvement in improving adherence
- **Understand** how a patient's self image influences adherence

- **Implement** specific strategies to enhance patient adherence

RECENT FINDINGS

- Medical Outcomes Study
- Bootman's Cost of Noncompliance Study
- FDA Reports

MEDICAL OUTCOMES STUDY

- A 4 year national observational study that examined the impact of system and patient characteristics and medical treatments on the outcomes of chronic disease (N=20,223).
- Three main adherence studies in the MOS
 - Effect of patient characteristics on adherence
 - Recall of advice about regimens

- Relationship between adherence and medical outcomes

EFFECT OF PATIENT CHARACTERISTICS ON ADHERENCE

- N= 1198 patients
- Nonadherence at baseline was best predictor of nonadherence at year 2
- Younger patients were less adherent
- Avoidant coping was associated with nonadherence
- More distressed, lower functioning patients were less adherent

EFFECT OF PATIENT CHARACTERISTICS ON ADHERENCE

- Satisfaction with interpersonal and financial aspects of care were associated with adherence
- Satisfaction with technical care was associated with nonadherence
- Social support associated with adherence in some cases (diabetes)

RECALL OF ADVICE ABOUT REGIMENS (N=1751)

- Recall of recommendations varies dramatically with the type of recommendation
- Recommendations to take medications are recalled the best
- Diet , exercise, and self-care recommendations are recalled very poorly
- Patients most likely to adhere to advice about medications, then diet , then exercise

- The majority of patients failed to recall elements of potentially important medical advice.

RELATIONSHIP BETWEEN ADHERENCE AND MEDICAL OUTCOMES (N=2125)

- Examined relationship between adherence and changes in health related quality of life, blood pressure, and glycohemoglobin over two year period
- Analyses controlled for age, income, ethnicity, gender, site, and system of care

- Compliance measured by self-report
- 4 significant positive effects of general adherence on outcomes were observed, out of 60 possible

RELATIONSHIP BETWEEN ADHERENCE AND MEDICAL OUTCOMES

- Adherence improved social functioning and energy/fatigue in diabetics on insulin
- Adherence improved emotional well being in recent MI patients
- Adherence improved glycohemoglobin in MI patients with diabetes

RELATIONSHIP BETWEEN ADHERENCE AND MEDICAL OUTCOMES

- Specific adherence positively impacted outcomes in 7 of 72 possible comparisons.
- Diet adherence improved diabetics' mental health
- Self-monitoring adherence improved mental health of depressed diabetics
- Diet improved physical health of diabetics with MI or CHF
- Adherence to meds worsened physical health for diabetics and depressed patients

JOHNSON & BOOTMAN'S COST OF NONCOMPLIANCE STUDY

Johnson, J. A., & Bootman, J. L. (1995). Drug related morbidity and mortality. A cost of illness model. Archives of Internal Medicine, 155, 1949-1956.

- A conceptual model of drug related morbidity and mortality
- A probability-based estimate of costs
- Excess utilization and costs due to negative outcomes were estimated
- Cost estimates ranged from \$30.1 to \$136.8 billion
- Main reported figure was \$76.6 billion

FDA ESTIMATES
 (Federal Register, Vol. 60, No. 164, p. 44231)

Annual Costs of Preventable Drug-Related Illness

	Number (Millions)	Incidence (Percent)	Unit Cost (\$)	Total Cost (Million \$)
Noncompliance:				
Hospital Admissions	35	5.0	8,890.00	15,558.
Unnecessary Rxs	60	5.0	20.00	60.
Physician Visits	60	5.0	39.00	117.
Sub-Total Non-Comp.				15,735.
Adverse Reactions				
Hospital Admissions	35	1.4	8,890.00	4,387.

Total Annual Cost				20,122
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IDENTIFY THE THREE COMPONENTS OF THE THEORY OF REASONED ACTION/THEORY OF PLANNED BEHAVIOR

- Attitudes toward the regimen
- Subjective norms about the regimen
- Control beliefs with respect to the regimen

IDENTIFY THE HEALTH BELIEFS
THAT ARE MOST RELEVANT TO ADHERENCE

- Perceived Efficacy
- Perceived Severity
- Perceived Susceptibility
- Perceived Cost/Benefit

UNDERSTAND THE IMPORTANCE OF PATIENT INVOLVEMENT IN IMPROVING ADHERENCE

- Involvement improves outcomes
- Patient question asking is crucial part of involvement
- Pharmacist can use silence and open-ended questions to increase patient involvement
- Increased involvement means increased time

UNDERSTAND HOW A PATIENT'S SELF IMAGE INFLUENCES ADHERENCE

- Chronic illness disrupts biography and self image
- Maintaining health means balancing self-image, interpretations, and activities of everyday living
- Drug therapy can help and/or hinder this delicate balancing act
- Key is to be sensitive to the patient's need for balance and to ask the right questions

IMPLEMENT SPECIFIC STRATEGIES TO ENHANCE PATIENT ADHERENCE

- Three prime questions plus final verification
- What did the doctor tell you the medication was for?
- How did the doctor tell you to take the medication?
- What did the doctor tell you to expect?
- Could you repeat back to me how you're going to take your meds?

ADDITIONAL STRATEGIES

- Expect conflict and be prepared to negotiate
- Involve friends and/or family
- Use information systems
- Partner with physicians
- Use silence
- Develop relationships with doctors and patients
- Monitor outcomes
- Express concern

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Thank You!