7b – Understanding and recall of health care advice and adherence to treatment regimes

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Learning objectives

1) To define the terms "adherence" and "compliance" and describe the limitations of these terms.
2) To develop an understanding of the scale of non-adherence to health care advice
3) To describe the clinical and economic consequences of non-adherence
4) To identify the main causes of non-adherence
5) To describe the role of failure to understand and recall in non-adherence
6) To describe ways of improving recall of health care information and enhancing adherence to advice

Psychological factors in medical treatment

- **Compliance** – Acting according to request or command (Oxford dictionary).
- **Adherence** – "to stick fast to" (Oxford dictionary).
- **Self management behaviours** – focus simply on whether target behaviour occurs no assignment of "blame".

Adherence is rarely "all or nothing"

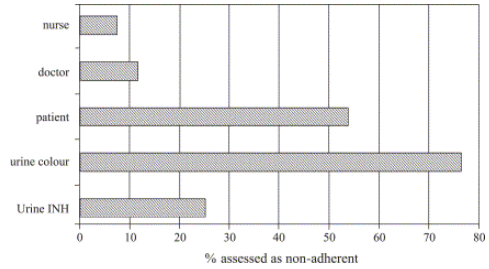
Examples:

- Forgetting a dose
- Deliberately skipped doses
- Occasional day or even week off therapy
- Stopped therapy

Macintyre et al (2005)

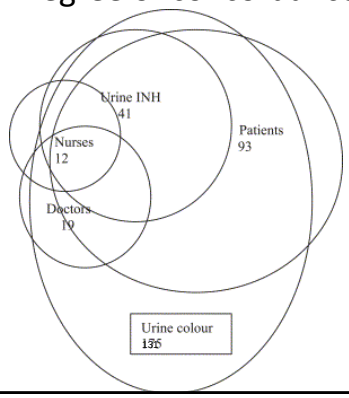
- 173 patients being treated for active tuberculosis.
- Nurses and infectious disease physicians rated if patients were ‘‘always compliant,’’ ‘‘mostly compliant,’’ ‘‘sometimes compliant,’’ ‘‘rarely compliant,’’ ‘‘never compliant,’’ and ‘‘unsure.’’
- Also took patient rating, urine drug level and colour.

Ratings of adherence



Doctors and nurses assessed patients as ‘‘sometimes, rarely, or never compliant’’ in 11% (19/173) and 7% (12/173) of cases, respectively. Only 50% of patients who were rated non adherent by doctors were also rated non adherent by nurses.

Degree of concordance



Best concordance between self report and urine colour

Methods of Measuring Adherence

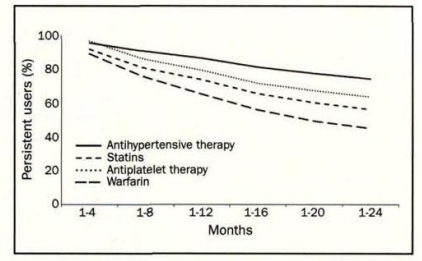
Direct methods

- Directly observed therapy
- Measurement of the level of medicine or metabolite in blood
- Measurement of the biologic marker in blood

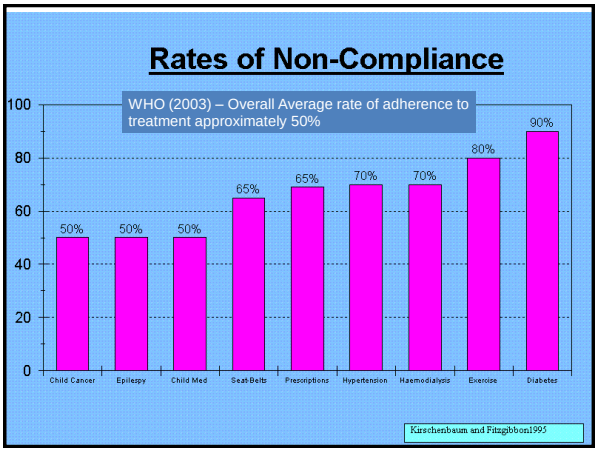
Indirect methods

- Patient questionnaires, patient self-reports
- Pill counts
- Rates of prescription refills
- Electronic medication monitors
- Measurement of physiologic markers
- Patient diaries

Adherence with preventative medication after stroke



Glader et al (2010)



Watchdog/Health/NOP (2000)

- 11% prescribed medications never started
- 34% medication courses not completed
- £37.6 Million worth of unused medication handed in to pharmacies each year in the U.K.

Fletcher et al (2010)

- Follow up of nearly 200,000 prescriptions
- Only ¾ ever dispensed

Consequences of non-adherence

- Increased hospital admissions – 20% of all hospital admissions probably due to non-adherence
- Rejection of transplants
- Occurrence of complications
- Development of drug resistance
- Increased mortality

What are the causes of non-adherence?

- No consistent relationship with age, SES or intelligence (Haynes et al 1979, Ley 1988)
- No consistent relationship with personality variables (Kaplan & Simon (1990)
- Non-adherence **not** greater in psychiatric patients (Ley 1976)

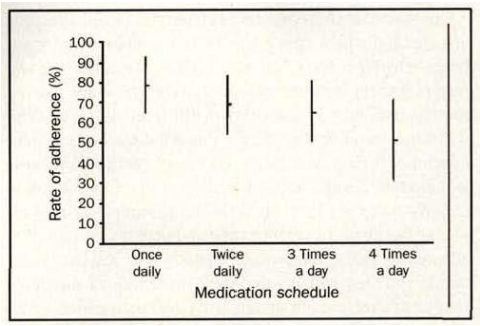
Factors affecting compliance

1) Characteristics of regime
2) Patient-practitioner interaction
3) Psycho-social variables

What are the causes of non- adherence?

Regime related factors

- **Physical aspects** **e.g. packaging, font size**
- **Complexity**



Claxton et al (2001)

What are the causes of non- adherence?

Regime related factors

- **Physical aspects** e.g. packaging, font size
- **Complexity**
- **Duration**
- **Cost**
- **Side effects**

Factors affecting compliance

1) Characteristics of regime
2) Patient-practitioner interaction
3) Psycho-social variables

Patient-practitioner interaction

Communication style

Szasz & Hollender (1956)

1. **Activity – passivity**
2. **Guidance – cooperation**
3. **Mutual participation**

Activity-Passivity Model

- Health professional's role:
  Does something to pt
- Patients role
  Passive recipient
- Example:
  Trauma, coma

Guidance-Cooperation

- Health professional's role:
- Tells patient what to do

- Patients role
- Co-operator (obeys)

- Example:
- Acute infection

Mutual participation

- **Health professional's role:**
  Helps patient to help him/herself

- **Patients role:**
  Active participant

- **Example:**
  Chronic illnesses

Effect of General Practitioner's consulting style on patient satisfaction

(Savage & Armstrong 1990)

- Patients (n=359) attending a group practice in Inner London were randomly allocated to one of two conditions.

  1) "Sharing" consulting
     (e.g What do you think is wrong? What were you hoping I could do?)
  2) "Directive" consulting style
     (*You are suffering from…, It is essential that you take this medicine…..."*)

Savage & Armstrong (1990) contd

- Satisfaction with Dr's understanding of problem, adequacy of explanation and feeling helped were all measured.

- Patients in the Directive style condition were more likely to report feeling satisfied in all aspects of consultation.

Wilson et al (2009)

- 612 patients with poorly controlled asthma randomly allocated to either normal care or shared decision making where treatment was negotiated to take account of patient goals/preferences.
- Shared decision making was associated with better adherence to medication and clinical outcomes (inc. asthma control and lung function)

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Understanding and recall of information

- 7-53% of patients do not understand instructions (Ley 1980)
- But 50% of patients who would like more information do not ask for it (Klein 1979)
- Hospital outpatients recalled on average 63% of the information presented in a consultation. (Ley & Spelman 1967)

Factors affecting recall

Individual factors

1) Anxiety
2) Medical knowledge

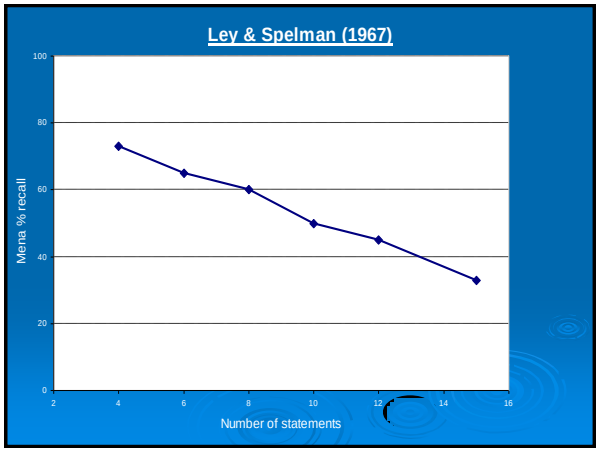
Type of information and recall

1. Diagnostic statements – 87%
2. Information re: illness – 56%
3. Instructions – 44%

Ley & Spelman (1965,67)

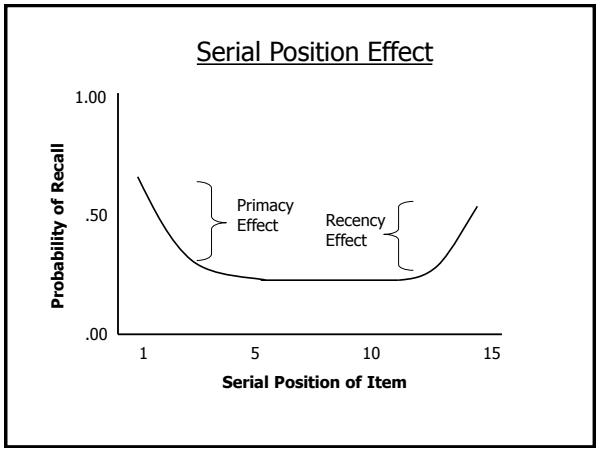
Presentation factors

1) Amount of information



Presentation factors

1) Amount of information
2) Order



Presentation factors

1) Amount of information
2) Order
3) Stressing importance

Presentation factors

1) Amount of information
2) Order
3) Stressing importance
4) Specificity

Presentation factors

1) Amount of information
2) Order
3) Stressing importance
4) Specificity
5) Mode of presentation

The use of written information

- Most patients would like to receive written information (97% in study by Gibbs et al 1990)
- The majority of patients report that they do read written information when it is given to them (88% Gibbs et al 1987)
- Written information leads to increased knowledge (in over 90% of studies) and adherence (in 60% of studies) (Ley and Morris 1984)

Readability of health information

- The Flesch formula is based on the average sentence length in words of any given text and the number of syllables per 100 words. The formula gives a score for reading ease on a scale from 0 (practically unreadable) to 100 (easy to read).
- The formula for the Flesch Reading Ease score is: **206.835 – (1.015 x ASL) – (84.6 x ASW)**
- A score of 70-80 is taken to be plain English: about 20 words per sentence and 1.5 syllables per word.

- (But most word processors can calculate it automatically e.g. in MS Word 2010 go to File>Options>Proofing and tick the box which says "show readability statistics" then next time you do a spell check Flesch score will be shown).
- A score of 70-80 is taken to be plain English: about 20 words per sentence and 1.5 syllables per word.
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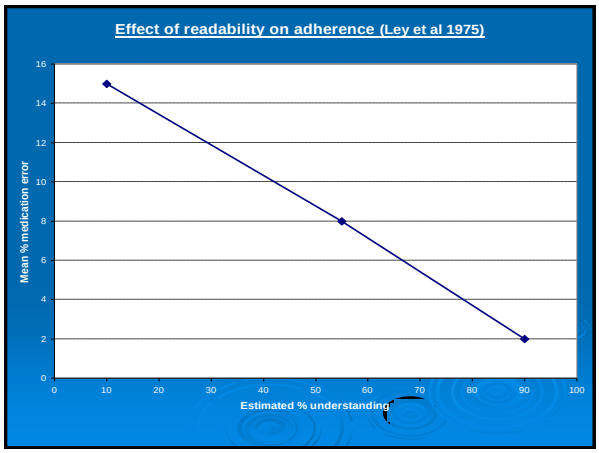
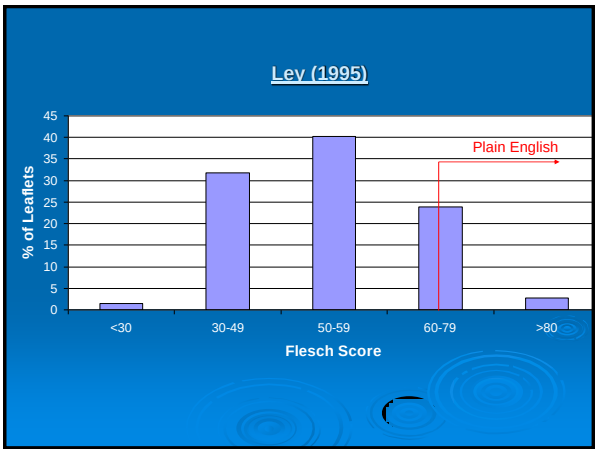
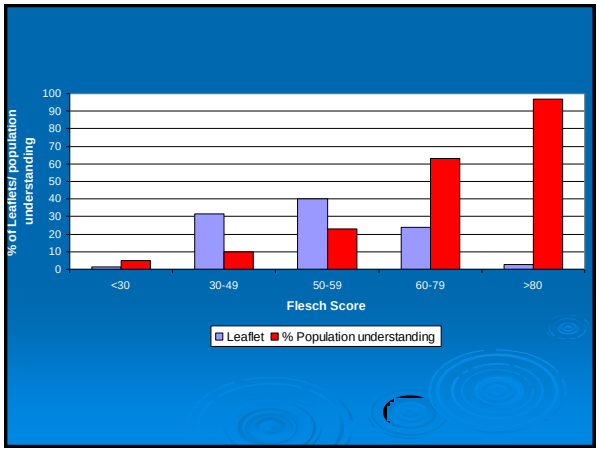
- An alternative formula is the SMOG (Simple Measure of Gobbledegook)







Presentation factors

- Amount of information
- Order
- Stressing importance
- Specificity
- Mode of presentation
- Follow up

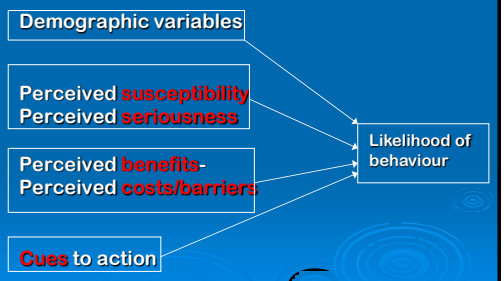
Factors affecting compliance

1) Characteristics of regime
2) Patient-practitioner interaction
3) Psycho-social variables

- Health Beliefs
- Illness representations
- Self efficacy
- Social support

Health Beliefs Model

(Rosentock 1966)



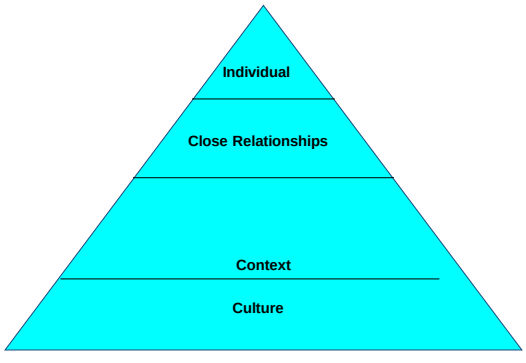
Illness representations

(Leventhal et al 1980)

- **Definition:** "A patients own implicit, commonsense beliefs about their illness"

1) Identity
2) Cause
3) Consequences
4) Time line
5) Curability/controllability (Lau & Hartman 1983)

Levels of psychosocial influence



Factors affecting compliance

1) Characteristics of regime
   a. Complexity
   b. Duration
   c. Cost
   d. Side effects

2) **Patient-practitioner interaction**
   a. Satisfaction
   b. Communication style
   c. Understanding and memory

3) **Psycho-social variables**

Improving adherence

1.
2.
3. Improve interaction esp.: Communication style & presentation
4. Identify and modify beliefs
5. Involve significant others & wider network

TABLE 2. **Questions a Clinician Can Ask to Assess a Patient's Medication Adherence**

I know it must be difficult to take all your medications regularly. How often do you miss taking them?[3]
Of the medications prescribed to you, which ones are you taking?
Of the medications you listed, which ones are you taking?
Have you had to stop any of your medications for any reason?
How often do you not take medication X? (address each medication individually)
When was the last time you took medication X? (address each medication individually)
Have you noticed any adverse effects from your medications?

Brown & Bussell (2011)