Adherence to medical treatment: Introduction and theoretical perspective

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“Drugs don't work in patients who don't take them“

(C. Everett Koop, M.D. US Surgeon General, 1981-9)
ADHERENCE / COMPLIANCE

The extent to which patients follow medical treatment and advice

RESEARCH focuses on:

- the levels of non-adherence & effects on outcome
- factors which explain / predict non-adherence
- development / evaluation of interventions
The problem of non-adherence

WHO report on non-adherence

- Estimated that over 30%-50% medicines prescribed for long term illnesses are not taken as directed.

- If treatment is evidence-based, then this represents a loss for patients and for the health care system.
Health care cost of non-adherence in Diabetes

![Bar chart showing diabetes costs by adherence level.](image)

TYPES OF NON-ADHERENCE

Unintentional Non-adherence

Patient Ability & Resources

Practical Patient Barriers to Adherence

Intentional Non-adherence

Patient Beliefs & Motivations

Patient Perceptual Barriers to Adherence
RANGE OF POSSIBLE FACTORS:

- Poor HCP-Patient Communication
- Low patient satisfaction and/or recall
- Problems in planning/executive function or prospective memory
- Financial or other barriers
Patients know what to do & how to do it

BUT are reluctant to adhere because either :-

• TREATMENT DOESN’T MAKE SENSE

• WORRIES/CONCERNS ABOUT TREATMENT
### Predictors of non-adherence: Overview of Evidence

#### 70% of Non-compliance is intentional

<table>
<thead>
<tr>
<th>Weak evidence</th>
<th>Moderate evidence</th>
<th>Strong evidence</th>
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</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Cognitive ability, depression, social support, coping skills</td>
<td>Concerns about treatment (fear of side effects etc)</td>
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<tr>
<td>Income</td>
<td>Number of medicines, disease seriousness beliefs</td>
<td>Beliefs about illness (cause, timeline)</td>
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<tr>
<td>Age</td>
<td>Health literacy, locus of control</td>
<td>Cost of therapy</td>
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<tr>
<td>Race</td>
<td>Self efficacy, trust in HCP, HCP-patient concordance</td>
<td>Necessity (perceived need) for treatment</td>
</tr>
<tr>
<td>Income, personality</td>
<td>Symptom experience</td>
<td>Perceived drug efficacy</td>
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What are the key beliefs influencing adherence to treatment?

1) Patients’ perceptions of illness
2) Patients’ perceptions of treatment
### Core beliefs about Illness

<table>
<thead>
<tr>
<th>• IDENTITY</th>
<th>Abstract label eg, hypertension; asthma; arthritis</th>
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<tbody>
<tr>
<td></td>
<td>Concrete symptoms that a person associates with the condition</td>
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<tr>
<td>• CAUSAL BELIEFS</td>
<td>Stress, environment, genetics, own behaviour, ageing etc</td>
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<tr>
<td>• TIMELINE</td>
<td>Perceived duration and profile eg, chronic, acute, cyclical</td>
</tr>
<tr>
<td>• CONSEQUENCES</td>
<td>Personal, economic, social</td>
</tr>
<tr>
<td>• CURE / CONTROL</td>
<td>Beliefs about the amenability to control or cure</td>
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ILLNESS PERCEPTION & treatment adherence

- Some illness perceptions are associated with treatment adherence in some conditions:
  - *causal* beliefs predict adherence behaviour in post-MI
  - *timeline* beliefs predict preventer medication adherence in asthma etc

- BUT – illness beliefs *per se* are not strong predictors of treatment adherence – need to consider more proximal predictors (ie patients’ beliefs re. treatment)
What are the links between illness and treatment beliefs?
GOODNESS OF FIT between illness reps and treatment recommendations

- Patients evaluate the need for treatment in the light of their understanding of illness

- But some treatments may not make sense:
  - exercises for back pain, balance disorder etc
  - daily adherence to preventer medication in asthma
  - smoking cessation in early cervical cancer
  - phosphate binding medication in ESRD

- As a result patients develop beliefs about treatment goodness of fit and increase motivation
TREATMENT BELIEFS:
What is the patient's perspective?
Beliefs about Medicines Questionnaire (BMQ)

**SPECIFIC BELIEFS** about medicines prescribed for a particular illness

**GENERAL BELIEFS** about medicines as a whole
SPECIFIC BELIEFS
Views about prescribed medication

Necessity
Beliefs about necessity of prescribed medication for maintaining health

Concerns
Arising from beliefs about potential negative effects
SUMMARY

Patients’ beliefs about their illness and treatment

• Influence adherence
• Have an internal logic
• Are influenced by symptoms
• May be based on mistaken beliefs/premises
• May not be disclosed in consultation
• Are not set in stone and can be changed
• Recent intervention studies (eg Petrie et al, 2012)
Implications for IMPARTS and for health care?

- IMPARTS data will allow us to identify the extent and drivers of non-adherence in a systematic way.
- Beliefs are “hidden” and not usually revealed in the consultation.
- Interventions to train HCPs to identify and address adherence problems.
- Use the consultation to anticipate possible adherence barriers etc and plan.