

Treatment adherence in integrative medicine

Adherence is defined as the extent to which a patient's behaviors follow an agreed-upon prescription or therapeutic regimen. Adherence considers the patient's views and choices, and allows them to play a more active role in the development of the treatment plan. Low treatment adherence is a significant issue that limits the effective management and treatment of chronic conditions, creating significant healthcare burden, costs, and poor patient outcomes. ^(2, 3, 23, 26, 34)

Intentional non-adherence:

Deliberate abstinence from a therapy

Unintentional non-adherence:

Sporadic or accidental lapses in the degree to which a treatment plan is followed

The process of medication adherence and its management

Various theoretical models of treatment adherence have been proposed. As an example, within this framework, adherence to medications is the extent to which patients use their medication as prescribed during three phases:

- 1. Initiation (primary adherence):** the point at which a patient takes the first action, step, or dose, etc., of a prescribed treatment plan ^(26, 34)
- 2. Implementation (secondary adherence):** the degree to which a patient follows their treatment plan from initiation to discontinuation ⁽³⁴⁾
- 3. Discontinuation:** the point at which the treatment plan halts regardless of the rationale or whether it was intentional or unintentional ⁽³⁴⁾



What factors influence adherence?

Several hundred factors may interactively influence the likelihood of adherence. Practitioners should identify the most relevant factors for each patient.

The World Health Organization's (WHO) report on adherence describes five interacting dimensions that influence adherence to treatment plans within states of chronic disease. ⁽²⁶⁾ The WHO's five dimensions of adherence and examples of each are outlined below.

The WHO's five dimensions of adherence

Condition/disease factors

- Development course or state of the condition
- Existence of treatments available
- Extent of physical, psychological, social, educational, or employment disability
- Presence of comorbidities
- Symptom severity

Patient factors

- Forgetfulness
- Level of motivation, self-efficacy, or knowledge of the disease and therapy
- (Mis)understanding of the disease, diagnosis, or therapeutic protocol
- Negative feelings like stress, hopelessness, or anxiety towards treatment or the condition
- Perception of therapeutic expectations, effects, efficacy, or need for treatment

Social/economic factors

- Age, race, and gender
- Culture or social beliefs of the treatment or disease
- Literacy level and education
- Living location and transportation access
- Poverty or employment status
- Social and family support
- Treatment cost

Systemic/healthcare team factors

- Access to treatment and availability or scope of care/coverage
- Establishment of community support and self-management programs
- Patient-practitioner relationship
- Practitioner education, workloads, incentives, and feedback
- Systemic patient education
- Time constraints, follow-ups

Therapeutic factors

- Availability of medical support for side effects
- Frequency of treatment adjustments
- Presence of adverse effects
- Protocol complexity
- Speed of therapeutic benefits
- Therapy duration
- (Un)success of previous treatment

It is important to note that these factors have been primarily studied within the realm of conventional medicine. However, the factors influencing adherence transcend medical dogmas, whereby significant overlap of these factors similarly influence adherence to other treatment options including diet, physical activity, or complementary and alternative medicines (CAM), including supplements. ^(9, 10, 11, 12, 14, 18, 20, 24)

Steps to optimize treatment adherence



Practitioner education

Become familiar with the factors that influence treatment adherence.



Proactive screening

Proactively identify barriers to adherence and provide strategies prior to treatment initiation.



Continue to measure

Use multiple measures to best capture adherence rates and reasons for non-adherence.



Implement key strategies

Provide strategic interventions specific to the identified reasons for non-adherence.

Top strategies to improve medication adherence

Dose simplification



Reduce dose frequency.
(5, 6)

Use sustained-release formulations.
(15)

Suggest combination pills or multi-ingredient formulations.
(5, 19)

Suggest products with compartmentalized packaging.
(5, 6, 7)

Electronic reminders



Suggest text messages or other automated cues set to specific dose times via applications.
(31)

Personalize texts or use two-way communication.
(31)

Consider electronic packaging devices that provide real-time dose use and feedback data.
(4, 17, 30)

Patient education



Provide verbal or written content tailored to the specific condition or barriers to adherence.
(32, 33, 35)

Use information leaflets to improve health literacy.
(29)

Provide education on how to self-monitor and self-manage the condition.
(13, 35)

Cost reduction and rewards



Support value-based insurance designs, which reduce costs for highly-effective treatment vs. less effective treatments.
(1, 16, 21, 22, 27)

Explore financial reward options (e.g., discounts, loss of percentages of "financial bonuses" for each lapse in adherence).
(6, 25)

Additional strategies for improving patient treatment adherence

1. Realistic cost

- Consider whether options with health insurance coverage are available.
- Use a staged approach to introduce treatments one at a time and set realistic goals in line with financial restrictions.

2. Patient readiness

- Assess the likelihood a patient will adopt a behavior by asking open-ended questions about motivations, attitudes, and beliefs about treatment.
- Practice strategies such as motivational interviewing or other theoretical and evidence-based behavior strategies to communicate empathy and a shared partnership/investment in the patient's well-being.
- Provide education to reassure the patient about the availability of evidence-based treatments and how they work, potential side effects of treatment, information about the condition, and the importance of adherence.
- Use lab testing to help demonstrate the need for treatment and track progress.

3. Staged approach

- Facilitate treatments with simplified regimens via reduced dosing frequency (e.g., sustained-release) and fewer therapies (e.g., combined pills).
- Provide multiple options for increased flexibility.

- Suggest the use of pre-assembled dosing (e.g., blister packs), pill organizers, or other methods that can remind patients whether a dose was used or not.
- Link treatment with a patient's simple daily habits (e.g., teeth brushing).
- Be clear about which aspect of the health problem to prioritize.

4. Communication

- Provide multiple opportunities for treatment reminders using tools like text messages, phone calls, and applications.
- Provide feedback on adherence using quantitative and qualitative data.
- Provide multiple points of contact and follow up in between appointments to determine how the treatment is coming along.
- Provide opportunities for in-clinic and face-to-face interactions when possible.

5. Streamline care

- Involve other practitioners with various training and schedule flexibility in the process or provide referrals.
- Incorporate multiple strategies as necessary, particularly with behavioral and educational components, for long-term adherence assistance.
- Engage in adherence training as a professional development opportunity.



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