

# Why Do Patients Not Meet the Pharmacological Treatment?

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## Abstract

Although there has been a shift from “compliance” (doctor-centered) to “adherence” and successively to “therapeutic alliance” (centered on the patient and the doctor-patient relationship), the basic concept remains complex and has multiple models of boarding. Many investigations have been made to determine the factors responsible for low compliance. However, the findings are inconsistent with respect to the effects of numerous variables, and lack practical interest, because they do not really clarify the reasons for non-compliance. The non-adherence cannot be correctly predicted by medication beliefs, chronic disease, and socio-demographics characteristics. Doctor may consider routinely inquiring about non-adherence, but he has to remember that he usually stays with superficial reasons of little practical utility. “The heart has reasons, which the reason cannot understand”; there are reasons (of the patients) that the reason (of the doctor) does not understand. Medication-taking decisions are not the subject of rational choices by patients, influenced only by the attributes of treatments and psychosocial, socio-demographic, and disease-related factors, etc. The more we delve into the reasons, the more we could understand why patients “do not want, do not know, or cannot” comply with our prescriptions. Knowing “reasons for reasons” can only be done by “tuning in” with the patient and with ourselves. If the patient feels that their voice is listened to carefully, they will begin to identify more clearly the meaning of each symptom and event related to their illness. Satisfaction with the doctor is the main reason why many patients comply with the treatment.

**Keywords:** Physician-patient communication; Adherence; Pharmaceutical treatment; Therapeutic adherence; Therapeutic alliance; Medical patient relation.

## Introduction

Therapeutic compliance has been defined as the degree to which the behaviour of a person corresponds with the recommendations of the health professional [1]. Several terms associated with the concept of adherence to treatment are used: therapeutic alliance, cooperation, compliance, mutuality, collaboration; among others. Each term has a particular nuance but all focus on highlighting the ability of the patient to engage, participate and respect the agreement on treatment recommendations co-established by the health professional [2].

In reality, there has been a process of transition from the term “compliance” to that of “adherence”, and successively to “therapeutic alliance”. This is the step

from an “objective” vision focused on the doctor, to an “objective-subjective” one focused on the patient and the doctor-patient relationship. Or in other words, from a hierarchical relationship (active doctor, passive patient), to another “hierarchical-paternalistic” (paternalistic doctor, passive patient), and another based on “collaboration” (inter-subjective dialogue), and finally to a “Shared decision model” (active participation) [3].

A large body of research finds that in various settings, from 30%-60% of patients with chronic illness (such as hypertension, bronchial asthma, depression, etc.) are not adherent to regimens, and this figure can be considerably higher in developing countries [3,4-11]. Medication non-adherence is a major impediment to the management of diseases and risk factors. Pharmaceutical treatment is

essential to the management of most chronic diseases, but patients' failure to take medications as prescribed often results in failure to meet treatment goals. Medication non-adherence has been associated with a worse evolution, a greater number of relapses and a higher economic cost. Even in the case of diseases where the treatment saves the patient's life, many of them do not comply adequately.

Suboptimal adherence can result not only in progression of disease, but in drug resistance, often to multiple classes of drugs. Improving adherence is thus of vital clinical and public health importance, and leads to preventable costs and hospitalizations [12-14].

Medication adherence is thought to be the principal clinical predictor of positive outcomes, not only for serious mental illnesses such as schizophrenia, bipolar disorder, or depression, but also for physical conditions such as diabetes. Consequently, research on medication often looks not only at medication condition (e.g., placebo, standard medication, investigative medication), but also at adherence in taking those medications within each medication condition [15]. As average life expectancy increases, so do the incidence of chronic diseases and the number of persons receiving long-term drug therapy. Thus elderly patient's non-compliance with medication regimens has the potential for sweeping medical and economic consequences and is likely to become increasingly important in the design of disease-management programs for this population [16].

Actually, two "therapeutic continuities" can be differentiated, referring to chronic or long-term pathological processes with slow variations of their clinical picture, which makes the patient live with his disease such as diabetes, hypertension, stroke, schizophrenia, dysthymia, and a pharmacological discontinuity in acute processes or episodes that resolve in a short time or not very long. A through-stages-of-life compliance can also be differentiated (with the passage from child to adolescent and adult, and the rest of generational turnings points) [17], for example, during the transition to adolescence of children with type 1 diabetes, a reduction is observed of the frequency of glycaemic monitoring, with marked repercussion on metabolic control, even after statistical adjustment for important covariates [18], and a longitudinal adherence, during each longitudinal stages of life [3].

Despite the potential impact on the health and expenditure of the population, it has been found that interventions that promote adherence to medication are only moderately effective. Understanding the relative influence of the factors that affect adherence decisions to the patient's medication and the characteristics of the individuals associated with the variation in adherence will lead to a better understanding of how future interventions should be designed and directed [19].

While much research has focused on determining the factors responsible for poor compliance, studies have tended to focus on the easy-to-measure characteristics of patients, such as poly-pharmacy, sex, age, or illness, which, unfortunately, generally they are neither predictive nor alterable [20]. On the other hand, accurate measurement of adherence behaviours remains a difficult problem without direct resolution; one measure used is the number of patients who have left the clinical trials, but extrapolation of this finding to the usual situations in real life or to all healthcare systems is not be easy [10,15,21].

Fundamentally, the construct of adherence is not one behavior, but a complex of behaviours, and therefore is multiply determined. Behavior in one domain (e.g., diet) may not correlate well with behaviours in another domain (e.g., medication taking). Furthermore, research on various approaches to assessment and measurement has failed to produce a widely agreed upon 'gold-standard' for assessment. Even more objective assessment methods (e.g., pill counts vs. electronically-monitored dosing) are associated with measurement errors and bias [22]. Specific issues of measurement and assessment may differ across disease, time course, and patient, among other factors [23,24]. Examining the relationships between evaluation methods can also provide useful information about the robustness and consistency of observed effects [10].

Research should seek to understand the best way to capture the dynamic and heterogeneous nature of adherence over time, whether by developing and validating new methods, refining existing ones or, perhaps more importantly, addressing broader conceptual issues that may present problems for empirical study. If adherence is really a dynamic process that changes over time, it is unlikely that single assessments of adherence at any given time, whether evaluated by subjective or objective measures, completely capture the self-control behaviours of the disease and they probably account for variation in the results of the disease [13]. In this scenario, from general medicine, how can we understand the lack of adherence to medical advice or pharmacological prescription? Why do not patients comply? What are their reasons?

## Discussion

### *Different models or explanatory dimensions*

The World Health Organization described 5 "interacting dimensions" that affect adherence, including social and economic factors, condition-specific factors, therapy-related factors, patient factors, and factors related to the health care team, including provider-patient interactions [25]. From a broader perspective, adherence to treatment can

be analyzed from different perspectives considering different explanatory models: psychological, biological, or sociological. The biomedical model (numerical, mathematical), try to identify factors that can cause adherence and seeking to use this information to lead the patient. The behavioural/social model builds adherence as a behavior that is learned. Another explanatory model is the communicational model that associates poor adherence to rupture or asynchronous communication between the doctor and the patient; consequently the improvement of the communication improves the adherence. Another model is the rational model of beliefs, applied to beliefs in the area of health; this model assumes that adherence can be modified based on rational thinking, and it argues that if a patient works and uses logical thinking and balanced considers the risks versus the benefits of the treatment, it will lead to greater adherence. The self-regulatory system model that takes cognitive factors and the patient's planning capacity into consideration; patients are seen as a subject capable of solving their problems and therefore develop a consistent behavior. Finally, the community model, which assesses the factors that contribute to the lack of adherence to medication among adults with chronic disadvantages (acceptance of the disease, healthy eating habits, preventive behaviours, positive mental attitude, health practice, sex, levels of education and the short duration of the disease, etc.) [2,4,12,26].

However, no single model incorporates all the variables that explain adherence to treatment, and cannot be applied to all patients to a specific medical condition or a specific context [20,27]. In any case, there are a number of factors associated with adherence to treatment that are the most researched and in which it is admitted that they are the most important for predicting adherence, such as the beliefs and attitudes of the subjects about their disease and treatment, which explain up to 20% of the variance of adherence in patients with chronic diseases. There are other factors that influence the adherence to treatment and that are not directly related to cognitive variables. Table 1 shows these factors investigated more frequently [28]. However, the findings are inconsistent with respect to the effects of patient's age, sex, socio-economic status, housing, co-morbidities, number of visits to the doctor, knowledge, attitudes, beliefs about health, intervention by mobile phone, etc. And many studies present numerous errors and statistical biases in their measurement [15]. Until the results, of additional comprehensive studies, become available, current knowledge should be taken into account with great caution when designing and implementing disease management programs [16,29-31].

So, really, why do our patients not take medications properly? Does non-compliance occur simply by chance? The usual studies show statistical-mathematical-

relationship between many treatments and non-adherence factors, but they lack practical interest, because they do not really know the reason for non-compliance. These studies, generally of quantitative design, cannot investigate the truth of why patients do not comply. We would have to say with the philosopher Blaise Pascal that "The heart has reasons, which the reason cannot understand" [32].

Heart drives a variety of sometimes contradictory emotions. That heart that makes us say things that we would never have revealed or do what we never thought. According to Blaise Pascal, the man endowed with reason is susceptible to open his heart; it is this ability that he calls "thought" that makes his humanity. However, the heart is often stronger than the reason. Because the heart is not reasonable, it does not listen to reason, it has its own reasons. The heart has reasons that the reason ignores! Thus, those reasons are mostly personal, and there is nothing reasonable about them, they are driven by emotions and desires.

Consequently, there are reasons (of the patients) that the reason (of the professional) does not understand. In this way, the authors show some reasons that their patients do not comply with treatment, but they are still very superficial reasons, since they start from reason and not from emotion. Behind those reasons there would still be more reasons. The more we delve into the reasons, the more we can understand not only why patients "do not comply with our treatments", but why "patients do not want, they do not know, or they cannot fulfil it". In short, the design of studies or individual reflection to bring light to the subject, should not be quantitative, or focus-exclusively on a biomedical model, but qualitative, "emotional", or if you want, qualitative-quantitative, to be able to inquire into the "true reasons". So far, the data and results about non-compliance are predictable and do not add anything to the known ("they do not shed light on the problem"). Biomedical research fails to clarify the causes of noncompliance, insists on analyzing "superficial" factors of noncompliance, and thus has little practical interest, especially in general medicine. The reality is that beyond the various models of adherence and evaluation techniques, the patient often convincingly affirms that he remains adherent. The explanation of these phenomena is not easy because of everything said before, but a first approach may be that, when motivational, neuropsychological and behavioural factors have been ruled out, it is important to discover and analyze the presence of sociocultural factors with the patient [33]. And to deepen the true reasons, how is it done? If the patient feels that their voice is listened to carefully, they will begin to identify more clearly the meaning of each symptom and event related to their illness. You can also name, little by little, the knots that "slow you down in your journey" due to the disease. Sometimes we hear the words as hollow words of personal connotation and classify them

Factors	Examples
<p>1. Factors related to the disease:</p> <p>1.1. Characteristics of the disease</p> <p>1.2. The meaning that the patient gives to his illness</p> <p>1.3. Valuation of society about the disease</p> <p>1.4. The experiences and information of the patient</p>	<p>Depression: is a disease that is associated with low adherence to treatment; this could be explained by characteristics of the disease (anhedonia, memory impairment, feelings of hopelessness). The greater symptomatic severity and degree of dysfunction may increase the likelihood of adherence. Other factors are the meaning that the patient gives to their disorder in relation to the cause of their ailment, the severity of the symptoms and the way to resolve or treat it. This meaning will be influenced in turn by society's assessment of the disease, and by the experiences and information that the subject will have. Some depressed adults do not want to use antidepressants because they believe that they should be able to cope it without help.</p>
<p>2. Factors related to drugs</p>	<p>Medications are associated with cognitive and practical barriers: beliefs about their mode of action, degree of effectiveness, and fears of adverse effects; dependency, etc. For example, in bronchial asthma, the main barriers to adherence to treatment identified by children and their parents were stigmatization and fear of drug addiction and adverse effects. The form of drug administration, frequency, number of medications and costs are also practical barriers to adherence.</p>
<p>3. Factors related to the family</p>	<p>Social support is an important factor in proactive behaviours in health. The closest social support is in the family. Family cohesion, family support and sharing similar values influence the patient and their adherence to medical treatments. Negative attitudes, family rejection and a high level of criticism are powerful predictors of non-adherence and abandonment of treatment.</p>
<p>4. Factors related to the patient-physician relationship</p>	<p>In depressed adults, studies show that those patients who are in good relationship with their doctor adhere more to treatment, as well as those who report receiving more information and who are allowed to choose between different therapies. In addiction therapy, the ability of the health agent to empathize with the patient in order to achieve a cooperative relationship is a strong adherence factor. The delivery of information by itself would not seem to be enough to promote behavioural changes important for the management of some disorders and diseases.</p>

**Table 1:** Factors more investigated as associated to the adherence to the treatment.

as symptoms, but we do not hear the key elements of the tone of the voice, the linguistic expressions and their psychological world. The general practitioner (GP) has to find/know some reasons why his patients do not comply with the advice, but without it happening to us as it happens many times: we stay with the superficial; we are left with what are still superficial reasons. Behind those reasons there would still be more reasons. The more we delve into the reasons, the more we can understand it [34,35]. To increase the capacity to understand why the patient does not comply, it is necessary to return to the basics: “understand” the patients and ourselves in the respective contexts. The patient has his reasons that the doctor’s reason does not understand, but the doctor has reasons that the patient’s reason does not understand. Only by tuning in both directions can a “click” of understanding arise based on both the psychological and physical aspects of both actors and significantly increase adherence. This is a dialogue or conversation between experiences, patient and doctor: a “double tuner” bio-psychosocial [36], where we recognize ourselves and recognize the relationship that exists between the disease and the patient’s personal and social life [37]. The adherence or lack of it depends mainly on the doctor-patient relationship. Diagnosis (“evaluation”) means discovering what brings the patient and how he sees the problem; but the patient also makes a diagnosis (evaluation) of the therapist and of his ability to understand and treat his problem [36,38,39]. Improving doctor’s communication skills improves outcomes for both patients and doctors [40,41]. We could summarize, that the main one-perhaps the only reason why many patients comply with the treatment is the good relationship they have with their doctor. And many doctors are horrible in the human relationship [42,43].

## Conclusion

Although there has been a process of moving from the concept of “compliance” (centered on the doctor) to that of “adherence”, and successively to “therapeutic alliance” (centered on the patient and the doctor-patient relationship), the basic concept. It remains complex and has multiple facets and models of approach. In any case, more than half of the population abandons the pharmacological treatment, and medication non-adherence is a major impediment to the management of diseases and risk factors, with great public health importance, and leads to preventable costs and hospitalizations. Many investigations have been directed to determine the factors responsible for low compliance, and there are a number of factors associated with adherence to treatment that are the most investigated. However, the findings are inconsistent with respect to the effects of numerous variables, and lack practical interest, because they do not really know the reason for non-compliance. Non-adherence does not occur at random, but it cannot be correctly predicted by medication beliefs, chronic

disease, and socio-demographics characteristics. Health care providers, especially GPs, may consider routinely inquiring about non-adherence in order to proactively address patient’s suboptimal medication beliefs, but you have to remember that usually you are left with superficial reasons of little practical utility. “The heart has reasons, which the reason cannot understand”; there are reasons (of the patients) that the reason (of the professional) does not understand. The more we delve into the reasons, the more we can understand not only why patients “do not comply”, but why “patients do not want, do not know, or cannot” comply with our advice and pharmacological prescriptions. Medication-taking decisions are not the subject of rational choices by patients, influenced only by the attributes of treatments and psychosocial, socio-demographic, and disease-related factors, etc. The GP should try to know “the reasons for the reasons” for the lack of adherence of the patient, and this can only be done by “understanding” the patients and ourselves in the respective contexts: a kind of double tuner to listen to the other and to listen to ourselves about our reasons for how we understand the other. If the patient feels that their voice is listened to carefully, they will begin to identify more clearly the meaning of each symptom and event related to their illness. Once this is understood, each professional has to decide what to do next. Understanding individual treatment preferences is an important step to improving adherence support provision in practice. Satisfaction with the doctor is the only reason why many patients meet the treatment. But some doctors are horrible in the human relationship.

## References

1. World Health Organization. Adherence to long-term therapies: evidence for action. World Health Organization, Geneva. 2003.
2. Pacheco B, Aránguiz C. Factors associated with treatment adherence in adolescents with depression. Rev Chil Neuro-Psiquiatr. 2011; 49(1):69-78.
3. Niolu C, Siracusano A. Discontinuità psicofarmacologica e aderenza. Roma: Il Pensiero Scientifico Editore. 2005.
4. Jankowska-Polańska B, Blicharska K, Uchmanowicz I, Morisky DE. The influence of illness acceptance on the adherence to pharmacological and non-pharmacological therapy in patients with hypertension. Eur J Cardiovasc Nurs. 2016; 15(7):559-68.
5. Dilla T, Valladares A, Lizán L, Sacristán JA. Treatment adherence and persistence: causes, consequences and improvement strategies. Aten Primaria. 2009; 41(6):295-354.
6. Osterberg L, Blaschke T. Adherence to medication. N Engl J Med. 2005; 353(5):487-97.

7. Benner JS, Glynn RJ, Mogun H, Neumann PJ, Weinstein MC, Avorn J. Long-term persistence in use of statin therapy in elderly patients. *JAMA*. 2002; 288(4):455-61.
8. Dailey G, Kim MS, Lian JF. Patient compliance and persistence with antihyperglycemic drug regimens: evaluation of a medicaid patient population with type 2 diabetes mellitus. *Clin Ther*. 2001; 23(8):1311-20.
9. Wilson IB, Laws MB, Safren SA, Lee Y, Lu M, Coady W. Provider focused intervention increases HIV antiretroviral adherence related dialogue, but does not improve antiretroviral therapy adherence in persons with HIV. *J Acquir Immune Deficiency Syndrome*. 2010; 53:338-47.
10. Dunbar-Jacob J, Mortimer-Stephens MK. Treatment adherence in chronic disease. *J Clin Epidemiol*. 2001; 54(1):57-60.
11. Gadkari AS, McHorney CA. Unintentional non-adherence to chronic prescription medications: How unintentional is it really? *BMC Health Serv Res*. 2012; 12:98.
12. Kleppe M, Lacroix J, Ham J, Midden C. A dual-process view on medication adherence: The role of affect. *J Health Psychol*. 2017.
13. Howren MB, Gonzalez JS. Treatment adherence and illness self-management: introduction to the special issue. *J Behav Med*. 2016; 39(6):931-34.
14. Oller Canet S, Lacasta Tintorer D, Castro Rodríguez JI, García-Lecina R, Flamarich-Zampalo D, Font-Canal. *Actas Esp Psiquiatr*. 2011; 39(5):288-93.
15. Tueller SJ, Deboeck PR, Van Dorn RA. Getting less of what you want: reductions in statistical power and increased bias when categorizing medication adherence data. *J Behav Med*. 2016; 39(6):969-80.
16. Balkrishnan R. Predictors of medication adherence in the elderly. *Clin Ther*. 1998; 20(4):764-71.
17. Turabián JL, Franco BP. Turning points and transitions in the health of the patients: a perspective from family medicine. *J Family Med Community Health*. 2016; 3(4):1087.
18. Rausch JR, Hood KK, Delamater A, Pendley JS, Rohan JM, Reeves G. Changes in treatment adherence and glycemic control during the transition to adolescence in type 1 diabetes. *Diabetes Care*. 2012; 35(6):1214-19.
19. Laba T, Brien J, Jan S. Understanding rational non-adherence to medications. A discrete choice experiment in a community sample in Australia. *BMC Fam Pract*. 2012; 13:61.
20. Becker MH, Maiman LA. Sociobehavioral determinants of compliance with health and medical care recommendations. *Med Care*. 1975; 13(1):10-24.
21. Marijo BT, Rollin WN, Mangeet KC, Denis JL. Antidepressant medication adherence: a study of primary care patients. *Bandolier J*. 2001; 84.
22. Gonzalez JS, Schneider HE. Methodological issues in the assessment of diabetes treatment adherence. *Curr Diab Rep*. 2011; 11(6):472-479.
23. Llabre MM, Weaver KE, Durán RE, Antoni MH, McPherson-Baker S, Schneiderman N. A measurement model of medication adherence to highly active antiretroviral therapy and its relation to viral load in HIV-positive adults. *AIDS Patient Care and STDs*. 2006; 20(10).
24. Liu H, Golin CE, Miller LG, Hays RD, Beck CK, Sanandaji S. A comparison study of multiple measures of adherence to HIV protease inhibitors. *Ann Intern Med*. 2001; 134(10):968-77.
25. Laws MB, Beach MC, Lee Y, Rogers WH, Saha S, Korhies T. Provider-patient adherence dialogue in HIV care: results of a multisite study. *AIDS Behav*. 2013; 17(1):148-59.
26. Kristin JA, John B. A theoretical model of how neighborhood factors contribute to medication nonadherence among disadvantaged chronically ill adults. *J Health Psychol*. 2015; 21(12):2923-33.
27. van den Boogaard J, Msoka E, Homfray M, Kibiki GS, Heldens JJHM, Felling AJA. An exploration of patient perceptions of adherence to tuberculosis treatment in Tanzania. *Qual Health Res*. 2012; 22:835-45.
28. Schoenthaler AM, Schwartz BS, Wood C, Stewart WF. Patient and physician factors associated with adherence to diabetes medications. *Diabetes Education*. 2012; 38:397-408.
29. Dunbar-Jacob J, Rohay JM. Predictors of medication adherence: fact or artifact. *J Behav Med*. 2016; 39(6):957-68.
30. Volpp KG, Troxel AB, Mehta SJ, Norton L, Zhu J, Lim R. Effect of electronic reminders, financial incentives, and social support on outcomes after myocardial infarction: The HeartStrong randomized clinical trial. *JAMA Intern Med*. 2017; 177(8):1093-1101.
31. Shet A, De Costa A, Kumarasamy N, Rodrigues R, Rewari BB, Ashorn P. Effect of mobile telephone reminders on treatment outcome in HIV: Evidence from a randomised controlled trial in India. *BMJ*. 2014; 349:5978.
32. Heart Quotes. Understand matters of the heart with

these heart quotes. Blaise Pascal. 2832786.

33. Zarragoitia Alonso I. Therapeutic adherence on depression. Rev Hosp Psiquiátrico de la Habana. 2010; 7(3).

34. Crowley MJ, Zullig LL, Shah BR, Shaw RJ, Lindquist JH, Peterson ED. Medication non-adherence after myocardial infarction: an exploration of modifying factors. J Gen Intern Med. 2015; 30(1):83-90.

35. Marshall IJ, Wolfe CDA, McKeivitt C. Lay perspectives on hypertension and drug adherence: Systematic review of qualitative research. BMJ. 2012; 345:e3953.

36. Turabian JL, Pérez Franco B. How is the door of understanding of the symptoms opened in family medicine? Semergen. 2011; 37(10):554-58.

37. Shem S. Monte Miseria. Editorial Anagrama, Barcelona. 2000.

38. Hammersley D. Counselling people on prescribed drugs. Sage Publications, London. 1995.

39. Turabian JL, Perez Franco B. The effect of seeing the sea for the first time. An attempt at defining the family medicine law: the interview is clinical Medicine.

Aten Primaria. 2011; 40:565-66.

40. Silverman J, Kurtz S, Draper J. Skills for communicating with patients (3rd edn). CRC Press, Boca Raton. 2013.

41. Ratanawongsa N, Karter AJ, Parker MM, Lyles CR, Heisler M, Moffet HH. Communication and medication refill adherence. The diabetes study of Northern California. JAMA Intern Med. 2013; 173(3):210-18.

42. Turabian JL. Doctor-patient relationship in pharmacological treatment: discontinuation and adherence. COJ Rev Res. 2018.

43. Turabian JL, Perez Franco B. Prescription of medicines in family medicine: rational, reasonable or relevant? Aten primaria. 2005; 36(9):507-09.