

About medication adherence

What exactly do compliance and adherence mean?

Prevalence of adherence to medications

How are long-term diseases related to adherence and compliance?

Why don't people take their medications as directed?

References

What exactly do compliance and adherence mean?



Compliance suggests a one-way relationship, whereby the doctor states the medical regimen and the patient is expected to comply.¹ On the other hand, **adherence** is the “active, voluntary, and collaborative involvement of the patient in a mutually acceptable course of behaviour to produce a therapeutic result”. Here, the patient is a partner in healthcare decision making, and both patient and healthcare professional agree on treatment goals and the medical regimen.^{1,2}

Adherence to therapy is very important for the management of long-term diseases such as heart disease and **diabetes**.³ The World Health Organization defines adherence to long-term therapy as “the extent to which a person’s behaviour—taking medication, following a diet, and/or executing lifestyle changes, corresponds with agreed recommendations from a healthcare provider”.⁴

Medication adherence can be measured using direct and indirect methods²:
Examples of direct methods: Healthcare worker watching the patient take every dose of the medication, measurement of medication levels in the blood.

Examples of indirect methods: Surveys, diaries, patient self-report, pharmacy refill rates, pill counting, monitoring for clinical response, and electronic data.



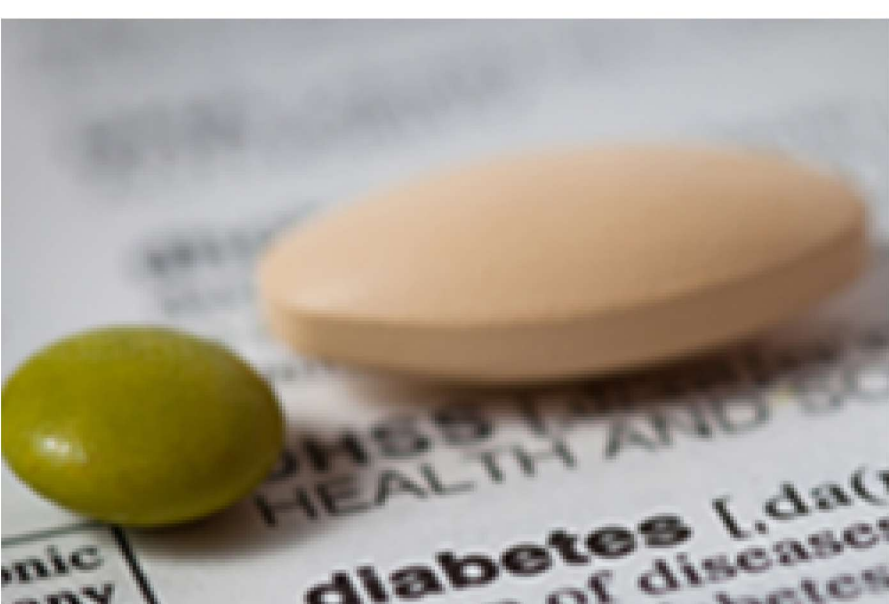
Prevalence of adherence to medications



In developed countries, adherence among patients with long-term diseases such as high blood pressure (BP) averaged at only **50%**, and this figure is assumed to be worse in developing countries.⁴



In Malaysia, good adherence to high BP medication was found to be **53.4%**.⁵



In the United States, 65.4% of patients with type 2 diabetes achieved adherence rates of **80%** or better in their first year of medication therapy.⁶



A study showed that 2 years after hospitalization for acute coronary syndrome (eg, heart attack or unexpected chest pain), only around **40%** of patients continued taking statins (cholesterol-lowering medications).²

Non-adherence can manifest in many ways, eg, not filling a new prescription or taking less than the dose recommended by the doctor. It has been found that 20–22% of new prescriptions for long-term conditions such as **high BP**, **diabetes** and **high cholesterol** were not filled.³

How are long-term diseases related to adherence and compliance?



Poor adherence to recognized standards of care is the main reason behind the development of **diabetes complications**.⁴ The biggest barrier to effective insulin therapy is compliance.⁷

Similarly, the main cause of failure to control high blood pressure (BP) is poor adherence. It is estimated that poor adherence contributes to poor BP control in over two-thirds of people with high BP.⁴ Medication non-compliance can result in BP not reaching target despite being prescribed up to three BP medications.⁸

Rates of uncontrolled high BP, diabetes and high cholesterol in Malaysia

- **High BP:** Only 35% of patients achieved BP control while on treatment.⁸
- **Diabetes:** In government health clinics, only 23.8% of patients with type 2 diabetes achieved the national HbA1c target.⁹
- **High cholesterol:** Among patients with type 2 diabetes, only 28.5% and 37.8% achieved target total cholesterol and low-density lipoprotein (“bad”) cholesterol, respectively.⁹

Why don't people take their medications as directed?



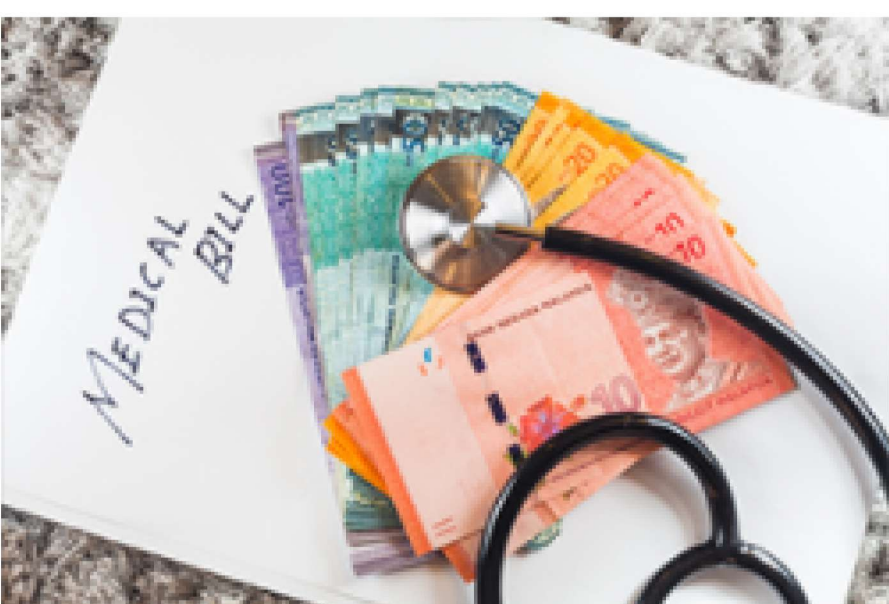
- The medication is for a disease for which they do not experience any symptoms, eg, **high blood pressure** or **high cholesterol**³
- Lack of understanding of the disease³
- Forgetfulness¹⁰
- Misunderstanding or confusion on instructions, eg, how and when to take¹¹



- Not convinced that the medication is effective¹⁰
- Unsure if the medication is working¹⁰
- Presence of side effects^{10,11}
- Fear (such as of medication dependence or side effects)¹¹



- Duration or complexity of treatment¹¹
- Having to take the medication multiple times a day³
- Difficulty in taking medications (eg, confused about use of injections or inhalers)¹⁰



- Poor relationship between the patient and the healthcare professional³
- Missed appointments with the doctor³
- Medication cost (too expensive)¹¹

References

1. Gould E, Mitty E. *Geriatr Nurs* 2010;31:290–298.
2. Ho PM, et al. *Circulation* 2009;119:3028–3035.
3. PhRMA. Improving prescription medicine adherence is key to better health care. Available at https://www.phrma.org/-/media/Project/PhRMA/PhRMA-Org/PhRMA-Org/PDF/Patient_Savings_Programs_FINAL_062413.pdf. Accessed 8 October, 2019.
4. World Health Organization. Adherence to long-term therapies: Evidence for action [Updated 2003]. Available at http://www.who.int/chp/knowledge/publications/adherence_full_report.pdf. Accessed 19 September, 2019.
5. Ramli A, et al. *Patient prefer adherence* 2012;6:613–622.
6. Briesacher BA, et al. *Pharmacotherapy* 2008;28:437–443.
7. Ministry of Health Malaysia. Clinical practice guidelines: Management of type 2 diabetes mellitus (5th Edition); 2015.
8. Ministry of Health Malaysia. Clinical practice guidelines: Management of hypertension (4th Edition); 2013.
9. Feisul I, Azmi S. National Diabetes Registry, 2009–2012. Putrajaya: Non-communicable disease section, Disease control division, Department of public health, Ministry of Health Malaysia; 2013.
10. American Heart Association. Medication adherence-taking your meds as directed. Available at http://www.heart.org/heartorg/conditions/more/consumerhealthcare/medication-adherence---taking-your-meds-as-directed_ucm_453329_article.jsp#VuJnIPyUfHQ. Accessed 19 September, 2019.
11. National Stroke Association. Medication adherence and compliance. Available at <https://www.stroke.org/en/health-topics/consumer-healthcare/medication-information/medication-adherence-taking-your-meds-as-directed>. Accessed 8 October, 2019.