



# Do incentives and enablers improve adherence to tuberculosis treatment?

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**This Cochrane Review shows that giving people material incentives and enablers, such as cash, vouchers or hot meals, may have little or no effect on the number of people that are cured or complete tuberculosis treatment. However, people with tuberculosis may be encouraged to return for diagnostic tests or start and continue treatment.**

## What does the research show?

The diagnosis and treatment of people with tuberculosis is critical for curing the disease, controlling infection and minimising drug resistance. The aim of this Cochrane Review was to find out if people were more likely to return for diagnosis appointments and follow their treatment when receiving material incentives and enablers. Cochrane authors collected and analysed all relevant research studies to answer this question. They compared people who were given material incentives (any financial or material reward) and enablers (financial assistance) to people who were given routine care. From this work, we can conclude that:

- incentives may have little or no effect on the number of people with tuberculosis that are cured or that complete treatment (low certainty of the evidence)

- incentives probably increase the number of people that visit a clinic to start or continue treatment (moderate certainty of the evidence)
- we are uncertain if incentives have any effect on the number of people who complete treatment for latent tuberculosis (low certainty of the evidence)
- incentives may increase the number of people that return to get results of their skin test (low certainty of the evidence)
- we are uncertain if incentives lead to any adverse events because there is too little research addressing this

The certainty of the evidence reflects the extent to which we are confident that an estimate of the effect is correct. The higher the certainty, the more confident we are that the estimate is near the true effect.

## Findings table

Findings: what happens?	People receiving routine care	People receiving incentives	Certainty of the evidence
<b>Treatment success<sup>1</sup></b> Incentives may have little or no effect on the number of people that are cured or that complete tuberculosis treatment	721 per 1000	750 per 1000 (620 to 807 per 1000)*	⊕⊕○○ Low
<b>People visiting a clinic to start or continue treatment</b> Incentives probably increase the number of people that visit a clinic to start or continue treatment	249 per 1000	393 per 1000 (316 to 488 per 1000)*	⊕⊕⊕○ Moderate
<b>Completion of treatment for latent tuberculosis</b> We are uncertain if incentives have any effect on the number of people who complete treatment for latent tuberculosis because the research studies showed very different results			⊕⊕○○ Low
<b>Return for skin test reading<sup>2</sup></b> Incentives may increase the number of people that return to get the results of their skin test to go through their tuberculosis diagnosis	441 per 1000	953 per 1000 (622 to 1000 per 1000)*	⊕⊕○○ Low
<b>Adverse events of receiving material incentives</b> We are uncertain if incentives lead to any adverse events because there is too little research addressing this	One study recorded a few incidents of theft of vouchers; no other adverse event were noted		

\* The numbers in brackets show the range where the actual effect may be. It is 95 % likely that the effect lies somewhere within this span. <sup>1</sup> Cure or completion of treatment for active tuberculosis  
<sup>2</sup> Mantoux test

## Background

### *What is tuberculosis?*

Tuberculosis is caused by a bacteria that lives in the body. This bacteria, *Mycobacterium tuberculosis*, was first identified in 1882 and many people around the world are still affected by the disease. In Norway, there are 350 to 400 cases of tuberculosis every year and this number continues to increase (Norwegian Institute of Public Health). Many people who are infected with the bacteria will not have any symptoms and will live with the bacteria in an inactive state. This is called latent tuberculosis. If the bacteria is active in the body, people will develop symptoms such as a chronic cough or loss of weight, loss of appetite, and general ill health. This is known as active tuberculosis. Tuberculosis usually affects the person's lungs, but can also affect other parts of the body. People with active tuberculosis of the lungs spread the disease to others when they cough or sneeze and others inhale droplets carrying the bacteria.

People with active tuberculosis of the lungs who are undiagnosed or untreated are an important public health concern because they can infect others. People may be undiagnosed or untreated for a number of reasons. In some countries, people may have poor access to healthcare services. Diagnostic tests usually require several visits to the clinic (Mantoux test). Treatment for active tuberculosis usually lasts from six to twelve months, and can have side effects. People may also avoid diagnosis or treatment because of the stigma attached to tuberculosis. Material incentives or enablers may address some of these problems and may help individuals complete the diagnosis and/or treatment and thus help prevent the spread of the tuberculosis.

### **What is this information based on?**

The authors updated a previous Cochrane Review and searched for studies that had been published up to June 2015. They included 12 studies. The studies included between 79 and 4091 participants. Ten of the studies were done in the USA and involved a) teenagers (one study), b) injection drug or cocaine users (four studies), c) homeless adults (three studies), and d) prisoners or recently released prisoners (two studies). The remaining two studies involved the general population and were done in Timor-Leste and South Africa.



Illustration: Colourbox

The Cochrane review presented very little information about the participants. We therefore know very little about their age or gender, their level of education, their understanding of the importance of treatment, their reasons for not following treatment, or their physical, emotional or mental health. We also know little about participants' sensitivity or resistance to drugs, if they were on treatment or being diagnosed for first time, fee for health services, and the type (pulmonary or non-pulmonary) of tuberculosis they had. It was also unclear how adherence to diagnosis and treatment was defined and calculated.

### **Source**

Lutge EE, Wiysonge CS, Knight SE, Sinclair D, Volmink J. Incentives and enablers to improve adherence in tuberculosis. *Cochrane Database of Systematic Reviews* 2015, Issue 9. Art. No.: CD007952. DOI: 10.1002/14651858.CD007952.pub3.