

Evidence Assessment: Summary of a Systematic Review

Who is this summary for?

For Doctors and Health Personal, Administrators and Managers of health facilities, Community Health Workers and the partners involved in the management of tuberculosis.

Reminder systems to improve patient adherence to tuberculosis clinic appointments for diagnosis and treatment

Key findings

- More people attended the clinic and completed TB treatment with pre-appointment reminder phone-calls.
- More people attended the clinic with pre-appointment phone-calls, and the number attending the final clinic was higher with three- monthly phone-calls or nurse home visits.
- Similar numbers of people attended clinic for skin test reading with and without pre-appointment phone-calls.

Background

Effective treatment for TB requires people to take multiple drugs daily for at least six months. Consequently, once they start to feel well again, some patients stop attending clinics and stop taking their medication which can lead to the illness returning and the development of drug resistance. One strategy the World Health Organization (WHO) recommends is that an appointed person (a health worker or volunteer) watches the person take their medication everyday (called direct observation). Other strategies include reminder systems to prompt patients to attend appointments on time, or to re-engage people who have missed or defaulted on a scheduled appointment. These prompts may be in the form of telephone calls or letters before the next scheduled appointment ("pre-appointment reminders"), or phone calls, letters, or home visits after a missed appointment ("default reminders").

Question

What are the effects of reminder systems on improving attendance at TB diagnosis, prophylaxis, and treatment clinic appointments, and their effects on TB treatment outcomes?

Reminder systems to improve patient adherence to tuberculosis clinic appointments for diagnosis and treatment in Cameroon: The WHO estimated that in 2012 the TB mortality rate in Cameroon, excluding HIV, was 29 per 100,000, the prevalence rate of all forms including HIV positive people, was 319 per 100,000 and the incidence rate, also including HIV positive cases was 238 per 100,000. Phone calls are used to improve adherence in patients on treatment as well as for those lost to follow-up. The implementation of these intervention could improve the management of patients suffering from tuberculosis in Cameroon.

Table 1: Summary of the systematic review

	What the review authors searched for	What the review authors found
Studies	Randomized controlled trials including cluster RCTs and quasi-RCTs, Controlled before-and-after studies (CBAs).	Four Randomized controlled trials (RCTs), two quasi-Randomized controlled trials and three Controlled before-and-after studies met the inclusion criteria.
Participants	<ul style="list-style-type: none"> Children and adults in any setting who require treatment for TB. This includes people with PTB (diagnosed by sputum microscopy, culture, or both, regardless of HIV status), smear- negative PTB (diagnosed by symptoms and chest radiograph findings, or other diagnostic tests, regardless of HIV status), or extrapulmonary TB (diagnosed by signs or symptoms and histopathology, sputum acid-fast bacilli smear, culture, or both, imaging studies or polymerase chain reaction (PCR)). Children and adults in any setting with TB infection who require prophylaxis against TB. Children and adults in any setting referred (including self- referred) to TB diagnostic or screening services. 	Children and adults in any setting who require treatment for TB.
Interventions	<ul style="list-style-type: none"> Any actions taken to remind patients to take their TB medication or attend appointments (pre-appointment reminders). Any actions to contact patients who have missed an appointment (default reminders). 	<p>One study was conducted in new sputum smear positive PTB patients including both non-MDR-TB and MDR-TB.</p> <p>One study was conducted in primary school children undergoing TB chemoprophylaxis.</p> <p>Three trials assessed the effectiveness of different reminders on return after the tuberculin skin test in different trial populations.</p> <p>One was conducted in a wide range of age groups receiving TB diagnosis, TB chemoprophylaxis, or treatment.</p> <p>Three trials were conducted among patients undergoing treatment for active TB.</p>
Controls	<ul style="list-style-type: none"> No reminders. Other kinds of reminder actions or other interventions to improve adherence. 	No reminder
Outcomes	<p>Primary outcomes</p> <ul style="list-style-type: none"> Completion of TB diagnostics; Completion of screening process; Commencement of prophylactic treatment; Commencement of curative treatment; Completion of prophylactic treatment; Completion of curative treatment ; Incidence of active TB (in studies of prophylactic treatment). <p>Secondary outcomes</p> <ul style="list-style-type: none"> Any measure of adherence to treatment or attendance at appointments; Any measure of patient involvement or patient satisfaction; Any adverse event (for example, elevated liver enzymes, optic neuritis). 	The main outcomes assessed in the pre-appointment reminder trials were the number of patients who adhered to a scheduled appointment and cure, as defined in the protocol; and for default reminders, the number of patients who completed treatment.
Date of the most recent search: 29 August 2014		
Limitations: This is a high quality systematic review, AMSTAR =11/11		
Citation: Liu Q, Abba K, Alejandria MM, Sinclair D, Balanag VM, Lansang MAD. Reminder systems to improve patient adherence to tuberculosis clinic appointments for diagnosis and treatment. Cochrane Database of Systematic Reviews 2014, Issue 11. Art. No.: CD006594. DOI: 10.1002/14651858.CD006594.pub3.		

Table 2: Summary of findings

TB treatment: pre-appointment reminder versus no reminder			
Patient or population: People on TB treatment			
Settings: Outpatient clinic			
Intervention: Pre-appointment reminder			
Comparison: No reminder			
Outcomes	Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
Attendance at single clinic appointment	1.32 [1.10-1.59]	615 (1)	Low
Completion of TB treatment	1.14 [1.02-1.27]	92 (1)	Low

Applicability

Included trials took place in: USA (4), India (2), Spain (1), Thailand (1), Iraq (1). These interventions may be applied in other low resources settings such as Cameroon.

Conclusions

Policies of sending pre-appointment reminders to people, and contacting those who miss appointments, seem to be sensible additions to any TB programme, and the limited evidence available suggests they have small but potentially important benefits.

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