Cochrane for Clinicians

Putting Evidence into Practice

These are summaries of reviews from the Cochrane Library.

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Text Message Appointment Reminders

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Clinical Question

Do text message reminders improve attendance at health care appointments?

Evidence-Based Answer

Text message reminders increase attendance at health care appointments compared with no reminders or postal reminders. They are as effective as telephone call reminders but are less expensive. (Strength of Recommendation: C, based on consensus, disease-oriented evidence, usual practice, expert opinion, or case series.)

Practice Pointers

Missed appointments are a significant problem for patients and physicians. They delay needed health care and increase medical costs. Common reasons for missing health care appointments include forgetting the appointment (49%), having an inconvenient appointment time (30%), and attempting to cancel an appointment (30%).[1] Telephone calls and postal mail have been used to send reminders to patients about appointments.

The advantages of text messaging include low cost, immediate transmission, relatively high privacy, and less intrusiveness.[2] Text messaging could represent an effective, low-cost medium for sending appointment reminders.

In a meta-analysis of four randomized controlled trials involving 3,547 participants (mean age range = 33 to 57 years), the authors of this Cochrane review found that text message reminders increased attendance at health care appointments compared with no reminders (risk ratio = 1.10; 95% confidence interval, 1.03 to 1.17). One study showed that adding text message reminders to postal reminders increased attendance compared with using postal reminders alone (risk ratio = 1.10; 95% confidence interval, 1.02 to 1.19). Text message and telephone call reminders had a similar impact on attendance, although the cost per text message reminder was lower. In two studies, the relative cost of text message reminders per attended appointment was only 55% to 65% of the cost of telephone call reminders.

Limitations of the review included the small number of studies and their low to moderate methodologic quality. None of the studies measured harms or adverse effects of text messaging, such as loss of confidentiality and security of medical information. In addition, no evaluation of health outcomes or user satisfaction was performed.

This Cochrane review shows that text message reminders can improve appointment attendance at a lower cost than postal and telephone call reminders. High rates of text messaging across all socioeconomic groups suggest that most patients have access to this communication modality.[2] However, there is a significant age disparity in text messaging use; adults 18 to 29 years of age use text messaging 23 times more often per day than those older than 65 years.[3] Text messages sent to the wrong patient based on incorrect or outdated contact information could create confidentiality problems.[4] Further high-quality studies that address the concerns about text message reminders are needed.

SOURCE: Car J, Gurol-Urganci I, de Jongh T, Vodopivec-Jamsek V, Atun R. Mobile phone messaging reminders for attendance at healthcare appointments. *Cochrane Database Syst Rev.* 2012;7:CD007458.

The practice recommendations in this activity are available at http://summaries.cochrane.org/CD007458.

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Pharmacotherapy for Mild Hypertension

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Clinical Question

Does treating mild hypertension improve health outcomes?

Evidence-Based Answer

Pharmacologic treatment of mild hypertension for up to five years does not reduce coronary events, stroke, or mortality compared with placebo. (Strength of Recommendation: B, based on inconsistent or limited-quality patient-oriented evidence.)

Practice Pointers

Evidence supporting antihypertensive drug therapy to reduce the incidence of cardiovascular disease events and mortality combines populations of patients with all stages of hypertension, as well as patients with and without previously recognized cardiovascular disease.[1] It is unclear whether pharmacotherapy for patients with stage 1 hypertension (i.e., systolic blood pressure of 140 to 159 mm Hg and/or diastolic blood pressure of 90 to 99 mm Hg) and no history of cardiovascular disease produces similar health benefits as treating patients with stage 2 hypertension (i.e., systolic measurement of 160 mm Hg or greater and/or diastolic measurement of 100 mm Hg or greater).

The authors identified four randomized controlled trials (RCTs) examining the clinical effectiveness of pharmacotherapy for mild hypertension in 8,912 participants (mean age range = 37 to 72 years) without previous cardiovascular events. Outcomes included overall mortality, total cardiovascular events (stroke, myocardial infarction, and congestive heart failure), and withdrawals from the trials because of adverse effects after four to five years of follow-up. Therapies included one or more of the following drugs: thiazide diuretics, beta blockers, reserpine, clonidine (Catapres), methyldopa, and hydralazine.

Meta-analysis showed no difference in overall mortality between the treatment and placebo groups (risk ratio [RR] = 0.85; 95% confidence interval [CI], 0.63 to 1.15). Pooled analysis of three RCTs (n = 7,080) demonstrated no difference in total cardiovascular events between the treatment and placebo groups (RR = 0.97; 95% CI, 0.72 to 1.32). One single-blinded RCT of 17,354 participants (mean age = 52 years) with mild to moderate hypertension demonstrated a statistically significant higher incidence of trial withdrawals because of adverse effects (RR = 4.80; 95% CI, 4.14 to 5.57) in the treatment group compared with the placebo group. The treatment group had a 9% risk of withdrawing from the study because of adverse effects. Authors rated the overall study quality as very low because of attrition bias, lack of clear reporting of randomization detail, and lack of investigator blinding in some RCTs; authors rated the one RCT examining withdrawals as moderate quality.

The lack of an observed treatment effect is not surprising, because patients with mild hypertension have a low baseline risk of cardiovascular disease events and overall mortality. Therefore, maximum benefit would be expected to be modest, at best, especially with a short follow-up window of four to five years.

The evidence-informed, consensus opinion–based Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure recommends that all stages of hypertension be treated to a goal of less than 140/90 mm Hg, beginning with lifestyle modification. If this goal is not achieved, thiazide diuretics should be used as initial pharmacotherapy for most patients, alone or in combination with one of the other drug classes (i.e., angiotensin-converting enzyme inhibitors, angiotensin receptor blockers, beta blockers, calcium channel blockers) that also have been shown to reduce one or more hypertensive complications in RCTs.[2] However, in light of the findings of this Cochrane review, it would be reasonable to emphasize pharmacotherapy in patients with stage 2 hypertension and to emphasize lifestyle changes in patients with mild hypertension and no cardiovascular disease. Larger double-blinded RCTs in this population of patients with stage 1 hypertension are needed to clarify the potential long-term benefits of pharmacologic therapy.

Author disclosure: No relevant financial affiliations.

SOURCE: Diao D, Wright JM, Cundiff DK, Gueyffier F. Pharmacotherapy for mild hypertension. *Cochrane Database Syst Rev.* 2012;8:CD006742.

The practice recommendations in this activity are available at http://summaries.cochrane.org/CD006742.

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