

Cochrane for Clinicians

Putting Evidence into Practice

These are summaries of reviews from the Cochrane Library.

The series coordinator for *AFP* is Corey D. Fogleman, MD, Lancaster General Hospital Family Medicine Residency, Lancaster, Pa.

A collection of Cochrane for Clinicians published in *AFP* is available at <http://www.aafp.org/afp/cochrane>.

CME This clinical content conforms to AAFP criteria for continuing medical education (CME). See CME Quiz Questions on page 173.

Author disclosure: No relevant financial affiliations.

The Impact of Personalized Risk Communication on Screening Decisions

DEAN A. SEEHUSEN, MD, MPH, *Fort Belvoir Community Hospital, Fort Belvoir, Virginia*

CHRISTY J.W. LEDFORD, PhD, *Uniformed Services University of the Health Sciences, Bethesda, Maryland*

Clinical Question

What is the impact of personalized risk communication on patient decision making about screening tests?

Evidence-Based Answer

Patients presented with personalized risk information are more likely to make informed decisions about screening than patients who are presented with generic risk information. Individualizing risk appears to improve the accuracy of patients' risk perception and decrease anxiety.

Practice Pointers

Screening tests are not appropriate for every patient. Instead, individual risk and personal values play a role in determining whether a given patient should undergo screening for a disease. Many guidelines recommend that physicians have a discussion with patients when determining whether to perform a specific screening test, and many guidelines use individual risk as a differentiator for recommendations. For instance, the U.S. Preventive Services Task Force recommends that physicians discuss a patient's risks and values before making a decision about screening for breast cancer.¹ Ideal risk communication would increase a patient's knowledge about his or her own risk of a given condition and lead to a well-informed decision to undergo or decline screening for that condition.

This review included 41 studies with a total of 28,700 participants. Three studies evaluated patients' ability to make informed choices with and without individualized risk information. All three of the studies

used the Multidimensional Measure of Informed Choice, a tool that assesses consistency between a patient's knowledge, attitudes, and choices about a screening test.² Combined, 45% of those receiving personalized risk communication made informed choices, compared with 20% of those receiving generic risk communication. Pooled analysis showed strong evidence that personalized risk communication was associated with increased informed decision making (odds ratio [OR] = 3.65; 95% confidence interval [CI], 2.13 to 6.23).

Pooled analysis of nine studies showed improved knowledge levels about screening tests in patients who received personalized risk communication. Similarly, three studies evaluating risk perception showed a trend toward improved risk perception with personalized risk communication (OR = 1.65; 95% CI, 0.96 to 2.81). Personalized risk communication resulted in an increase in the uptake of screening tests (OR = 1.15; 95% CI, 1.02 to 1.29). In the one study that looked at "appropriate uptake" of cholesterol screening, personalized risk communication resulted in higher levels of appropriate uptake (OR = 1.32; 95% CI, 1.14 to 1.55).³

Several facts need to be considered when assessing these findings. First, the effects of personalized risk communication on uptake of screening seemed to be greater for participants told they were at higher risk. This could mean that a patient being told that he or she is at high risk is the main effect, rather than the personalized communication of risk. Second, these results were dominated by studies addressing mammography and colorectal cancer screening (34 out of 41 studies), which limits their generalizability to other screening tests. Lastly, to date, there are relatively few conditions for which personalized risk can be accurately calculated quickly and easily. This further calls into question the implications of these findings and highlights the need for continued research to generate clinical risk calculation tools.

Physicians who counsel patients about screening options should help them understand the impact of disease screening in the context of each patient's individual risk. When available, risk calculators that provide individualized risk assessments should be used. The results of this review suggest that this will improve knowledge and informed decision making.

SOURCE: Edwards AG, Naik G, Ahmed H, et al. Personalised risk communication for informed decision making about taking screening tests. *Cochrane Database Syst Rev*. 2013;(2):CD001865.

The practice recommendations in this activity are available at <http://summaries.cochrane.org/CD001865>.

The views expressed in this article are those of the authors and do not reflect the official policy or position of the U.S. government, Department of the Army, or Department of Defense.

REFERENCES

1. U.S. Preventive Services Task Force. Screening for breast cancer. <http://www.uspreventiveservicestaskforce.org/uspstf/uspbsbrc.htm>. Accessed May 22, 2013.
2. Marteau TM, Dormandy E, Michie S. A measure of informed choice. *Health Expect*. 2001;4(2):99-108.
3. Hutchison B, Birch S, Evans CE, et al. Screening for hypercholesterolaemia in primary care: randomised controlled trial of postal questionnaire appraising risk of coronary heart disease. *BMJ*. 1998;316(7139):1208-1213.

Aspirin With or Without an Antiemetic for Acute Migraine Headaches in Adults

AARON SAGUIL, MD, MPH, *Uniformed Services University of the Health Sciences, Bethesda, Maryland*

JOEL HERNESS, MD, *Fort Belvoir Community Hospital, Fort Belvoir, Virginia*

Clinical Question

Is aspirin, with or without an antiemetic, an effective therapy for acute migraine headache in adults?

Evidence-Based Answer

Aspirin, with or without an antiemetic, is an effective treatment for acute migraine headache. Adding the antiemetic metoclopramide (Reglan) significantly reduces migraine-related nausea and vomiting compared with aspirin alone. (Strength of Recommendation: A, based on consistent, good-quality patient-oriented evidence.)

Practice Pointers

Migraines are an exceedingly common and disabling affliction; 16.6% of U.S. adults report having migraines or severe headaches.¹ Direct costs average \$1,533 per person annually,² whereas indirect costs are an estimated \$12 billion each year.³ Most persons who have migraines do not take preventive medications, but nearly all treat acute attacks. Commonly used treatments include triptans, nonsteroidal anti-inflammatory drugs, acetaminophen, and caffeine. Aspirin and metoclopramide are inexpensive, widely available medications, and the latter may improve outcomes by treating nausea and improving analgesic bioavailability.⁴

This Cochrane review investigated the effectiveness of aspirin, with or without metoclopramide, for the treatment of migraine. More than 4,000 participants in 13 studies were randomized to receive either (1) 900 or 1,000 mg of aspirin with or without 10 mg of metoclopramide, or (2) placebo or 50 to 100 mg of sumatriptan (Imitrex). Six studies with 2,027 participants were pooled and demonstrated that more patients taking aspirin were pain free at two hours (24% vs. 11% of those taking placebo; number needed to treat = 8; 95% confidence interval [CI], 6.4 to 11). Similarly, patients taking aspirin were more likely to achieve headache improvement at two hours (i.e., intensity decreasing from moderate/severe to none/mild) than those taking placebo (52% vs. 32%; number needed to treat = 5; 95% CI, 4.1 to 6.2). Adding metoclopramide to aspirin therapy was no more effective than aspirin alone for complete pain relief at two hours (two studies, 519 participants), but it was more effective for headache improvement at two hours (three studies, 765 participants). The addition of metoclopramide did not increase the ability of aspirin to keep the patient pain free at 24 hours.

Aspirin and sumatriptan are similarly effective in treating acute migraine. For the outcome "pain free at two hours," 26% were relieved with aspirin and 32% with sumatriptan (relative benefit = 0.82; 95% CI, 0.65 to 1.03). Although metoclopramide appears to have a minimal role in enhancing analgesia when combined with aspirin, the combination was significantly better than aspirin

alone for nausea, a common and disabling symptom of migraine. The findings of this review are consistent with current guidelines that list aspirin among the first-line monotherapies (i.e., nonsteroidal anti-inflammatory drugs, triptans, and acetaminophen) for acute migraine headache.^{5,6} Antiemetics, such as metoclopramide, are primarily considered an adjunct treatment for refractory headache.^{5,6} This review provides evidence that metoclopramide should be reserved for those with significant nausea.

SOURCE: Kirthi V, Derry S, Moore RA. Aspirin with or without an antiemetic for acute migraine headaches in adults. *Cochrane Database Syst Rev*. 2013;(4):CD008041.

The practice recommendations in this activity are available at <http://summaries.cochrane.org/CD008041>.

The views expressed in this article are those of the authors and do not reflect the official policy or position of the U.S. government, Department of the Army, or Department of Defense.

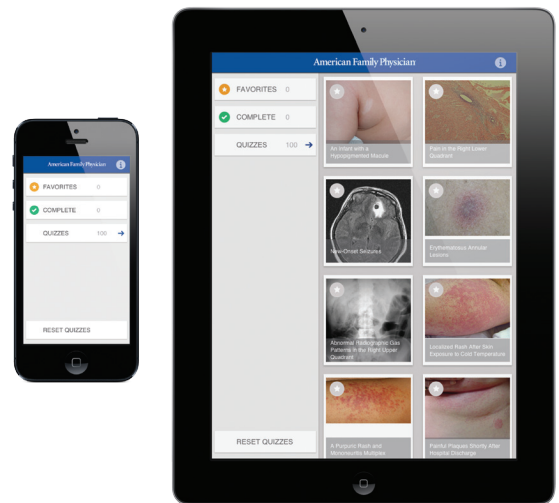
REFERENCES

1. Schiller JS, Lucas JW, Ward BW, Peregoy JA. Summary health statistics for U.S. adults: National Health Interview Survey, 2010. *Vital Health Stat* 10. 2012;(252): 1-207.
2. Stokes M, Becker WJ, Lipton RB, et al. Cost of health care among patients with chronic and episodic migraine in Canada and the USA: results from the International Burden of Migraine Study (IBMS). *Headache*. 2011;51(7):1058-1077.
3. Hawkins K, Wang S, Rupnow MF. Indirect cost burden of migraine in the United States. *J Occup Environ Med*. 2007;49(4):368-374.
4. Colman I, Brown MD, Innes GD, Grafstein E, Roberts TE, Rowe BH. Parenteral metoclopramide for acute migraine: meta-analysis of randomised controlled trials. *BMJ*. 2004;329(7479):1369-1373.
5. Headaches: diagnosis and management of headaches in young people and adults. NICE clinical guideline 150. London, United Kingdom: National Institute for Health and Care Excellence (NICE); 2012. <http://www.nice.org.uk/CG150>. Accessed August 4, 2013.
6. Beithon J, Gallenberg M, Johnson K, et al. Institute for Clinical Systems Improvement. Diagnosis and treatment of headache. 2013. https://www.icsi.org/_asset/qwrnzq/Headache.pdf. Accessed August 4, 2013. ■

Try your hand at solving them all

Featuring 100 diverse quizzes, the *AFP Photo Quiz* app from *American Family Physician* is a convenient clinical learning tool that challenges and enhances your skills to identify conditions.

Buy *AFP Photo Quiz* now and challenge yourself anytime, anywhere.



Coming soon for Android.



American Family Physician®

Apple, the Apple logo, iPhone and iPad are trademarks of Apple Inc., registered in the U.S. and other countries. App Store is a service mark of Apple Inc.

