The top POEMs of 2015 consistent with the principles of Choosing Wisely

Roland Grad MDCM MSc CCFP
Herzl Family Practice Centre
Choosing Wisely Canada

Interview with Dr Roland Grad

Roland Grad is a family doctor and researcher at McGill University in Montreal, Que. His research is in the area of knowledge translation, medical education, and continuing professional development, with a focus on how health professionals use research-based information. Here he explains how POEMs (Patient-Oriented Evidence that Matters) could be used to inform the Choosing Wisely Canada (CWC) campaign.

Definitions
Choosing Wisely Canada releases lists of evidence-based recommendations from medical societies, focused on reducing unnecessary diagnostic tests, treatments, and procedures.

POEMs that had the highest ratings with the Canadian Thoracic Society as a way of informing their CWC list. Then, the editor of American Family Physician, the journal of the American Academy of Family Physicians, asked me to write a paper on the POEMs of 2015 that could inform conversations with patients in line with Choosing Wisely in the United States. This is exciting research—to see that national organizations are paying attention to what the “crowd” of physicians is saying. The crowd is telling us, based on POEMs and their practice wisdom, which tests, treatments, or procedures are low value.

What are your thoughts about how this work could go forward?
Faculty/Presenter Disclosure

Relationships with commercial interests:

• **Grants/Research Support:** Canadian Medical Association, Canadian Pharmacists Association
• **Speakers Bureau/Honoraria:** The International Centre for Evidence-based Medicine Canada
Disclosure of Commercial Support

• This program has received no financial support
• This program received in-kind support from the Canadian Medical Association
When it comes to your health, sometimes LESS is more.

Do I really need this test, treatment or procedure?

What are the downsides?

What happens if I do nothing?

Are there simpler, safer options?

ChoosingWiselyCanada.org

Choosing Wisely Canada
Terms and definitions

• POEMs
  •

• Choosing Wisely
  • A campaign to improve patient care by encouraging a conversation between the physician and patient at the point of care about avoiding an unnecessary test or procedure (‘do not do’ lists)

• Unnecessary medical care
  • A diagnostic or treatment service that provides no demonstrable benefit to a patient, based on a review of the evidence.
Choosing Wisely Canada is a campaign to help physicians and patients engage in conversations about unnecessary tests, treatments and procedures.

Confronting Unnecessary Care

This accredited online module reviews the issue of unnecessary care in Canada and describes the resources and clinical guidance available through Choosing Wisely Canada.

LEARN MORE
“Houston, we have a problem ... “

Test ordering for preventive health care among family medicine residents

Daisy Fung MD  Inge Schabort MBChB  Catherine A. MacLean MD MScE MBA  Farhan M. Asrar MD MSc MPH
Ayesha Khory MD  Ben Vandermeer MSc  G. Michael Allan MD

Abstract

Objective  To determine which screening tests family medicine residents order as part of preventive health care.

Design  A cross-sectional survey.

Setting  Alberta and Ontario.
Top POEMs of 2015 Consistent with the Principles of the Choosing Wisely Campaign

ROLAND GRAD, MD, MSc, McGill University, Montreal, Quebec, Canada
MARK H. EBELE, MD, MS, University of Georgia, Athens, Georgia

The authors applied a novel method to identify recent clinical studies that showed results consistent with the principles of the Choosing Wisely campaign. The method, based on crowdsourcing studies known as POEMs (point oriented evidence that matters), involved analyzing POEM ratings submitted by physician members of the Canadian Medical Association in the context of their continuing medical education. In the 251 unique POEMs delivered to the physicians in 2015, an average of 1,284 physician ratings were received per POEM. The authors then identified 1 POEM that ranked highest on a single item in the rating questionnaire—namely, whether the POEM helps redress an overdiagnosis or overtreatment, which is the focus of the Choosing Wisely campaign. The result is a set of POEMs original research that describe interventions that are not superior to other options, are sometimes more expensive, place patients at increased risk of harm. Knowing the bottom line of these studies could help physicians and patients engage in better conversations when making decisions about clinical care. (Am Fam Physician. 2016;94(7):566-5)

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Top POEMs for Choosing Wisely:
Another Tool to Help Physicians Practice Good Medicine

JAY SIWES, MD, Georgetown University Medical Center, Washington, District of Columbia

See related article on page 566 and editorial on page 539.

Regular readers of American Family Physician (AFP) know of our support of the Choosing Wisely campaign, a program designed to help avoid wasteful or unnecessary medical tests, treatments, and procedures.1 More than 70 specialty societies participate in this campaign, contributing more than 400 clinical recommendations—most advising clinicians not to do harm.2 However, some are uncertain about Choosing Wisely3 4 and created a list of primary care–relevant recommendations and a searchable database on our website (http://www.aafp.org/afp/recommendations/search.htm). In many of our articles, we include a table of relevant Choosing Wisely recommendations (for an example, see http://www.aafp.org/afp/2016/07/15/p97.html). If you haven’t explored Choosing Wisely lately, I encourage you to give it a try.

Choosing Wisely is one of several major campaigns combating overtreatment, overdiagnosis, and overutilization.1 In this issue of AFP, we feature our newest addition to this effort: a collection of POEMs consistent with the principles of Choosing Wisely.3 POEMs (point-oriented evidence that matters) are studies that address interventions that improve outcomes that matter to a patient’s health (e.g., morbidity, mortality, quality of life), as opposed to disease-oriented evidence, which is based on surrogate markers that may or may not affect a patient’s well-being (e.g., blood tests, imaging studies, physiologic mechanisms).4 A similar collection of POEMs was published last year, and with this installment, we anticipate publishing an annual list in AFP. Unlike the actual Choosing Wisely recommendations, some of which are based on expert opinion,1 3 the top POEMs are all based on patient-oriented evidence showing improved clinical outcomes. In addition, these POEMs were systematically validated by physicians as helping to avoid unnecessary clinical interventions.

If you’re looking for concise lists of tips to change clinical practice for the better, I encourage you to consult this list of top POEMs for Choosing Wisely, as well as those in the related annual collections: Top 20 Research Studies for Primary Care Physicians.5

Editorials

Of Wise Choices, Evidence That Matters, and Leaving Old Friends Behind

ALLEN F. SHAUGHNESSY, PharmD, MMed Ed
Tufts University School of Medicine, Boston, Massachusetts

See related article on page 566 and editorial on page 539.

Tradition is no longer the bedrock of practice. Better medical research and better delivery of its results make change easier and more necessary. And we have help.

In this issue, Drs. Grad and Ebele point out the consistency between two efforts to foster change in evidence-based practice. Copyright © 2016 Annual Refresher Course for Family Physicians

REFERENCES


Patient-Oriented Evidence that Matters (POEMs)™ Suggest Potential Clinical Topics for the Choosing Wisely™ Campaign

Roland Grad, MDCM, MSc, CCFP, FCFP, Pierre Pluye, MD, PhD,
David Tang, PhD, Michael Shulba, MLIS, David C. Slawson, MD, and
Allen F. Sboughnessy, Pharm D, MMedEd

Objective: We propose a method of identifying clinical topics for campaigns like Choosing Wisely.

Methods: In the context of an ongoing continuing medication education program, we analyzed ratings on every patient-oriented evidence that matters (POEM) synopsis delivered in 2012 and 2013. Given the objective of the Choosing Wisely campaign, we focused this analysis on 1 specific item in the validated questionnaire used by physicians to rate POEMs. This questionnaire item is about “avoiding an unnecessary diagnostic test or treatment.” For each POEM, we calculated frequencies and proportions for this item, then we identified the 20 POEMs that were most commonly associated with this item in 2012 and 2013. Finally, we determined whether the clinical topic of each of these POEMs was mentioned in the Choosing Wisely master list.

Results: In 2012 and 2013 we received 506,809 completed questionnaires (or ratings) linked to 530 POEMs, for an average of 956 ratings per POEM. In 59% of these POEMs (n = 312), the most commonly expected type of health benefit was “avoiding an unnecessary diagnostic test or treatment.” We then identified the top 20 POEMs most commonly associated with this item in each year by ranking all 312 POEMs from the top down. The clinical topic addressed by 29 of these 40 POEMs was not addressed in the Choosing Wisely master list. These topics fell into 3 categories: diagnostic tests, medical interventions, and surgical interventions.

Conclusion: “Big data” can identify clinical topics relevant to campaigns such as Choosing Wisely. This process represents a new way to inform the expert panel approach. (J Am Board Fam Med 2015;28:184–189.)

Keywords: Continuing Medical Education, Email, General Practice, Primary Health Care, Quality of Health Care
‘POEMs’ Reveal Candidate Clinical Topics for the Choosing Wisely Campaign

Roland Grad MD MSc • Sarah Ousalem • David Tang PhD • Pierre Pluye MD PhD

1. Daily InfoPOEM

2. The crowd (doctors)

3. IAM questionnaire
(with 3 types of patient benefit)

4. Outcome: As voted by the crowd
Top POEMs of 2014 that suggest clinical topics for Choosing Wisely™

Clinical Question / POEM Title

Arteriotomy in coronary artery bypass grafting: who should have sternotomy? (CABG) vs. minimally invasive direct coronary artery bypass (MIDCAB) for single-vessel disease

Isolated bilateral subclavian artery injury following trauma

Does routine sedation and analgesia improve outcomes in patients who undergo major noncardiac surgery?

Does checking for tracheomalacia in children with stridor improve outcomes?

Does routine screening for cancer using stool DNA test in asymptomatic adults improve outcomes?

Does routine screening for acute stroke in emergency departments improve outcomes?

Is there a role for routine screening for breast cancer in men?

Is a screening mammogram useful in patients over 75 years of age?

Is there a benefit to providing routine screening mammograms to asymptomatic women over 45 years of age?

Is there a benefit to routine screening mammograms in women under 50 years of age?

Is there a benefit to routine screening mammograms in women over 50 years of age?

Is there a benefit to routine screening mammograms in women under 40 years of age?

Is there a benefit to routine screening mammograms in women over 40 years of age?

Is there a benefit to routine screening mammograms in women under 30 years of age?

Is there a benefit to routine screening mammograms in women over 30 years of age?

Is there a benefit to routine screening mammograms in women under 20 years of age?

Is there a benefit to routine screening mammograms in women over 20 years of age?

Is there a benefit to routine screening mammograms in women under 10 years of age?

Is there a benefit to routine screening mammograms in women over 10 years of age?

Is there a benefit to routine screening mammograms in women under 5 years of age?

Is there a benefit to routine screening mammograms in women over 5 years of age?

Is there a benefit to routine screening mammograms in women under 2 years of age?

Is there a benefit to routine screening mammograms in women over 2 years of age?

Is there a benefit to routine screening mammograms in women under 1 year of age?

Is there a benefit to routine screening mammograms in women over 1 year of age?

Is there a benefit to routine screening mammograms in women under 6 months of age?

Is there a benefit to routine screening mammograms in women over 6 months of age?

Is there a benefit to routine screening mammograms in women under 3 months of age?

Is there a benefit to routine screening mammograms in women over 3 months of age?

Is there a benefit to routine screening mammograms in women under 1 month of age?

Is there a benefit to routine screening mammograms in women over 1 month of age?

Is there a benefit to routine screening mammograms in women under 1 week of age?

Is there a benefit to routine screening mammograms in women over 1 week of age?

Is there a benefit to routine screening mammograms in women under 1 day of age?

Is there a benefit to routine screening mammograms in women over 1 day of age?

Is there a benefit to routine screening mammograms in women under 1 hour of age?

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Is there a benefit to routine screening mammograms in women under 1 minute of age?

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Is there a benefit to routine screening mammograms in women under 1 second of age?

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Is there a benefit to routine screening mammograms in women under 1 millisecond of age?

Is there a benefit to routine screening mammograms in women over 1 millisecond of age?

Is there a benefit to routine screening mammograms in women under 1 microsecond of age?

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Is there a benefit to routine screening mammograms in women under 1 picosecond of age?

Is there a benefit to routine screening mammograms in women over 1 picosecond of age?

Is there a benefit to routine screening mammograms in women under 1 femtosecond of age?

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Is there a benefit to routine screening mammograms in women over 1 attosecond of age?

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Is there a benefit to routine screening mammograms in women over 1 zeptosecond of age?

Is there a benefit to routine screening mammograms in women under 1 yoctosecond of age?

Is there a benefit to routine screening mammograms in women over 1 yoctosecond of age?

Is there a benefit to routine screening mammograms in women under 1 x 10^(-24) of age?

Is there a benefit to routine screening mammograms in women over 1 x 10^(-24) of age?

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Musculoskeletal Disease
- Meniscal Tears
- Drug therapy of low back pain
- Spinal Stenosis

Cardiovascular Disease
- Dual Antiplatelet Therapy After Drug-Eluting Stents
- Screening for Coronary Artery Disease
- Anticoagulation and Venous Thromboembolism
- Bridging Anticoagulation
- Screening for Occult Malignancy in the Context of Venous Thromboembolism

Miscellaneous
- Vitamin D
Which one of the following statements about the treatment of knee osteoarthritis is correct? (pick one)

- A. Arthroscopy is not beneficial in middle-aged patients with a meniscal tear and little or no osteoarthritis.
- B. Platelet-rich plasma injections are superior to hyaluronic acid for knee degenerative joint disease.
- C. Steroid injections improve response to exercise therapy.
- D. Arthroscopic surgery is the first-line treatment for meniscal tears.
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- C. Steroid injections improve response to exercise therapy.
- D. Arthroscopic surgery is the first-line treatment for meniscal tears.
Arthroscopic surgery for degenerative knee: systematic review and meta-analysis of benefits and harms

J B Thorlund,1 C B Juhl,1,2 E M Roos,1 L S Lohmander1,3,4

Arthroscopic surgery for degenerative tears of the meniscus: a systematic review and meta-analysis

Moin Khan MD, Nathan Evaniew MD, Asheesh Bedi MD, Olufemi R. Ayeni MD MSc, Mohit Bhandari MD PhD
PICO

- **Patient population**
  - Middle aged and older patients with knee pain with or without osteoarthritis
  - Patients with concomitant ACL injuries were excluded

- **Interventions**
  - Arthroscopic surgery involving partial meniscectomy, debridement, or both
  - Nonsurgical interventions such as sham surgery (including sham lavage), exercise, or medical treatment

- **Comparison**

- **Outcomes (3 to 24 months)**
  - Benefits: patient-reported pain and physical function from RCTS
  - Harms: adverse events from RCTs and cohort studies
Primary analysis: pain

• Using data pooled from all trials: a statistically significant but **clinically unimportant effect of arthroscopy on pain**, equivalent to 2.4 points on a 100 point scale

• A pain benefit was observed only in the first six months; after six months, no pain benefit from arthroscopic surgery was apparent
Which one of the following statements about recent studies on cardiovascular disease is correct? (pick one)

- A. In patients with drug-eluting stents, dual-antiplatelet therapy for more than one year provides additional benefit with little additional risk of bleeding.
- B. Long-term treatment with beta blockers after myocardial infarction is recommended to reduce mortality.
- C. Sitagliptin (Januvia) should be prescribed for patients with type 2 diabetes mellitus to reduce the risk of cardiovascular events.
- D. Screening for coronary artery disease using computed tomography angiography is not beneficial in asymptomatic adults with diabetes.
Which one of the following statements about recent studies on cardiovascular disease is correct? (pick one)

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- D. Screening for coronary artery disease using computed tomography angiography is not beneficial in asymptomatic adults with diabetes.
Effect of Screening for Coronary Artery Disease Using CT Angiography on Mortality and Cardiac Events in High-Risk Patients With Diabetes: The FACTOR-64 Randomized Clinical Trial

JB Muhlestein and coauthors

Effect of Screening for Coronary Artery Disease Using CT Angiography on Mortality and Cardiac Events in High-Risk Patients With Diabetes: The FACTOR-64 Randomized Clinical Trial

Published online November 17, 2014

Available at jama.com and on The JAMA Network Reader at mobile.jamanetwork.com
PICO

• Patient population

• Interventions

• Comparison

• Outcomes
Study Population

• **Inclusion Criteria**
  
  – Men: \( \geq 50 \) years old with at least 3 years history of DM or \( \geq 40 \) years old with at least 5 years history of DM
  
  – Women: \( \geq 55 \) years old with at least 3 years history of DM or \( \geq 45 \) years old with at least 5 years history of DM
  
  – Use of antidiabetic medication for at least 1 year

• **Major Exclusions**
  
  – Documented ASCVD (known CAD, history of MI, angina, CVA, TIA, cerebral or peripheral revascularization)
  
  – Limited life expectancy or pertinent co-morbidity
  
  – Unwilling or unable to provide consent
Diagnostic Testing in the CCTA Group

- Coronary arteriography and coronary artery calcium (CAC) scanning performed on a Toshiba Aquillon 64 CT scanner
  - Only a CAC score obtained if creatinine $\geq 2.0$ mg/dl (men) or $\geq 1.8$ mg/dL (women), contrast allergy or heart rate $>60$ bpm despite beta-blockade

- Scan results divided into 4 categories of severity
  - **Severe stenosis:** $\geq 70\%$ in at least one proximal coronary artery
    - Recommended to undergo diagnostic coronary angiography
  - **Moderate stenosis:** Any $50\%$ - $69\%$ stenosis or CAC score $>100$
    - Recommended to undergo stress cardiac imaging followed by coronary angiography if clinically relevant myocardial ischemia detected
  - **Mild stenosis:** Any $10\%$ - $49\%$ stenosis or CAC score $>10$ - $100$
  - **Normal:** $<10\%$ stenosis everywhere and CAC score $\leq 10$

No further imaging studies recommended
Medical Management

• Standard optimal diabetes care
  – Recommended for all controls and CCTA patients with normal coronary artery scans
  – **Targets:** HgA1C<7.0%, LDL<100 mg/dL, systolic BP<130 mm Hg

• Aggressive risk factor reduction care
  – Recommended for all CCTA patients with at least some documented CAD
  – Emphasize diet and exercise
  – **Targets:** LDL<70 mg/dL, HDL>50 mg/dL, TG<150 mg/dL, HgA1C<6%, systolic BP<120 mm Hg
Enrollment and Follow-up

- Enrollment from 2007 - 2013
- Patients followed until August 1, 2014 (4.0±1.7 years)
- Endpoints (Outcomes)
  - **Primary endpoint:** composite of all-cause mortality, non-fatal MI, and hospitalization for unstable angina
  - **Secondary endpoints (n=6)**
    - CV death alone and together with MI and unstable angina
    - CAD death alone and together with MI and unstable angina
    - Hospitalization for heart failure
    - Rise serum creatinine by ≥0.5 mg/dL at 30 days and persisting at one year
    - Stroke or carotid revascularization procedure
    - Change in HbA1c, blood pressure, lipids
Study Flow

Electronically screened: 14,208

Approached for enrollment: 4,613
Letters with follow-up phone calls: 3,731
Other methods for approach: 882

900 Randomized

3,713 excluded
2,474 not on diabetic medications
1,233 met other exclusion criteria
   (too short of diabetes diagnosis, other co-morbidities, unable to be contacted)
   6 refused participation

448 Randomized to be not scanned
1 withdrew immediately following randomization, excluded from further analyses
447 No CCTA Group*

452 Randomized to be scanned
452 CCTA Group*

*Primary Analysis
## Selected Baseline Characteristics

<table>
<thead>
<tr>
<th>Baseline Characteristics</th>
<th>No CCTA (n = 447)</th>
<th>CCTA (n = 452)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, mean (SD), y</td>
<td>61.6 (8.35)</td>
<td>61.5 (7.94)</td>
</tr>
<tr>
<td>Male, No. (%)</td>
<td>235 (52.6)</td>
<td>234 (51.8)</td>
</tr>
<tr>
<td>Body Mass Index, mean (SD)</td>
<td>33.4 (7.05)</td>
<td>32.9 (6.76)</td>
</tr>
<tr>
<td>Smoking History or Current, No. (%)</td>
<td>68 (15.4)</td>
<td>75 (16.6)</td>
</tr>
<tr>
<td>DM duration, mean (SD), y</td>
<td>13.5 (10.72)</td>
<td>12.3 (9.23)</td>
</tr>
<tr>
<td>DM Type, No. (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type I</td>
<td>52 (11.6)</td>
<td>56 (12.4)</td>
</tr>
<tr>
<td>Type II</td>
<td>395 (88.4)</td>
<td>396 (87.6)</td>
</tr>
<tr>
<td>DM Medications, No. (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Insulin Agent Only</td>
<td>255 (57.1)</td>
<td>257 (57.0)</td>
</tr>
<tr>
<td>Insulin Only</td>
<td>95 (21.2)</td>
<td>84 (18.6)</td>
</tr>
<tr>
<td>Both Non-Insulin Agent and Insulin</td>
<td>97 (21.7)</td>
<td>110 (24.4)</td>
</tr>
<tr>
<td>Statin use, No. (%)</td>
<td>322 (72.0)</td>
<td>346 (76.5)</td>
</tr>
<tr>
<td>Aspirin use, No. (%)</td>
<td>181 (40.5)</td>
<td>193 (42.7)</td>
</tr>
<tr>
<td>Hemoglobin A1C, mean (SD), %</td>
<td>7.5 (1.41)</td>
<td>7.4 (1.40)</td>
</tr>
<tr>
<td>LDL Cholesterol, mean (SD), mg/dL</td>
<td>87.7 (32.9)</td>
<td>86.3 (29.1)</td>
</tr>
</tbody>
</table>
Primary Endpoint (Death/MI/Unstable Angina)

HR = 0.80 (0.49, 1.32)
Conclusions

• Among asymptomatic patients with type 1 or type 2 diabetes, screening for CAD by CCTA did not reduce the composite rate of all-cause mortality, nonfatal MI, or hospitalization for unstable angina at 4 years despite differential use of coronary interventions and favorable trends in lipids and blood pressure.

• Overall, annual event rates in both control and intervention groups were low (<2%/yr).
  – This may be attributed to the excellent medical management received by all enrollees within Intermountain Healthcare, with baseline levels near or exceeding system targets for HgA1C, LDL-C, and systolic BP.

• These findings do not support CCTA screening in this population.
Which one of the following statements about bridging anticoagulation is correct? (check one)

A. Withholding bridging therapy is associated with an increased risk of venous thromboembolism.

B. Bridging anticoagulation in patients with chronic atrial fibrillation improves outcomes, including a reduced risk of stroke.

C. In patients with nonvalvular atrial fibrillation, bridging anticoagulation is associated with a higher risk of bleeding complications and cardiovascular events.

D. Patients undergoing minor surgeries with lower bleeding risk are most likely to benefit from bridging therapy.
Which one of the following statements about bridging anticoagulation is correct? (check one)

A. Withholding bridging therapy is associated with an increased risk of venous thromboembolism.
B. Bridging anticoagulation in patients with chronic atrial fibrillation improves outcomes, including a reduced risk of stroke.
C. In patients with nonvalvular atrial fibrillation, bridging anticoagulation is associated with a higher risk of bleeding complications and cardiovascular events.
D. Patients undergoing minor surgeries with lower bleeding risk are most likely to benefit from bridging therapy.
Perioperative Bridging Anticoagulation in Patients with Atrial Fibrillation

James D. Douketis, M.D., Alex C. Spyropoulos, M.D., Scott Kaatz, D.O.,
Richard C. Becker, M.D., Joseph A. Caprini, M.D., Andrew S. Dunn, M.D.,
David A. Garcia, M.D., Alan Jacobson, M.D., Amir K. Jaffer, M.D., M.B.A.,
David F. Kong, M.D., Sam Schulman, M.D., Ph.D., Alexander G.G. Turpie, M.B.,
Vic Hasselblad, Ph.D., and Thomas L. Ortel, M.D., Ph.D.,
for the BRIDGE Investigators*
PICO

• Patient population
  18 years or older, Warfarin therapy for ≥3 months, AF or A-flutter demonstrated on ECG, CHADS2 Score ≥1

• Interventions
  • Randomized to LMWH (dalteparin) or Placebo
  • Warfarin stopped 5 days prior to procedure and restarted after the procedure
  • LMWH administered from 3 days prior to procedure and continued for 5-10 days after procedure
  • Treatment continued until INR was 2 or higher on one occasion
  • Patients had follow-up encounters by telephone weekly, with a final encounter 30-37 days after the procedure

• Comparison
  Comparisons are placebo vs. LMWH
  • Arterial Thromboembolism
  • Stroke
  • TIA
  • Systemic Embolism
  • Major bleeding 1.3% vs. 3.2% (P=0.005 for superiority; NNH=50)
Efficacy and safety of paracetamol for spinal pain and osteoarthritis: systematic review and meta-analysis of randomised placebo controlled trials


ABSTRACT

OBJECTIVE
To investigate the efficacy and safety of paracetamol (acetaminophen) in the management of spinal pain and osteoarthritis of the hip or knee.

DESIGN
Systematic review and meta-analysis.

DATA SOURCES
Medline, Embase, AMED, CINAHL, Web of Science, ClinicalTrials.gov, Cochrane Central Register of Controlled Trials, Cochrane Database of Systematic Reviews, Controlled Trials, Current Controlled Trials, Database of Abstracts of Reviews of Effects, Database of Abstracts of Reviews of Effects, and the International Clinical Trials Registry Platform.

RESULTS
Paracetamol was ineffective for reducing pain intensity (weighted mean difference $-0.5$, 95% confidence interval $-2.9$ to $1.9$) and disability ($0.4$, $-1.7$ to $2.5$) or improving quality of life ($0.4$, $-0.9$ to $1.7$) in the short term in people with low back pain. For hip or knee osteoarthritis there was “high quality” evidence that paracetamol provides a significant, although not clinically important, effect on pain ($-3.7$, $-5.5$ to $-1.9$) and disability ($-2.9$, $-4.9$ to $-0.9$) in the short term. The number of patients reporting any adverse event (risk ratio $1.0$, 95%
Naproxen With Cyclobenzaprine, Oxycodone/Acetaminophen, or Placebo for Treating Acute Low Back Pain
A Randomized Clinical Trial

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**Importance** Low back pain (LBP) is responsible for more than 2.5 million visits to US emergency departments (EDs) annually. These patients are usually treated with nonsteroidal anti-inflammatory drugs, acetaminophen, opioids, or skeletal muscle relaxants, often in combination.

**Objective** To compare functional outcomes and pain at 1 week and 3 months after an ED visit for acute LBP among patients randomized to a 10-day course of (1) naproxen + placebo; (2) naproxen + cyclobenzaprine; or (3) naproxen + oxycodone/acetaminophen.

Supplemental content at jama.com
CME Quiz at jamanetworkcme.com and CME Questions page 1640
What leads family doctors to provide care that will confer little or no benefit to patients?

1. Fear of litigation
2. Patient demand
3. Clinical habits (routines)
4. Lack of knowledge
5. Uncertainty e.g. about prognosis