

Top POEMs of 2018

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Top 20 Research Studies of 2017 for Primary Care Physicians

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Based on systematic surveillance of more than 150 medical journals, 247 studies met criteria as POEMs (patient-oriented evidence that matters) in 2017. Members of the Canadian Medical Association identified 28 of these POEMs as most relevant to practice. This article reviews the clinical questions and bottom-line lessons from these studies. Blood pressure should be measured after a period of rest, using bare arms, and antihypertensive treatment is more effective when treatment starts at a lower blood pressure than when treatment starts at a higher blood pressure. Home-based blood pressure monitoring is as accurate as office-based monitoring. Blood pressure monitoring in patients with type 2 diabetes does not reduce cardiovascular events in adults 65 years or older. Statins do not reduce the risk of infection for common outpatient site procedures, and the preferred approach to managing respiratory tract infections is unclear. Most patients have glucose monitoring in type 2 diabetes mellitus, and trying to achieve an A1C target level of 6.5% rather than 7.0% does not improve outcomes and may be harmful. Smoking and glucose and A1C levels have limited accuracy for identifying glucose intolerance, and patients 65 years and older with hyperstimulating hormone levels between 4.4 and 5.2 mIU/L may not benefit from treatment before initiating treatment. Calcium and parathyroid hormone are not effective for acute or chronic low back pain, even in patients with vertebrae. Physical therapy does not provide any additional benefit over usual care in patients with acute neck pain, and continuation of physical therapy for longer than 6 weeks is not effective and may delay discharge. A new question concerning low-risk and high-risk patients in other studies is being studied. We continued to find no benefit to prostate cancer screening, and clinicians need to be thoughtful about how they discuss recommendations to stop screening for cancer in older patients. Family physicians, residents, and students should consider roles of adverse events, and continue to provide strong pressure to patients with obstructive sleep apnea does not reduce the risk of cardiovascular events. *Am Fam Physician.* 2018;97(10):618-628. Copyright © 2018 American Academy of Family Physicians.

POEMS = Patient Oriented Evidence that Matters

- A POEM is:
 - Relevant to primary care, hospital or ED practice
 - Demonstrate an improvement in patient oriented outcomes
 - Evaluated for validity and bias
 - 7 reviewers, 110 journals → 255 POEMs in 2017
 - CMA members get free subscription to POEMs, and 700 – 2000 rate each one for relevance using a validated tool (IAM)
 - A top 20 POEMs article has been published in *American Family Physician* annually for last 7 years
- The best of the best of the best presented today!**



Where can you get POEMs?

Emailed daily to *Essential Evidence* subscribers:
<http://www.essentialevidenceplus.com> (\$85/yr)

FREE Weekly "POEM of the Week" podcast
 FREE Biweekly "Primary Care Update" podcast

FREE 4-5 monthly in *American Family Physician*

AU/UGA clinical faculty: just email Julie Gaines, our librarian, to get daily POEMs: jkaines@uga.edu

POEMs Research Summaries

Single question is useful for identifying acute mountain sickness in travelers at high altitude

Clinical Question: How accurate are symptoms used in identifying high altitude sickness in acute mountain sickness?

Bottom Line: Three different symptoms used to identify acute mountain sickness (AMS) are not accurate for identifying acute mountain sickness (AMS). However, the Denver Altitude Questionnaire (DAQ) is the most accurate tool for identifying AMS in travelers at high altitude.

Reference: <https://doi.org/10.1001/jama.2018.10000> | <https://doi.org/10.1001/jama.2018.10000>

Study Design: Systematic review

Funding/Institution: National Institutes of Health (NIH)

Abstract: (omitted)

Keywords: (omitted)

Podcasts - Science & Medicine - Mark Ebell and Michael Wilkes

POEM of the Week Podcast
 Mark Ebell and Michael Wilkes

From the Provider

Each week, Dr. Mark Ebell, POEMs Editor, joins Dr. Michael Wilkes, NPR correspondent and Vice-Dean of the UC-Davis Medical School, for a five minute discussion about an important recent medical study reviewed by the POEMs editors. POEMs provide condensed reviews of studies that could affect a clinician's practice, and the discussion in the podcast provides additional depth and insight into the issue covered by the POEMs snippets. More about POEMs and its companion open-access journal, *Essential Evidence Plus*, at www.essentialevidenceplus.com.

Episode	Released	Description	Popularity	Price
Episode 447: Aspirin alone may be sufficient protection...	Jan 1, 2019	Dr. Ebell and Dr. Wilkes discuss th...	4	Set
Episode 448: Sometimes our worst choices turn good...	Dec 31, 2018	Dr. Ebell and Dr. Wilkes discuss th...	4	Set
Episode 449: Statins ineffective for primary prevention...	Dec 26, 2018	Dr. Ebell and Dr. Wilkes discuss th...	4	Set
Episode 444: Lorazepam is safe, but only moderately effect...	Dec 10, 2018	Dr. Ebell and Dr. Wilkes discuss th...	4	Set
Episode 443: Olanzapine, with no evidence, suggests an...	Dec 10, 2018	Dr. Ebell and Dr. Wilkes discuss th...	4	Set
Episode 442: Calcitonin and paricalcitol not effective...	Dec 10, 2018	Dr. Ebell and Dr. Wilkes discuss th...	4	Set
Episode 441: LEVITIN 2018: HIV testing alone every 3...	Nov 20, 2018	Dr. Ebell and Dr. Wilkes discuss th...	4	Set
Episode 440: Aspirin + High-dose PPI prevents death...	Nov 19, 2018	Dr. Ebell and Dr. Wilkes discuss th...	4	Set
Episode 439: Discontinuation surgery vs more effective...	Nov 19, 2018	Dr. Ebell and Dr. Wilkes discuss th...	4	Set
Episode 438: Chronic sinusitis: saline irrigation helps...	Nov 19, 2018	Dr. Ebell and Dr. Wilkes discuss th...	4	Set
Episode 437: Lower systolic BP during antihypertensive...	Oct 19, 2018	Dr. Ebell and Dr. Wilkes discuss th...	4	Set
Episode 436: What are the most effective drug therapies...	Oct 19, 2018	Dr. Ebell and Dr. Wilkes discuss th...	4	Set
Episode 435: Signaling language in chart notes count...	Oct 19, 2018	Dr. Ebell and Dr. Wilkes discuss th...	4	Set
Episode 434: MRI results: fewer episodes of severe hapt...	Oct 19, 2018	Dr. Ebell and Dr. Wilkes discuss th...	4	Set
Episode 433: Modernized findings are common with chro...	Sep 26, 2018	Dr. Ebell and Dr. Wilkes discuss th...	4	Set
Episode 432: Metformin treatment improves outco...	Sep 10, 2018	Dr. Ebell and Dr. Wilkes discuss th...	4	Set

Podcasts - Science & Medicine - Mark Ebell and friends

Primary Care Update
 Mark Ebell and friends

From the Provider

Three monthly medical primary care physicians discuss the latest in primary care medicine. Join Mark Ebell MD, John Hickner MD, Henry Barry MD, and others for this brief and needs update on evidence-based primary care.

NAME	RELEASED	DESCRIPTION	POPULARITY	PRICE
1 Primary Care Update: Episode 9	Jan 4, 2019	This week: how does the yield for...	4	Set
2 Primary Care Update: Episode 8, 12/20/18	Dec 20, 2018	This week we talk about the resu...	4	Set
3 Primary Care Update: Episode 7	Dec 9, 2018	Topics: fluids to prevent UTI, abse...	4	Set
4 Primary Care Update: Episode 6	Nov 20, 2018	This week's topics: whether surge...	4	Set
5 Primary Care Update: Episode 5	Nov 8, 2018	We discuss recent studies on: ant...	4	Set
6 Primary Care Update: Episode 4	Oct 23, 2018	Mark, John and Henry talk about...	4	Set
7 Primary Care Update: Episode 3	Oct 12, 2018	Mark, John and Henry discuss th...	4	Set
8 Primary Care Update: Episode 2	Sep 14, 2018	Today's topics include anticoagul...	4	Set
9 Primary Care Update: Episode 1	Aug 24, 2018	Today's topics are new basal insu...	4	Set

20 studies

Between 1500 and 2000 Canadian physicians rated each of 250 POEMs for relevance to their practice. They selected:

- Lots of blood pressure studies (6)
- Infectious disease (4)
- Pain management (3)
- Behavioral medicine (3)
- Miscellaneous (4)

POEM #1: A single blood pressure measurement is often falsely elevated – critical to not rely on it

Question: Is a single office blood pressure measurement reliable to assess hypertension?

The answer is: no! They took 1000 consecutive primary care patients and measured BP after 5 minutes of rest, and then 4 more times 2 minutes apart. They compared initial BP with mean of next 4 BPs.

The first systolic BP was 10+ mm higher in 24%, and 5+ mm higher in 46%. The first diastolic BP was 5+ mm higher in 22% of patients. Hypertension would have been erroneously diagnosed by relying on the initial measure in 12% of patients

(Heart 2018; 104(14): 1173)

More on measuring BP

POEM #2: The 2nd blood pressure checked by a primary care doc was an average of 8 mm lower than initial; 1/3 went from over 140/90 to under 140/90.

• JAMA Intern Med 2018; doi:10.1001/jamainternmed.2018.0315

POEM #3: A large registry of hypertensive patients in Spain with both ambulatory and office BPs found that 24 hour ambulatory blood pressure measures were a mean of 19/11 mm Hg lower than single office measures. Ambulatory was also a better predictor of mortality.

• N Engl J Med 2018; 378: 1509

POEMs #4-6: And the BP target is?

- SPRINT trial: In older (mean 68) non-DM patients with very high 10 year CV risk (> 15%)...BP target of 120 vs 140 led to lower all-cause mortality (NNT = 83 over 3 years) but more hypotension (NNH = 100), more electrolyte abnormality (NNH = 125), and more acute kidney injury (NNH = 67). No difference in ACS, MI or stroke
- ACC/AHA JNC 8 guideline advocated 130/80 for most patients based on SPRINT.
- AAFP and ACP: do not endorse ACC/AHA target of 130/80 and continue to recommend 140/90 for most patients

• POEM #4: SR of 74 randomized trials with over 300k patients comparing drug with placebo or targets. Treating patients with BP > 140/90 reduced mortality. Treating patients who were already at or below 140/90 did not (JAMA IM 2018; 178: 28)

• POEM #5: Caution is advised in aggressive treatment of very old. Dutch study of 570 residents 85+ found association between greater BP lowering and increased mortality. (Age Ageing 2018; 47: 545)

• POEM #6: Commentary in JAMA IM advising a thoughtful and judicious approach, argued for a 140/90 target, and noted that the rest of the world also uses 140/90 after looking at the same data. (JAMA IM 2018; doi:10.1001/jamainternmed.2018.0310)

POEM #6: Opioids vs non-opioids for MSK pain

- Identified 240 patients with mod – severe chronic low back, hip or knee pain for 6 months (mean age 58). Randomized to:
- Opioid group: Immediate release oral opioids → SR oral opioids → transdermal fentanyl if needed. Max dose 100 morphine equivalents
- Non-opioid group: acetaminophen / NSAID → amitriptyline gabapentin adjuvant → topical analgesics → pregabalin, duloxetine, and/or tramadol if needed (only 11%)
- At 12 months no difference in function, and lower pain intensity in non-opioid group. More dropouts due to medication adverse events in opioid group (19% vs 8%). (JAMA 2018; 319: 872)

POEM #8: Ibuprofen + acetaminophen = opioid + acetaminophen for acute severe extremity pain

- Recruited 411 adults in ED with acute extremity pain bad enough to require imaging.
- Randomized to:
 - Ibuprofen 400 + acetaminophen 1000 mg
 - Oxycodone 5 mg + acetaminophen 325 mg
 - Hydrocodone 5 mg + acetaminophen 325 mg
 - Codeine 30 mg + acetaminophen 300 mg
- At 2 hours, pain in all groups dropped 3.5 – 4.3 points, p = ns (1.3 drop was clinically significant). Even in subgroup with 10/10 pain, no difference seen. (JAMA 2017; 318: 1661)

POEM #9: Gabapentin and pregabalin ineffective for low back pain

- Meta-analysis found 9 RCTs (3 crossover) comparing topiramate, pregabalin and gabapentin with placebo. Good quality studies in general (low risk of bias for 8/9).
- Total of 14 comparisons reported, only 2 showing benefit
 - 43 patients randomized to 3600 mg/day gabapentin or placebo
 - 96 patients given 300 mg topiramate daily
 - Other 12 showed no benefit. Where they could pool studies, no benefit.
- No difference in adverse events. So maybe gabapentin 300 bid is a nice placebo? (CMAJ 2018; 190: E786)

POEM #10: Short courses of antibiotics as good as longer for outpatient infections

- Systematic review of systematic reviews (9 SRs with 395 to 5763 patients)
- Children:
 - 5-7 days = 10 days for strep throat
 - 3 days = 5 days for CAP
 - 2+ = 7+ days for otitis media
 - 2-4 = 7-14 days for UTI
- Adults
 - 3-7 = 6-10 days for acute rhinosinusitis
 - 3 = 5+ days for uncomplicated UTI
 - 7-14 = 14-42 for acute pyelo
 - 7 or less = 7+ for community acquired pneumonia
 - 3-6 = 7-14 for UTI in older women

POEM #11: Nothing works for cough

- Nothing.
- At least no good evidence.
- OK, maybe honey works for kids
- Of course, per Carl Sagan, absence of evidence is not evidence of absence (Chest 2017; 152: 1021)

POEM #12: Increased water intake decreases recurrent UTI in women

- I love this study
- They randomized 140 women with 3 or more uncomplicated UTIs to normal water intake or 1.5 liters of additional water per day.
- At one year, those in the extra water group had 1.7 vs. 3.2 UTI's per year
- Downside was two more trips to the loo daily in the extra water group (JAMA IM 2018; 178: 1509)

POEM #13: 5 days nitrofurantoin better than 1 dose fosfomycin with uncomplicated UTI

- Recruited women with uncomplicated UTI and randomized (open label) to:
 - Oral nitrofurantoin 100 mg po tid x 5 days
 - Oral fosfomycin 300 mg once
- Clinical resolution 70% for nitrofurantoin vs 58% fosfomycin, $p < 0.05$, NNT = 8)
- Cost: nitrofurantoin \$20, fosfomycin \$90
- (JAMA 2018; 319:1781)

Behavioral Medicine POEMs

- **POEM #14:** Meta-analysis of prospective cohort studies enrolling patients not depressed at baseline. 49 studies, 266k patients, 1.8 million person-years. Higher levels of activity associated with less incident depression (aOR 0.83, 95% CI 0.79 – 0.88) even after adjusting for age, smoking, BMI, and baseline symptoms. So get moving! (Am J Psychiatry 2018; 175: 631)
- **POEM #15:** Systematic review of 14 observational studies of patients taking z-drugs (i.e. zolpidem, zaleplon, eszopiclone). Odds ratio 1.6 (95% CI 1.4 – 1.9) for fracture among patients taking z-drug compared with control, corresponds to NNH ~ 270. Also trend for more falls. It's not just benzos, avoid z-drugs as well in persons at risk for fracture. (Age Ageing 2018; 47(2): 201-8)
- **POEM #16:** SR of 28 studies with 5233 patients followed for 8 to 52 weeks after randomization to continued or discontinuation of SSRI/SNRI for anxiety disorder. Relapse occurred in 36% switched to placebo, 16% who continued. Glass half full would say 64% did well after discontinuation (BMJ 2017; 358: j3927)

The rest are a mixed bag...

POEM #17: Are insulin analogs any better than NPH?

- Large registry of diabetics taking Lantus or Levimir compared with those taking NPH. Adjusted for demographics, index year, clinician specialty, comorbidities, CKD, liver disease, visual impairment, history of depression, glycemic control, history of severe hypoglycemia, and medication nonadherence.
- Found better glycemic control with NPH (A1C – 0.22%, 95% CI -0.09% to -0.37%) and a trend toward fewer episodes of severe hypoglycemic episodes requiring ED visit (8.8 vs 11.9 per 1000-person years).
- Cost: \$30 for Novolin N vs \$300 for Lantus on GoodRx (JAMA 2018; 320:53)

POEM #18: FIT more acceptable and accurate than gFOBT

- Fecal Immunochemical Tests (FIT) require only a single sample and no dietary restrictions, unlike older guaiac based tests. UK screens for CRC by mailing a fecal test card to everyone over age 60 every 2 years. Found uptake was higher in those randomized to FIT than gFOBT (66% vs 59%). And, the rates of cancer and advanced adenoma detection were 0.24% and 1.29% with the FIT, and only 0.12% and 0.35% with gFOBTs. (Gut 2017; 66)
- Time to clear out your stash of old guaiac based cards and start using FIT. Is it as good as colonoscopy? Not quite, but very close based on current data, with direct comparison RCTs underway worldwide.

POEM #19: Aspirin is not effective for primary prevention

- ARRIVE study recruited 12,546 patients with 10% to 20% CV event risk over next 10 years (moderate / high risk). Randomized them to aspirin 100 mg or placebo and followed for 5 years.
- At 5 years, no difference in composite of MI, stroke, CV death, TIA or unstable angina (4.3% vs 4.5%) and no difference in all cause mortality (2.6%). (Lancet 2018; 392: 1036)
- What's going on here? Difference may be increasing obesity (one recent analysis found aspirin 100 mg only reduced CV events in 70 kg or lighter patients. Also we are doing much better at controlling other CV risk factors, so less for aspirin to do.

POEM #20: And may even be harmful!

- ASPREE study enrolled 19,114 70+ year olds without CV disease to aspirin or placebo and followed them for 5 years.
- They saw HIGHER all cause mortality in aspirin group (1.6 more deaths/1000 person years). This was mostly due to more cancer deaths (3.1% vs 2.3%, HR 1.3, 95% CI 1.1 – 1.6, NNH 125).
- Given multiple other studies found LESS cancer, this should be interpreted cautiously.
- (N Engl J Med 2018; 379: 1519)

Thank you!

