

Top 10 POEMs of 2017

Mark H. Ebell MD, MS

Professor, University of Georgia

Editor, Essential Evidence Plus

<http://www.essentialevidenceplus.com>

Financial Disclosure

- I have no relevant financial disclosures.

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>

Weekly podcast on iTunes

4-5 monthly in *American Family Physician*

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

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

Clinical Question

How accurate are diagnostic tools in identifying high-altitude travelers at risk of acute mountain sickness?

Bottom Line

Three different diagnostic scoring tools have similar accuracy for identifying adults at risk of acute mountain sickness (AMS). One tool, the Clinical Functional Score (CFS), is the simplest to use and consists of asking a single question. ([LOE = 2b](#))

Reference

[Meier D, Collet TH, Locatelli I, et al. Does this patient have acute mountain sickness? The rational clinical examination systematic review. JAMA 2017;318\(18\):1810-1819.](#)

Study Design: Systematic review

Funding: Foundation

Setting: Various (meta-analysis)

Allocation: Unknown

Synopsis

These investigators searched without language restrictions multiple databases including MEDLINE, EMBASE, and bibliographies of relevant articles for studies reporting epidemiological data, evaluations, and comparisons of diagnostic procedures or instruments for AMS. Two investigators independently evaluated potential studies for inclusion criteria and methodologic quality using a standard risk-of-bias scoring tool. Disagreements were resolved by consensus agreement with a third reviewer. The Lake Louise Questionnaire Score (LLQS) is the accepted reference standard for diagnosing AMS, with a score of 5 or higher indicating severe AMS and a corresponding high risk of developing life-threatening high-altitude cerebral edema. The three instruments that could be compared with the LLQS were the Acute Mountain Sickness-Cerebral score (AMS-C), a visual analog scale score quantifying an overall severity of sickness at altitude (VAS[O]), and a clinical functional score (CFS) composed of a single question: "Overall if you had any symptoms, how did they affect your daily activity?" The CFS is scored on an ordinal scale of 0 to 3, indicating none, mild, moderate, and severe (bed rest) reduction in function. A total of 91 articles (N = 66,944 patients) evaluated the prevalence of AMS, reporting that above 2500 m (8200 ft), for every 1000-m increase (3300-ft increase) in altitude, the prevalence of AMS increases by 13% (95% CI 9.5% - 17%). Fourteen studies included head-to-head comparisons of at least 2 different AMS diagnostic tools. Using the LLQS score of 5 or greater as the reference standard, likelihood ratios were similar for the VAS(O), AMS-C, and CFS (positive likelihood ratio range 3.2 - 8.2; and negative likelihood ratio range 0.30 - 0.36). A response of 2 or higher on the single-question CFS (indicating moderate to severe reduction in function) had a pooled sensitivity of 82% and specificity of 67%.

1. Routine self-monitoring of blood glucose not helpful for T2DM not on insulin

Does self blood glucose monitoring improve ANY outcomes in patients with T2DM not using insulin? (Young, 2017)

Previous non-US studies have found that SBGM in patients with T2DM not on insulin does not improve any clinical or glycemic outcomes.

This large US trial from DFM at UNC randomized 450 to no routine monitoring, once daily monitoring, and once daily monitoring enhanced with automated message feedback. After one year, no change in A1C, quality of life, measures of satisfaction, empowerment or hypoglycemic episodes. Let's just say no.

2. Measuring blood pressure, Part 1

Bare arm or sleeved arm?

186 Japanese adults had BP measured on bare arm (129/67), 1 mm thick sleeve (133/73), or rolled up (133/74).

To get the most accurate measure, let patients relax for a few minutes, and then measure their blood pressure on a completely bare arm. Does a difference of 4 mm systolic and 6 mm to 7 mm diastolic matter? It might; especially when deciding whether to add a second or third drug. (Ozone, 2017)

3. Measuring blood pressure, Part 2

Rested BP vs initial BP?

In this Dutch study, 201 patients with suspected white coat hypertension were placed in a quiet room and their BP monitored every 5 minutes by an automated cuff. The mean of the 6 BPs was much lower than their initial “unrested” office reading: 23/12 mm Hg lower.

This is important, as the clinicians report they would be much less likely to intensify treatment if they used these readings.(Bos, 2017)

4. Best approach to treating onychomycosis

Is confirmatory diagnostic testing cost-effective for the management of clinically suspected onychomycosis? (Mikailov, 2017)

It is annoying that many insurance plans require a biopsy of the toenail for onychomycosis. This cost-effectiveness compared a range of strategies, and found that the most cost-effective approach was simply empiric therapy with oral terbinafine (\$10/12 week course, plus \$40 to monitor liver function). The chance of liver injury is estimated to be only 1 in 50,000 to 1 in 120,000, so testing to confirm the diagnosis would cost tens of millions of dollars per case of liver injury avoided.

Note: They also found that if you plan to prescribe the much more expensive topical solution efinaconazole 10% (Jublia), then confirmatory testing with periodic acid-Schiff (PAS) reduces costs.

5. Too intensive blood glucose control not helpful

What is the long-term effect of intensive blood glucose control in patients with type 2 diabetes? (ACCORD, 2016)

The ACCORD study randomized middle-aged patients with T2DM to glycemic targets of < 6.0% vs 7.0% to 7.9%. They found higher cardiovascular mortality in the tight control group in their initial report. This is a long-term follow-up, and found that patients in the intensive treatment group continued to keep their hemoglobin A1c levels lower than in the standard care group; they also continued to be at increased risk of death from a cardiovascular event (HR 1.20, 95% CI 1.03 – 1.39), equivalent to a 20% relative increase in risk. For most of our patients, a target of 7.0% or even 7.5% is perfectly adequate.

6. Gabapentinoids not helpful for back pain

Is pregabalin an effective treatment for the pain of acute or chronic sciatica? (Mathieson, 2017)

This study randomized 207 patients with moderate to severe sciatica, to pregabalin or placebo, and followed them for one year. They concluded that pregabalin does not relieve pain, improve function, or improve any other outcomes in patients with sciatica.

Are gabapentinoids safe and effective in treating patients with chronic low back pain? (Shanthanna, 2017)

This systematic review found 8 small randomized trials, 5 of pregabalin and 3 of gabapentin. The studies were of limited quality, and they found minimal if any improvement in pain. However, the rate of adverse effects is high. The few studies that assessed function found no improvement.

7. Steroid injections not helpful, possibly harmful, for OA

Do intra-articular corticosteroids improve pain and function and decrease cartilage loss in adults with osteoarthritis of the knee? (McAlindon, 2017)

Previous SR found benefit, but studies poorly controlled. This well-done study compared q 3 month knee injections of triamcinolone 40 mg with saline over two years. They found no significant difference in pain and function assessments compared to saline. However, a significant increase in cartilage loss and damage did occur in patients receiving steroids compared to saline based on serial MRI exams.

8. Language matters when discussing ending cancer screening

How do older patients react to the idea of stopping cancer screening toward the end of life? (Schoenborn, 2017)

This was a qualitative study, that interviewed groups of patients about their feeling regarding stopping cancer screening.

When bringing up the idea that cancer screening may no longer be beneficial given a patient's limited life expectancy, using direct language such as "You may not live long enough to benefit from this test" is perceived by many patients as overly harsh. Instead, statements such as "This test will not help you live longer" may be better received. Although not studied, this same approach may be helpful for de-prescribing efforts.

9. CPAP for sleep apnea doesn't prevent CV events

Does positive airway pressure for adults with sleep apnea reduce cardiovascular disease morbidity and mortality? (Yu, 2017)

CPAP is commonly recommended, with the rationale that it reduces the risk of CV events. Two recent trials have refuted that with completely negative results. This was a systematic review that found a total of 10 studies with 7266 adults comparing the effect of CPAP vs usual care on CV outcomes. Their findings: no effect on CV events or mortality

Patients who experience daytime fatigue at baseline benefit from reduced sleepiness and improved physical and mental well-being. Order sleep testing only in patients with signs or symptoms of sleep apnea who also experience clinically significant symptoms of daytime fatigue. No one else will benefit.

10. NSAIDs safety is similar

Is celecoxib as safe as naproxen or ibuprofen with regard to the risk of cardiovascular events? (Nissen, 2016)

This was a large prospective trial (n = 24,222) sponsored by Pfizer (Celebrex). They spin it as favoring Celebrex, but the differences among the drugs are very small: NNH = 250 to 500 for renal harms, NNH = 200 to 250 for iron deficiency anemia of GI origin, and no difference in ulcers.

Importantly, there is no difference among them for the most important outcomes (death from any cause, cardiovascular death, and stroke). If you choose to recommend celecoxib over less-expensive drugs like naproxen or ibuprofen, prescribe the generic version, which is much less expensive, and do not prescribe more than 200 mg daily.

Top 4 Rated Guidelines by CMA readers

Clinical Question	Bottom-Line Answer
ACP: Oral medications for type 2 diabetes mellitus (Qaseem, 2017)	Begin with metformin, adding a second oral treatment (a sulfonylurea, a thiazolidinedione, an SGLT-2 inhibitor, or a DPP-4 inhibitor) if needed for glycemic control. None of the drug classes for second tier therapy are preferred, base the decision on patient preference and cost.
ACP and AAFP: Drug therapy for patients 60+ with hypertension (Qaseem, 2017)	In patients older than 60 years, consider treatment if the SBP is 150 mm Hg or higher, or 140 mm Hg or higher in patients with a history of stroke or TIA and those at high CV risk. This is less aggressive than the AHA guidelines, heavily influenced by the SPRINT trial.
ACP: Non-invasive treatment of acute, subacute and chronic low back pain (Qaseem, 2017)	Start with nondrug approaches for acute and chronic low back pain, given the low evidence of benefit and risks associated with medication. There is evidence of some benefit for a wide variety of nondrug approaches (exercise, rehab, mindfulness, yoga, CBT), which allows patients to choose the one that makes the most sense for them.
ACP: Management of gout (Qaseem, 2017)	Acute gout should be treated with a corticosteroid, a nonsteroidal antiinflammatory drug (NSAID), or low-dose colchicine (1.2 mg, followed by 0.6 mg after 1 hour). Prophylaxis should not be initiated in most patients after a first gout attack or in patients with infrequent attacks. If preventive therapy is started, there is no need for a 24-hour urine monitoring or ongoing uric acid monitoring; just use standard doses of allopurinol or febuxostat.

Thank you!

ebell@uga.edu

