UPDATE IN GIM 2015

ACP Oklahoma Chapter Scientific Session
Samis Education Center, OKC
John Schumann MD, FACP
TOP 10
TOP 10 (sorta)
Sources

**Update**

**Update in General Internal Medicine: Evidence Published in 2014**
Reena H. Hemrajani, MD, and Stephanie A. Call, MD, MSPH

Our goal was to select articles published in 2014 that are likely to help clinicians provide high-value care for ambulatory patients. To that end, we identified articles in ACP JournalWise that were “highest rated” or “most read.” We also searched MEDLINE by using 10 search topics rated highly by a panel of practicing generalists.

We selected one article out of several that compared novel oral anticoagulants with warfarin in the management of atrial fibrillation. We also chose an article that evaluated the role of prolonged cardiac monitoring to detect atrial fibrillation in patients with cryptogenic stroke. In addition, we selected an article that examined how to use venous ultrasonography and D-dimer levels to decide how long to continue anticoagulation for venous thromboembolism. We found that 2014 was a big year for guidelines and reviews, and we chose articles that summarize guidelines about 4 conditions pertinent to generalist practice: obstructive sleep apnea, adult immunization, lung cancer, and hypertension. In addition, we highlight an update to a Cochrane review on the use of antibiotics in acute bronchitis. Finally, we discuss a systematic review that elucidates the value of confirmatory ambulatory blood pressure monitoring in patients with elevated blood pressure in the office.

**Atrial Fibrillation**

In Patients With Atrial Fibrillation of All Ages, Dabigatran Is Cost-Effective Compared With Warfarin


Findings: Investigators compared dabigatran versus warfarin by using incident rates from the RE-LY study for benefits and harms, costs from Medicare payment schedules, and published estimates of quality of life in a model that estimated incremental costs per quality-adjusted life-year gained during a lifetime. Compared with patients receiving warfarin, those receiving dabigatran had fewer ischemic strokes and intracranial hemorrhages but more extracranial hemorrhages and acute myocardial infarctions. The incremental cost per quality-adjusted life-year for dabigatran versus warfarin was less than $100,000, the commonly accepted willingness-to-pay threshold. This finding was true for people who were younger than 75 years of age, 75 years of age or older, and all age groups; it persisted in sensitivity analyses. In all age groups, dabigatran cost less than warfarin for total events and long-term follow-up.

Cautions: Because costs were based on Medicare expenditures, this study did not consider costs borne by patients and caregivers, unreimbursed provider costs, and other societal costs. Although the study used results of a high-quality clinical trial, it required assumptions that increased the uncertainty of its findings.

Implications: In a comparison of dabigatran with warfarin, the tradeoffs between benefit, harm, and cost favor dabigatran for patients in all age groups. This information on groups of patients may be useful when clinicians make decisions about individual patients.

**Patients With Cryptogenic Stroke May Benefit From Prolonged Monitoring to Detect Atrial Fibrillation**


Background: Cryptogenic stroke accounts for 25% of
Sources

- ACP Update in GIM – Annals of Int Med
- ACP Journal Club (Annals)
- JAMA/JAMA Internal Medicine
  - Less is More
- NEJM
- JGIM
- Slow Medicine Updates
- AAFP
  - POEMs: Patient-Oriented Evidence that Matters
  - PURLs (JFP) : Priority Updates from the Research Literature
Updates in Slow Medicine

To subscribe: pcohen@challiance.org
Less is More

Collections

Less Is More
Most recent content is listed first. The collection includes content published from 1998 forward.

Teachable Moment | August 31, 2015
Preoperative Stress Tests—Superfluous Investigations Resulting in Excessive Treatment Delay: A Teachable Moment
Abhinav Shama, MD; James S. Khan, MD, MSc; Kevin R. Bainey, MD, MSc

Research Letter | August 24, 2015
Statin Use in Very Elderly Individuals, 1999-2012
Michael E. Johansen, MD, MS; Lee A. Green, MD, MPH

Perspective | August 24, 2015
An Injudicious Request—Performing a Test That Is Not Indicated
Meghan O'Brien, MD, MBE

Research Letter | August 17, 2015
Urinalysis Orders Among Patients Admitted to the General Medicine Service
Fenny Yin, MD; Alex Kiss, PhD; Jerome A. Leis, MD, MSc
JAMA Intern Med. Published online August 17, 2015. doi:10.1001/jamainternmed.2015.4036
Update 2015 Themes

- Aging
- Cardiovascular Health and Monitoring
- Statins
  - Attempted innovation through technology
- Other Pharmaceuticals
  - Opioids, a public health problem and some new ideas
  - Antimicrobials
- Potpourri
Aging
Cognitive Aging

- JAMA 2015;313(21):2121-2

“Cognitive aging is not easily defined by a clear threshold on cognitive tests because many factors – including culture, occupation, education, environmental context, and health variables (e.g. medications) – influence test performance and norms.”

“For an individual, cognitive performance is best assessed at several points in time.”

- Beware highly technical tasks (new learning)
Aging

• ‘The Grey Tsunami’
  • Since Jan 1, 2010, 10,000 Americans turn 65 EVERY DAY
  • 85 & older rapidly growing sector of the population
  • Along with obesity, must re-think our standard interfaces
    • Hospitals and Nursing homes are dangerous places
    • We need to be as supportive as possible in the home environment
    • Increase in self/home monitoring?
    • Consider “de-prescribing”
Aging – Dementia Care

- In patients with dementia who live in care (nursing) homes, nondrug interventions reduce agitation.
- Systematic Review (Br J Psychiatry)
- Light therapy, music tx, aroma therapy, exercise,
- 32 RCTs, effects “short term,” more study needed
- Impact: ½ of >5M US adults with diagnosed dementia have agitation
Beatitudes

A REPORTER AT LARGE | MAY 20, 2013 ISSUE

THE SENSE OF AN ENDING
An Arizona nursing home offers new ways to care for people with dementia.

BY REBECCA MEAD

Last summer, Frederick C. Hayes was admitted to the advanced-dementia unit at Jewish Home Lifecare, on West 106th Street. It was not an easy arrival. Hayes, a veteran of the Korean War, had been a trial lawyer for five decades. He was tall, and, though he was in his early eighties, he remained
Aging – Delirium Prevention

- Multicomponent non-pharmacologic interventions reduce incident delirium in inpatients
- Meta-analysis JAMA Int Med. 2015;175:512-20
- Early mobilization, mental engagement, hearing aids, eyeglasses, adequate oral hydration, sleep hygiene
- 57% RRR for falls, NNT 15
- 40% RRR for incident delirium NNT 20
- One 2009 study associated incident delirium with 25% 3-month mortality
Aging – “De-prescribing”

- Low SBP associated with greater progression of cognitive decline in older patients with dementia and Mild Cog Imp (among those treated with Anti-HTN meds)
- Prospective cohort study, 2 memory clinics over 3 years (Italy) 172 patients
- JAMA Int Med. 2015;175(4):578-585
- “strict control of SBP may negatively affect cognition”
- Cut back on medication, use ambulatory or home BP monitoring to verify
Aging: is a Low (Normal) BP Dangerous?

- Multiple BP meds (+/- combo agents) in elderly associated with higher mortality in NH residents [PARTAGE Study]
- JAMA Int Med 2015;175(6):989-995
- France, >1000 NH residents, all >80, 2 year follow up
- HR 1.81 for all cause mortality
- These NH patients twice as likely to die within 2 years
- “More study to assess corresponding benefit to risk ratio in this growing population”
Perioperative Testing in Cataract Surgery

- NEJM 2015;372(16):1530-8
- Routine pre-op testing not recommended for patients undergoing cataract surgery
- Neither decreases adverse advents nor improves outcomes
- Medicare retrospective observational cohort (2011)
- 440,000 patients: 53% had at least one pre-op test
- 36% of ophths ordered pre-op testing on 75% of their pts
- Strong assoc with ophthalmologists practice pattern and preference than any other factor
- Conservative estimates $10s of millions
Cardiovascular Health

• Ambulatory BP monitoring predicts CV events
• Ann Int Med 205;162:192-204 (AHRQ funded)
• Systematic review of 11 cohort studies shows that ABPM (and home monitoring) predicts CV events independent of office based BPs
• HRs on CV events 1.16, CV mortality 1.42, stroke 1.40 all-cause mortality 1.13 [at 4 to 13 years of follow up]
• Reasoning: more data points, nocturnal readings,
• Limits: availability, reimbursement
CV health: > self-measurement?

- JAMA 2014;312:799-808
- RCT (TASMIN-SR), UK, 59 Prim Care practices, 555 pts
- Self mgmt program 2-3 one hour training sessions
- Intervention group
  - 143/81 → 128/74
- Control group
  - 144/80 → 138/76
- 81% follow up, goal was change in SBP at 12 months
- Home management ‘safe and effective’ in appropriate pts
CV health: statins

• Too early to comment on PCSK-9 inhibitors
  • [alirocumab (Praluent) FDA approved in HeFH late July 2015]
• Statins do not increase cognitive effects in patients
• J Gen Int Med 2015;30:348-58 (AHRQ funded)
• Meta-analysis of 25 RCTs, >50k total patients
• In patients with or without initial cognitive impairment, statins do not increase risk for adverse cognitive effects
Statins statins statins!

- In palliative care, does stopping statins increase or change the course of mortality?
- *JAMA Int Med* 2015;175:691-700
- RCT cooperative of 15 US Pal Care sites
- 381 patients – ½ continued statin, ½ stopped
- Non-significant increase in time to death 229 days vs 190
- Sig (modest) increase in QOL based on self scoring
- Is the improvement in QOL (> perception of support) merely due to the conversations taking place to explain why stopping the medication makes sense?
One last statin study -- Nephrology

- Peri-procedure high dose statins reduce contrast-induced acute kidney injury after coronary angiography
- Am J Cardiol 2014;114:1295-1302
- Meta-analysis of 12 RCTs, >5000 pts
- Doses of atorvastatin 40/80, rosuvastatin 10/40, simvastatin 40/80 – all also rec’d NAC
- Pooled data RRR of 55% with NNT of 24 (AKI@ 2-5 days)
- Limits—meta-analysis, mechanism unclear but trend seems protective
Nephrology-Tech

- In hosp pts, an e-alert for AKI did not lead to improvement over usual care
- Lancet 2015;385:1966-74
- RCT at UPenn ~2400 pts with AKI mean age 60, 56% M
- E-alert sent via text page to covering provider—detected by computer algorithm vs usual care
- Endpoints: death, dialysis, and max change in Cr
- No significant differences between alerted group and usual care
- 5-6% RRI for death at 7 days, 6-7% dialysis
- Think differently?
Tech -- Prevention

- ‘Invitation’ for flex sig screening reduced CRC and CRC mortality
- JAMA 2014;312:606-15
- RCT in Norway of 100,000 adults ages 55-64
- 10k flex sig letter, 10k + FOBT, 80k ‘usual care’ (no letter)
- RRR: CRC incidence 20% CRC mortality 27%
- NNT 362 (incidence) 884 (CRC death)
- However no significant change in all-cause mortality
Statins → other meds (Opioids)

- ED-initiated buprenorphine treatment led to a slight increase in in engagement w/treatment
- JAMA 2015;313(16):1636-44
- RCT of 329/1200 opioid users (out of >130k) (Yale)
- Arms: referral (usual care), brief intervention, brief intervention + buprenorphine
- Increase in ER based outpt addiction treatment, fewer inpatient stays for addiction tx, less self reported illicit opioid use. No decrease in + urine tests
- Limitations: small effects, single center study
More on Opioids (CDC Data)

Drug overdose death rate (age-adjusted per 100,000 population)

Source: National Vital Statistics System (1)
Note: These rates were adjusted using the direct method and the 2000 standard US population (6).

Prevalence of nonmedical use of prescription pain relievers in the past year among persons aged ≥12 years

Source: National Survey on Drug Use and Health (7)

Kilograms of morphine equivalents of opioid pain relievers sold (per 10,000 population)

Source: Automation of Reports and Consolidated Orders System (8)
Nasal Naloxone – First Responders

How it works
A prescription nasal spray called naloxone, sold under the name Narcan, can counteract the effects of an overdose of heroin or other opioids. Narcan can also be injected.

An overdose
When receptors in the brain are overpowered by an opioid, like heroin, the receptors slow, then stop the body’s ability to breathe.

The reversal
Naloxone has a stronger attraction to the brain’s receptors and displaces the opioids long enough to allow breathing to resume.
Baltimore Public Health
Back to our talk -- Opioids

• Duration of Opioid Action correlated to unintentional overdose
• JAMA Int Med 2015;175(4):608-15
• VA cohort study 2000-2009
• 319 unintentional overdoses
• HR 2.33 of ‘overdose injury’ those on long acting opioids, HR >5(!) in the first two weeks after initiation of treatment
• Authors’ conclusion: favor use of short-acting opioids for at least 2 weeks before considering long-acting
Medications ➔ Antimicrobials

• Neuraminidase inhibitors reduce flu duration by about a day, do not decrease hospitalizations
• Cochrane Database Syst Rev 2014;4:CD008965
• Systematic review (looked at 46 RCTs, FDA data) for purposes here talking only adults
• Oseltamivir and zanamivir: time to first alleviation of symptoms 6 days (vs 7 in controls)
• Conclusion: ‘NIs relieve flu symptoms and reduce symptomatic flu. Oseltamivir does not reduce hospitalizations.’
Antibiotics + Sulfonylureas = bad

- MCR patients on glyburide or glipizide on a fluoroquinolone, TMP-SMX, metronidazole, had increased ER visits and hospital admissions
- JAMA Int Med 2014;174:1605-12
- MCR retrospective cohort study (Texas)
- >60,000 pts > or = 66 years old
- ORs of up to 4 for ER visit or hospitalization (not fluconzaole or moxifloxacin)
- Safer: PCNs, cephalosporins, macrolides, doxycycline, nitrofurantoin, clindamycin
- Commenter: ORs not large—warrants prospective study
More on Antibiotics

- TMP-SMX linked to sudden death in older pts on spironolactone
- CMAJ 2015;187:E138-43
- Case-control study, Canada, 328 cases bet 1994-2011, median age 86, 2/3 women
- Adjusted OR 2.46 for sudden death with TMP-SMX
- Commenter: “findings add to the growing number of studies that stress the importance of considering drug-drug interactions before adding new medications…esp in elderly pts with multiple co-morbid conditions.”
Antibiotics (final)

- No difference in treating uncomplicated skin infections when using clindamycin or TMP-SMX
- NEJM 2015;372:1093-103
- RCT of 4 sites (EDs, UCs), 524 patients
- Comparison of TMP-SMX 800/160 BID vs clindamycin 300mg TID
- Clinical ‘cure’ about 90% in both groups, both with 18% rate of adverse events
- Literature lacks head-to-head trials like this
- Commenter: “Provider preference is probably fine in most settings”—more details needed on co-morbidities
Potpourri

- An Apple a Day?
- VMS: duration of vasomotor symptoms in menopausal women
- Beneficial effect of saunas?
- All of these appeared in JAMA Int Med
An Apple a Day?

- JAMA Int Med 2015;175(5):777-83
- NHANES 2007-8 and 2009-10 looked at 8728 adults
- Dietary survey, 9% ID’ed as ‘apple eaters’ 1/day
- “higher educational attainment and less likely to smoke”
- Adjusted analysis showed no fewer doctor visits, but a small trend toward fewer prescriptions
VMS = VasoMotor Symptoms

- JAMA Int Med 2015;175(4):531-9
- SWAN study—observational study of 3300 women at 7 US sites. 1449 women with frequent VMS (6 or more days during previous two weeks)
- Major finding: median total VMS duration was 7.4 years
- “Frequent VMS last more than 7 years during the menopausal transition for more than half of the women and persisted for 4.5 years after the final menstrual period.”
Saunas

- JAMA Int Med 2015;175(4):542-8
- Strong correlation between sauna use and lower cardiovascular events and all-cause death
- Finland prospective cohort study of 2315 middle aged men
- 20 years (!) of follow up
- Proportional benefit: the more sauna use and/or the longer duration of use, the stronger the benefit
Questions?

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ENDING MEDICAL REVERSAL
IMPROVING OUTCOMES, SAVING LIVES

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