Take 3 – Practical Practice Pointers© February 18, 2019 Edition

Pediatric Immunizations 2019, CPE in Adults, HTN and Dementia

Follow-up – HTN "Mythbusters":

The February 4th Take 3 included a "mythbuster" regarding the use of thiazide diuretics for HTN and stated that "When a thiazide is indicated, chlorthalidone and indapamide are preferred based on their use in the SHEP and ALLHAT studies."

As was pointed out by a colleague (keep that feedback coming!), the fact that HCTZ was not used in the two studies referenced does not mean it is not as effective. As such, it is likely more important to use any indicated first line agent (including HCTZ) to control BP, particularly considering that HCTZ is included in many combination medications, making adherence more likely.

From the CDC and the ACIP

1) Recommended Child and Teen Immunization Schedule 2019

This past week the 2019 Recommended Child and Teen Immunization Schedule was published by the Advisory Committee on Immunization Practices (ACIP) of the CDC and also approved by the AAFP, the AAP, and ACOG. New recommendations include:

Influenza ("old news"):
The intranasal live attenuated influenza vaccine (LAIV/FluMist) is again an option for children 2 years and older. The following children should not receive LAIV:

- Pregnant adolescents;
- Any eligible child on aspirin or other salicylates;
- Children with immune suppression;
- Children 2-4 years old who experienced asthma or wheezing in the past 12 months;
- Children who received influenza antiviral medications < 48 hours before vaccination.

Hepatitis A:
Homelessness has been added as an indication for vaccinating children against Hepatitis A. Additionally, children aged 6-11 months, as well as unvaccinated people aged 12 months or older, should receive the vaccine before traveling internationally.

Hepatitis B:
A change in wording was made in the section on hepatitis B to emphasize the importance that the first dose of the vaccine should be administered to every medically stable infant who weighs 2000 grams or more who is born to a mother who is hepatitis B surface antigen negative.

HPV:
Not a new change, but a reminder that the initiation of the HPV vaccine at ages 9-14 makes a patient eligible for the two-dose series, given 6-12 months apart. Those who start the series at ≥ 15 should receive the three-dose series.

MMR:

The specific recommendation for using measles, mumps, and rubella vaccination in the case of a measles or mumps outbreak now recommends that clinicians seek guidance from local health departments.

Tdap (and DTaP):
Children who receive a Tdap or DTaP at ages 7-10, either inadvertently or as part of a catch-up plan, should also still receive a Tdap dose at 11-12 years old. Also, every pregnant adolescent should receive one dose of Tdap between 27-36 EGA.

Vaccination "catch-up":
The recommendations once again include a very helpful table that outlines the "catch-up" schedule for patients 4 months to 18 years. It should be noted that for many of the vaccines, the number required will depend on the age of the patient, so it will important to reference this table when determining the catch-up schedule.

My Comment:
The process of pediatric immunization administration has become incredibly complex. The good news is that the CDC continues to do a better job of creating many resources to assist busy healthcare teams with this process. The CDC site contains many helpful visual aids, including those suitable to print and hang in the office, links to phone applications that are free to download, parent-friendly vaccine reminder schedules in several languages, and even online "quizzes" that parents or clinicians can complete to determine which vaccines a child may need.

References:
Committee on Infectious Diseases. Recommended Childhood and Adolescent Immunization Schedules: United States, 2019. Pediatrics. February 2019. Link
CDC Immunization Schedule: Link

From the Cochrane Database Review

2) General Health Checks for Adults

The "annual check-up" is a common expectation in many segments of our patient population, and has also been socialized into the expectations of many clinicians as well. The intention of these exams is to detect disease and risk factors for disease with the purpose of reducing morbidity and mortality. This can often include laboratory testing or other screening tests.

Since such screening can lead to the increased use of diagnostic and therapeutic interventions, which can be harmful as well as beneficial, it is important to assess whether these checks do more good than harm, or if they do any good at all. This Cochrane review is the first update of the initial review that was published in 2012.

The literature search included randomized trials comparing health checks with no health checks in adults unselected for disease or risk factors, excluding geriatric (>65) trials. "Health Check" was defined as screening (asymptomatic) for more than one disease or risk factor in more than one organ system.

The authors included 17 trials, 15 of which reported outcome data (251,891 participants). The data analysis indicated that health checks have little or no effect on

total mortality or cancer mortality, and likely little to no effect on cardiovascular mortality. Analysis also indicated little or no effect on fatal and non-fatal ischemic heart disease, and probably have little or no effect on fatal and non-fatal stroke.

The authors concluded that general health checks are unlikely to be beneficial for the parameters defined in the review. They go on to say, *"On the other hand, our review **does not imply that physicians should stop clinically motivated testing and preventive activities,** as such activities may be an important reason why an effect of general health checks has not been shown."*

My Comment:
I reached out to John Epling, MD, one of my FM faculty colleagues and a national expert in evidence-based patient care, for his commentary on this review. John replied: *"At some level, the ability to structure your practice to deliver the highest rates of proven preventive services is what's important. If you can do that with health checks, great! If you can do that with hi-fidelity opportunistic screening combined with population outreach, great! They key is evaluating your system and its capability to deliver. If you're doing health checks, and your population doesn't seem healthier – the key would be to evaluate fidelity, reach, adherence, etc. – not simply assume that health checks don't work.*

For this reason, I think MAWVs are a good idea, because they're stripped down to the stuff they think matters (getting rid of physical exam requirements, e.g.).... They've also provided incentives to both parties involved to enhance reach and adherence."

Reference:
Krogsboll LT, et al. General health checks in adults for reducing morbidity and mortality from disease. Cochrane Database Syst Rev. 2019 Jan 31: Link

From the Literature and the SPRING MIND Trial

3) Intensive Blood Pressure Control to Prevent Dementia?

The results from the Systolic Blood Pressure Intervention Trial Memory and Cognition in Decreased Hypertension (SPRINT MIND) were published online this past week.
The original SPRINT study enrolled over 9,000 cognitively healthy adults (mean age, 68 years) with HTN and at increased risk for CVD who were randomly assigned to undergo intensive lowering of SBP (goal, <120) or standard treatment (goal, <140). The trial was stopped early in 2015 with great fanfare after findings indicated benefit for the primary outcome of decreased CVD events and all-cause mortality in the intensive treatment group, though with increased morbidity from hypotension. This led to the update ACC/AHA recommendations regarding blood pressure targets for persons with HTN. As noted in the February 4th edition of Take 3, for many reasons the AAFP and ACP have not adopted these new guidelines.

The SPRINT MIND study was designed as part of SPRINT, with probable dementia as a primary outcome. Secondary outcomes were mild cognitive impairment (MCI) and the composite of any cognitive impairment, probable dementia, or MCI. The median treatment period was 3.3 years, and total median follow-up was 5.1 years. During follow-up, reduction in all-cause probable dementia with intensive treatment did not occur. There were statistically significant reductions in the secondary outcomes of the

risk for MCI (14.6 vs 18.3 cases per 1000 person-years) and the risk for combined cognitive impairment outcome (20.2 vs 24.1 cases per 1000 person-years).

The authors conclude that among ambulatory adults with HTN, treating to a SBP goal of < 120 compared with a goal of < 140 did not result in a significant reduction in the risk of probable dementia. Because of early study termination and fewer than expected cases of dementia, the study may have been underpowered for this end point.

With regard to the decrease in MCI, in the discussion the authors indicate that *"... some caution should be exercised in interpreting this result, both because MCI was not the primary cognitive outcome of the trial and because it is not clear what this effect may mean for the longer-term incidence of dementia. Although MCI considerably increases the risk of progression to dementia, such progression is not certain and reversion to normal cognition is also possible."*

My Comment:
Sigh .... I wasn't originally planning to cover this study in Take 3, but after being asked about it by two of my patients, realized the importance of doing so. Apparently, the Alzheimer's Association has been playing up this study on their website and in the press as a potential "breakthrough" for preventing Alzheimer's disease, and some of the lead authors have been overplaying the findings as well in interviews with the press.

In my view, the single most important fact anyone needs to know about SPRINT MIND trial is that it did not achieve its primary outcome, which was reducing the incidence of all-cause dementia. This is what the trial was designed to do and failed to do.

While MCI is not something anyone wants, it is not the same as dementia, and in the context of the study, any implication that this intermediate secondary outcome would have eventually led to a successful primary outcome without actually showing it (that is, after all, why research is done) is irresponsible. Additionally, reporting the secondary outcome as a relative risk reduction (19%) rather than actual risk reduction (1.34%) only feeds into the suspicion that they were fishing for positive press for the study. And, unfortunately, the press (including MedScape) took the bait and fed into the "speculative hype" ... thus my patient's outreach to me.

This does not mean that aggressive blood pressure won't help protect the brain, only that this study did not conclusively show this. With the funding from the Alzheimer's Association, more than 7000 of the participants will be followed for an additional 2 years in SPRINT MIND 2.0. Stay tuned for more in the future!

Reference:
The SPRINT MIND Investigators. Effect of Intensive vs Standard Blood Pressure Control on Probable Dementia: A Randomized Clinical Trial. JAMA. 2019;321(6):553-561. Abstract

Feel free to forward Take 3 to your colleagues. Glad to add them to the distribution list.

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