

# In This Issue: On-the-Ground Advances & High-Level Influences

Kurt C. Stange, MD, PhD, Editor

*Ann Fam Med.* 2017;15:102-104. <https://doi.org/10.1370/afm.2061>.

*Conflict of interest:* Kurt Stange has been a member of the National Commission of Prevention Priorities since it began.

**T**his issue of *Annals* conveys new knowledge to support practice- and patient-level improvements in practice, and reveals policy-level factors that constrain or enhance on-the-ground work to improve health.

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## ON-THE-GROUND ADVANCES

The sweet spot between the easy, usual way of measuring blood pressure and the hassle of 24-hour monitoring is investigated by Bos and colleagues.<sup>1</sup> They find that in-office automated blood pressure monitoring over 30 minutes results in a dramatic reduction in the number of patients who meet criteria for treatment intensification. In a related editorial, Green states that routine office blood pressures should no longer be used to diagnose or modify hypertension treatment. He calls for practice-based research and new approaches so that clinicians “get it right” for their patients.<sup>2</sup>

A prospective study of screening for diabetes compares point-of-care glycosylated hemoglobin testing with standard care, and finds a much higher rate of pre-diabetes diagnosis with systematic use of point-of-care glycosylated hemoglobin testing. The authors conclude that glycosylated hemoglobin “may be the most effective method to identify patients unknowingly living in hyperglycemia.”<sup>3</sup>

Elmore et al experiment with offering patients in a large primary care safety net clinic the opportunity to type their visit agendas in the electronic visit note prior to seeing their clinician.<sup>4</sup> Both patients and clinicians find that this improves communication, and most want to continue having patients type their agendas in the future. They conclude that “Enabling patients to type visit agendas may enhance care by engaging patients and giving clinicians an efficient way to prioritize patients’ concerns.”

Having both patients and physicians wash their hands is found by Doyle et al to be a promising approach to assuring high rates of use of this simple, important infection control practice.<sup>5</sup>

In a cluster randomized trial, LaPorte and colleagues find that a brief intervention by general practitioners working with young cannabis users has subtle effects in subgroups, but no overall effect on cannabis consumption.<sup>6</sup>

Parents’ expectations regarding antibiotics for children with acute respiratory infections is evaluated by Hoffmann et al. They find that while most parents recognize potential harms from antibiotics, they overestimate their effect on symptom duration by 5 to 10 times.<sup>7</sup>

The usefulness of antibiotics for children whose eczema appears infected is examined in a clinical trial by Francis et al. They find no added effect of topical or oral antibiotics over topical steroids and emollients.<sup>8</sup>

In a reflective personal essay, Ventres offers an internal blueprint for providing person-centered care. Seven “intentions of practice” help him attend to patients as complex human beings.<sup>9</sup>

Young et al approach patient-centeredness through a different lens. Their essay provides perspectives on the particular challenges of measuring quality in primary medical care.<sup>10</sup>

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## HIGH-LEVEL INFLUENCES

Care coordination across 11 countries is examined by Penm et al.<sup>11</sup> They find that patients are less likely to experience poor care coordination if their primary care physician knows their history well, spends sufficient time with them, involves them in care, and explains things well. Among 11 high income countries, care coordination is poorest in the United States.

Rhodes and colleagues test the hypothesis that the Patient Protection and Affordable Care Act’s expansion of access—now threatened—might overwhelm primary care by increasing access for millions of new patients. In 10 diverse states, by the measure of median wait times for new appointments, there was no evidence of being overwhelmed.<sup>12</sup> Multiple other studies

show that primary care is stretched dangerously thin. This study shows that despite being stretched, primary care has the ability to adapt to meet demands when policy changes bring additional opportunities for service.

In a study of the long-term “imprint” of training, Phillips and colleagues find that the spending pattern of physicians training in high cost vs low cost Hospital Service Areas persists long after training.<sup>13</sup>

An article by authors from the Patient-Centered Outcomes Research Institute (PCORI) shares an Engagement Rubric developed from multiple sources. Building on decades of prior work in participatory research by others, the PCORI Engagement Rubric provides a framework for involving patients and other stakeholders in all phases of research.<sup>14</sup>

We welcome your reflections at <http://www.AnnFamMed.org>.

## GRATITUDE AND TRANSITIONS

The *Annals'* Editorial Advisory Board provides crucial strategic advice about the journal's direction, connections, and the conversations in which we participate. They also provide critical connections to diverse people and ideas served by *Annals*. We would like to thank the following outgoing Board members for their years of guidance and insights:

- Richard Antonelli, MD
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- Ann Louise Kinmonth, MD
- Steve Reid, MD
- Moira Stewart, PhD
- Richard “Mort” Wasserman, MD
- Jack Westfall, MD

We are delighted to welcome four new members to the Board:

- Sarah Burbank, BS, Rush Medical College (student member)
- Alexander Fiks, MD, MSCE, Children's Hospital of Philadelphia and Pediatric Research in Office Settings
- Robert McNellis, MPH, PA, Agency for Health Care Research and Quality
- Sally Okun, RN, MMHS, PatientsLikeMe

Over the past year, the *Annals* team has benefitted greatly from the service of 2 Editorial Fellows who, in

## Thank you, Reviewers and E-letter Contributors!

*Ann Fam Med* 2017;15:103. <https://doi.org/10.1370/afm.2062>.

We would like to extend our thanks to 2 groups who provide invaluable insights to the *Annals of Family Medicine*.

Peer reviewers are key to advancing scholarship and contributing to the quality of a research journal. We are grateful to the individuals who volunteer their time and expertise in this important endeavor. Please see [https://www.annfam.org/sites/default/files/additional\\_assets/PDF%20Documents/PDF/reviewers16.pdf](https://www.annfam.org/sites/default/files/additional_assets/PDF%20Documents/PDF/reviewers16.pdf) for the *Annals'* 2016 peer reviewers.

The *Annals* is also enriched by those who contribute e-letters. In 2016 we posted more than 125 e-letters. Our sincere thanks to those who participated in this stimulating dialogue. To read e-letters, click on the “eLetters” tab on the right-hand side of any article.

addition to learning about the processes of editing and publishing a journal and undertaking special projects, have functioned as editors. We are grateful for their outstanding work with us:

- Alan Adelman, MD, MS
- Michael Johansen, MD

Finally, we are happy to welcome Ahmed Rashid, MBChB, MSc, MRCP as the new *Annals* Editorial Fellow. Ahmed currently is a clinical teaching fellow at the University College of London Medical School and brings clinical, teaching, research, and social media expertise to his work with us.

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## CORRECTION

*Ann Fam Med* 2017;15:104. <https://doi.org/10.1370/afm.2047>.

In Maciosek MV, LaFrance A, Dehmer SP, McGree D, Flottesmesch TJ, Xu Z, Solberg LI. Updated priorities among effective clinical preventive services. *Ann Fam Med*. 2017;15(1):14-22, there is a typo in Table 1. In the 2nd column, for the score 4 row, the range should be 0 to 33,500, not 0 to 3,500. We regret the error.

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ANNALS OF FAMILY MEDICINE  
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**EDITORIALS**  
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**In This Issue: Size Matters**  
*Kurt C. Stange*

**Achieving PCMH Status May Not Be Meaningful for Small Practices**  
*Kelley K. Glancey; James G. Kennedy*

**The Paradox of Size: How Small, Independent Practices Can Thrive in Value-Based Care**  
*Farzad Mostashari*

.....  
**ORIGINAL RESEARCH**  
.....

**Solo and Small Practices: A Vital, Diverse Part of Primary Care**  
*Winston R. Liaw; Anuradha Jetty; Stephen Petterson; Lars E. Peterson; Andrew W. Bazemore*  
Family physicians in solo and small practices outnumber those in larger practices.

**Large Independent Primary Care Medical Groups**  
*Lawrence P. Casalino; Melinda A. Chen; C. Todd Staub; Matthew J. Press; Jayme L. Mendelssohn; John T. Lynch; Yesenia Miranda*  
Large physician-owned groups have the potential to make primary care attractive to physicians and improve patient care.

**Primary Care Physician Panel Size and Quality of Care: A Population-Based Study in Ontario, Canada**  
*Simone Dahroug; William Hogg; Jaime Younger; Elizabeth Muggah; Grant Russell; Richard H. Glazier*  
In Ontario, larger patient panel sizes do not decrease quality of care, but cancer screening rates are slightly lower.

**Willingness to Exchange Health Information via Mobile Devices: Findings From a Population-Based Survey**  
*Katrina J. Serrano; Mandi Yu; William T. Riley; Vaishali Patel; Penelope Hughes; Kathryn Marchesini; Audie A. Atienza*  
Willingness to exchange health information via mobile devices varies with the sensitivity of the

# It is Time to Change How We Measure Blood Pressures in the Office

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*Ann Fam Med* 2017;15:105-106. <https://doi.org/10.1370/afm.2056>.

For a typical patient in my practice with Stage I hypertension and 1 or more other cardiovascular risk factors, the number needed to treat (NNT) for 5 years to prevent a death, acute coronary event, stroke, heart failure, or renal failure is only 11, and patients at higher risk (especially those with known coronary or renal disease) benefit even more.<sup>1,2</sup> With such a large benefit for outcomes that matter so much to patients, and a condition so many patients have, treating hypertension properly is clearly one of the most important things we do in family medicine.

We have to measure blood pressure accurately to treat it properly. In practice that's always been a problem. Our evidence base for hypertension treatment is clinical trials that used standardized office blood pressure (SOBP) measurement. SOBP requires the patient be seated at rest for 5 minutes, with feet on the floor, back supported, and arm supported at mid-chest height. When giving continuing medical education talks, I find that describing SOBP and asking the audience, "Is it always done that way in your practice?" reliably produces laughter.

Worse, even when done properly, SOBP is neither especially consistent and repeatable<sup>3</sup> nor the best predictor of outcomes.<sup>4</sup> White-coat hypertension is common, and can mislead us into overtreating blood pressure.

Is that bad? Some believe that white-coat hypertension, although less dangerous than sustained hypertension, still leads to more adverse outcomes than normotension and thus does merit treatment.<sup>5,6</sup>

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*Conflicts of interest: author reports none.*

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Franklin et al<sup>7</sup>, however, recently published a more careful analysis demonstrating that when age and risk are properly matched, white-coat hypertension patients do not have worse outcomes than similar normotensive patients. Overdiagnosing hypertension can have costly financial and social consequences for patients, and overtreatment imposes annoying burden (and cost) even on those who have hypertension. Nor can we assume overtreatment is medically harmless. Overtreatment is essentially unknowingly treating to a more aggressive than standard level of blood pressure reduction, and the SPRINT trial<sup>8</sup> demonstrated a substantial rate of serious adverse events from doing so. Those adverse events may be worth risking for the high-risk patients who meet the inclusion criteria for SPRINT, but imposing the harms of overtreatment on low-risk patients—or those who do not even have hypertension at all—is unjustifiable.

So how do we avoid overtreatment? The gold standard is 24-hour ambulatory blood pressure monitoring. While it certainly has a place, however, it is somewhat costly and cumbersome even for initial diagnosis. For routine monitoring it would be quite impractical. Home monitoring can be very useful for those patients motivated to do it reliably, but what about everyone else?

Fortunately, over the last 15 years or so a significant body of evidence has emerged in primary care practices on automated office blood pressures collected with patients sitting undisturbed 6 times over 5 to 10 minutes (AOBP)<sup>4,9,10</sup> or every 5 minutes for 30 minutes (OBP30).<sup>3,11</sup> AOBP and OBP30 are superior to routine office blood pressure measurement and to SOBP, closely approximating (for daytime pressures, at least) continuous ambulatory monitoring. Both methods could allow us to avoid overdiagnosis and overtreatment. Do they, in practice?

In this issue, Bos & Buis<sup>12</sup> take the next necessary step. They provide evidence that treatment decisions change for a significant number of patients when OBP30 is used, compared to routine office blood pressures. At

this point the evidence seems clear: routine office blood pressures, and even SOBP, should no longer be used to diagnose hypertension nor to adjust treatment.

So what are the implications for practice change? Aside from the obvious equipment needs, we will need to change our thinking on diagnosis and treatment thresholds, choose a method, and implement our choice properly. A well-done practice-based research network study comparing AOBP and OBP30 is an important first step. Since SPRINT used an abbreviated AOBP, with just 3 measurements, adding that to the comparison would be valuable. We need to know whether AOBP or abbreviated AOBP, done in a few minutes, are just as good as a 30-minute protocol, or if there is a convenience/accuracy tradeoff we need to consider.

We also will need to rethink our thresholds. The threshold for Stage 1 hypertension of 140/90 is drawn from studies using SOBP. Home and continuous ambulatory blood pressures run lower, and as AOBP and OBP30 closely approximate daytime ambulatory pressures, using 140/90 would result in underdiagnosis and undertreatment. Myers et al<sup>13</sup> have provided observational evidence based on patient-oriented outcomes for 135/85, at least for older adults. Replication and extension to younger populations, and to patients with higher risk profiles, is needed. Ideally the evidence for practice should come from practice—again suggesting that practice-based research networks are the best laboratories.

Changing how we do things in our offices may be a challenge too. Both AOBP (whether standard or abbreviated) and OBP30 require setting a patient up and then leaving them undisturbed while the measurements are taken. If we are to avoid overdiagnosing and overtreatment due to the white-coat effect, we “white coats” need to stay out of the room! (Taking off the coat won’t fool anyone’s sympathetic nervous system, either.) For some practices that will be easy, but for some of us it will mean at least changing our routines, and sometimes even rearranging our offices. Getting it right will be a good use for our teams’ quality improvement skills. Because hypertension treatment matters so much to so many, we owe it to our patients to get it right.

To read or post commentaries in response to this article, see it online at <http://www.annfammed.org/content/15/2/105>.

**Key words:** hypertension; blood pressure determination; white coat hypertension; practice patterns, physicians’

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