

EDITORS' NOTE

Research to Improve Clinical Care in Family Medicine: Big Data, Telehealth, Artificial Intelligence, and More

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This issue highlights changes in medical care delivery since the start of the COVID-19 pandemic and features research to advance the delivery of primary care. Several articles report on the effectiveness of telehealth, including its use for hospital follow-up, medication abortion, management of diabetes, and as a potential tool for reducing health disparities. Other articles detail innovations in clinical practice, from the use of artificial intelligence and machine learning to a validated simple risk score that can support outpatient triage decisions for patients with COVID-19. Notably one article reports the impact of a voluntary program using scribes in a large health system on physician documentation behaviors and performance. One article addresses the wage gap between early-career female and male family physicians. Several articles report on inappropriate testing for common health problems; are you following recommendations for ordering Pulmonary Function Tests, mt-sDNA for colon cancer screening, and HIV testing? (J Am Board Fam Med 2024;37:161–164.)

What Has the COVID Pandemic Taught Us?

The full brute force of the pandemic may be gone, but COVID-19 catalyzed lasting change for many entrenched norms of patient care.

The pandemic forced changes in health care delivery, including the increased use of telehealth. In a large dataset from the Epic electronic medical record, Zain et al¹ found no difference in rehospitalization for telehealth versus in-person follow-up after initial hospitalization. It is reassuring that clinicians and their patients were able to appropriately choose the follow-up setting. Bayliss and colleagues² also investigated self-management among persons with multiple chronic conditions in the wake of COVID. They highlight what criteria are essential when considering and combining virtual and in-person care.

A study of pre- to postpandemic long-term opioid therapy (LtOT) in individuals with chronic pain finds a drop early in the pandemic, with rebound later, and racial/ethnic and geographic disparities in use of LtOT.³ The authors suggest additional research is needed to understand the increase

in LtOT postpandemic and racial/ethnic disparities in LtOT for chronic pain.

Srinivasulu et al⁴ studied outcomes of in-office versus telehealth medication abortions, a situation easier to study because of the COVID-19 pandemic. They conclude that telehealth medication abortion is effective, timelier, and potentially more accessible than in-office medication abortions.

Caring for Patients Outside or Inside of the Office, Particularly for Safety-Net Patients and Systems

Porterfield and colleagues⁵ explore how family medicine health care teams implement health-related social needs screening, documenting barriers and considerations for it to be effectively integrated into primary care visits. Free home blood pressure monitors can change the dynamic for blood pressure control.⁶ The low-income patients (primarily from Hispanic or other minority populations) in this study benefited.

Food insecurity and various health problems, such as diabetes, are linked. It is therefore difficult to understand how family physicians support patients with food insecurity. Bunt et al⁷ report on a survey of academic family practices, reporting their

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practices' work with food insecurity, finding multiple barriers to implementation.

Telemedicine use was associated with a modest improvement in diabetes control and engagement in care⁸ across 20 Federally Qualified Health Centers (FQHCs), after accounting for potentially confounding variables. Many FQHC patients lack access to computers and smartphones, leading to the use of audio-only telemedicine.

A technology-assisted menu-driven program was used by Krishnakumar et al⁹ to improve diabetes clinical measures. Of particular note, positive outcomes were achieved regardless of the level of the patient's health literacy.

Tietbohl and colleagues¹⁰ applied mixed methods to compare 2 interventions to increase engagement in advance care planning in primary care. Their results show how clinicians can use both traditional mailings and group visits to increase engagement.

One health care system offered scribes to clinicians, yet few accepted this offer. Florig et al¹¹ provide an overview of the implementation and outcomes of a voluntary program on the use of scribes in 1 large health system. For the advocates of the use of scribes to enhance care delivery or efficiency, this article is a must read.

Ebell et al¹² validated a simple risk score for primary and urgent care patients with COVID-19 that can support outpatient triage decisions around COVID-19. This article provides the link to the online decision support tool the authors created.

Most of us would agree that adolescent time alone with clinicians is important—particularly for sensitive subjects such as sexual activity, smoking, abuse, and other risk factors. Although experienced clinicians may recognize cues from others in the room, it can be difficult when language and culture introduce barriers. Many teenagers get no time alone with their clinicians¹³—particularly teenagers with certain sociodemographic characteristics. How could change occur and what happens in your office?

Socioecological barriers to health care were further explored by Jose and colleagues,¹⁴ who investigated the experience of Filipinos in a remote rural community to assess structural and social challenges experienced when interacting with the health care system. They reveal how community, culture, and language are fundamental components of health access.

Using data on care quality is understood to be important. Parchman et al¹⁵ report on their work with small practices—provided practice facilitators to enhance their ability to undertake more work on the clinical care quality. The level of support available from an EHR can improve the reporting of data quality.

Over or Under—Inappropriate Testing for Common Health Problems?

Both. Barriers to obtaining pulmonary function tests for patients with wheezing follow usual patterns for other illnesses. However, for wheezing, many physicians believe testing would not help,¹⁶ thus the tests are not even ordered. Research suggests otherwise, potentially leading to overtreatment. This has been true for more than 20 years.¹⁷ The advantages of testing? More accurate diagnosis and less overtreatment with the wrong medications.

The mt-sDNA orders for colon cancer screening were inappropriate 1-fifth of the time Ahn et al.¹⁸ Ouch! Are you following the recommendations in your test ordering? Are there other issues, such as patient lack of adherence or the opposite—a preference for overtesting? The authors review the frequency and types of over- or underordering and the contraindications to using this mt-sDNA cancer screening test. There are probably multiple clinician and patient reasons for the answers.

Large Data Sets Increasingly Provide Clinically Helpful Information

In an epidemiologic study from a large health system,¹⁹ Chartash et al characterize multimorbidity across 4 main age groups and diagnosis, and, specifically, the increasing rate of multimorbidity. How much could be overdiagnosis? What other factors may affect changes in use of ICD-10 diagnostic codes (eg, justifying specific medicines, coding for reimbursement?)

Although clinicians know that HIV pre-exposure prophylaxis (PrEP) is underutilized, the actual pattern of underutilization could help us target efforts toward improving the uptake and adherence rate to guidelines. Lopez et al²⁰ follow the trends in a large group of patients newly positive for HIV. It is telling that the positive HIV test was usually the first time an HIV test was completed or known to that system—that is, there was not much HIV testing

done based on risk factors alone. Although this is a multifactorial problem, as health care professionals, we can and should do better. With prevention, HIV spread can be largely prevented. With early diagnosis and treatment, HIV becomes a manageable long-term chronic diagnosis.

More on the Family Physician Wage Gap

The wage gap between early-career female and male family physicians persists and is not readily accounted for by the usual confounders, such as hours worked, geographic location and type of professional activity. Furthermore, the change in income did not match the change in work effort. More can be found in the article by Sanders et al.²¹

Artificial Intelligence and Machine Learning

This title says it all: “What complexity science predicts about the potential of artificial intelligence/machine learning to improve primary care.”²² Dr. Young and coauthors predict artificial intelligence (AI) and machine learning (ML) tools will likely work when their “tasks are limited in scope, have clean data that are mostly linear and deterministic, and fit well into existing workflows.” Sounds good, well maybe. . . .

Yes, we are both excited and apprehensive! Machine learning and the more encompassing field of artificial intelligence in general have been infiltrating our private and professional roles. The American Board of Family Medicine (whose associated foundation funds this journal), has started to use ML to support such items as recertification. In the article by Price et al,²³ the authors consider family physician motivation patterns and key recertification outcomes—that is, pass or fail for those motivated intrinsically compared with extrinsically. Meantime, we can learn some of the new terminology, such as what is “unsupervised” ML?

To see this article online, please go to: <http://jabfm.org/content/37/2/161.full>.

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