

units (see photo). With such cubicles, health care workers can provide intravenous fluids and therapeutics through specialized ports and are thus freed from the burdensome personal protective equipment used during the 2014 West African outbreak to spend more time with their patients. Médecins sans Frontières (MSF, or Doctors without Borders) continues to be a leader in developing safe care for patients with EVD provided in structures that can be rapidly erected using local resources. In addition, its engagement of local practitioners in the provision of health care to patients with EVD can build trust.



An audio interview with Dr. Damon is available at [NEJM.org](http://www.nejm.org)

Finally, advances have been made in the provision of aggressive supportive patient care. The availability of laboratory tests to monitor patients has en-

abled the use of aggressive hydration, electrolyte management, and hemodynamic support.

Since 2014, clinical care for EVD has evolved with the development of new therapeutic agents, patient cubicles, and aggressive supportive care. Yet we must not forget the importance of carrying out the basic pillars of outbreak response: effective contact tracing and community engagement can permit rapid identification of people who are ill and facilitate the provision of early clinical care, which has been shown to improve the likelihood of survival.

The views expressed in this article are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

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From the Centers for Disease Control and Prevention, Atlanta.

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## Beyond Evidence-Based Medicine

Stacey Chang, M.S., and Thomas H. Lee, M.D.

Evidence-based medicine (EBM) was an important advance over the intuition-based medicine that preceded it, but its limitations are becoming clear even as it's increasingly accepted as an aspiration. Guidelines based on clinical research are being hardwired into our operational norms, incentive programs, and information systems, and some quality measures have already been retired because compliance with guidelines is uniformly high.<sup>1</sup> But even when physicians prescribe medications that have been proved beneficial in randomized trials, the chances that patients are taking them a year later are akin, at best, to a coin toss.

This gap is one reflection of the need for something beyond

EBM, a model for health care delivery that can adapt systematically to the individual nuances that differentiate patients. EBM placed new emphasis on the relationship between clinical research and clinicians' practice patterns but shifted medicine's "center of gravity" away from the space between clinician and patient to somewhere between research and clinician. Real progress has been made, but something has been lost, and we believe it must be recovered.

What's needed, in our view, is "interpersonal medicine," a disciplined approach to delivering care that responds to patients' circumstances, capabilities, and preferences. Interpersonal medicine, as we envision it, is not just about being nice — it's about being ef-

fective. And it could be incorporated into health care delivery with the same rigor and respect accorded to EBM.

Interpersonal medicine would recognize clinicians' influence on patients and informal caregivers and the relationships among them. It would be anchored in longitudinal, multidirectional communication; broach social and behavioral factors; require coordination of the care team; and constantly evaluate and iterate its own approach. It requires recognition and codification of the skills that enable clinicians to effect change in their patients, and tools for realizing those skills systemically.

Rather than a rejection of EBM, we see interpersonal medicine as the appropriate next phase in ex-

panding the knowledge base underlying patient care. Before the rise of EBM, experience gained from a lifetime of practice was the most reliable basis for clinical decision making, even for physicians grounded in scientific training. As recently as 1993, in an article on changing physicians' practices, the word "evidence" came up only once, and the authors noted that use of guidelines had been "remarkably unsuccessful."<sup>2</sup>

Intuition-based medicine wasn't wrong — it was just limited to the data to which physicians had access. But in the 1990s, the ideas behind EBM were taking shape, and rigorous methods were increasingly used in clinical research to reach statistically powerful conclusions. In 1996, Sackett and colleagues wrote that EBM was "the conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients."<sup>3</sup> Physicians still drew on their own experiences and instincts, but EBM enabled them to expand their personal proof models with broader data sets and less bias.

Although health care still doesn't reliably use EBM, considerable progress has been made, and outcomes in many clinical conditions have improved. There is growing clarity and agreement on how to perform rigorous clinical research, grade evidence, appraise available data, and formulate practice recommendations. Professional societies no longer view EBM as a threat to their members' autonomy; instead, they develop guidelines that use evidence to free at least some of their constituents' work from controversy.

Yet these gains reveal that more than reliable application of guidelines is needed for the next

big leaps in health. What makes us ill today (the chronic disease triad of obesity, diabetes, and heart disease) and what kills some of us disproportionately (suicide, alcohol, and drugs) are different from what ailed previous generations. The roots of these diseases are not strictly the biophysical determinants of health; they are also social and behavioral. They cannot be addressed effectively in isolated office visits or by prescribing interventions based on good science alone.

Even when patients present with apparently physical ailments, solutions often lie in addressing behavioral and social factors — a task for which traditional doctor-patient interactions are inadequate. Such factors are better addressed through a series of meaningful interactions focused on motivation, engagement, empowerment, conviction, and resilience. These interactions occur at home, at work, at play, in our communities (and sometimes in clinics), between clinicians and patients, between patients and families and communities, and among patients. Through such interactions, relationships are built that can endure distraction and overcome hurdles.

These relationships can anchor our approach to many diseases, but they require a presence and capability from clinicians built on more than hard data. Interpersonal medicine demands skills that place clinicians alongside their patients, as fellow travelers and experienced guides.

It also requires systems that draw on those skills when they're likely to make a difference. For example, at Boston's Brigham and Women's Hospital, where one of us practices primary care, all Medicaid patients are screened for social needs by practice assis-

tants or medical assistants, and positive responses trigger various actions, including alerting the physician, but also bringing in community health workers and others. Though these concepts are not new, they have not been instituted systematically in most organizations.

But health care is ripe for change. The fee-for-service reimbursement system emphasized delivering evidence-based care efficiently, but new value-based models of care prioritize effectiveness over throughput. That effectiveness cannot be accomplished by individual clinicians moving faster or working harder. It requires more meaningful interventions and relationships among clinicians and with patients.

Good intentions are not sufficient for developing such relationships. Considerable data exist on what builds patients' trust in their clinicians, an essential ingredient in cooperative, collaborative relationships. Press Ganey (where one of us is employed), which assesses patients' experiences, has found that the major drivers are aspects of the way care is delivered — empathy, coordination, and communication. Not surprisingly, better physician communication is associated with a 19% gain in patients' adherence to recommended therapies<sup>4</sup> and improvement in a variety of outcomes.<sup>5</sup>

The key steps for making interpersonal medicine reliable can be adapted from the rollout of EBM in health care. First, it has to be taught. One danger is assuming that clinicians already have the skills to deliver interpersonal medicine as individuals or groups. The educational process requires building innovative, practical curricula and new tools that emphasize experiential learning for skill acquisition. Some of these already

exist but are not widely disseminated. For example, the Cleveland Clinic, Texas Children's Hospital, and other institutions have had every physician undergo formal training in communication skills.

The next step is measuring processes and outcomes, which requires agreement on metrics or appropriate surrogates. The research underpinning EBM suggests that "soft" outcomes are often the important ones and can be measured rigorously even when they're variable. If trust is the foundation on which clinician-patient relationships are built, for example, we have work to do in measuring it. Because improvement is important, measurement should be done in real time so that clinicians can respond nimbly, and the outcomes from multiple perspectives (such as patients, families, and other clinicians) should be captured.

The third step is enabling interpersonal medicine, which requires developing matchmaking protocols that predict stronger relationships, so we can pair clinicians and patients for success, creating environments that reduce anxiety and foster interaction. It also re-

quires instituting service standards, best practices, and tools that encourage productive dialogue. For example, Dell Medical School's clinics have no waiting rooms. Patients are shown directly to a room that is designed primarily to accommodate conversation among the patient, family members, and the clinicians who will visit them. No exam table is in sight; a chair converts to an exam table when necessary.

The final step is creating incentives for interpersonal medicine, both financial and nonfinancial. This step is fraught with political hazards but could accelerate improvement. It requires rating and benchmarking clinicians on the basis of outcomes, relationships, and understanding and moving beyond productivity as a primary value indicator. It requires asking patients and caregivers to contribute to those ratings, and transparency in the form of their internal and external publication. Ultimately, transparency is the most effective way to celebrate and recognize humanistic skill in parity with scientific accomplishments.

None of these elements are un-

attainable: some solutions have already been proposed and (inconsistently) instituted, if not in medicine, then in adjacent or analogous fields. This effort is not about addressing lack of knowledge, but about building systemic capability at a scale that mirrors our scientific effort. We can pursue an empathetic version of medicine that embraces emotion and appreciates behavior if we value human nature as much as human biology.

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From the Design Institute for Health, Dell Medical School, Austin, TX (S.C.); and Press Ganey and Harvard Medical School — both in Boston (T.H.L.).

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## Fulfilling States' Duty to Evaluate Medicaid Waivers

Kristen Underhill, J.D., D.Phil., Atheendar Venkataramani, M.D., Ph.D., and Kevin G. Volpp, M.D., Ph.D.

Nearly 75 million U.S. residents have health insurance coverage through Medicaid. Benefits and program designs vary from state to state. One source of state-based variation is Section 1115 projects, which are defined as "experimental, pilot, or demonstration" programs that are "likely to assist in promoting the objectives" of the Medicaid statute. States seeking to implement experimental policies in their Med-

icaid programs must apply to the Centers for Medicare and Medicaid Services (CMS) for a Section 1115 waiver, which lifts certain federal regulations for 5 years. Thirty-seven states had active Section 1115 waivers as of October 31, 2018 (see map),<sup>1</sup> and more than one third of Medicaid spending goes toward Section 1115 programming.<sup>2</sup>

Section 1115 waivers are becoming more consequential as

CMS considers allowing states to implement policies that were disfavored by prior administrations. Foremost among these policies are community engagement requirements, which mandate that non-disabled, nonpregnant adults meet monthly quotas for time engaged in work, volunteer activities, or school to maintain their Medicaid coverage.<sup>3</sup> Other proposed waiver terms include beneficiary premiums with coverage lockouts