BMJ

BMJ 2013;347:f5539 doi: 10.1136/bmj.f5539 (Published 19 September 2013)

ANALYSIS

ESSAY

Humanism in the time of metrics—an essay by David Loxterkamp

Doctors' increasing focus on biomarkers and measures of performance has shifted our attention away from what may be most important for our patients, argues **David Loxterkamp**

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With the advent of pay for performance and quality standards, family doctors are now in the business of data reporting. We are paid to report "quality measures" and meet their targets. In the United States, where lawmakers, employers, and patients agree that the cost of healthcare is unsustainable, the government and industry are joining forces to enact structural and payment forms like meaningful use of electronic health records, pay for performance, and the patient centered medical home, which aims to transform the delivery of primary care. These programs reward healthcare providers with new computer systems and added management fees with the expectation of lower costs and measurable improvements in health. But this shift of our gaze to patients' physiology and chemistry, and to our performance in managing it has unintended consequences.

Distracted by data

It is reported that physicians spend, on average, 11 minutes with their patients[1] and listen to their chief complaint for only 22 seconds before taking control of the interview.[2] During these brief encounters, to what or to whom do doctors attend? A structured history of the present illness taken by the medical assistant? The chronic disease flowsheets? A checklist of overdue prevention measures? Doctors have risen to their rank through a fierce competitiveness: we are experts at knowing what to know for the purposes of the test. Increasingly, we are graded on our performance on meeting national guidelines for the control of weight, blood pressure, smoking cessation, cholesterol levels, and diabetes, and the results are reported on consumer websites. It is possible, even likely, that such data will change our approach to patient care. They are already inexorably shaping to what and to whom we listen.

True confession: I was an early adapter of electronic health records. When our practice purchased the first version in 2000, I was dazzled by how simple, legible, organized, encyclopedic, and beautiful it was. I wasn't alone. Despite the hefty price tag, increasing numbers waded into the market, from small office managers to hospital chief executives to national vendors of clinical services. Then came President Obama's economic stimulus package. The Hi-Tech Act of 2009 offered financial incentives for the purchase and "meaningful use" of electronic health records and earmarked $3.6bn (£2.3bn; €2.7bn) for the decade-long life of the program. The Annals of Family Medicine recently reported that 68% of family physicians in the US are now using an electronic health record system, and 80% will be on board by the end of the year—a doubling from just six years ago.[3]

The widespread implementation of the electronic health record was intended to reduce the duplication of services, avoid prescribing errors, and increase physicians' adherence to evidence based guidelines. But it also made it easier to "upcode" encounters with the click of a box. Physicians were often tempted, and sometimes encouraged, to check elements of the history and physical examination that were previously never performed. These failings are obvious when we read our colleagues' office notes, and now patients—aided by online portals—are equally aware. The government and other insurers literally pay the price.

Added expense and privacy concerns may be the least of our worries. Computers are peerless at storing, sorting, and reporting data, the kind we gather from laboratory studies and vital signs and checklists. Healthcare payers and the insurance industry use these data to reward—and thereby direct—the delivery of healthcare according to what is most easily measured.

Even Luddites and sentimentalists[4] must acknowledge that medicine cannot, should not, go back to the paper chart. Measurement is a good and necessary thing when it fosters socially responsible research and provides a reality check for human intuition, assumption, and self delusion. But it is never a neutral thing. What we measure unmistakably matters more than what we don't. And in the age of pay for performance, it speaks to us in the form of incentives that cannot be ignored by our bosses.

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Primary care physicians who value the therapeutic relationship must be a little sympathetic to the plight of the mad scientist in Mary Shelley's *Frankenstein*. He was taunted by the monster that he brought to life, "You created me, but I am your master." Likewise, we have created a place in our exam rooms for a computer that needs our care and feeding. It now directs the flow and purpose of an encounter that once unfolded organically according to the particular needs of the patient.

Shifting the focus

A patient recently slumped into my office clutching a paper from his employer. On it were empty boxes for me to enter blood pressure, weight, waistline circumference, cholesterol, and fasting blood sugar readings. We reviewed recent results. Only his glucose level was slightly raised, so we spent the majority of our 20 minutes talking about diet, exercise, and targets for weight loss. None of this concerned him, he revealed on his way out the door, as much as the tension in his marriage and the difficulties he and his wife were having with their autistic son.

I had seen the paper form before as part of other employee wellness programs. But I never knew what inspired it until I read a New Yorker essay about America's best known television doctor, Dr Oz.[5] His "fifteen minute physical" identified what doctors, patients, and now employers seem to regard as the key markers of health. They have become the central focus of most insurance covered annual examinations in the US. Never mind that annual exams do not reduce morbidity or mortality, neither overall nor for cardiovascular or cancer causes.[6] Never mind that the individual components, taken out of context, tell us little about the future health of those we examine.

Take weight. According to a recent meta-analysis, being overweight or having low level obesity carries a lower risk of death than being "normal" weight. Only with higher degrees of obesity does the risk of death rise.[7] And this news is no exception. Large longitudinal studies have reversed our long held beliefs and recommendations with regard to the routine use of estrogen and progesterone, calcium, and vitamin D,[8] stents and coronary artery bypass,[9] aspirin, niacin,[10] and fenofibrates.[11] Our efforts at intensive control of blood pressure and blood sugar in type 2 diabetes can backfire, often resulting in worse health outcomes.[12 13] Careful, comparative studies show us that generic medications can outperform their newer, proprietary counterparts.[14] Science seldom gives us lasting pearls. One critical observer of the scientific method put it bluntly, "We like to pretend that our experiments define the truth for us. But that's often not the case. Just because an idea is true doesn't mean it can be proved. And just because an idea can be proved doesn't mean it's true. When the experiments are done, we still have to choose what to believe.[15]

Most of what really works in medicine is comprehensible, even to our patients. Nothing is more beneficial than helping smokers quit; it easily adds 10 years to a young person's life.[16] Childhood immunizations should be kept current. Aspirin should be recommended for the secondary prevention of heart disease. We must not fail to ask about alcohol misuse.[17] Doctors know too well that not every disease can be prevented or discovered early enough to be cured. But allowing the public to believe otherwise fills our waiting rooms and tempts us to order unnecessary exams, tests, and treatments. We order them to buy time, save face, and avoid litigation. Our orders contribute to the gross national product. They allow us to do something, which is often worse than doing nothing at all for the overall wellbeing of those we care for.

Wider determinants of health

What is health? Or is that a fair question to ask experts on disease? Wendall Berry refers to health as membership.[18] In other words, health is tied to our sense of connection to community. When disease disrupts the bonds of those connections, or requires that they be broken (as for the addict or victim of domestic violence), the doctor's job is to ease and facilitate the patient's transition. We are agents of change, from disease to health, from brokenness to a more connected, responsive, and responsible whole. Imagine for a moment that we could redesign our job and the dataset we utilize. What would it look like if there were no bean counters? Could we enlarge our job description to include serving as custodians for an oral history of wounded lives, or as chemists in the complex and volatile setting of human action and reaction?

The importance of such reactions is illustrated by the placebo effect. Turner and Brody have shown that placebos consistently deliver "good" or "excellent" results in 64-75% of recipients, especially where subjectivity is involved (such as with pain or depression).[19 20] The benefits are magnified by the doctor who actively listens, shows empathy and concern, provides satisfactory explanations, and creates a treatment plan with the patient at the controls.

Similarly, adverse childhood experiences have been shown to be associated with adult health outcomes. When Vincent Felitti directed a weight loss program for Kaiser Permanente he found that though most participants lost weight, the dropout rate was unacceptably high. Follow-up interviews revealed that many of them had been sexually abused as children and they connected this with subsequent weight gain. As Felitti remembers it, "the counterintuitive aspect was that, for many people, obesity was not their problem; it was their protective solution to problems that previously had never been discussed with anyone."[21]

Along with Robert Anda of the Centers for Disease Control, Felitti later screened for childhood trauma among health plan members. Because the experience of childhood trauma was positively correlated with rates of cigarette and alcohol misuse, drug addiction, sexual promiscuity, depression, and attempted suicide, it was also correlated with high rates of morbid obesity, emphysema, diabetes, and heart disease. In ongoing data analysis, people with an adverse childhood event score over five (out of 10 categories) were found on average to die nearly 20 years earlier than those with scores of zero.[22]

Our social connections also seem to have a strong influence on health. In 2007, Nicholas Christakis and James Fowler tracked the social connections of more than 12 000 residents of Framingham, Massachusetts, over three generations.[23] They found that the risk of becoming obese increased by 45% if a friend became obese, by 20% if the friend had a friend who became obese, and by 10% if a friend of that friend's friend gained weight, thus establishing the rule of "three degrees of influence." They subsequently found that smoking cessation and the spread of happiness also followed the three degree rule.[24 25] In powerful ways, we mimic the behaviors and absorb the values of others, especially those we like.

Facilitating change

A primary care physician's day is largely spent managing the markers of disease: adjusting medications to lower blood pressure, body mass index, or cholesterol level. Too often, it seems like an exercise of "tinkering at the edges." But once doctors find themselves powerlessness to "fix" the underlying

problem, our role can shift to preparing patients for lasting change.

Over the past two decades, William Miller and Stephen Rollnick have revolutionized the way in which healthcare workers perceive their role in behavioral change. They call their approach "motivational interviewing" and see it as a directive, client centered counseling style that encourages patients to change their behavior by exploring and resolving ambivalence. Patients are not blind to the risks of their behavior or the benefits change. They simply find themselves stuck in habits both harmful and rewarding. Miller and Rollnick have identified four therapeutic behaviors that are consistently beneficial in helping patients make lasting change: the expression of empathy; the revelation of discrepancies between patients' problem behaviors and their stated goals; the ability to roll with resistance to change; and, most importantly, support for self efficacy, when patients believe that change is both necessary and possible.

Designing our future

The placebo response, the long term effects of childhood trauma, the power of social connectedness, and the nuances of behavioral change are all fertile ground for primary care research. But deciding what to study is only the first step; where and how to study it are just as important. Shouldn't research agendas be hard wired into our electronic health record? Then the cycle would be complete: research guiding practice redesign; daily practice suggesting the most relevant research hypotheses.

By the time patients really need a family doctor, we are just another stop on the merry-go-round of office appointments. What they need from us is reassurance, commonsense advice, coordination of community resources, and knowledge of their family values. This was once our vital function, but no longer. We are on a merry-go-round, too, and now see a greater value in access and efficiency than continuity of care.

It is clear that mental and physical health are inextricable, that the glass through which we see the world—half full or half empty, rose colored, or darkly tinted–is the major determinant of our sense of wellbeing. Would it make a difference if we asked patients, before they met the doctor, a few simple questions about the buoyancy of their mood, their grip on anxiety, their quality of sleep, and the status of their closest relationships? And if we made therapists available for immediate counseling if the scorecard shows a dramatic change or downward trend?

Patients are not (only) data fields for the doctor to harvest, objects to be imaged, or problems to be solved. They are also our neighbors asking for help, using posture, gait, gesture, and facial expression to indicate where and how to proceed. Let's first acknowledge them beneath their symptom complex and accept the story of their illness in their own words. This takes time—face time, time looking into their faces instead of a clock or computer or a hundred other distractions that crowd our exam rooms.

When we propose a treatment plan, let it be based on the best information. For this, infrequently used concepts must be dusted off: knowledge of the natural course of disease, access to evidence based guidelines, expected outcome in terms of numbers needed to treat, transparent costs to the patients, knowledge of the referring specialist's communication and procedural skills, and confidence in our ability to work with their recommendations.

Lastly, let's ask our patients if their concerns have been heard, our findings explained, their needs addressed. Post visit surveys might answer these questions and teach us how to better communicate with our patients and expedite our duties.[26]

It is not too late to retool the primary care workshop, to redesign the "product" that patients are clamoring for. Some experimentation has already begun. Practitioners of direct primary care have eliminated the health insurance middlemen by offering annual subscriptions. Patients receive affordable primary care; doctors receive an adequate income and sufficient time to spend with their patients.[27] Eric Topol has pioneered the use of sophisticated diagnostic tools at the primary care bedside, thus eliminating the time and expense of a hospital referral.[28] Dennis McCullough is an advocate for slower paced healthcare for elderly people, whose complex medical and social concerns simply need more time.[29]

No doubt, biomarkers of disease will remain a central focus of the clinical gaze, but human faces are emerging on the periphery, and the voice of "America's doctor" rings with a new air of authenticity:

"I would take us all back a thousand years," Dr Oz mused in a recent interview, "when our ancestors lived in small villages and there was always a healer in that village—and his job wasn't to give you heart surgery or medication but to help find a safe place for conversation."[5]

In all fairness, Dr Oz may not be acquainted with primary care or its village healers. If he was, he might find a safe place for conversation and discover what we are learning about connection, childhood trauma, doctor-patient relationships, and the facilitation of change. If we are to remain the masters of our own creation—the electronic health record and its data trove—doctors must submerge it under our plane of awareness, hardwire it into our daily operations, and fence it from the sacred space we reserve for our patients. Only then can we do what we do best: sit presently with our patients and care for them. And allow them to learn, invest, and lead in their own recovery, and in the renewable health resource that is community.

Competing interests: I have read and understood the BMJ policy on declaration of interests and have no relevant interests to declare.

Provenance and peer review: Commissioned; not externally peer reviewed.

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Cite this as: BMJ 2013;347:f5539