

# Health Care as If Health Mattered

Thomas R. Frieden, MD, MPH

Farzad Mostashari, MD, MSc

**T**HERE IS CONSENSUS ABOUT THE NEED FOR FUNDAMENTAL change in the US health care system and there has been attention to the important problems of inadequate access and increasing costs. But the most serious shortcoming—that the nation's health system is not designed to maximize health—has been overshadowed. Individuals in the United States receive only about half the recommended medical services.<sup>1</sup> Only 43% of individuals with diagnosed diabetes,<sup>2</sup> 37% with hypertension,<sup>3</sup> and 25% with hypercholesterolemia<sup>4</sup> have adequate control of their disease; furthermore, less than 20% of smokers who try to quit receive assistance from their physicians, and only 2% are prescribed pharmacotherapy.<sup>5</sup> Lack of effective primary health care is a public health problem that results in avoidable blindness, amputations, strokes, heart attacks, and premature death. Nearly 9 of 10 Americans with uncontrolled diabetes, hypertension, and hypercholesterolemia already have private or public health insurance.<sup>6</sup>

If reforming US health care results only in expanded access to care, costs will increase faster but with limited health benefits. If only cost controls are instituted, even more individuals will be denied access to needed care. Health care must be restructured to make maximizing health the organizing principle. To do this, 3 synergistic changes are needed: (1) payment that offers substantial rewards for disease prevention and effective management of chronic disease; (2) an information system oriented toward prevention; and (3) changes in care management and practice workflows.

Efforts to implement each of these changes separately have failed to substantially improve care because they lacked sufficient focus on prevention and because these 3 interventions are needed jointly. Pay-for-performance initiatives have been hampered by lack of reliable information on quality of care and outcomes.<sup>7</sup> Electronic health records (EHRs) have had limited or no effect because most have not been designed to facilitate, encourage, and track preventive services for entire patient populations. And without financial incentives or the power of EHRs to track individual patients and patient panels, clinicians are not able to achieve scale or sustain improvements in preventive services or care for those with chronic conditions.

In most of the current US health care system, treating illness is more profitable than promoting health. Preventive services are usually poorly reimbursed or not reimbursed at all. A patient who has sustained a myocardial infarction may require cardiac surgery that costs \$100 000 or more. But a physician who counsels patients to adopt a healthy lifestyle, prescribes the right medications, and follows up regularly to help reduce

the patient's infarction risk can lose money. As a result, health care information systems and practice workflows do not prioritize prevention or facilitate management of chronic disease. If a substantial proportion of physicians' reimbursements were based on the proportion of patients who complete all vaccinations and core cancer screenings, have good management of blood pressure and cholesterol levels, and either do not smoke or have documented assisted attempts at quitting, many more patients would receive these lifesaving preventive services.

To date, pay-for-performance systems have generated scant evidence of measurable quality improvements<sup>8,9</sup> and may offer no advantage over fee-for-service in improving care and containing costs.<sup>10</sup> Pay-for-performance systems do not fundamentally alter the substantial financial advantages of intensive treatment of advanced illness over disease prevention. Current pay-for-performance programs offer only small performance bonuses, are often not integrated with quality-improvement initiatives, and often focus on what is easy to measure rather than what will most improve the health of patients and communities.<sup>11,12</sup> Of the hundreds of ambulatory care measures approved by national quality organizations, none address screening the general population for human immunodeficiency virus, hypercholesterolemia, or depression. Furthermore, these measures often are based on processes performed, such as whether physicians measure lipid levels, rather than on outcomes, such as how well lipid levels are controlled. But processes and outcomes may not be correlated.<sup>13</sup> Pay-for-performance might be much more effective at improving health, and would encourage innovation in doing so, if it rewarded outcomes or reliable predictors of outcomes such as control of blood pressure and cholesterol levels and if the rewards were prioritized based on their potential to increase patients' years of healthy life.<sup>14</sup>

Well-designed and effectively implemented EHRs are a necessary, but not sufficient, component to change payment structure and improve health care system performance. EHRs have the potential to enable valid clinical quality measurement, high-quality preventive care, and better management of chronic conditions such as hypertension and hypercholesterolemia. The US Department of Veterans Affairs (VA), which has a financial incentive to improve prevention, implemented an effective EHR system in the mid-1990s<sup>15</sup> and now outperforms the private sector on almost every measure of quality. Patients at VA facilities receive 67% of the recommended level of health care vs 51% received by non-VA patients.<sup>16</sup> A systematic review found that in a small number of institutions, EHRs have

**Author Affiliations:** Dr Frieden is Health Commissioner for New York City; Dr Mostashari is Assistant Commissioner for the New York City Health Department's Primary Care Information Project.

**Corresponding Author:** Thomas R. Frieden, MD, MPH, New York City Department of Health and Mental Hygiene, 125 Worth St, Room 331, New York, NY 10013 (tfrieden@health.nyc.gov).

### Box. Key Features of Effective Electronic Health Records

#### Standardized, Accurate Essential Data Elements

Enables data to be analyzed and shared in a consistent manner

#### Incorporate Data From Outside Systems (Particularly Pharmacies, Inpatient Stays, Laboratories, and Imaging Centers)

Facilitates effective coordination of care across clinicians; external data must be standardized and machine-interpretable if it is to be incorporated into quality measures and decision supports

#### Facilitate Medication Reconciliation, Especially Between Prescribed Medications and Pharmacy Records

Improves monitoring of medication adherence, helps avoid adverse drug-drug interactions, increases prescribing efficiency

#### Registry Reporting

Enables tracking patients who require better care management; allows physician, practice, or institution to systematically monitor and improve care of chronic conditions; facilitates anticipatory care and patient recall

#### Clinical Decision Support at the Point of Care

Combines patient data and evidence-based clinical best practices to provide decision-making assistance for priority preventive care issues

#### Risk Stratification

Enables use of demographic and clinical information to identify at-risk patients; assists in disease-management referrals, interpreting quality-measurement data, and targeting anticipatory care

#### Automated Quality Measurement

Enables practices to monitor quality-improvement activities; allows insurers to compare clinicians and pay for improved preventive services and improved clinical outcomes

#### Support for Patient Self-management

Helps patients and clinicians work together to improve disease self-management; incorporates assessment of patient self-efficacy and health literacy; provides easily understood graphs, charts, and handouts; improves patient communication through mailed reminders, secure messaging, or Web portals

#### Improved Interfaces With Public Health Services (Including Automated Reporting of Mandatorily Notifiable Communicable Disease, and Immunization Information)

Enhances capacity to respond to public health emergencies; facilitates monitoring of disease trends and population health; helps identify populations in need of targeted interventions

#### Systematic Outcomes Evaluation

Improves postmarketing surveillance of adverse drug events, understanding the correlates of health disparities, and predictors of treatment and treatment outcomes

#### Maximizing Reimbursement for Preventive Activities

Assists practices in appropriately billing for preventive care and chronic disease management activities, based on the specific provisions of each patient's health coverage

#### Linking to Community Resources

Helps clinicians identify community resources that can support patients, including disease management programs offered by health plans, nutrition or exercise programs, substance abuse and mental health services, and support groups

improved the quality of care, particularly for preventive health services<sup>17</sup>; however, as currently implemented across most practices, EHRs confer little or no health benefit.<sup>18,19</sup>

To improve health outcomes, prevention must be integral to EHR design. A well-designed EHR ensures that clinicians have key information at the right time and in the right format to make decisions about the care of their patients before, during, and after clinical encounters (BOX). EHRs require standardized data elements to allow comparison of key indicators across physicians and practices as well as electronic interfaces with laboratory results and medication histories. EHRs designed with prevention as a guiding principle can generate reminders for patients to keep appointments—reminders sent routinely by dentists, veterinarians, and auto mechanics, but rarely by physicians. Lifesaving preventive actions and recommendations can be programmed into the EHR system as the default choice instead of requiring a busy physician with incomplete information to remember them. EHRs with registry functions enable clinicians to know exactly who has which conditions, who is due or overdue for key screenings, whose illnesses are well or poorly man-

aged, and where they need to improve care. Few US physicians have information systems that allow answering 4 simple but vitally important questions about a practice population: How many patients have hypertension? How many have adequate control? How many of those not in control are receiving a diuretic? How do these measures compare with those from last year? While some academic medical centers have designed systems with some of these features, such functions are absent from most commercial medical record systems available to private physicians.<sup>20</sup>

Most physicians practice in solo or small-group settings and might benefit most from EHRs, but fewer than 5% and 10%, respectively, have adopted them.<sup>21</sup> Medicare beneficiaries treated by 1- and 2-physician practices are less likely to receive preventive care than patients treated in larger group settings, in part because larger practices have better access to health information technology systems and are more likely to participate in quality-improvement initiatives.<sup>22,23</sup> Although use of EHRs to provide preventive services can reduce costs to the health care system as a whole, the benefit of those reduced costs rarely returns to those providing the services. Thus, currently there

is a strong financial disincentive for physicians—especially those in small groups—to adopt EHRs. Bringing EHRs that improve prevention to primary care physicians nationwide will cost an estimated \$20 billion in start-up funding over 5 years for equipment, training, and transition costs.<sup>24</sup> Considering the \$2 trillion now spent on health care each year<sup>25</sup> without maximizing health, the potential benefits would be well worth the costs.<sup>19</sup>

EHRs can help improve quality of care in practices of various sizes but only if practices use them to change their operations. Physicians are trained to make intellectually challenging decisions and provide complex treatments to individual patients, but the goal of maximizing health is achieved when their entire panel of patients with common problems—particularly hypertension, hypercholesterolemia, and tobacco addiction—receive simple, evidence-based preventive services with a high degree of consistency. Effective use of an EHR for prevention and for incentive payments will require that practices change workflows, both to record the data necessary in a consistent manner and to systematically improve preventive care. Gains in the quality of preventive care and management of chronic disease take place when protocols for services are established, rigorously followed, and continuously monitored with individual feedback to physicians. In most physician practices, this will require altering office assignments and workflows, as well as retraining staff and possibly hiring additional staff. Physicians will make these changes only if they are enabled by EHRs and supported by pay-for-performance financing.

New York City has strived to create a healthier environment by increasing cigarette taxes, establishing smoke-free workplaces, removing artificial *trans* fats from restaurant offerings, and proposing mandatory posting of calorie information at chain restaurants. Changing the clinical practice environment is also being attempted by redesigning and extending EHRs to more than half of clinicians in the city who care for large numbers of patients receiving Medicaid; helping health care practices re-engineer workflows and provide patient-centered medical homes to improve prevention; and—through aggregated reporting of accurate, standardized key clinical quality measures from EHRs—enabling payment based on verifiable and clinically meaningful outcomes. Maximizing health is the organizing principle of this project, and this has had profound implications for customization of EHR software, choice of clinicians (ie, those who care for the highest-risk patients), readiness and quality-improvement technical assistance provided, and quality measures monitored. However, unless the clinicians involved receive meaningful additional payment for delivering better health to their patients, the health information technology and practice redesign cannot be replicated, sustained, or expanded.

If investment is made in good-quality EHRs and prevention is paid for, the health care system will adapt. Costs may not be drastically reduced, but by paying to prevent rather than treat illness, the current disease care system can be transformed into one that maximizes health.

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