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COLUMN

THE MEDICINE WE DO: REAL REFORM OF HEALTHCARE

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There is nothing more difficult to carry out, nor more doubtful of success, nor more dangerous to handle, than to initiate a new order of things. For the reformer has enemies in all those who profit by the old order, and only lukewarm defenders in all those who would profit by the new order.

—Niccolò Machiavelli, *The Prince and The Discourses*

In February 2009, The Institute of Medicine held a summit on Integrative Medicine and the Health of the Public at the National Academy of Sciences. Six hundred key leaders and stakeholders in healthcare, including educators, scientists, community leaders, practitioners, lawmakers, policy makers, and insurance leaders, attended it. It was a broad coalition that came together with a common purpose: to change not only the way we do medicine but also the medicine we do.

The conversation at The Institute of Medicine focused not, as one might expect, on incorporating alternative treatments into healthcare but on truly integrating healthcare. Key models advanced included implementation of healthcare teams for chronic disease, the medical home, and a fundamentally different framework for diagnosis and treatment framed by Dr Ralph Snyderman, chancellor emeritus of Duke University, as "prospective" medicine—participatory, preventive, predictive, and personalized.[1] This is the clinical model and framework for practice developed by the Institute for Functional Medicine. Dr Wayne Jonas of the Samueli Institute presented his model for a national wellness initiative (WIN) that provides a framework for creating a culture of health and wellness through public and private efforts across diverse sectors and industries of our society.

The same week, Senator Kennedy's (D-Massachusetts) Senate working group on healthcare reform held hearings on integrative and functional medicine.[2] My testimony echoed calls from Dr Memhet Oz for mobilizing a national health service corps (HealthCorps) to "educate the student body" through health coaches. Dr Dean Ornish underscored that lifestyle approaches to heart disease and prostate cancer have been proven to be more effective and cost effective than medication or surgery.[3] And Dr Andrew Weil emphasized the importance of transforming medical education to train a new generation of practitioners in integrative medicine. A number of us met afterward with Senators Harkin (D-Iowa) and Mikulski (D-Maryland) and their key healthcare advisors, who are allies in moving this agenda forward. I also met with key policy makers in the White House.

There seems to be no lack of understanding of the issues but rather a lack of clarity around key strategies for how to implement changes with policy levers that currently exist. I believe that key avenues for sustainable change are being overlooked. We are at a turning point for healthcare and our nation that is laden with possibility but fraught with danger. I live on the ground as a practicing doctor with real people suffering real problems that have real solutions being overlooked—solutions that hold the key to saving our healthcare system from self-destruction. With healthcare costs approaching 20% of the gross domestic product, now at $2.5 trillion, or $8160 per person annually, and the projected depletion of the Medicare trust fund in less than a decade, changing financing and delivery methods for more of the same model of care that has been proven to cost more and result in poorer outcomes[4] is necessary but not sufficient for effective healthcare reform.

I fear that President Obama's call for prevention may be little more than the implementation of the Clinical Preventive Care Task Force Guidelines, which, while important, are not true prevention but simply early detection. I also fear that simply addressing healthcare reform without addressing the systems-wide issues across all sectors of society that affect the health of our nation and healthcare costs will fail.

Areas outside the direct domain of healthcare such as intellectual property laws, for example, could encourage private industry to develop products and services that promote health and wellness rather than generate profit from sickness and obesity. Education policies must support transformation of schools as incubators of health rather than disease. How can we feed our children for learning and thriving when so many school kitchens have only deep-fat fryers and microwave ovens? Government agencies and departments with domains that impact health, such as the Departments of Agriculture, Health and Human Services, Transportation, Education, and Defense, and the Centers for Medicare & Medicaid Services (CMS), etc, must be coordinated to create a culture of health and wellness.

I have no doubt that when applied well, the personalized systems-medicine approach based on functional medicine as a scalable model for medical practice, education, and research can dramatically improve outcomes while reducing costs, providing a real solution to

our healthcare crisis. Creating the incentives to build this approach and delivering it through integrated healthcare teams, including health educators/coaches driven by the operating system of functional medicine, have to be part of the solution.

Even if we get everything else right in healthcare reform—such as payment reform, universal access, electronic records (currently conceived of as simply transferring the 19th- and early 20th-century medical records system to the computer rather than facilitating a fundamentally new way to practice medicine based on whole-systems analysis), reduction of medical errors, malpractice reform, funding of comparative effectiveness research between drugs or procedures rather than lifestyle or integrated approaches—none of our efforts will matter unless we address the true drivers of cost and chronic disease.

This is a national security issue that threatens our standing in the world. As President Obama stated, "Fixing healthcare is no longer only a moral imperative but a fiscal imperative." But opponents will not go quietly into the night. As reported recently in *The New York Times,* there is an insidious presence of pharma and industry in medical education, research, and practice that prevents the best evidence on lifestyle medicine from becoming the standard of care. Harvard medical students petitioned for education free of pharma bias and limits on consulting and payments by pharma to faculty members, one of whom had 47 industry affiliations and many of whom received tens to hundreds of thousands of dollars in payments.[5]

A recent *JAMA* review that examined the basis for clinical practice guidelines for evidence-based medicine (EBM) found that only 11% of guidelines are based on firm clinical evidence (level of evidence A); most are based on "expert" opinion (level of evidence C).[6] Of guidelines with good evidence (level A), only 19% are Class I recommendations (general agreement among experts that treatment is useful or effective). These clinical practice guidelines considered "best evidence" are heavily influenced by what we have done (driven by pharma), not what we should do (based on evidence for systems medicine). Medical device and pharma industries routinely pay consulting fees and payments to physicians who promote their products, often without evidence of benefit or for off-label uses. Eli Lilly and Company (Indianapolis, Indiana) recently paid $1.4 billion to settle criminal charges that it illegally marketed Zyprexa, an anti-psychotic drug, and Pfizer (New York, New York) set aside $2.3 billion in fines for illegally marketing Bextra.[7]

Dr Peter Green, the world's expert on gluten, found in a study of 10 million subscribers to CIGNA (Philadelphia, Pennsylvania) that correctly diagnosing celiac disease would result in a 30% reduction in healthcare costs by decreasing utilization (oral communication, March 2009), yet this is not advanced because there is no pharma marketing for testing or treatment of gluten intolerance, something that affects 3 million to 10 million Americans, only 1% of whom are diagnosed.

Clearly we cannot afford incremental reform, but what I read and hear about the types of strategies and polices reported in the media from the current administration concerns me because it sidesteps the real issues of the drivers of costs and disease. A coordinated effort across government agencies and industry sectors focusing on health and wellness, incorporating what we already know, is urgently needed. I support the idea of a White House team based on the recommendations in the WIN proposal[8] put forth by Dr Jonas as a way to develop an ongoing vehicle for coordination of strategy and policy.

Certain ideas, while radical, seem obvious to me if we are to create real change and avert disaster. Horse-and-buggy makers gave way to the automobile, and 8-track manufacturers gave way to the iPod. While some industries will fade, others that promote health and wellness will flourish. These are the changes that will shift our system from sick care to healthcare. A coordinated effort at the White House level is necessary to successfully create a culture of health and wellness and transform our healthcare system.

The following are strategies that could have the biggest impact on cost and outcomes.

1. **Reimbursement must change** to include payment for integrated healthcare teams focused on lifestyle treatment of chronic disease and clinical models of systems/functional medicine and wellness. Reimbursement must encourage cognitive services, patient education, and improved clinical outcomes (not pay for performance, which encourages increased use of procedures and testing and may not be linked to improved patient health).
2. **Investment for comparative effectiveness research** must support comparing existing drug- and procedure-based medicine to lifestyle, diet, and functional and integrative approaches. Comparing drug to drug or procedure to procedure simply propagates a model already proven to be less effective than diet and lifestyle for most chronic disease.
3. **Medical education must be transformed.** Nutrition, lifestyle medicine, and environmental medicine must be core components of the education of health professionals and physicians. Medical education could be free, with 2 years of mandatory health service in community health centers, which would provide training in lifestyle/systems/functional medicine with integrated healthcare teams. For about $1.6 billion per year for 67 000 medical students, we could train a new generation of physicians. Establishment of a prototype institute for lifestyle/systems/functional medicine could develop the pedagogy and scalable curricula for medical schools, residencies, postgraduate education, and ancillary health professional education.
4. **Improve food policy and school and community environments** to encourage health by prohibiting food that is known to promote obesity and disease and providing whole, real, fresh foods for our children. Obese teenagers have the same risk of premature death as heavy smokers.[9]
5. **Provide demonstration projects in community health centers** to provide inexpensive, nutritious meals (including takeout), recreational facilities, counseling/education (eg, cooking classes), and healthcare based on systems/lifestyle/functional medicine at one location.[10]
6. **Impose limits on pharmaceutical and unhealthful food advertising.** More than $30 billion is spent on marketing junk

and fast food to consumers, including $13 billion targeted at children, and more than $30 billion is spent by pharma on marketing drugs to physicians (about $30 000 annually per physician). Direct-to-consumer drug advertising also drives prescribing practices based on induced preferences rather than science.

7. **Bioinformatics and electronic medical records** must facilitate 21st-century systems-based and lifestyle medicine rather than 19th- and 20th-century medical records–keeping systems transferred to electronic format.[11] Healthcare teams must be linked by a scalable electronic medical record and database based on systems medicine, so all clinicians can engage in uniform data collection and analysis and allow for improved clinical care, research, measurement of health outcomes, and cost savings.
8. **Create Office on Wellness, Health Promotion, and Integrative Health** as a way to develop an ongoing vehicle for coordination of strategy and policy. Focus specifically on developing policies and programs for lifestyle-based chronic disease prevention and management, integrative healthcare practices, and health promotion.

Real healthcare reform is now possible in a perfect storm where alignment of economic, scientific, and moral imperatives provides an opportunity for us as a nation to do well by doing good through fundamentally changing the medicine we do. It will require the collective imagination, intention, focus, and action of healthcare providers, consumers, industry, and policy makers. In the words of the ancient Jewish sage, Rabbi Hillel, "If I am not for myself, who will be for me? And when I am for myself, what am 'I'? And if not now, when? If I am not for myself, then who will be for me? And if I am only for myself, then what am I? And if not now, when?"

To view the full testimony of the Committee on Health, Education, Labor, and Pensions, "Integrative Care: A Pathway to a Healthier Nation," go to http://help.senate.gov/Hearings/2009_02_26/2009_02_26.html.

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