

THE PROBLEM

A rapidly spreading epidemic of chronic disease has compromised the effectiveness of our healthcare system and threatens to bankrupt both national and global economies. Alarming projections suggest future generations may have shorter, less healthy lives if current trends continue unchecked.¹ Our current healthcare model fails to confront both the causes of and solutions for chronic disease and must be replaced with a model of comprehensive care geared to effectively treating and reversing this escalating crisis.

THE COST OF CHRONIC DISEASE

*Of total healthcare costs in the United States, more than 75% is due to chronic conditions.² In 2008, the U.S. spent 16.2% of its GDP (\$2.3 trillion) on health care.³ This exceeds the **combined** federal expenditures for national defense, homeland security, education, and welfare! By 2023, if we don't change how we confront this challenge, **annual** healthcare costs in the U.S. will rise to \$4.13 trillion,⁴ the equivalent—in a single year—of four Iraq wars.*

THE GLOBAL BURDEN OF CHRONIC DISEASE

- “By 2020, it is predicted that **non**communicable diseases will account for 80% of the **global burden** of disease, causing 7 out of every 10 deaths in developing countries, compared with less than half today.”⁵ From 1983 to 2009, the number of people in the world with diabetes increased seven-fold, from 35 to 225 million.⁶ In 2010, 92 million diabetics and 148 million pre-diabetics were identified in China alone.⁷
- **In the United States**, about 133 million Americans—nearly 1 in 2 adults—live with at least one chronic illness, and chronic diseases *already* cause 7 in 10 deaths each year:
 - » **Heart disease:** 81 million people⁸
 - » **Cancer:** 11 million people⁹
 - » **Depression:** More than 1 in 20 Americans, 12+ years old¹⁰
 - » **Diabetes:** “In the past 20 years [in the U.S.], the prevalence of diabetes has doubled and will do so again in the next 16 years.”¹¹ “One in every 3 children born [in the U.S.] today will develop diabetes during his/her lifetime.”¹²

OUTDATED CLINICAL MODELS

Despite notable advances in treating and preventing infectious disease and trauma, the acute-care model that dominated 20th century medicine is not effective in treating and preventing chronic disease.¹³ *The primary driver of chronic disease is the interaction among genes, activities of daily living (lifestyle), and the environment.*^{14,15,16} Adopting a **new operating system** for 21st century medicine requires that we:

- Recognize and validate more appropriate and successful clinical models
- Re-shape health professions education and clinical medicine so that health practitioners achieve proficiency in the assessment, treatment, and prevention of chronic disease
- Reimburse equitably for lifestyle medicine and expanded preventive strategies

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THE SOLUTION

The primary drivers of the chronic disease epidemic are the complex daily interactions between an individual's genetics, environment, and lifestyle choices. A comprehensive clinical model—a new operating system—is needed to address these underlying causes of disease and train healthcare practitioners to help their patients manage this complex, interconnected web. Functional medicine provides just such a powerful new operating system and clinical model to replace the outdated and ineffective acute-care models carried forward from the 20th century. Three “engines” will drive progress toward achieving the strategic objective of reversing the epidemic of chronic disease: Education, Research, and Collaboration.

EDUCATION

- *Create a comprehensive blueprint* for the specific knowledge and skills required of a trained functional medicine clinician
- *Develop innovative teaching methods and instructional technologies* suited to the needs of practicing clinicians
- Prepare a *functional medicine curriculum for health professions schools* and residency programs; develop apprenticeship and mentorship programs
- *Set standards and assessment methods for certifying proficiency* in functional medicine practitioners from a variety of healthcare disciplines

RESEARCH

- *Build and maintain a practice-based research network (PBRN)* to assess and validate the most successful functional medicine approaches to specific conditions
- Contribute to the national effort to *develop and validate whole systems research models* and comparative effectiveness studies
- *Continuously monitor the emerging scientific evidence* about the underlying causes of—and effective approaches to—chronic disease; integrate the evidence into every level of functional medicine education

COLLABORATION

- *Identify and partner with key insurers, employers, and government agencies to implement pilot projects* that will demonstrate the marketplace practicality and clinical validity of the functional medicine model
- Identify and partner with organizations that can help *build out and validate the functional medicine model*, with a particular focus on educational technology and clinical tools
- Collaborate with leaders in academic medicine to *integrate functional medicine education into health professions schools and residency programs*
- Educate and collaborate with policymakers to *support initiatives* aimed at transforming medical education, research, and practice