

now at

protomag.com

search proto's
complete archive
share proto articles
with friends and
colleagues
sign up for proto's
RSS feed

EDITORIAL ADVISORY BOARD

Stephen B. Calderwood, M.D.
Jeffrey B. Cooper, Ph.D.
Harold J. Demonaco, M.S.
Mason W. Freeman, M.D.
Daniel A. Haber, M.D., Ph.D.
Daniel B. Hoch, M.D., Ph.D.
Lisa Iezzoni, M.D.
John A. Parrish, M.D.
David W. Rattner, M.D.
Laura E. Riley, M.D.
Celeste Robb-Nicholson, M.D.
Jerrold F. Rosenbaum, M.D.
James H. Thrall, M.D.
Frances Toneguzzo, Ph.D.
Joseph P. Vacanti, M.D.
Kirby Vosburgh, Ph.D.
Anne B. Young, M.D., Ph.D.



MASSACHUSETTS
GENERAL HOSPITAL

Peter L. Slavin, M.D. // President,
Massachusetts General Hospital

David F. Torchiana, M.D. // CEO and
Chairman, Massachusetts General
Physicians Organization

Peggy Slasman // Editor-in-Chief
Meg Vitter // Editorial Manager

Time Inc.
CONTENT SOLUTIONS

Paul T. Libassi // Deputy Managing Editor
David Bumke // Project Editor
Sarah Alger // Senior Editor
Roman Luba // Design Director
Chris Malec // Associate Art Director
Denise Bosco // Senior Photo Editor
Sara Cahill // Senior Copy Editor
Cynthia Manalo // Account Director
John Kiriluk // Associate Production Director
Jane Mayers // Prepress Manager

ADVERTISING

George J. Baer III // Executive Director
248-988-1896
SOUTH CENTRAL The Kostial Company
888-241-6634 ext. 712
EAST COAST Wynne Media Company
212-869-1410
MIDWEST Rickert Media CHICAGO
312-464-9125 MINNEAPOLIS 952-830-1252
SOUTHEAST Richards/McLaughlin Media
770-888-2212
DETROIT Kennedy + Company 313-866-4399



Massachusetts General Hospital, a
900-bed academic medical center located in
Boston, is a founding member of Partners
HealthCare and is the largest and oldest
teaching affiliate of Harvard Medical School.

This magazine is intended to present advances in
medicine and biotechnology for general informational
purposes. The opinions, beliefs and viewpoints
expressed in this publication are not necessarily those
of the MGH. For personal health issues, the MGH
encourages readers to consult with a qualified health
care professional.



If and when President Obama finally signs health care reform into law, it will stamp 2010 as a landmark year in U.S. social policy. This health care overhaul will help insure most of the 46 million individuals who have no coverage. For the first time since the passage of Medicare legislation in the 1960s, the federal government will have acted to significantly extend health care coverage, something most Americans believe to be a basic human right.

Yet the work of health care reform is hardly complete. Improving access only compounds the need for attention to the other major issue in health care: rising costs. In 2009 health care spending exceeded \$2.6 trillion. That's approximately 17% of the entire U.S. economy. According to the Congressional Budget Office, about half of that growth is attributable to new medical technology. So the question becomes: Can we afford health care for all while supporting the forward march of technology?

Some advances actually reduce what we spend while improving quality. Vaccines, for example, have eliminated such terrible diseases as polio and the acute and chronic costs of treating them. Unfortunately, many other technologies—such as magnetic resonance imaging and implantable cardiac defibrillators—increase expenditures, even though they may save untold numbers of lives. And other breakthroughs, while ostensibly making it cheaper to treat particular conditions, ultimately raise costs. That's what has happened with laser surgery for cataracts: It has transformed a once complex procedure with a long recovery time and greatly reduced the per-patient price tag. But the overall outlay for care has risen exponentially as millions more patients opt for treatment. Finally, while advances may lengthen and improve life, illness and death remain an inevitable part of human existence, and so will the associated costs.

Yet even if longevity adds costs, medical innovation may one day achieve the neat trick of saving money while improving results. Imagine the time, perhaps in a decade or two, when we'll be able to use healthy DNA to repair or replace defective genes associated with Alzheimer's disease. Think about stem cell therapies that will generate new heart muscle following a heart attack or individual genotyping that will pinpoint the cause of a particular cancer. The expense of treating heart disease, cancer and other scourges is enormous, and the human toll is even greater.

Proto exists to communicate ideas that could soon save lives and dollars. In this issue, we examine possible medications for celiac disease that could ultimately impact other debilitating autoimmune disorders, and we describe early successes of molecular therapies developed for retinal conditions causing blindness. Thanks to health care reform (please), millions more will have access to these exciting advances.

Peter L. Slavin, M.D.
President
Massachusetts General Hospital

David F. Torchiana, M.D.
CEO and Chairman
Massachusetts General Physicians
Organization