

FACTS & FIGURES

Dollars and sense

A nonprofit think tank called the Milken Institute recently released a report called *Unhealthy America*, capturing the economic impact of seven chronic diseases—cancer, diabetes, heart disease, hypertension (high blood pressure), stroke, mental disorders, and pulmonary conditions such as asthma. These diseases exact a human toll, of course, but also the very measurable financial toll highlighted below.



\$1.3 trillion

Annual economic losses in the U.S. due to these seven diseases (including both treatment costs and lost productivity)

162 million

Number of cases of these seven chronic diseases in the U.S.

42%

Estimated increase in the number of cases by 2023

40 million

Number of those cases that could be avoided by making modest improvements in prevention and treatment

\$1.1 trillion

Estimated annual savings by 2023 if those improvements are made

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Rank of obesity and smoking among the preventable causes of these seven diseases

2,500

Number of Vermont and New Hampshire families participating in a Dartmouth study to assess influences on adolescent obesity

July 4, 2008

Date on which the DHMC campus will become totally tobacco-free

SOURCES: MILKEN INSTITUTE, DARTMOUTH-HITCHCOCK MEDICAL CENTER

Vascular surgeons pool their data to improve outcomes

Surgeons recognize the importance of outcomes,” says Dr. Jack Cronenwett, a vascular surgeon at DHMC. But, he adds, “it’s hard to track and calibrate your outcomes against others” without a really huge database. Even if all the surgeons in a hospital capture their outcomes, once the data is broken down into meaningful categories, small swings in absolute numbers can create misleadingly big swings in percentage rates.

Voluntary: So in 2002, Cronenwett recruited 48 vascular surgeons from nine hospitals across New Hampshire, Vermont, and Maine to form the Vascular Study Group (VSG) of Northern New England. The VSG is a voluntary, cooperative organization dedicated to collecting and sharing data from key vascular procedures at all the participating hospitals and then discussing and refining best practices based on that data.

Between 2003 and 2006, the group recorded information from 6,143 procedures, plus follow-up facts on 83% of patients a year after their procedure.

Usage: The data points range from preoperative medication usage to postoperative complications to mortality rates for five types of surgery—such as opening a blockage in one of the main arteries of the neck (a procedure called carotid endarterectomy) and repairing a weak spot in the wall of the body’s central artery

(a condition called an abdominal aortic aneurysm). The first analysis of the data was published a few months ago in the *Journal of Vascular Surgery*.

The VSG is the only active, comprehensive vascular registry in the U.S. Since its formation, the group has expanded to 11 hospitals, including the University of Massachusetts Medical Center. Its twice-a-year meetings are attended not only by surgeons but also by nurses, data analysts, and database managers. It was modeled after the Northern New England Cardiovascular Disease Study Group, founded in 1987 by Drs. Gerald O’Connor and Stephen Plume of Dartmouth; between 1987 and 2000, that group achieved a more than 60% drop in mortality following heart surgery.

Patterns: The VSG’s goal is to similarly improve outcomes for patients who undergo vascular surgery. It will be a while before meaningful patterns emerge from the data so that meaningful changes can be identified. But already, between 2003 and 2006, the preoperative use of beta-blockers, which help prevent heart complications, increased from 72% to 91% and of statins, which help lower cholesterol, from 54% to 72%.

Aggregate results from the VSG are shared at each biannual meeting. In addition, all 11 hospitals receive a report with their own data separated out, so each facility can benchmark itself in relation to the others. “There’s been enough trust developed in the group, and people are so focused on quality, that we

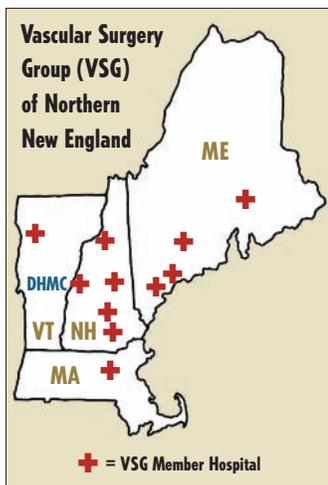
have agreed to unblind the results to identify which centers were really doing it right," says Cronenwett.

Members of the VSG staff at DHMC also compare the information that goes into the registry to the billing records at the 11 hospitals, to be sure that 100% of each participating surgeon's cases are captured.

Rate: And each participating surgeon receives an individual report, too. "So if a patient asks me, 'How many carotid endarterectomies have you done over the past two years,' I can tell them that I've done, you know, 150," says Dr. Jens Jorgensen, a VSG member from Maine Medical Center in Portland.

"I can tell them what my stroke rate is and what my mortality rate is," Jorgensen continues. "And so it really allows us to give informed consent to patients in a much better, more meaningful way."

MATTHEW C. WIENCKE



Eleven New England hospitals are currently members of the VSG, which was established by a surgeon at DHMC.

Dartmouth's Gougelet: A master of disaster

A Dartmouth emergency physician and national emergency-preparedness expert, Dr. Robert Gougelet, has been appointed vice chair of the National Advisory Council of the Federal Emergency Management Agency (FEMA). The council was established in 2007 in the wake of criticism about FEMA's response to the Hurricane Katrina disaster in New Orleans.

"I believe both Congress and the administration looked at the faults of Hurricane Katrina and felt there needed to be an advisory process," says Gougelet, who was one of the emergency responders to Katrina. "A lot of us on the council felt skeptical—[that] our advice wouldn't be taken—but I've been pleasantly surprised."

Reform: The 30-some members of the National Advisory Council, says Robert Shea, associate deputy administrator of FEMA, "bring a great deal of passion about their area of responsibility and their desire to help FEMA reform itself. . . . Quite frankly, it's energizing . . . for everybody involved."

The council is charged with looking at federal preparedness for, responses to, and recovery from natural disasters as well as acts of terrorism and other man-made disasters.

Groups: "If we're going to improve," says Arthur Cleaves, a Boston-based regional administrator for FEMA, "we have to have the insights from private business, from the academic institutions, from all first respon-

ders, and any volunteer groups." Cleaves, who was the emergency management director for Maine from 1999 to 2006, has worked with Gougelet on emergency preparedness for more than five years. Gougelet, says Cleaves, "knows the complexities within the medical world, and the difficulty in . . . getting people to leave their primary jobs to be available.

"But probably more than anything," adds Cleaves, Gougelet "understands in emergencies what's needed and where and when and then how you'd . . . get the right people at the right place at the right time."

As one of only three physicians on the council, Gougelet provides expertise few other members have. Shea cites an

example—the recent headline news about formaldehyde fumes in FEMA trailers used to house Gulf Coast residents left homeless by Katrina. Formaldehyde had been used in making composite panels in the trailers, resulting in toxic levels of fumes from the chemical. Gougelet, explains Shea, was instrumental in helping FEMA determine "what happened, what went wrong, . . . where we are going from here."

An early member of one of the nation's first Disaster Medical Assistance Teams and a current member of a Boston-based



Rob Gougelet, left, has traveled all over to help out after disasters. He's pictured here with a team in Bam, Iran, after a 2004 earthquake there.

team, Gougelet has responded to many national and international disasters—from Hurricane Hugo in 1989 and the 1994 Northridge earthquake, to the 2001 New York anthrax crisis and the 2004 earthquake in Bam, Iran. He also heads the

Northern New England Metropolitan Medical Response System and the New England Center for Emergency Preparedness, and, through DHMC, is a consultant on bioterrorism planning to the New Hampshire, Vermont, and Maine Departments of Health.

Good heart: "Rob's been a great part" of getting the National Advisory Council going, says Shea. "This is basically volunteer work, and so we're dependent on the folks like Rob. He's got a good enough heart that he's willing to spend his time and effort" helping out wherever he can.

Laura Stephenson Carter