



**SNOW JOB:** Dr. Edward Merrens, chief of hospital medicine at DHMC, was the U.S. biathlon team physician at the Vancouver Olympics. Biathlon combines Nordic skiing and target shooting. Merrens was a Nordic skier as an undergraduate at Dartmouth.

## PITCH-PERFECT PARTICIPANT

When Chris Carpenter first heard about the Children’s Hospital at Dartmouth (CHaD), few outside southern New Hampshire could have picked the young major-leaguer out of a lineup. Not even fellow Manchester resident John Xiggoros could have done so—until his physical therapist pointed out the 6-6 pitcher working out at the same rehab center.

It was the late 1990s and Xiggoros and his wife, Patricia, were launching a fund to benefit CHaD in memory of their daughter, who’d died of a rare cancer (see [www.kristensgift.com/about.htm](http://www.kristensgift.com/about.htm)). Hoping to enlist Carpenter’s help, Xiggoros asked permission to contact his agent. “Chris asked me who it benefited,” Xiggoros recalls. “After a brief explanation, Chris said, ‘I’ll be glad to help the kids. We don’t need any agents. Just tell me where to be and what to do.’”



Since then, Carpenter has won a Cy Young Award and a World Series ring. And made significant donations to CHaD—most recently \$20,000 after the National League named the St. Louis Cardinal the Comeback Player of 2009. And he and his wife, Alyson, have visited young patients at CHaD several times. “I was there the day after one of his visits, and the staff was just amazed at how thoughtful and generous he was with his time,” says Sharon Brown, CHaD’s director of community relations. “He got right down on the floor with the kids.” D.C.

## TOPS IN THE FIELD OF STRESS

Much as they welcomed recent recognition from the International Society of Traumatic Stress Studies (ISTSS), DMS’s Matthew Friedman, M.D., and Paula Schnurr, Ph.D., knew better than to rest on their laurels. In fact, the day before they both received national awards at the ISTSS conference in Atlanta, an Army psychiatrist opened fire at Fort Hood, Texas, killing 13 people. All manner of media descended on the meeting, clamoring for instant analysis.



Friedman, who received the group’s Public Advocacy Award, was ready, calling the event “much more difficult to absorb, to understand” than battlefield deaths.

Schnurr, who received the group’s Robert S. Laufer Award for outstanding scientific achievement, calls her colleague “one of the most significant positive influences on the entire field.” She and Friedman have a long track record of serving the field together, as cofounders and leaders of the 20-year-old National Center for Post Traumatic Stress Disorder, based at the DMS-affiliated White River Junction, Vt., VA Medical Center. D.C.

## Blood draw waiting times drop dramatically

In DHMC’s outpatient phlebotomy labs, the journey to improved patient care began with 122 steps.

Every day, hundreds of patients have their blood drawn at one of the Medical Center’s four outpatient phlebotomy labs. By last spring, says Michael Harhen, the administrative director of pathology, it was clear from surveys that many of those patients were not entirely satisfied with the process. The biggest problem was the wait

time—an average of 22 minutes. But over the past year, the managers and employees who staff the labs have implemented a series of changes that have made a dramatic difference, cutting the average wait to about three to five minutes.

**Flow:** Before making any changes, lab managers brought in consultants to provide a new perspective. The consultants videotaped the blood-drawing process, from the time a patient checks in to the moment the blood sample is sent away for analysis. They then charted the flow of patients, paperwork, and samples through the lab, breaking down each part of the process and even counting the number of footsteps taken by lab staff. Among other conclusions, they found that 122 of those footsteps were wasted effort that did not contribute to patient care.

The study helped staff focus on what was essential to get a patient through the lab quickly and

safely. “When someone comes in to have their blood drawn, they’re not really concerned about anything other than getting a safe needle stick . . . quickly and accurately,” says Jonathan Park, Ph.D., the manager of the clinical laboratories. “Everything else is extraneous.”

**Tasks:** Starting in April 2009, the lab implemented a number of changes to make the process more efficient, including re-arranging where employees sit and changing the tasks done by some employees.

Another important change came with the implementation of software that allows a lab employee to monitor wait times at the four different outpatient phlebotomy labs. Each step in the process is time-stamped and automatically entered into the monitoring system, making it possible to know how long patients are waiting, on average, at each lab. That way, if the lab on Level 3 is moving smoothly but patients are backing up on Level 5, personnel can be shifted to address the problem before wait times get too long. “They’re really small changes, but there was a huge impact,” says James Tracy, manager of support services and education.

**Wait:** Each morning, the average wait times from the previous day are posted where employees can see them. Longer wait times are highlighted in red or yellow, while shorter wait times are highlighted in green. Before the

**The results of blood tests now get to physicians 40% more quickly.**

**PAPER WEIGHT:** Dr. David Goodman, a national expert in researching the physician workforce, coauthored an op-ed essay titled “Doctors No One Needs” for the December 23, 2009, issue of the *New York Times*.



changes were implemented, wait times under 12 minutes were green. Now, Tracy says, anything over 10 minutes is red.

**Save:** Rethinking the process has also helped the phlebotomy labs save money. For one thing, they were able to cut down on the amount of supplies they need to keep on hand. They are also working on using more straight needles and fewer butterfly needles. Straight needles work just as well for most patients and cost significantly less than butterfly needles, which are still used for patients whose veins are more difficult to access. That change alone could lead to annual savings of about \$150,000.

“We’re not where we want to be yet, but we’re getting there,” says phlebotomy supervisor Michelle Gour. “We’ve already saved a lot of money.”

The phlebotomy staff has also taken steps to improve the process of taking inpatient blood

samples, allowing them to improve the percentage of samples that are analyzed by 8:00 a.m. Gour says that getting those samples collected and analyzed as early as possible allows physicians and patients to make decisions about treatments earlier in the day, making it easier to discharge patients or schedule procedures.

As a result of the changes, the results of blood tests now get from the lab to the physicians who ordered them 40% more quickly. Gour says that both patients and physicians have commented on the changes. The improvement is also evident on patient survey forms, with satisfaction rates on the rise since the changes were implemented.

**Mission:** “Not only did we speed up our process, but we improved the patient experience, which is what our mission is all about,” says Harhen.

AMOS ESTY



JON GILBERT FOX

**A quality improvement project in Dartmouth-Hitchcock’s outpatient phlebotomy lab cut the average waiting time for patients from 22 minutes to five minutes or less.**

F A C T S & F I G U R E S

**Emergency exit**

**1979**

Year emergency medicine became a recognized specialty

**1982**

Year DHMC hired its first certified emergency physician

**1995**

Year DHMC became a Level I Trauma Center



**2**

Number of physicians (both residents) who saw patients in DHMC’s Emergency Department (ED) before 1982

**14**

Number of certified emergency physicians on the staff now

**25,700**

Number of certified emergency physicians in the U.S. now

**12,000**

Number of patients per year seen in DHMC’s ED in 1982

**32,000**

Number per year seen now

**2010**

Year DHMC’s first certified emergency physician, Dr. Norman Yanofsky, is retiring as section chief

SOURCES: AMERICAN BOARD OF EMERGENCY MEDICINE, DHMC