Demarest, the author and illustrator of many children’s books, has in recent years focused on real-life adventure, including flying with the Hurricane Hunters and the U.S. Coast Guard. An official artist for the Coast Guard, he traveled in May 2006 to the Persian Gulf to document its work in words and watercolors. The idea of chronicling the Dartmouth-Hitchcock air-rescue service arose from that trip, and he began doing occasional ride-alongs a year ago. He also used to be a volunteer firefighter in Thetford, Vt., and later in Meriden, N.H., so is familiar with the work of first responders. He’s currently working on a book for adults about DHART and the history of medevac services. This feature tells the story of his first day with DHART; the patients involved have given permission for the story to be told, but their names and some identifying details have been changed to protect their privacy.

June 29 is a special day for Mike and Sue Newman. It’s the birthday of both their grandchildren—brother and sister Jason, 12, and Emma, 10, born two years apart to the day. Last year, the youngsters chose to celebrate the occasion at EBA’s, a pizzeria in Hanover, N.H. The Newmans planned to join the children and their parents—their son, David, and his wife, Laura—for dinner there.

As the Newmans were getting ready to head for Hanover, Mike kept an eye on the weather. It had been raining off and on all day, and by mid-afternoon, given the forecast for more rain, he suggested leaving early for the hour-long drive from Springfield, Vt.

Mike used to work in the town’s formerly thriving machine-tool industry; when his employer of 44 years shut its doors in 2001, he switched to selling real estate. Sue had worked as the office manager for a local optometrist ever since their two sons had left home. The Newmans had celebrated their 46th anniversary a few months earlier.

When they traveled together, the couple usual-

Flight nurse Abe Wilson surveys the cabin after a transport to Mass General Hospital. DHART now stands for Dartmouth-Hitchcock Advanced (rather than “Air”) Response Team, since the service includes ground units, too.
Karen Jacobi—a part-time Hanover firefighter and an ambulance driver for the Dartmouth-Hitchcock Advanced Response Team (DHART)—identified herself as an EMT. She, like the tow truck, was another of the day’s fortuitous elements.

Then the truck pitched sideways and rolled. And rolled. Grass, mud, and rain tore through the cab. Sounds of crunching metal and shattering glass echoed in Sue’s ears. The truck slammed repeatedly into the muddy earth before finally settling, driver’s side down, in a ravine. “It seemed like it took forever for us to stop,” Sue recalls. “It was like a loud zipping noise,” he recalls. The truck hit and smashed into the metal guardrail, ripping 12 feet of it out of the ground.

Dressed just in casual slacks and flip-flops, Jacobis slid down the muddy slope to the bottom of the ravine. She was relieved, as she peered in at Sue, to see that at least one of the truck’s occupants was alert and able to say that she was okay. “At that moment, I heard a groan and looked down at a man pinned under the truck,” Jacobis recalls. “He told me he was having trouble breathing, and seeing the wheel pressed against his chest, I immediately started digging out the mud underneath his back.” Her efforts brought a little relief for Mike.

“Though I was the first person [on the scene],” Jacobis says later, “I was quickly joined by two other EMTs who also happened to be on the interstate—ironically, people I’d known and worked with in the past. When Windsor ambulance arrived and started working on the man, I placed a basket on him so he wouldn’t go into shock and stayed by his side, holding his hand. I wanted him to know someone was there just for him,” she explains.

Jacobis was “very reassuring,” says Sue Newman. “She stayed with us a long time, telling me help was on the way. And it was.”

Nicole Buck was another of the good samaritans who got there early. A graduate student in Dartmouth’s Department of Earth Sciences, she, too, is—identified herself to the Dartmouth-Hitchcock Advanced Response Team (DHART)—and an ambulance driver for Dartmouth Medicine online at dartmed.dartmouth.edu

Karen Jacobi—a part-time Hanover firefighter and an ambulance driver for the Dartmouth-Hitchcock Advanced Response Team (DHART)—identified herself to the Dartmouth-Hitchcock Advanced Response Team (DHART) and an ambulance driver for Dartmouth Medicine online at dartmed.dartmouth.edu.
Sue Newman had been told to stay where she was, for fear any movement might cause the truck to shift. She lay quietly, listening to the muffled sounds of the emergency personnel working feverishly to extricate her husband.

Meanwhile, Windsor Fire Chief Ron Vestal headed south to set up a traffic control point below the accident. He knew nothing would be rolling in the northbound lanes for a while. Soom, the Vermont State Police sent a cruiser further south, to Exit 8, where I-91 traffic was rerouted onto side roads.

For the emergency personnel who continued to arrive on the scene, the sight of the twisted guardrail and the battered truck was gut-wrenching. When they heard that the driver was pinned beneath the truck, they feared for his survival. “This particular three-mile stretch of road,” Buck says, “for years was so bad that anytime it rained, my husband and I drove to the station and waited for our pagers to go off. And they almost always did.”

When Windsor ambulance got there, Jacobs directed the four EMTs on board. Rich Bowman, Timothy Lang, and Kelly Young—all “intermedi ate technicians”—and Barbara Thomas, a “basic,” headed right for Mike, muddled and partially hidden in the foot-tall grass. They got on their hands and knees and dug away more of the mud under him while also starting an IV. The miracle of the situation was that he was lying in a slight V-shaped depression; the sloping sides of the embankment supported much of the Chevy’s weight. And although the slippery mud made navigating on the hillside hard for the emergency personnel, the heavy rain proved to be a blessing, for it had softened the ground enough that it gave under the weight of both Mike and the truck.

The Meunier’s wrecker arrived quickly on the scene and backed perpendicularly across the highway—its rear bumper resting against the guardrail. The firefighters attached its cable to a hook on the undercarriage of the blue pickup and then signaled to the driver to take up the slack, preventing the pickup from sliding any further. Lateral movement was now the rescuers’ main concern. A call went out for chocks—16-by-6-inch wooden blocks—to help stabilize the truck. Nicki Buck doffed her heavy firefighter’s “bunker coat” and dashed back to the engine, returning with a plastic milk crate full of blocks and then sliding them down the embankment to waiting hands. The rain had stopped by then, but the rescuers were laboring under increasing oppression; the sloping sides of the embankment supported much of the Chevy’s weight.

Sue had been told to stay where she was, for fear any movement might cause the truck to shift. She lay there quietly, listening to the muffled sounds of the emergency personnel working feverishly to extricate her husband.

Once the rain stopped, sunlight poured in through the truck’s smashed back window. Soaking wet and covered in mud, Sue welcomed the warmth on her head and shoulders. Wedged in as she was, her only view was down through the remains of Mike’s side window, toward the mud and mangled grass just 18 inches from her face. She remained calm but grew increasingly worried about Mike. Then, with a sinking feeling, she remembered the family members who would soon be waiting at the pizzeria, wondering what had happened to them.


Flight status was still “red,” meaning the helicopters were grounded. But as they peered at the Rorschach-like splatters on the monitor, the two men could see the showers starting to dissipate.

**Dartmouth Medicine**—online at dartmed.dartmouth.edu
Mark Pippy picked up the receiver and learned of a “rollover on Interstate 91, with entrapment, near the Windsor exit.” He called Clark, who responded, “We’re good to go,” as he turned to head out to the helipad.

Pilot Paul Austin, strapped in and ready to go.

Clark was doing a walk-around of the aircraft, making sure it was flight-ready. Then they stepped outside and strode through shimmerring puddles toward DHART 1 on the south end of the helipad. Clark was doing a walk-around of the craft. "Windsor Dispatch of a “rollover on Interstate 91, with entrapment, near the Windsor exit.” Pippy hung up and called Clark to see if he was ready to respond. "We’re good to go," Clark said into the phone, as he turned to head out to the helipad.

Pippy pushed a button on the console in front of him, and the hangar resounded with beeps as everyone on duty pulled their pages from their flightbags and read the text message telling them of a scene call on I-91: a motor vehicle accident. Vota and Rylander pushed back their chains from their computers in the crew room and headed for dispatch to get more information.

Roger that," said Clark as he left the dispatch office. He stepped into the galley kitchen, poured himself a cup of coffee, and strolled down the hall to the pilot’s office—a small, cozy, always-dark 8-by-10 room with two desks and a single bed. There, he logged onto the computer to double-check the status, Pippy responded.

"Let me know when you want to upgrade the status," Pippy responded.

"Roger that," said Clark as he left the dispatch office. He stepped into the galley kitchen, poured himself a cup of coffee, and strolled down the hall to the pilot’s office—a small, cozy, always-dark 8-by-10 room with two desks and a single bed. There, he logged onto the computer to double-check the weather. Even though a glance outside showed the rain still pouring down, Clark saw a break in the front moving in from the west.

The two helicopters alternate calls. DHART 1’s day shift starts at 7:00 a.m. and runs for 12 hours, while DHART 2’s crew clocks in three hours later, likewise for a 12-hour stint. When DHART 1’s day crew finishes up, a 7:00 p.m.-to-7:00 a.m. crew takes over, and similarly for DHART 2. The Federal Aviation Administration (FAA) mandates a maximum pilot workday of 14 hours and a minimum of 10 hours of preflight rest time. As a shift nears its end, the fresh flight crew will beleap the outgoing crew if it looks like a call could take the first crew beyond its time limit. It’s not unheard of for a crew to fly to a site, only to have the recovery take longer than expected and for the pilot to time-out. In such a case, the pilot must literally walk away from the helicopter; the rest of the crew can stay on, but a new pilot must be flown in to take over. (Although the FAA sets no mandates for EMTs, DHART does put limits on its medical crew shifts.)

By mid-afternoon on June 29, both crews had logged two missions, so it was DHART 1’s turn to take the next call. Clark, nurse Dan Vota, and paramedic Alf Rylander were on the DHART 1 roster that day. Just as the rain outside began to abate, as it was due, the phone rang in DHART’s dispatch office. Mark Pippy picked up the receiver and learned from Windsor Dispatch of a “rollover on Interstate 91, with entrapment, near the Windsor exit.” Pippy hung up and called Clark to see if he was ready to respond. "We’re good to go," Clark said into the phone, as he turned to head out to the helipad.

Vota climbed into the aft-facing seat, then clicked the buckle on the four-point shoulder-lapbelt and snapped it tight. Next, he plugged a black cord dangling from his helmet into the so-called Carter box—a black device the size of a deck of cards connected to the aircraft’s communication system. Rylander stuck his head as he slid into the forward-facing copilot’s seat, then he, too, buckled up and plugged in. Both lowered the visors on their helmets before sliding their doors shut and securing the handles. It was cramped in back, but that allowed for easy access to the neatly stowed equipment and supplies, including the green and chrome oxygen valves mounted on both interior sides.

Another DHART crewmember always helps with preflight operations from the tarmac. That day, paramedic Jason Johns, wearing regulation ear plugging from his helmet into the so-called Carter box—a device connected to the aircraft’s communication system.

Pilot Paul Austin, strapped in and ready to go.
In less than five minutes, they were closing in on the site of the accident—easily a 20-minute drive from DHMC. Clark, who by then had his radio keyed to the incident commander’s frequency, was already talking to the ground coordinator to get landing instructions. The crew could see two lines of unmoving traffic in the northbound lanes, stretching more than a mile to the south.

The accident site suddenly came into view as Clark banked and swung the helicopter around a cluster of conifers and maples. Multiple emergency vehicles ringed the scene—State Police cars, the Windsor ambulance, Hartland and Windsor fire engines, and rescue trucks. Amid the flashing blue, white, and red lights, the crew on DHART 1 could see the late-model blue pickup on its left side in the ravine. Clark radioed the crew, asking for the landing checklist. Calmly, Vota read down the list. “Check,” Clark responded after each item. He slowed the descent of the helicopter as it slipped over the last of the emergency vehicles. The whine of the rotors changed to a louder, almost metallic “whup, whup,” vibrating the whole compartment. Looking out their respective sides of the aircraft, Vota and Rylander confirmed to Clark that both areas were clear.

Clark touched down on the highway 70 yards beyond a parked state police car and radioed Pippy: “DHART 1 has landed.”

On scene at 15:55,” Pippy radioed back. “Going off mike,” they said—then doffed their helmets. Jumping quickly out of their respective side doors, they met at the rear of the helicopter. Rylander ducked underneath the tail extension and unsnapped two recessed clasps, swinging the bowed clamshell doors down and away from the aircraft. Vota helped him slide out the gurney, its legs snapping into place before its wheels hit the tarmac.

Pippy, 30 feet away inside the dispatch room—“Comm” being shorthand for communications—“You are number 440, clean at 15:48.”

“Thank you, sir,” Clark acknowledged.

Through their helmets and seats, the crew could both hear and feel the two powerful Pratt and Whitney engines revving as Clark gently pulled up on the collective—the flight lever. The Eurocopter rocked slightly on its white metal landing skids as the rotor wash sent it slightly, and headed off to the southwest. The sky was still dark and filled with gray clouds, but a shaft of late-afternoon sun suddenly broke through and evaporated under the intense heat of the late-afternoon sun. Sweat poured off the emergency personnel who were struggling to hold the Chevy in place while also digging out the driver.

By that time, the firefighters had the truck well-braced with chocks. But the ground was still soggy and slippery. Transporting the patient up the ravine wasn’t going to be easy. Suddenly, a call rang out for more people to help stabilize the truck. Clark, a burly man who stands exactly six feet tall, had one leg over the guardrail on his way to go help before he was quickly (and good-naturedly) rebuffed by Vota. “If you get hurt, who’s gonna fly us?” Vota asked, giving Clark a “what were you thinking?” look.

Clark chuckled. “Yeah, I guess it’s not such a hot idea,” he said. No matter how severe an accident is, first responders often find that a light note has a way of settling the mood. The DHART crew would have to wait for the EMTs in the ravine to haul the victim up to the roadway. Vota had already gathered the driver’s name and vital statistics from the onsite personnel: Mike Newman, age 65, weight 240 pounds. Clark took out a calculator and factored this information into his “weights and balances.” With a patient that large, he might need to take the aircraft aloft to reduce its weight by burning off some extra fuel, so they could make the return flight safely. But Clark’s calculations indicated they were safe as is.

Steam rose from the roadway as the puddles evaporated under the intense heat of the late-afternoon sun. Sweat poured off the emergency personnel who were struggling to hold the Chevy in place while also digging out the driver. For Mike, the reality of his situation had been brought home by the insertion of the IV needle. continued on page 56
A bag passed it to another EMT on the road. Hands. An EMT who'd been holding the IV to a bright yellow backboard—and then slope—neckbrace in place, shirt off, strapped. Eral firefighters carefully hauled him up the ment, his leg appeared to be unbroken. Seven firefighters carefully hauled him up the ment. Much to the EMTs' amaze-

But his left leg was partially wrapped around the truck on top of me. I don't know how I was opening my eyes realizing someone was talking to me, as I found myself staring up at my truck on top of me. I don't know how I was doing this. I don't remember anything.

The difficulty that faced the rescuers was that not only was Mike pinned by the truck, but his left leg was partially wrapped around the truck on top of me. I don't know how I was doing this. I don't remember anything.

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