

Above and Beyond the Call: Three Jefferson Heroes

by John J. Gartland S'44

Every so often Jefferson Medical College alumni or alumnae will step away from their usual roles as practicing and teaching physicians and perform acts of heroic courage, or correct a longstanding historical wrong against humanity, or work fearlessly against overwhelming odds to promote human rights and justice in the world. Such Jefferson graduates should be recognized, be publicly saluted, and have their stories made part of the permanent record of the institution. This is the story of three such Jefferson graduates who did respond to calls above and beyond their usual professional responsibilities. The *Alumni Bulletin* brings their stories to the readership so their actions and achievements can be honored by all Jeffersonians.

Richard H. Kirschner '66, a world renowned forensic pathologist, completed his postgraduate education in pathology in 1971 at the University of Chicago. After two years in military service, he joined the University of Chicago faculty as an Associate Professor of Pathology and remained based at that institution for his entire professional career. Early on during his pathology career he became interested in criminal pathology and in investigating the various causes of human death. He began this new interest by working for Chicago's Cook County medical examiners office in 1978 as a forensic pathologist. While helping to identify the remains of 273 people killed in 1979 in the crash of American Airlines Flight 191 shortly after takeoff from Chicago's O'Hare International Airport, he met Dr. Clyde Snow, a noted forensic pathologist. This chance encounter changed Dr. Kirschner's life because Dr. Snow encouraged him to become involved with human rights investigations around the world, and that is what Dr. Kirschner did for the rest of his professional career.

Between 1984 and 2000, Dr. Kirschner participated in 36 international missions to investigate suspected political killings and human rights violations in many countries on behalf of organizations such as Physicians for Human Rights, the Organization of American States, the American Association for the Advancement of Science, and the United Nations. Forensic evidence collected and assembled from excavated graves by Dr. Kirschner in 1984 contributed to murder convictions for members of the military junta who ruled Argentina from 1976 to 1983, a period when over 12,000 Argentines disappeared under mysterious circumstances. During 1987-88, he was in Israel and Palestine investigating the deaths of prisoners from both sides occurring while the prisoners were in police custody. In particular, he made certain that independent autopsies were performed on Palestinians who died while in Israeli custody. In 1989 he investigated the killings of Catholic priests in San Salvador, as well as the deaths of prisoners while in South Korean custody. By 1994 he was using DNA testing to identify the biological parents of San Salvadorean children who had been kidnapped by the Army during San Salvador's civil war. These kidnapped children had been sent to

orphanages in the United States by the San Salvador Army. Many of these kidnapped children subsequently were adopted by American families.



Clement Kayishema, formerly the prefect of Kibuye in Rwanda, was convicted in 1989 of genocide and of crimes against humanity for his role in the 1995 massacre of Tutsi civilians by members of the Hutu tribe. He was sentenced to life imprisonment by the International Criminal Tribunal for Rwanda, sitting in Arusha, Tanzania. This well deserved life sentence for crimes against humanity was made possible by an investigation performed in Rwanda by Dr. Kirschner in 1996. His investigation of a mass grave at Home St. John, a Catholic missionary center in Kibuye Prefecture, directly implicated Clement Kayishema in the slaughter of these innocent people.

Also in 1996, Dr. Kirschner's examination of four mass grave sites near the Bosnian town of Srebrenica, where about 8,000 Muslim men and boys were believed to have been slaughtered by Serbs, contributed to the 2001 conviction of General Radislav Krstic by the International Tribunal in the Hague on charges of genocide.

General Krstic was sentenced to 40 years in prison, based partly on forensic evidence provided by Dr. Kirschner. Two of Krstic's superiors, Radovan Srpska, president of the breakaway Republic Srpska, and his top military officer, General Ratko Mladic, face similar charges in absentia. General Mladic recently was apprehended but Radovan Srpska remains at large as of this writing.

When interviewed by the Associated Press in 1996 and asked how he could do this type of work, Dr. Kirschner replied that it was not the dead bodies that disturbed him, it rather was trying to contemplate what goes on in someone's mind that allows them to do this kind of thing to other human beings. Tragically, Robert Kirschner '66 suffered an untimely death at age 61 on September 15, 2002 of causes unrelated to his forensic work. Susannah Sirkin, deputy director of Physicians for Human Rights, a medical human rights watchdog group based in Boston with whom Dr. Kirschner often worked, put Dr Robert Kirschner's contributions to humanity in proper focus when she said, "No one was more committed and passionate about working to promote human rights and justice than Dr. Bob Kirschner" (1). Jefferson honors the memory and work of Dr. Robert Kirschner '66, a true hero whose passionate search for justice and whose tireless efforts to bring justice to victims of political massacres carried him above and beyond the call.

Richard Raiber '56 was board certified in obstetrics and gynecology and practiced in Wilmington, Delaware. He held staff appointments at Memorial, Wilmington General, and St. Francis Hospitals in Wilmington. His lifelong passion outside of medicine, however, was a love of history and he continued to pursue his private research in

history as he continued to practice medicine. As time passed his interest in history gradually sharpened to focus more on modern German history and on military history. This sharpened focus might have stemmed partly from his German family background and partly from the military experiences he encountered while fighting in many battles in the Pacific theater as a member of the United States Marine Corps during World War II.

Following retirement from the practice of obstetrics and gynecology, he approached the History Department at the University of Delaware about the possibility of entering upon formal graduate studies in modern German history. His intent was not to teach but rather just continue to pursue his private interest and research in this aspect of history. Members of the History Department decided that Dr. Raiber's motivation, intellectual ability and disciplined study habits qualified him to enter a no-fee graduate program at the University of Delaware designed for senior persons who met the rigorous admission requirements for the MA and/or the PhD program. As discussions with his thesis advisor, Dr. Willard Allen Fletcher, Professor Emeritus, Department of History, University of Delaware, progressed, Dr. Raiber decided to focus his particular interest on a World War II European Theater topic and, in particular, to the activities of German Field Marshall Albert Kesselring who was in command of the German Army Group in Italy, 1944-1945 (2).

During the period September 1944 to April 1945 Field Marshall Albert Kesselring was in command of all German defenses in that segment of Italy that remained in German hands. As such, Kesselring defended against the landings of Allied Forces at both Anzio and Trieste. Dr. Raiber's historical research eventually led him into the relatively narrow contextual framework of the March 23, 1944 Via Rasella partisan action in Rome, the retaliatory massacre of Italian civilians and prisoners on March 24, 1944 by German troops at the Ardeatine Caves, the failed OSS Ginny mission of March 24, 1944 on the Ligurian coast, and the execution of that unit's members by a German firing squad on March 26, 1944, clearly violations of the International Rules of Warfare. These events, and their eventual consequences, were what brought Field Marshall Albert Kesselring to trial for war crimes before a British Military Commission in Venice on February 10, 1947.

On March 23, 1944, Italian communist partisans bombed a company of German soldiers as they marched down Via Rasella in Rome and 33 German soldiers were killed. Hitler was outraged by this partisan action and ordered that 335 Italians be killed by the Gestapo in retaliation for the deaths of 33 German soldiers. It is reported that Baron Ernst von Weizsäcker, formerly Ribbentrop's number two in Berlin's Foreign Ministry, but recently appointed German Ambassador to the

Holy See in Rome, called Field Marshall Kesselring to ask him to stop, or at least, limit the number of expected Italian civilian reprisals but, as it turned out, to no avail (3). On March 24, 1944 265 Italian civilians and 70 Italian prisoners selected from Rome's prisons, were executed by the Gestapo in the Ardeatine Caves south of Rome. The entrance to these Caves then were sealed with dynamite, clearly rising to the level of a war crime.

The second war crime attributed to Field Marshall Kesselring grew out of a failed OSS operation, code-named Ginny II, and launched from Corsica on March 23, 1944. Its mission was to disrupt an important coastal rail link between Genoa and the rear area of the German defense lines. The mission failed and 15 American soldiers in regulation army uniforms (2 officers, 13 soldiers) were captured on March 24, 1944. Normally, these American soldiers would have expected to be treated as prisoners of war, but Hitler insisted they be executed, an order clearly in violation of the International Rules of Warfare.

They were executed without a trial by a German firing squad on the order of German General Dostler. As Commander of the German Forces in Italy, Kesselring was charged with these two war crimes. He was brought to trial before a British Military Commission in Venice on February 10, 1947. He was found guilty as charged and was sentenced to death. On appeal, however, extenuating factors, such as the decisive role played by the SS Command in Rome which was not under Kesselring's control, led the court to commute Kesselring's death sentence to life imprisonment. General Dostler, however, was tried as a war criminal in October 1945 and was executed in December 1945.

General Dostler's execution heightened Kesselring's anxiety about his own eventual fate. He immediately began to devise a pack of lies about his whereabouts in Italy at the time these pivotal events took place in the La Spezia area to save himself from General Dostler's fate. With the assistance of General Westphal and Colonel Beelitz, Kesselring constructed a web of lies designed to hide his presence in the LaSpezia area near where the captured American soldiers were murdered, and to place him instead at his headquarters in Monte Sorrato, supposedly involved in a troop inspection trip. In addition, key documents bearing on his role in the Ginny mission massacre were destroyed. Kesselring's lie succeeded in that the military court in Venice failed to discover the truth about his deception and, instead, placed the blame for the failed Ginny mission murders on General Dostler. Field Marshall Albert Kesselring served only five years of his sentence and, eventually, died peacefully in his own bed at home.

Some West German historians, working years later on the official German History of World War II, became aware of the conflicting dates and places in Field Marshall Kesselring's false and contrived



explanation of his whereabouts during the latter part of March 1944 but could not solve the puzzle left by Kesselring's web of lies. It was Dr. Richard Raiber's diligent and detailed examination of all available records and his historical research which allowed him to construct the documentary evidence that finally gave the lie to Field Marshall Kesselring's fabricated story and finally exposed his perjury before the British Military Commission in Venice in February 1947. The German historians were delighted with Dr. Raiber's incontrovertible evidence of Kesselring's perjury and paid him the ultimate compliment by rushing to publish his new evidence in *Militärgeschichtliche Mitteilungen* 56 (1996, Heft 2):69-106, Germany's, if not Europe's most respected journal of military history. Dr. Raiber's new research also provided significant evidence to correct many errors in both the official and private accounts of the failed OSS Ginny mission.

Regretfully, Dr. Richard Raiber died suddenly on March 28, 2002 of an acute coronary occlusion. His thesis committee at the University of Delaware regarded him as a very deserving scholar and saw his important dissertation manuscript through its final editorial stage and eventual publication. Richard Raiber '56 left his mark on history by correcting the historical record on a gross miscarriage of justice. All Jeffersonians owe Richard Raiber '56 a clear debt of gratitude for his diligence and for his determination to set the historical record straight which, clearly, was above and beyond the call of duty.

Stephen S. Frost '71 is board certified in internal medicine and in gastroenterology. He served as a staff gastroenterologist at Presbyterian-University of Pennsylvania Medical Center in Philadelphia for a number of years. Originally a member of the Naval Reserve while in medical school, he left the Naval Reserve in 1980 but always planned to return to Navy service at some future date. His period of practice of gastroenterology encompassed the years 1980 to 1994. He then spent the next few years in Waterville, Maine as Vice President for Administration for Maine General Health and saw fit to rejoin the Naval reserve in 1994.



Brian Baclura

In August 2001 the Navy asked him if he would serve as the Reserve Affairs Officer for the Chief of the Naval Medical Corps. Captain Stephen Frost accepted the assignment and relocated to Washington, DC with an office in the Bureau of Medicine and Surgery Building in Washington, DC. He was scheduled to attend a meeting in the Pentagon Building on September 11, 2001 in his new Navy capacity but arrived at the Pentagon a little early for his scheduled meeting. As he and fellow Navy doctor John Feerick walked toward the Pentagon for their scheduled meeting, they heard a loud noise, saw flames erupting from the building, and noticed an onrushing flood of people, many of them burned and injured, fleeing from the damaged building. Captain Stephen Frost's subsequent heroic actions of September 11, 2001 later were reported in "When Terror Hit the Pentagon, Stephen Frost's Reaction was: Tend to the Injured,"

Philadelphia Inquirer, September 26, 2001 by Steve Goldstein and later reprinted in the *Alumni Bulletin*, June 2002:16-17.

What Captain Stephen Frost '71 immediately did after American Airlines Flight 77 exploded into the Pentagon Building early in the morning of September 11, 2001 was to ignore the advice of police on the scene and instead sprint toward the damaged area of the Pentagon building which, by now, was burning fiercely, in an instinctive reaction to treat and care for the injured. Navy doctor John Feerick soon followed Stephen Frost into the damaged and burning area. Scores of burned and injured Pentagon personnel were lying on the lawn about 50 yards from the burning building. Frost and Feerick were the first doctors on the scene filled with traumatized and badly burned victims and they worked tirelessly to help and treat the injured during the entire day of September 11, 2001. They continued to ignore orders to leave the area from police and the FBI and used available medical kits to insert intravenous lines into the injured to administer saline and dextrose drips.

Other rescuers soon on the scene took their cue from a calm and composed Dr. Stephen Frost and, as a consequence, no rescuer left a patient alone and all totally ignored the lurking dangers around them. Dr. Frost, never stopping, continued to treat those with inhalation injuries and those who had been hurt by falling debris. Dr. Feerick established triage areas in the tunnels leading to the

Pentagon building parking lots. Their patients included Pentagon personnel, firefighters, and other rescue personnel. After darkness fell, Drs. Frost and Feerick bunked down with blankets on the concrete area surrounding the damaged Pentagon building. They finally left this scene of destruction at about 10 o'clock on the following morning. Talking later, Dr. Feerick said "Steve Frost was a rock. He is my personal hero." Captain Stephen Frost '71 was eventually awarded the Navy and Marine Corps Commendation Medal by the then Secretary of the Navy Gordon England for his heroic actions on September 11. Dr. Frost's actions clearly

were above and beyond the call.

The heroic efforts and actions of these three Jefferson Medical College graduates deserve to be permanently preserved in the annals of Jefferson Medical College, and they have been so recorded.

References

- 1) Robert H. Kirschner MD obituary, *New York Times*, Wednesday, September 18, 2002.
- 2) Foreword to the dissertation of Richard Raiber, M.D. William Allen Fletcher, Professor Emeritus, Department of History, University of Delaware.
- 3) *Hitler's Pope. The Secret History of Pius XII.* John Cornwall. Penguin Books, 1999, p.321.
- 4) Personal correspondence. William Allen Fletcher, Department of History, University of Delaware. February 15, 2003.

The Mother in *The Gross Clinic*

by Julie S. Berkowitz

For my last article before retiring as the Thomas Jefferson University Art Historian, I determined to solve a mystery about a subsidiary figure in Thomas Eakins's *Gross Clinic*. Art and medical scholars have always referred to this figure as the mother of the adolescent male patient, although the medical literature has never verified that a parent or other relative was required to be present during surgery in 1875 (as has sometimes been hypothesized).

The diminutive woman on the lower left edge of the canvas is the only female figure in the painting. She shields her eyes from the operation for osteomyelitis taking place in Dr. Gross's surgical clinic. Her claw-like hand seems frozen in a position of terror as she averts her head from the frightening sights and sounds of the 19th-century surgical amphitheater.

The most arresting thing about her appearance is that her left hand has six fingers. Prior explanations about pentimenti (overpainted elements of the composition coming through) or surface erosion of the canvas (both of these theories assume that the artist must have made drawing changes) were overruled recently by infrared reflectography analysis of the portrait's paint layers.

It turns out that she does have six fingers on the right hand. The condition of postaxial or ulnar polydactyly was a relatively common deformity. A well known Boston surgeon interested in the genetics of hand malformations, Joseph Upton MD of Harvard Medical School, has identified the chromosomal abnormality and sequenced its specific amino acid defect (see *Science*, 372:548, 1996).

In recent correspondence with Dr. Upton he wrote that many large pedigrees were studied, and many subjects that his research team documented were of German origin. "One of the best pedigrees I studied was of a family that came from both the Lancaster and Erie, Pennsylvania areas. These people originated from German immigrants and their ancestors lived in the Germantown area. I suspect that the patient upon whom Dr. Gross was operating was from Germantown and probably was of German origin." (For earlier studies of Lancaster County Amish families, see Victor A. McKusick, *Medical Genetic Studies of the Amish: Selected Papers*, Johns Hopkins University Press, 1978.)

Dr. Upton added that Caucasians have thumb or radial polydactyly

more commonly. Polydactyly of the thumb occurred once in every 2000-3000 live births in the period in which *The Gross Clinic* was painted.

Ulnar polydactyly was less common unless the trait was "expressed quite highly in the family." He said that he suspects that was also the case with Dr. Gross's patient in the painting, but we'll never know because his hands are concealed under the white linens.

Indeed, Samuel Gross wrote about several specific cases of "supernumerary" fingers. One mixed-race infant had such fingers attached to the outer side of his little fingers (*Medical and Surgical Reporter*, 17:118, 1867). Gross reported using a scissors to remove the fingers as they will "interfere with future usefulness." He added that it would be "interesting to know whether or not the parents of his child were similarly affected, for these malformations are often observed in a number of members of the same family."

Dr. Upton also mentioned that in general there was a high correlation between hand and facial deformities. "In the mid-to-late 19th century people with very conspicuous facial and cranial abnormalities probably had hand abnormalities as well," and were often treated as "retarded" despite normal intelligence.

In the portrait Eakins has concealed the mother's face in a puzzling manner. Because of the angle of her neck and head, one would expect to see some portion of her face above her hand. Instead the deep hat brim and a black triangle below the brim, possibly representing a veil, hide her face totally. Did she also have a facial deformity?

The hand deformity has never been mentioned in the scholarly literature or in reviews of the painting, to my knowledge. Evidently it was not noticed or else was considered too minor for discussion. Perhaps the condition was more widely known closer to the date of the painting. Nineteenth-century critics never listed this detail among other aspects of the painting which were considered offensive.

Assuming that Eakins included the female figure because she was an actual witness to the surgery, and most scholars think this is the case, should we also assume that he represented the polydactyly anomaly because it too was present? Since Dr. Gross was familiar with the condition and had speculated on familial manifestations, he must have approved its representation. Its inclusion does give us a faint glimmer into the identity of the patient and mother figures, taking away their otherwise complete anonymity. 🧐

ANNALS OF THE MEDICAL COLLEGE

Readers Reply with More Information on the Heart-Lung Machine

The heart-lung machine, which was developed at Jefferson 50 years ago, is regarded worldwide as the key to the modern era of open heart surgery. The article in the March *Bulletin* elicited a positive response from many readers. Two wrote replies containing additional information on the important events at Jefferson in 1953, which were led by John H. Gibbon Jr. '27.

Marguerite Stadvec writes from Torrance, California, "The article was excellent ... I was Dr. Gibbon's secretary, office nurse, and departmental administrative assistant for 20 years, and knew all the people noted in the old photograph [printed in the March *Bulletin*]. I immediately recognized Joanne Crothers, the heart-lung technician who worked as tirelessly as did the physicians."

The world's first successful open heart operation using a heart-lung machine was performed at Jefferson on May 6, 1953. Marguerite Stadvec informs us that "The only postoperative photographs of Cecelia Bavolek [the patient in that surgery] were on slides in Dr. Gibbon's teaching file which were frequently borrowed for lectures. Unfortunately the last person did not return them." Ms. Stadvec notes proudly, "Many people may not know or remember that Dr. Gibbon was an amateur watercolorist and also liked to paint portraits. He painted my portrait the year he retired and it still hangs over my desk."

The *Bulletin* also received news from John J. McKeown Jr. '47 of Wynnewood, Pennsylvania, who informs us that he was a resident who assisted in that historic operation on May 6, 1953. He states that the operating team consisted of Dr. Gibbon, Frank Albritten MD (another member of the Jefferson faculty), and Bernard J. Miller '43. Dr. Miller (who conducted the research program that made the heart-lung machine practical for human use) had to drop out during the surgery in order to fix a hitch in the machine. Dr. Gibbon asked Dr. McKeown to scrub in, and he assisted through the rest of the operation. Dr. McKeown notes that Dr. Gibbon asked Thomas Nealon S'44, a more senior resident, to dictate the operative report for him. Dr. McKeown's role was reported in the January 1982 issue of *Pennsylvania Medicine*, the magazine of the Pennsylvania Medical Society. 🗣️

Brent, Flomenberg, and Skyler Receive the Simon Gratz Research Prizes

David Brent, Neal Flomenberg, and Jay Skyler are the recipients of the Simon Gratz Research Prizes, a significant award given every three years to at least one Jefferson alumnus who is also on the Jefferson faculty, and at least one alumnus who is not on the faculty.

Neal Flomenberg '76 is a Professor and Director of Bone Marrow Transplant at Jefferson, and previously headed the program at the Medical College of Wisconsin. His research, which has been continuously funded by the National Cancer Institute, focuses on the use of leucyl-leucine methyl ester to modulate the frequency and severity of graft versus host disease.

David A. Brent '74 is the National Institutes of Health's mostly highly funded child psychiatrist, and a Professor at the University of Pittsburgh School of Medicine. He has made major studies of child suicide risk factors, including gun and alcohol availability, and the genetic contribution to depression and suicide.

Jay S. Skyler '69 is among the nation's leading clinical investigators in diabetes. A Professor and Division Director at the University of Miami, Miami, Florida, he chairs the NIH multicenter clinical trials network evaluating immune therapies to interdict the type 1 diabetes disease process. He was the founding Editor of *Diabetes Care*.

The next competition for the Gratz Prizes will be conducted in late 2005, and will be announced in advance in the *Bulletin*. 🗣️

GIFT OF HEALTH

Civic Foundation Grant Advances Jeff HOPE Initiatives

The Civic Foundation is continuing its longstanding philanthropy to Jeff HOPE with a grant to support the innovative student-managed program, which provides free medical care to homeless or otherwise underserved populations in Philadelphia. Some 700 Jefferson students and faculty members, under the auspices of the Department of Family Medicine, participate in this volunteer urban health initiative that includes five clinic sites, a patient advocacy project and a program for at-risk children.

"Jeff HOPE depends upon financial support from contributions," says Paul C. Brucker MD, President of Thomas Jefferson University. "This current Civic Foundation grant will assist in the purchase of medical and other essential supplies and help with transportation costs. The consistent partnership of the Civic Foundation is an essential ingredient of the project's success, and provides invaluable encouragement to both our volunteers and our patients."

Stephen P. Weinstein PhD, Clinical Professor of Psychiatry and Human Behavior, is a Vice President of the Civic Foundation, as is his wife, Rosalyn L. Weinstein. The Civic Foundation is based in Narberth, Pennsylvania, and has provided support to Jeff HOPE

since 1998. The foundation is dedicated to addressing important community needs through its philanthropy to local institutions.

Dr. Weinstein is also Director of JMC's Division of Substance Abuse Programs, and is the co-founder of Jefferson's Outpatient Intensive Substance Abuse Treatment Program. He has been directly involved in program development, administration, clinical service delivery and supervision of Jefferson's substance abuse treatment and research programs for 25 years, and has been honored by the City of Philadelphia for his community efforts in battling substance abuse in the city.

Jeff HOPE (Health, Opportunity, Prevention and Education) began in 1991 as an initiative by Jefferson Medical College students to address the serious health needs of a burgeoning homeless population in Philadelphia. Now a university-wide effort, Jeff HOPE volunteers includes faculty and staff from numerous departments who offer their services along with the medical students on a rotating basis at shelters. The program's mission to provide dignified, accessible and appropriate health care has had a positive impact in the community and its programs continue to expand to meet newly identified needs. 🗣️

Paul Manganiello '73: Committed to Community

This article is adapted with permission from the Spring 2003 issue of Dartmouth Medicine

“My uncle wanted me to go to a vocational school and do auto mechanics,” recalls Paul Manganiello (Jefferson '73). Now a reproductive endocrinologist at Dartmouth, Manganiello grew up in a working-class neighborhood in Jersey City, New Jersey. But he had his heart set on becoming a doctor, so he decided to ignore his uncle’s advice. He wanted to be a neurosurgeon, like the ones who’d tried to save the life of President John F. Kennedy in 1963.

Manganiello carried that dream through Seton Hall University in South Orange, New Jersey, and on to Jefferson Medical College. Whenever he had free time in medical school, he’d go watch neurosurgeons in action. But he soon realized he didn’t want to be a neurosurgeon after all. He’d found something that excited him even more. When he got to spend a night on the hospital’s maternity floor, he discovered that he loved the excitement of babies being born. So he decided to specialize in obstetrics and gynecology.

He completed his MD in 1973, stayed at Jefferson for his residency, and went on for a fellowship in reproductive endocrinology and infertility at the Medical College of Georgia. There, he trained under internationally known infertility and genetics specialist Paul McDonough MD—a “demanding” but “wonderful” mentor.

In turn, McDonough, who went on to become president of the American Society of Reproductive Medicine (1989-90), was impressed by Manganiello. “He did not have to be out front filling a stage with his presence,” McDonough says. “He was and has always been a ‘giver,’” to his patients, his students, and his community.

As busy as Manganiello is at Dartmouth-Hitchcock Medical Center, as Medical Director of its Office of Women’s Health Research and as head of the Division of Reproductive Endocrinology and Infertility, he feels that it is important to also devote some of his energies to the community. In fact, he was the driving force behind the establishment of Vermont’s first free primary-care clinic, and he still volunteers there.

But that’s just one of several commitments outside of work for Manganiello. Both he and his wife, Wendy, whom he met when she was a nursing student at Jefferson, have long been devoted to serving the community. Even though they have two busy careers (she as a medical-surgical nurse at DHMC) and have raised two children (Marc, a Boston College graduate who’s now a research assistant in the psychiatry department at UCLA, and Lisa, a junior at Loyola Marymount University in Los Angeles), they have always been active in their church and in other community endeavors.

In 1989, the Manganiellos spearheaded a fund raising campaign for Hannah House, a social service agency that provides residential and outreach services for pregnant and parenting teens in Vermont and New Hampshire. Manganiello sees problems associated with teen pregnancy almost every day in his practice. “Many times, they come from obviously broken homes,” he says of teen mothers. “A lot of these girls are physically and sexually abused by parents or stepparents.” Hannah House’s program “not only gives [teen mothers] transitional housing, but it also gives them an opportunity

to learn how to do normal activities of daily living, like doing a checkbook, and helps them learn to parent ... It’s really a wonderful program.”

Through their church, the Manganiellos (including Marc and Lisa) have also been active in the Upper Valley’s Interfaith Coalition Against Homelessness. In fact, it was a forum on homelessness in 1990 that led to the founding of the free clinic. “Someone in the audience asked me, ‘Where do the homeless get their health care around here?’” Manganiello recalls. “I said, ‘I don’t know.’”

But he didn’t drop the question there. He and some friends took it up in early 1991 and soon formed a study group of medical professionals and other concerned citizens. Before long, they realized that inadequate medical care was a problem not only for homeless people, but also for thousands of other Upper Valley residents—most of whom were employed, but at jobs that did not provide insurance and that paid so little they couldn’t afford the most basic care. The study group turned into a steering committee, headed by Manganiello and Peter Mason MD, a physician at the local Alice Peck Day Hospital.

The result was the opening of the Good Neighbor Health Clinic in White River Junction, Vermont, in 1992. The community has rallied behind the effort. DHMC and Alice Peck Day have provided financial support, furnishings, medical equipment, and liability coverage for the clinic’s volunteer physicians and nurses. In addition to working there regularly, Manganiello still serves on its board.

But Manganiello would be happy if there didn’t need to be a free clinic at all. “This was supposed to be just a band-aid,” he explains. Back in 1992, “Clinton was proposing his universal health care plan and we thought . . . we were going to have universal health care. It never worked out that way. I’m not a big proponent [of free clinics]. I want universal health care, a single-payer health plan.”

In his community work, Manganiello is committed to providing basic health care to people who don’t have access to it. But at DHMC, he works on the leading edge of a specialty—infertility medicine—that has become increasingly high-tech during his career.

His decision to come to DHMC in the first place was facilitated by McDonough, who had spent the summer of 1964 working for John Lyle MD, then Chief of Obstetrics and Gynecology at Hitchcock. Over a decade later, when Lyle was expanding the section, he asked McDonough to recommend a reproductive endocrinologist from his program. Without hesitation, McDonough gave him Manganiello’s name.

Manganiello arrived at DHMC in 1979. “That was right around the time when the first American IVF [in vitro fertilization] baby was born,” he says. “Up until that point, the specialty was really in its infancy.”

During the 1970s, IVF was so complicated—and the success rate so low—that even some infertility specialists wondered if it would catch on. At the time, IVF was done in an operating room using general



Jon Gilbert/Fox

anesthesia. The eggs were harvested at night to coincide with the body's natural cycles. Two incisions were made in the abdomen—one for a laparoscope and one for an aspirating needle to suck out the eggs. An egg was then placed in a Petri dish with live sperm, and, once fertilized, it was inserted back into the woman's uterus.

"I personally never really thought that IVF was going to be clinically applicable," Manganiello says. "I thought it was just too labor intense." He figured women who did get pregnant using IVF were just lucky. "But I was wrong," he admits with a laugh. "Obviously it took off."

In the early 1980s, infertility drugs were introduced; they stimulate the ovaries to produce many eggs at once. Still, U.S. doctors continued to rely on laparoscopy to collect the eggs, while "in Scandinavia, they were retrieving eggs under ultrasound direction," Manganiello says. So in 1985, he took a sabbatical in Göteborg, Sweden, to work with Matts Wikland MD PhD, one of the world pioneers in ultrasound-directed oocyte retrieval.

When Manganiello returned to the U.S., he started using the new

technique, which eliminated the need for laparoscopy and general anesthesia. Instead, he could watch on an ultrasound monitor as he guided the needle, attached to an ultrasound transducer, into the abdomen, through the bladder, and into the ovary to harvest the eggs. "I think DHMC was one of the first medical centers in the U.S. to be doing ultrasound retrieval," he says. "Within a year, we had our first pregnancy." Katherine Nopper, the daughter of sheep farmers from Poultney, Vermont, was born on August 31, 1987.

Soon another advance came along that meant no incisions at all—a device that permits eggs to be retrieved through the vagina. Then, in the late 1980s, a procedure called intracytoplasmic sperm injection (ICSI) was developed, whereby sperm could be injected into an egg. Before ICSI, if a couple had trouble conceiving because the male had a low sperm count, the eggs had to be fertilized with donor semen. "Now, in many cases, you can use ICSI to fertilize the eggs. That's been a major boon for male infertility," explains Manganiello.

Freezing techniques have improved, too. All the harvested eggs are fertilized and some are transferred to the uterus, but the majority are frozen. "You can use them in later cycles," Manganiello points out.

DHMC's infertility experts have also been refining techniques to improve IVF pregnancy rates as well as to reduce the risk of multiple births. At DHMC, about 20 to 30 percent of women who get pregnant using IVF have a multiple pregnancy, usually twins. "We certainly aren't seeing quads or quints or sextuplets or septuplets," says Manganiello. "I've been here 20 years, and we've probably had five couples like that." Fertility specialists are always eager, he adds, "to avoid the complications associated with higher-order pregnancies."

Manganiello's own collaborative research has included projects on tubal sterilization, testosterone therapy to treat fibromyalgia, and a number of other projects. Currently, he and several DMS colleagues are working with researchers at Dartmouth's Thayer School of Engineering to develop a novel technique for female sterilization—a small microwave antenna that can be used on an outpatient basis to occlude a woman's fallopian tubes. The device, if it is successful, may replace the current surgical method of occlusion.

Some may think it remarkable that Manganiello sees patients, does research, teaches medical students and residents, is regularly invited to give presentations, and serves on regional and national panels (such as a New Hampshire committee that wrote the state's surrogate mother bill and a U.S. Department of Health and Human Services subcommittee that explored infertility drugs), and yet still manages to find time to volunteer, too. But he makes the time because, he says, "I think it's really important."

Yet he never figured when he started studying health care for the homeless that he'd help found a free clinic, much less still work in it a dozen years later. "It wasn't as if I had this ultimate vision," he says. "It just developed." Just as his life has developed, starting in that Jersey City neighborhood. "I don't know if there's any one decision that was really significant," he reflects. "They were all critical."

*by Laura Stephenson Carter, Associate Editor,
Dartmouth Medicine magazine*