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SUMMER 2003

## gift of life

Organ donation  
could mean a  
second chance  
for someone  
else to survive

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## Family Matters

Couples struggling to  
get pregnant can turn to  
PRH's fertility experts

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## Pain, Pain Go Away!

With the breadth of  
treatment options, there's  
no reason to suffer. Find  
out how PRH can help

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# Cardiac Cath Lab

*New home—advanced capabilities*

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## sourcefact

**E**xercise is a key to preventing heart disease. But more than 60 percent of American adults do not achieve the recommended amount—30 minutes, three to four times per week.

The new cardiac catheterization laboratory in Portsmouth Regional Hospital’s Heart and Lung Center offers patients a new spaciousness, on-site recovery room beds and—perhaps most important—two state-of-the-art catheterization units in place of the one that served the old facility. These state-of-the-art systems are the first to be located in the Seacoast Region.

“The systems used in the new cath lab represent the most advanced technology available, giving us improved resolution in our images and a capability for more sophisticated interventions,” says cardiologist Frank A. Fedele, M.D. “The unit’s design streamlines our ability to care for patients. Now we can provide treatment services for heart and vascular problems in a combined, comprehensive process rather than as separate steps in separate locations.”

Notes cath lab technologist Tammy Trepanier, R.T., “It’s much more efficient for our patients. Patients come directly to us, they receive their

tests and treatment in our unit, they stay in our recovery area and they leave directly from here.”

## **Comprehensive Services**

PRH’s Heart and Lung Center is a gem in the Seacoast Region’s healthcare picture. For one thing, the hospital opened the region’s first cardiac catheterization laboratory in 1987. And, in 1998 it hired New York heart surgeon Donato A. Sisto, M.D., to establish a cardiac surgery service that would work in tandem with the catheterization unit and offer area residents important services previously not available in the Seacoast. Today, PRH’s three cardiothoracic surgeons perform about 500 procedures a year, including coronary artery bypass surgery, heart valve repair and replacement, surgery for aortic and ventricular aneurysms, radiofrequency ablation for atrial fibrillation, and lung and chest wall resection.

The significance of the new cardiac catheterization laboratory lies not just in its expanded space, but also in its upgraded capabilities, says Stacey O’Connell, assistant administrator, Heart and Lung Center. “We’ve added five recovery beds and 15 Interventional Care Unit beds right in the unit, so our patients can receive all their care in a single location.”

## **Working from the Inside**

Cardiac catheterization is a technique in which a thin, hollow tube—a catheter—is inserted into an artery in the arm or groin and threaded through the body’s arteries to the heart. Guided by live images displayed on a bank of monitors that highlight medical dye injected through the catheter, the invasive cardiologist can visualize the structure of the arteries that supply blood to the heart, or can study blood flow within the heart. This procedure, called angiography, allows identification of blockages in the coronary arteries. Catheterization also can be used to measure pressures of blood flow and define malfunctions of valves within the heart, as well as for other issues.

New imaging equipment in the cath lab represents a significant advance in the clarity of the



### Learn More

For more information on PRH’s Heart and Lung Center, and the Cardiac Catheterization Laboratory, call **(603) 433-4032**.

images provided to the cardiologists as they work. One unit is the GE Innova™ Flat-Panel System, used specifically for catheterization in the heart and coronary arteries. The other is the GE CCV Plus Dual-Use System, used for visualization during coronary procedures as well as for problems in peripheral arteries. The peripheral arteries are vessels located away from the heart, such as the carotid arteries that supply blood to the brain, the renal arteries that supply the kidneys and the deep blood vessels in the legs.

### Blockage Busting

“An angiogram is necessary to define the structures and help the surgeon plan the operation in any event,” Fedele says. “But beyond that, today there is a range of interventional techniques we can use with those catheters to treat some problems without surgery.”

These include balloon angioplasty (the insertion of a tiny balloon on the tip of the catheter that, when inflated within the area of narrowing in the blood vessel, can widen the blocked segment), placement of stents (tiny mesh tubes that can be situated in the newly expanded segment to help it stay open), use of an AngioJet (a device to suction out clots that have formed in an artery), placement of protective filters (devices to trap clots and debris that might travel up an artery to the lungs or brain) and rotablation (a technique to chip away at built-up plaque).

“The goal here always is to improve the quality of care we can provide to the residents of the Seacoast Region, and this new facility represents a giant step forward in doing that,” Fedele says.



More than **500,000 women** die of heart disease each year, compared to about 45,000 who die of breast cancer.

## Women's Number-One Health Threat

If PRH's new catheterization laboratory is designed to accommodate more patients who need care, the goal of PRH's Women's Heart Initiative is to spread the word that heart disease strikes women just as seriously as men, and that women need to be equally aware of the risks, symptoms and need for treatment.

“While surveys indicate that women overwhelmingly perceive cancer—and especially breast cancer—as their number-one health threat,” says JoAnn Turner, R.N., Cardiac Program Liaison for the Women's Heart Initiative, “the fact is that heart disease is the single largest killer of women in this country. More than 500,000 women die of heart disease each year, compared to about 45,000 who die of breast cancer.”

It's a lack of awareness that is found in the medical profession, as well, she notes: Only 38 percent of doctors even mention heart disease as a health issue to their women patients, according to a recent study.

### More Advanced and More Complex

“While it is the case that women tend to experience heart attacks some 10 years later in life than men,” Turner says, “their problems tend to be more advanced and more complex when they do hit. Estrogen and other hormones may protect women for much of their lives, but after menopause all bets are off. Blood pressure, cholesterol levels and other factors can change radically, and women's risk becomes equivalent to that of men.”

At the same time, studies have indicated that nationally women receive less timely emergency room care for

chest pain than do men, are less likely to be referred for advanced testing after catheterization than men, and die at a higher rate within a year of a first heart attack than men (38 percent to 25 percent).

Among 250 women screened since the Women's Heart Initiative was established at PRH in late 2002, 35 percent were found to have high blood pressure—and didn't know it—Turner notes. Some 63 percent had elevated levels of cholesterol.

### Providing the Attention Women Need—and Deserve

“Our goal at the initiative is to raise awareness of the importance of heart health among women; to emphasize screenings for such factors as cholesterol, blood pressure, blood sugar and triglycerides; and to underscore the need for cardiac risk assessment.”

While most women appear to be familiar with the basic signs of a heart attack—chest pain, tightness in the chest, pain down the left arm and shortness of breath—only a small number are aware of more subtle signs that may occur with or without chest pain. These include nausea, fatigue, pain in the neck or jaw, dizziness, heartburn and severe sweating.

“With our new cardiac cath lab, there is much we can do to help women with cardiovascular disease,” Turner says. “With a better understanding of heart attack's signs and symptoms, hopefully women will seek care earlier. And if women increase their awareness of heart disease risk and work to stay heart healthy, perhaps they won't have to use it at all.”

# PRH's New Behavioral Health Unit

*A safe, flexible facility with programs tailored to each patient's needs*

sourcefact

**D**epression and anxiety disorders—the two most common mental illnesses—each affect 19 million American adults annually, according to the National Institute of Mental Health.

When Portsmouth Regional Hospital opened the doors of its new, 22-bed inpatient psychiatric unit in May, it brought into service a facility custom-designed to support its innovative work in helping people with behavioral health issues.

“We developed this new unit as a highly flexible space that allows for creative programs,” says Tim Osner, Director of Behavioral Health Services. “It’s intended to support the work of a multidisciplinary team of psychiatrists, nurses, group clinicians, social workers and counselors in helping patients find stabilization and coping skills to deal with their problems.”

Physically, the new unit represents a bright, calming environment with warm green and off-white walls, soothing art prints with a seashore motif, clear sight lines that let staff better monitor patients to ensure safety and six monitored rooms equipped with video cameras. “This last feature is important,” Osner says, “because it lets us keep patients who are in crisis in more normal surroundings rather than having to isolate them in seclusion rooms.” By and large, rooms are double-occupancy. The average stay in the Behavioral Health inpatient unit is four to five days.

**Multi-Generational, Multi-Needs Patients**

PRH's Behavioral Health Services serves a multi-generation patient population—evaluating and treating patients ranging from adolescents ages 15 and older to seniors.

“Our patients can be people of any age with profound depression, bipolar [or manic depressive] disorder, substance abuse problems, or crisis stabilization needs,” Osner says, adding, “A typical crisis stabilization situation

might be one in which an individual is so profoundly depressed that he or she clearly needs to spend the night in a safe, stable environment, which provides around-the-clock care.”

Treatment options include one-on-one visits with psychiatrists, the use of psychotropic medications, group therapy sessions, education to develop coping skills and family intervention.

“We strongly emphasize family involvement in our patients’ care,” Osner says. “Our goal is to have a family meeting within 24 hours of a patient’s admission, and to work with family members—both to understand the patient’s situation and to assist the family in providing a supportive environment after discharge.”

Treatment programs at PRH's Behavioral Health Department frequently emphasize four key areas for the patient to focus on: self-control, optimism, meaningful daily activity and awareness of one’s own spirituality.

“This means working to help patients develop a sense of empowerment over their lives...the feeling that they are in control,” Osner says. “This is probably the most important element.

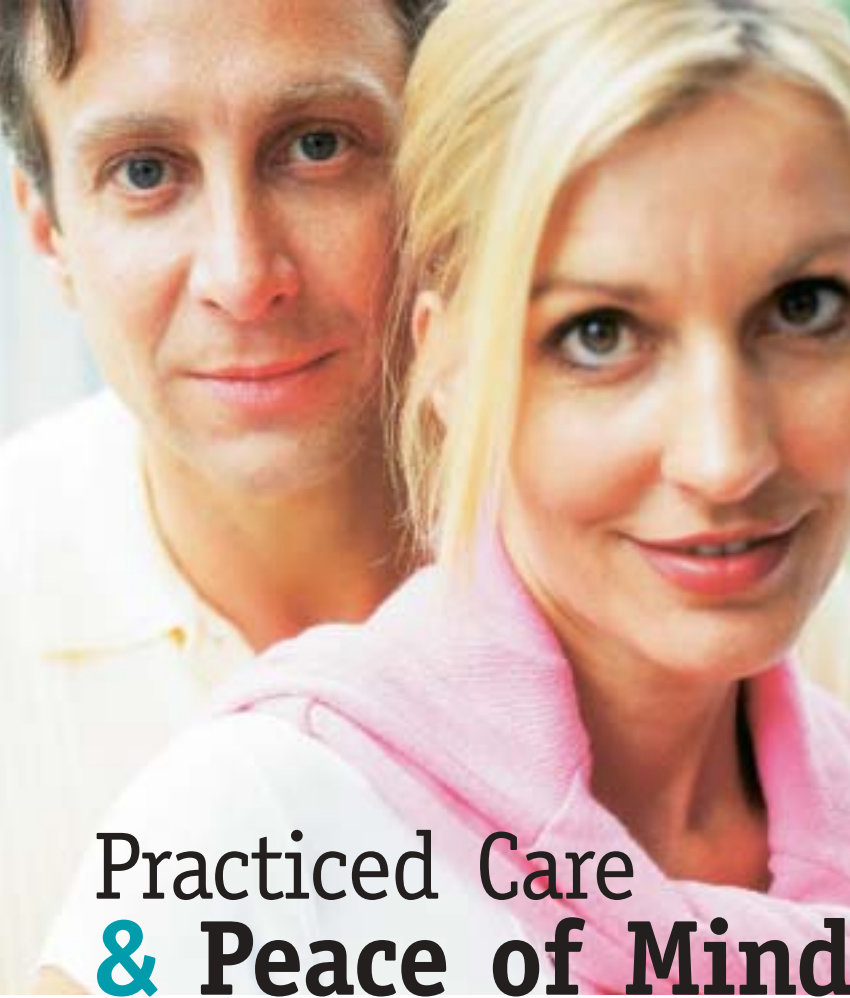
“Building optimism reflects the concept that negative issues can be discussed and placed in context and people can focus on positive aspects of their lives,” he says. “Meaningful activity refers to the goal of helping patients get back to matters that used to be important to them, whether it’s spending time with their families, reading or perhaps something as simple as walking the dog. Spirituality isn’t a religious focus as much as getting in touch with one’s own higher power, something that can be different for each person.”

As part of the renovations, Behavioral Health outpatient programs have been moved to expanded, better-designed space at the Orchard Plaza Office Plaza on Borthwick Avenue, about a half-mile from the hospital’s main campus. PRH's Behavioral Health program has been named a “best practice” by several health plans, Osner notes.



**For More Information**

To learn more about PRH's inpatient psychiatric care, contact Behavioral Health Services at **(603) 436-0600** or visit our Web site at [www.portsmouthhospital.com](http://www.portsmouthhospital.com).



## The Breast Center at Portsmouth Regional Hospital brings a new level of breast care to the Seacoast

### Practiced Care & Peace of Mind

**D**ealing with a suspicious mass in the breast can be an overwhelming experience for a woman, and it's important that she receive both state-of-the-art diagnostic care to identify the abnormality and fast test results to alleviate anxiety.

Portsmouth Regional Hospital's new Breast Center is specifically designed to help women deal with the prospect of breast cancer emotionally as well as medically, says John P. Gens, Jr., M.D. "To do this, we set out to create a streamlined process that helps the patient learn the facts about her situation as quickly as possible and feel that she's on the way to an effective course of treatment, if it's needed."

In the view of Breast Center Supervisor Wendy Blood, the Center "offers a woman a place to go for all her breast health needs—one-stop shopping." There, patients can find resources for screening and diagnostic mammograms, ultrasound, quick access to radiologists and surgeons, and technology for stereotactic breast biopsy.

And all of this takes place, Blood notes, in a private environment dedicated to breast care patients. "We're set up with comfortable sofas, hardwood floors with oriental carpets, decorative prints and soft music so that our patients can feel as relaxed as possible," she says.

#### Better Technology, Faster Results

The new Center resulted from the work of the Breast Team, a subcommittee of the hospital's Cancer Committee. "We felt we could improve the care we gave to patients by looking closely

at our system in terms of both medical capabilities and the way patients experience the process," says Gens, who heads the team and is one of PRH's six breast surgeons.

A key element of the new Center, says Imaging Services Director Robert White, is the presence of the Seacoast's first digital mammography system, offering greater speed, sharper resolution and an ability to examine a mammogram from different perspectives.

"With a digital format," White says, "images can be interpreted immediately. Digital mammography also provides better imaging of denser tissue."

Also key is the close-at-hand availability of PRH radiologists and surgeons to read diagnostic mammograms quickly and consult with the patient and her primary care physician.

"The radiologists seek to report to the PCP within an hour so that the patient's own physician can talk with her quickly," Gens says. "And, the surgeons have committed to seeing the patient that day."

#### A Team Approach

Although a biopsy is not an urgent medical emergency, it can be an emotional one if there's an abnormality. "If the diagnosis is benign, we don't have to do anything else. If it's cancerous, we're there to help the patient start on the road to treatment," Gens says. (It's important to point out that on average 80 percent of breast lesions retrieved for biopsy turn out to be benign.)

If the suspicious mass is palpable (meaning it can be felt by hand), the surgeon is likely to perform a simple needle aspiration, in which a thin, hollow needle draws out cells from the mass for analysis by a pathologist. If the mass is non-palpable, he will use a procedure called stereotactic biopsy. Live images from two fluoroscopic cameras guide the surgeon precisely to the targeted tissue to take a sample.

Currently, the Breast Center staff seeks to provide biopsy results to the patient within three days, with a goal of shortening this turnaround time to 24 hours.

If the biopsy determines the cells to be cancerous, Gens notes, the hospital has additional resources to call on. The case is presented at the weekly meeting of the Tumor Board, where a broad spectrum of caregivers—surgeons, oncologists, radiation therapists, pathologists, oncology nurses, hospice nurses and support group representatives—discuss the case and recommend treatment approaches.

"We have a lot to offer our patients," Gens says. "The Breast Center represents advances in both our medical capabilities and our ability to help patients deal with the psychological stresses related to breast care." ❁

#### Take Care—Call Now

To learn more about the Breast Center at Portsmouth Regional Hospital, or to make an appointment, please call **(603) 433-5190**.

# Toward Healthy, Thriving Babies

Couples become families with help from the new Fertility Center at PRH

**F**or couples desiring children, difficulty conceiving can be a source of pain, frustration and depression. Those who are able to conceive, only to have their pregnancies end in miscarriage, may feel helplessness, hopelessness and even worthlessness.

But there is hope. Solving reproductive difficulty is the work of PRH's new Fertility Center, the first full-service resource in the Seacoast Region for assessing and treating infertility and recurrent pregnancy loss.

"We are here to help people determine why they're having difficulty conceiving and to find the best way to help them achieve a successful pregnancy," says reproductive endocrinologist Joseph A. Hill, III M.D. "Our goal is to help people have a healthy baby." PRH has established this new Fertility Center in association with Hill of the Fertility Center of New England, Inc.

Infertility is usually defined as the inability to achieve a pregnancy after 12 months of unprotected intercourse, a problem affecting about 15 percent of couples desiring children. In general, 40 percent of cases are attributed to problems in the male, 40 percent to female factors and 20 percent are due to a combination or are unexplained.

Common male factors include hormonal imbalances, injuries and infections that interfere with sperm production and cause obstructions in the ejaculatory duct. Common female factors include hormonal deficiencies and excesses that interfere with normal ovulation, and structural problems with the uterus or fallopian tubes.

## Advanced Reproductive Technologies (ART)

In many cases, medical or even surgical treatments can resolve the problems causing reproductive difficulty. A wide range of advanced reproductive techniques may also be used.

"Intrauterine insemination [IUI] uses a small catheter to place viable sperm inside the uterus timed to coincide with the release of the egg," Hill says. "This procedure is relatively straightforward and painless, but does involve monitoring by blood tests and vaginal ultrasound and, in some cases, the use of ovulation-induction medications requiring injections to facilitate egg production.

"In vitro fertilization [IVF] may in some cases be needed to help achieve a successful pregnancy," Hill adds, "and we're very proud to be the first to provide this advanced technique in the Seacoast Region.

"IVF" says Hill, "also involves ovulation induction requiring monitoring." At the appropriate time, the eggs are collected under anesthesia using ultrasound-guided needle aspiration through the vagina. In the laboratory the eggs are incubated with sperm in a special culture. Three to five days after fertilization, a small catheter is used to painlessly transfer selected embryos into the woman's uterus. The chance of achieving a successful pregnancy following this procedure depends upon a number of factors but most specifically on the woman's age. "In cases of severe male factor infertility," Dr Hill adds, "IVF may be necessary so that an individual sperm can be injected into an egg to achieve fertilization in a process known as intracytoplasmic sperm injection (ICSI).

## Recurrent Pregnancy Loss

Miscarriage occurs in 15 percent of all pregnancies, and recurrent loss—defined as two or more pregnancy losses—occurs in approximately 1 percent of women. Two-thirds of pregnancy losses result from chromosomal abnormalities in the fetus that prevent the development of a healthy baby.

"If the embryo has either too many or too few chromosomes, or a chromosome rearrangement," says Hill, "the result can be either a baby born with serious birth defects or a miscarriage."

With this in mind, Hill and his colleagues at the Fertility Center of New England offer a new technique called pre-implantation genetic diagnosis (PGD). This innovative technique is used in conjunction with IVF to determine the most common chromosome abnormalities adversely affecting pregnancy.

"The key here," Hill says, "is that after three days in culture, most embryos have reached a stage of development that allows the safe removal of one cell that can be tested for up to nine different chromosomes or, in cases where the couple is known to be carriers of a genetic abnormality, up to 40 different inheritable diseases." The purpose of this procedure, says Hill, is to select embryos without these detectable genetic problems so that a successful pregnancy is more likely to result. "Approximately 70 percent of chromosomally abnormal pregnancies are spontaneously lost in the first 11 weeks of pregnancy. Our ability to diagnose the majority of these abnormalities before the embryo is implanted allows a greater chance for a healthy baby," he says. ❁



# Breaking *the* Pain Cycle

When pain just won't go away, it's time to call in the big guns

For most of us, pain is a short-lived problem, and we most likely know the cause—a sprained ankle, an insect sting or some other strain or injury. But for some people, pain can be chronic—that is, long-lasting and often continuous—and its cause can be unclear. It may appear without apparent injury. Or the injury may have healed, but the pain remains.

Helping patients deal with chronic pain is the mission of Paul Sansone, M.D., and Richard Duffy, M.D., anesthesiologists and pain management specialists who staff PRH's Pain Management Center. They work with a nurse coordinator, three nurses and a secretary to provide a broad range of treatment options for patients whose pain has proven intractable.

"We do procedures that can't be done anywhere else," Sansone says, "from nerve blocks to spinal cord stimulation. Almost all the patients we see are referred by PCPs, surgeons, physiatrists or neurologists—they're patients who have not responded to the treatments those physicians can offer."

## A Pain in the...

Chronic pain can have a wide range of causes—a degenerated vertebral disc in the spine that creates continuous irritation of nerve fibers, a tumor pressing against a nerve as it grows, arthritis inflammation in a joint, or damage to nerve fibers themselves from an injury or from the effects of diabetic neuropathy, just to name a few. By far the largest proportion of chronic-pain problems involves pain in the lower back.

"Fortunately," Sansone says, "today we have a considerable arsenal of options to deal with it. We take a comprehensive approach, looking at the patient's circumstances and tailoring a treatment plan to his or her needs, often starting with the least intrusive treatment and moving to more aggressive options as needed."

## Pain, Pain, Go Away!

Pain management specialists have a range of treatments at their disposal for patients with chronic pain, beginning with conservative measures and later turning to specialized surgical procedures

■ *Medications.* A starting point to treat chronic pain might be medication, such as



one of the COX-2 inhibitors for osteoarthritis and the triptans for migraine headaches. Anticonvulsants and antidepressants also have been proven to work effectively on pain pathways. Opioids, powerful prescription medications such as heroin and oxycodone, can be used to mask pain.

"Medications like these are as likely to be used at the primary care level," Sansone notes. "We frequently consult with PCPs seeking guidance on the use of opioids and other medications."

■ *Nerve Blocks.* Nerve blocks are injections of local anesthetic around nerves to stop them from sending pain messages along their pathways to the brain. Variations include facet injections, which control pain in the facet joints of the spine, where vertebrae meet; and epidural injections next to the spine, which control pain over broader areas. Trigger-point injections deliver anesthetics and corticosteroids to tight bands of muscle to ease spasms that generate pain.

"Depending on the patient and the agent used, a block can last from a few hours to months," Sansone says. "The goal here is to break the pain cycle and give the body a chance for the pain syndrome to subside."

■ *Electrical and Implantable Treatments.* Radiofrequency treatment uses an electrical needle to create a break in a nerve, while spinal cord stimulation uses electrical impulses to override the feeling of pain. And an intrathecal pump is a small device that can be surgically implanted into a patient's abdomen to provide a steady stream of medication directly to the spinal column. "This is a valuable treatment option, but we tend to be selective about when it should be used," Sansone says.

## Putting Pain in Its Place

Behavioral modification can help also, Sansone says. "It's clear that a patient's emotional and psychological state can play a role in the degree to which they experience pain.

"Sometimes," Sansone continues, "it's not possible to completely eliminate pain. But we can usually diminish it, and rehabilitation programs can help patients find ways to cope with it and lead productive, active lives." ❁

## Want to Break Your Cycle of Chronic Pain?

Portsmouth Regional Hospital's Pain Management Center can help. Call **(603) 433-4869** for more information or to make an appointment.