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Family Medicine

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Commentaries

Thanks For the Bad News

"Thank you so much."

"I didn't do anything," I replied, mildly mystified. "I told you that I didn't know what the problem was. I really don't know why your son walks the way he does, and I'm not sure I'm going to figure it out either."

"But you told me that there was a problem. You didn't tell me not to worry, that it's nothing. That means a lot to me."

"Well, of course there's something wrong. Your son used to walk from Central Falls to Foxboro and now he has trouble walking down the corridor of my office."

The son was a mildly retarded 40 year-old man. The mother was in her late sixties, very much intact. The son was labeled as having "cerebral palsy" at age 6, although no etiology had been identified. Now, 10 years after walking to Foxboro, a walker was on the not too distant horizon.

So, why was the mother relieved? Thirty years before there had been two brothers. The younger one started slowing down, getting a bit clumsy; and the mother knew there was something wrong, but the doctors identified the problem as the mother, not a disorder in the child. The mother was sent to a psychiatrist. She didn't think she needed one, but she'd do anything to help her son, so she went. After the boy died from his brain tumor, though, she never had much confidence in doctors.

I cannot recall a story quite so bad, although it is not uncommon to hear about pediatricians who reassured the parents that their babies were quite normal and the child turned out to have some type of cerebral palsy. And the reasons for that are fairly obvious. Children develop at different rates, and most inquiries by parents are because the current normal child is developing a bit slower than the older sib, or because the child isn't exactly on the path charted in a popular book on raising children. I'm quite certain that the vast bulk of reassurances are correct, but oc-

asionally there is something amiss. Were the parents hysterical? Was the doctor condescending and thoughtless?

I was taken off guard by the mother's thankfulness for being taken seriously. I always expect people to get upset with me when I say I don't know what's going on. It happens to me a lot. It got me to wondering how often patients think they are being "blown off." A large percentage of people getting care at all levels have non-physiological symptoms. A very prominent gastroenterologist friend of mine many years ago told me that half the patients in the GI clinic at a major Midwestern medical school had functional complaints (i.e., complaints with no apparent tangible basis). About 5% of new referrals to movement disorder centers have non-physiological disorders, either conversion disorders or malingering.

If one deals only with conversion disorders, neurological signs and symptoms of psychogenic origin, we have learned in recent years that the prognosis is usually dismal. If the problem has persisted for six months or more the chances of cure of miniscule. Since it takes at least that long for most of these patients to see a sub-specialist who can make the diagnosis, most of these patients don't do well. So I take this diagnosis very seriously. And the field of neurology has come to realize that "real" disorders and "psychogenic" disorders may produce similar disabilities. In fact, since the latter don't behave in as predictable a manner as organic disorders, responses to "standard" treatments for the movements are also unpredictable. One world expert opined that *only* psychogenic dystonia produces joint deformities, which is, of course, the opposite of what most people would think.

It is important to identify the problem as "real" despite the underlying problem having no organic cause. The important point from the doctor's perspective is to identify the problem and then the etiology. It took me many years to develop an approach to discussing non-organic movement disorders. As I have often encountered great resistance

to being told a disorder was a conversion disorder rather than a small stroke missed on the MRI, I have come to identify the problem and then to discuss separately the potential etiologies, including the non-organic. I then focus on this. I point out that the movement disorder identification is crucial but no more so than identifying the cause, as the cause determines the therapy. If the etiology is psychogenic, then the treatment must address those issues.

Many patients with psychogenic disorders have already heard the diagnosis and arrive almost spoiling for a fight. "You think I'm crazy? You think it's all in my head?" It is uncommon for me to encounter the opposite behavior in a patient, expecting to be taken too lightly, and being overwhelmed at being told there is a non-psychogenic problem, even though the diagnosis is either unknown or not good. I have learned over and over again that patients need to know the name of their disorder even when there is no treatment.

The issue in this case, less common for me than conversion disorder, is in distinguishing functional from organic. Aside from patients who complain of memory dysfunction, complaints which are usually related to depression or anxiety, it is uncommon to see patients who think they have a movement disorder problem that others don't easily perceive. It's usually the other way around, with the patient not perceiving their slowness, their chorea, their stiffness. Some patients have a minor degree of tremor but are relieved to learn that it is not Parkinson's disease. Others are pleased to learn that their imbalance might be normal for people in their eighties. However, people do not like to learn that their perceived disability is not "real." They like to learn that it is "real" but not serious.

I felt like an impostor in dealing with this patient and his mother. At least I admitted that I didn't know what was wrong. Usually that slows people down in their enthusiasm, but this mother was so pleased that I not only endorsed her own conception of the problem but that I was interested and bothered by the fact that I didn't know what this was. And clearly this was a serious problem.

These are humbling experiences. It is always humbling in not knowing an answer. It is even more humbling to be praised for one's ignorance.

— JOSEPH H. FRIEDMAN, MD

A Craving For Sugar Hastens Slavery In the West

A 17th Century couplet declared that young maidens were made of “sugar and spice, and all that’s nice”. The anonymous poet clearly selected exotic, rarely attainable items as metaphors for little girls. Certainly spices and sugar were then unknown to the western European cuisine except for a privileged few. Other than the occasional usage of honey, sweetening rarely accompanied the average occidental meal.

The extraction of sugar from a tall perennial grass was probably first accomplished in southern India over two millennia ago. Arab entrepreneurs then brought the plant to the Middle East in succeeding centuries.

In the bloody siege of Antioch, in the year 1098, Crusaders became familiar with the cultivated sugar cane, learning to chew upon the raw cane to yield a sweet substance the Arabs called *sukkar*. This translated in the Frankish tongue to *zucra*, and finally to English as sugar. And a taste for sugar was one of many novel customs that the Crusaders brought back to western Europe.

Sugar cane was a fastidious crop requiring a warm, moist climate; and while some sugar-cane fields were established in Sicily and southern Italy, the annual yield remained modest.

The conquest and colonization of the Caribbean region opened many possibilities for profitable investments. Venture capitalists, particularly English, envisaged vast plantations of sugar cane in the newly acquired territories. The island of Barbados, in the eastern West Indies, was selected and by 1627 a ruthless campaign of deforestation was begun. The island, some 500 square kilometers in area, was transformed into a series of one-crop plantations.

The production of sugar is labor-intensive, requiring much work in the harvesting process as well as the milling, separation and refining of the canes. Fields had to be planted and neighboring mills constructed. The sugar content of the canes deteriorated rapidly after harvesting; and to retain its sugar, the canes had to be milled shortly after being cut down. For decades, much of this work was performed by indentured white Britons as well as by many who voluntarily sought employment, and perhaps adventure.

The need for more workers for the sugar plantation was accelerated by an expanding demand for sugar to satisfy the increasingly discriminating European palate. Annual British sugar consumption was less than one pound per capita in 1620. By 1690 it had increased to 4.6 pounds; by 1720, to 11.1 pounds; and to 16.2 pounds per capital by 1760. The French, and to a lesser degree, other European nations also developed a passion for sugar, particularly to sweeten two new beverages introduced from the East - coffee and tea.

Slavery, the consummate obscenity of the Second Millennium, was an entrenched global enterprise by the early 17th Century. The Portuguese had developed numerous slaving ports along Africa’s western coast; and Arab traders had a virtual monopoly in the sale of African slaves from the east coast. Soon afterward other European nations participated in the involuntary transport of captured Africans to South America [par-

ticularly Brazil], Meso-America, the Caribbean and the English-speaking colonies of North America.

For a few decades, teams of European whites and African blacks worked the sugar plantations of Barbados. Working conditions were barbaric and the inevitable attrition required constant worker-replacement. England was no longer a reliable source and so slavery became the dominant, if not exclusive, wellspring of field workers. The deforested island of Barbados, now with a resident population of about 40,000, became the most densely populated region of the Western Hemisphere.

The attrition of workers was increased by a new threat to their survival. A disease which had been formerly confined to the forests of western Africa had now achieved a firm foothold in the densely populated islands of the Caribbean. It was a much feared, acute ailment characterized by hectic fevers, confusion, profound lassitude, anorexia, intense vomiting [often bloody], a yellowish discoloration of the skin and eyes and a mortality rate exceeding 30%. It was called yellow fever.

Yellow fever was unlike pestilences such as smallpox. Those in intimate contact with yellow fever victims, such as nurses or physicians, rarely contracted the disease; and yet large numbers in the community regularly were felled by the disease with no apparent pattern or explanation. It would require another three centuries before physicians such as Carlos Findlay of Cuba and Walter Reed of the United States indicted the *Aedes* mosquito as the carrier of the often-fatal virus of yellow fever.

Transforming Barbados from a sylvan paradise to a treeless expanse of cultivated and irrigated fields provided the mosquito vector of the disease with vast numbers of shallow pools to lay their eggs. Added to this was the densely populated nature of the island.

By 1647, Barbados confronted its first yellow fever epidemic, one of the first outbreaks to transform an occasional disease in Africa to a lethal epidemic in the Western Hemisphere. Within months, over 6,000 African slaves had succumbed to the disease on Barbados; and for the next three centuries, yellow fever devastated every Caribbean island which ventured into deforestation and a plantation economy based on slavery. It was not until the Spanish-American War, at the end of the 19th Century, that mosquito-abatement programs finally eradicated the disease.

Yellow fever, historically, has been a mosquito-borne disease infecting the forest monkeys of West Africa and, only occasionally, natives living at the margins of these forests.

The disease was brought to the Caribbean in the 17th Century where its mosquito-carriers found a much more congenial environment as well as a vast population of vulnerable souls. Yellow fever was one of the bitter accompaniments of slavery; and the induced craving for sugar, a needless dietary supplement, was a major impetus in bringing slavery to the West.

– STANLEY M. ARONSON, MD

A Tribute to John Cunningham, MD

Arthur Frazzano, MD

John J. Cunningham, MD, (“Jack”) pictured on the cover in a 1987 photograph with his granddaughter, Erin, was one of the inspirational forces behind the establishment of the fledgling training program in family medicine at the Brown Medical School. An icon in the Pawtucket community, he brought his practice to the Family Care Center at Memorial Hospital in 1975 to serve as the seminal patient cohort for the first eight residents in family medicine. A lasting tribute to his compassionate, caring nature and to the loyalty he instilled in people is the fact that many of the patients he brought with him are still there today.

Jack was born in Providence on February 21, 1924. His father, John Sr., died when Jack was young; and he was raised by his school teacher mom, Mary, and his three sisters. Jack attended local schools and served a stint in the military. After graduating from Providence College in 1947, he graduated from Tufts Medical School and completed a rotating intern-

ship at Memorial Hospital of Rhode Island (MHRI) in Pawtucket. He entered an ob/gyn residency, but tuberculosis cut short his training. He spent time in a sanitarium, where he underwent treatment, including therapeutic lung collapse. Jack always said this detour in his career made him better able to understand the role of illness in everyday life. It gave him an insight to further underscore his compassionate empathy for those who have had lives altered by illness. After leaving the sanitarium, he trained at the Veterans Administration Hospital in Rutland, Massachusetts. Soon thereafter, he and his wife Biruta, “Bert” to friends and family, settled in Pawtucket, where he established a general practice.

Much of the magic of Jack’s personality and uncanny ability to bond with children is captured in this photograph. One of many memories of Jack is his entering the room of a crying child, dulcetly muttering, “Hi Tiger,” and gaining the child’s attention without further tears. Truly, Jack embodied the wisdom of

Aeschylus who understood twenty-five hundred years ago, that “it is not the oath that makes us believe the man, but the man the oath.” Today, 18 years after his death, “Cunningham,” as Bert fondly refers to her husband, is still remembered by patients, friends and colleagues for his tireless efforts on behalf of the Blackstone Valley community. He is the closest thing to a “patron saint” that we have in Rhode Island family medicine and his spirit of healing continues among those he taught and inspired.

Arthur Frazzano, MD, is Associate Dean of Medicine (Clinical Faculty), Brown Medical School, and a member of the first class of Family Medicine residents at Brown/MHRI, from 1975.

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Thirty Years of Academic Family Medicine in Rhode Island: Looking Back, Looking Forward

Jeffrey M. Borkan, MD, PhD

Thirty years ago, a fledging medical school at an Ivy League university and a time-honored community hospital decided to take a risk—opening a residency and later a Department of Family Medicine. This specialty was established to provide individuals, families, and communities with continuous and comprehensive high quality health care throughout the lifecycle. The gamble was large; although Rhode Island had historically been a general practice state, the medical school and the hospital were moving into uncharted ground and breaking tradition with both their larger competitors north and south (Harvard and Yale) and with the direction of some of the other newly affiliated Brown hospitals. According to its first Dean, Stanley Aronson, **Brown Medical School (BMS)**, then just a “Program” in medicine, was ready to take a chance with this new field, especially since it seemed to hold significant potential for the training of well-educated physicians to meet the compelling needs of the Rhode Island population. Also, like the Department of Community Health, where Family Medicine was originally located, it did not require the investment in laboratory infrastructure that the new school could little afford. **Memorial Hospital of RI (MHRI)** was interested in sponsoring Family Medicine because, as the CEO both then and now, Mr. Frank Dietz, observed, it was consistent with the hospital’s “history and philosophical bent of primary care, general internal medicine, and prevention.” MHRI had sponsored a general practice training program until the mid-1960s and wanted to re-enter medical education after its affiliation with Brown. Family Medicine appeared to be a natural and logical development.

However, how could one start a Family Medicine residency and department in Rhode Island? There were no faculty, no residents, no teaching practices, and no experience. **Family Practice (FP)** had begun as an approved specialty in 1969, and knowledge of the field in the Northeast was sparse. To gather data, the CEO, along with a leading faculty member from internal

medicine, traveled to one of the early FP sites in New Jersey. Meanwhile, the first Family Medicine Division Head and later Dean, Dr. David Greer, visited the heartland to learn about the new specialty in Kansas City and upper Minnesota. The zealous founders of the field, the leaders of the new

American Academy of Family Physicians (AAFP), were eager to help this Ivy League school make the move and imparted their wisdom during visits to Pawtucket.

Another step forward was catching the attention of a leading general practitioner in the Pawtucket area, Dr. John J. Cunningham (depicted on the cover). Though he may have originally been skeptical, he jumped in wholeheartedly, becoming the first medical director, faculty member, and role model. When he came to MHRI to help start the residency, he brought his long-standing practice—including patients, staff, and records—transforming it into the first Family Care Center. Dr. Cunningham also brought his approach to care, providing endless clinical pearls and helping residents distinguish between what was important and what was not.

When the three-year residency opened on July 1, 1975, with seven trainees, the full time faculty consisted of Drs. Greer and Cunningham. Dr. Tom Scaramella, a psychiatrist who has been the residency director at Butler Hospital, Dr. Mary Ann Passero, a pediatrician, Dr. John Evrard, an OB-Gyn, and a psychologist, Dr. Ann De Lancey, joined soon afterward. A few local preceptors filled out the first faculty—including Dr. Barry Weisman, who continues to precept. The residency flourished and attracted top candidates from around the US. The class size expanded to 12 by 1977,



and to 13 several years later. The first graduates completed the program in 1978 and began a tradition that continues to this day—most go into practice within an hour’s drive of the residency.

The next step in the development of Family Medicine at Brown involved the granting of Departmental status and the hiring of the first Department Chair. Both milestones occurred in 1978. The new Department, headed by Dr. Louis Hochheiser, began to expand its range of faculty and activities. The Predoctoral division, whose goal was to teach Brown Medical students the principles of medical care and attract young physicians to the specialty, began in 1979, led by the first Predoctoral director and later Associate Dean for over twenty years, Dr. Stephen Smith. Although it took until 1995 before a required six-week clinical rotation in Family Medicine was mandated at Brown, multiple courses, electives, and enrichment opportunities have always been offered. The first researcher, Dr. Larry Culpepper arrived in 1981 and began the outstanding research tradition that continues to this day. He was also instrumental in starting the collaborative training relationship with the Blackstone Valley Community Health Center, a partnership that lasted 14 years, and expanded to other community health centers in RI. This reflected the Department’s continued commitment to underserved and vul-

nerable populations in our communities.

International family medicine became a focus with the arrival of the second Chair, Dr. Vincent Hunt, who led the Department to new heights during his tenure between 1986 and 2000. International collaborative educational and research projects have taken place in Russia, Jordan, Qatar, Vietnam, Israel, Greece, Hungary and more recently Honduras and the Dominican Republic, among others. These projects have involved everything from the establishment of national family medicine training, to health service planning, to providing direct service to the underserved.

The Department has continued to develop and mature, taking its place among the major Family Medicine departments and training programs in the country. Fellowship training was added, starting with Maternal and Child Health in 1992, followed by the C. Everett Koop Health Policy Fellowship in 2002 and the Leadership Fellowship in 2004. In a type of budding process, several faculty and graduates were instrumental in initiating a Department of Family Medicine at Boston University, starting in 1996. In 1999, the finishing touches were put on the new **Family Care Center (FCC)** at MHRI, a state of the art family medicine training center. The new FCC replaced the “clinic” style facility, providing three model practices that now house the 39 residents and over 20 faculty – as well as a base for innovative programs such as open access, group visits, chronic care collaboratives, and integrated mental and physical health

care. It has become a technology test center for electronic health records, decision support tools, and patient portals.

Health policy and advocacy has also been a critical component of the mission of the Department, with faculty, residents, and staff taking leadership roles in innumerable public forums, committees, and advisory boards, and even helping draft legislation to change state laws. Working closely with the **Rhode Island Academy of Family Physicians (RIAFP)** on its legislative initiatives, we have worked to make our voice heard on issues of importance to our patients and our discipline. This has also been demonstrated through the many projects related to **COPC (community oriented primary care)** in which residents leave the confines of the hospital and the FCC to engage in public health issues and endeavors.

Over the last five years, we have tried to take the Department to the “next step” in its evolution. We have created integrated divisions within the Department that allow resources and efforts to be focused upon particular areas, such as research, education, or international health, while remaining committed to a unified vision. Academic productivity, in terms of grants, publications, presentations, and programs, has expanded dramatically. (See Figures 1 and 2). We have tried to break down traditional academic and clinical silos and promote transdisciplinary efforts, throughout Memorial, Brown, the US and the world. We have expanded our clinical base, establishing clinical departments at Rhode Island Hospital (2000) and

the Miriam Hospital (2004). We have also established research collaborations with other centers as close as Brown and as far away as Oxford. At the same time, we have reached out to our home institutions – both Brown and Memorial, as well as the RIAFP – in an effort to both remain “mission critical” and to link our professional fortunes, transforming the usual metaphor of “them and us” to just “us”. Though family medicine is not the largest department at Brown Medical School, it has made a contribution far beyond the confines of primary care. Five Associate Deans are family physicians, our faculty lead or teach major portions of fourteen courses, and our researchers are some of the most productive at the University. We are involved in the newest wave of curriculum reform at all levels. For example, the new Doctoring program, one of the most radical changes in the BMS curriculum in years, is established on a strong primary care base, led in large measure by family physicians.

In 2006, looking back, it is amazing to consider how much has been accomplished in the space of one generation. Though the numbers are remarkable, whether it is the 349 residency graduates, the nearly 200 faculty members, the tens of millions of dollars of research grants, stacks of articles and books, or the thousands of students who have received education in family medicine, mere numbers do not suffice. It is fair to say that the residency graduates and family medicine faculty, who now comprise nearly 85-90% of all family physicians in Rhode Island, have inalterably influenced the face of primary care medicine in the State. Though family physicians represent only about 7% of the State’s physicians, they care for nearly a third of all Rhode Island children and more than one third of all Rhode Island adults. Our graduates are sought after for their skills and prowess, and now enter career paths, in addition to clinical roles, of which their forebears could only have dreamed—academia, television, info-matics, health insurance, and international health. The articles in this special issue reflect some the exciting achievements of the last 30 years and the directions for the future.

Family Medicine at Brown remains true to its roots. We care for

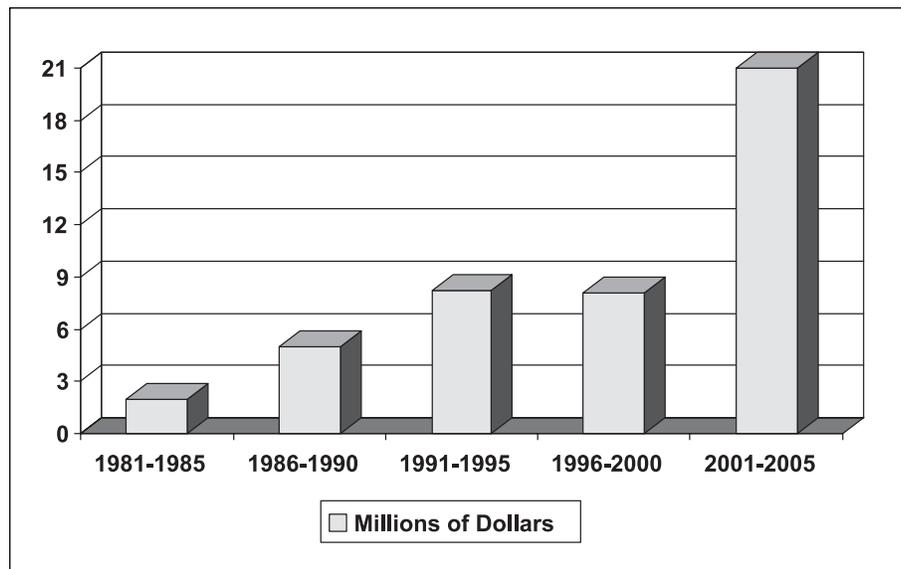


Figure 1: Grant Funding By Five-Year Cycles

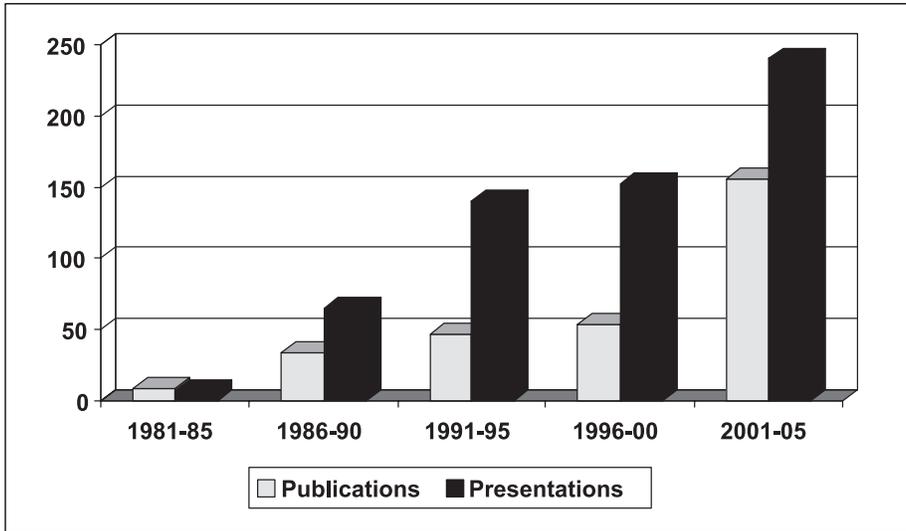


Figure 2: Research Scholarly Production: Publications and Presentations

individuals and families in their own communities, and treat men, women and children of all ages, ethnicities, and economic circumstances. We look forward to the next 30 years, and plan to continue our cutting edge contributions in clinical care, research, education, and advocacy. Our partnerships span Rhode Island, the nation, and the globe, and we are com-

mitted to work together to improve the health of our population at every opportunity. Remarkable accomplishments have been achieved in the course of one generation and we look forward to those of the next. We take this opportunity to celebrate and to thank all those who have played a role, as we gather our strength to meet the challenges ahead.

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Family Medicine Residency Education: Staying on the Cutting Edge

Melissa Nothnagle, MD, and Rabin Chandran, MD

The 30th anniversary of the Brown Family Medicine Residency Program provides an opportunity to highlight recent developments in residency education and to describe our vision of the future. These changes, ranging from competency-based assessment to advanced-access scheduling, prepare the next generation of family physicians for their roles in the community. Brown's Family Medicine Residency Program aims to remain on the "cutting edge" of these advancements in training.

RECENT CHANGES IN FAMILY MEDICINE RESIDENCY EDUCATION Competency-Based Education

Since its inception in the late 1960s, family medicine residency training has been organized as a series of clinical rotations. By completing blocks of educational experiences, residents were expected to acquire the knowledge, skills, and attitudes to become effective family physicians.

However, practitioners in a variety of disciplines have questioned the assumption that residents will achieve the learning objectives of residency programs by attending the required rotations and passing global evaluations. In most fields, the focus of residency requirements is shifting from the content and process of education to educational outcomes. To measure these outcomes, the Accreditation Council for Graduate Medical Education (ACGME) charged residency programs with implementing a competency-based model of assessment. Important early work in this area comes from our own discipline; a group from the Society of Teachers of Family Medicine provided early leadership that foreshadowed the ACGME's embrace of competency-based education.¹

The ACGME plan includes six competencies which organize graduate medical curricula: Patient Care, Medical Knowledge, Interpersonal and Communication Skills, Professionalism, Systems-based Practice, and Practice-based Learning and Improvement.² (Table 1) Residency programs use this framework to develop learning objectives for residents, instructional strategies,

and assessment tools. The assessment data are used to improve the performance of individual residents as well as to evaluate the effectiveness of the program.

The Brown Family Medicine Residency has implemented a number of competency-based assessments. For example, to appraise *medical knowledge* in pediatrics, our pediatric faculty leadership has developed web-based self-study modules on topics such as asthma management, fluids and electrolytes, evaluation of the febrile child, failure to thrive, sickle cell disease, and hyperbilirubinemia. Residents' responses to study-module questions are directed to the faculty supervisor for pediatric education, who provides feedback to correct misconceptions and direct residents to additional resources. Faculty who oversee our maternal and child health curriculum have improved resident assessment on labor and delivery by incorporating several competencies, including *patient care*, as demonstrated by accurate interpretation of non-stress testing and basic ultrasound, and *communication skills*, which are measured using a 360 degree evaluation [written feedback from multiple observers, including supervisors, peers, nursing staff, and patients]. In addition, several competency-based assessments are used in the residents' continuity practices. In some

cases a focus on competency-based assessment has involved applying a measurement of success to an existing and successful component of the residency. For example, during review of videotaped patient encounters, behavioral science faculty use a validated medical interview skills inventory to provide structured feedback on residents' *communication skills*. In addition, ambulatory family physician preceptors complete competency-based written evaluations of resident performance after patient care sessions. These evaluations address several competencies; for example, proficiency in outpatient billing and coding serves as a measure of competency in *systems-based practice*. Multiple assessments will be integrated to include measures of each of the six competencies throughout the three years of training, with increasing competence expected at each level.

The Future of Family Medicine's New Model of Practice

The Future of Family Medicine Project,³ initiated in 2002, created a plan for transforming family medicine. The results include a vision of a "New Model of Practice." The Brown Family Medicine Residency has integrated several elements of the new model into our resident and faculty practice. First, to incorporate advanced in-

Table 1: ACGME Competencies²

- Patient care that is compassionate, appropriate and effective for the treatment of health problems and in the promotion of health.
- Medical knowledge about established and evolving biomedical, clinical and cognate sciences as well as the application of this knowledge to patient care.
- Practice-based learning and improvement that involves the investigation and evaluation of care for their patients, the appraisal and assimilation of scientific evidence and improvement in patient care.
- Interpersonal and communication skills that result in the effective exchange of information in collaboration with patients, their families, and other health professionals.
- Professionalism, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to patients of diverse backgrounds.
- Systems-based practice, as manifested by actions that demonstrate an awareness of and a responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care.

formation systems, we have implemented an **electronic health record (EHR)** and exam room computers which provide access to the EHR, laboratory and imaging reports, hospital records, and internet access for point of care information retrieval and patient education. Second, to reduce barriers to access, we adopted an advanced-access scheduling system with the goal of “doing today’s work today.” Third, to focus on quality of care, the practice is implementing the Chronic Care Model for patients with diabetes.⁴ Finally, we model multidisciplinary team management of patients in our Diabetic Group Visits Program.

Resident Work Hour Limits

Responding to the data on the effects of sleep deprivation on clinical performance and public attention to excessive resident work hours, the ACGME began to enforce limits on resident work hours in July 2003, with the goal of prioritizing patient safety and resident education over service obligations.⁵ Residents in all specialties are now limited to 80 work hours per week, no more than 24 consecutive hours on duty (with an additional 6 hours for educational activities or continuity of care), a maximum on-call frequency of every third night, and at least one day off per week. While this may not seem generous to those outside the medical profession, most practicing physicians recall hospital shifts longer than 36 hours.

Three years after implementation of the duty-hour limits, controversy remains over whether patients truly benefit from these changes, and research findings on patient safety and educational outcomes after implementation are conflicting. A major concern is that shorter resident shifts result in more frequent sign-outs, which have been associated with delays in care and increased medical errors.^{6,7} To improve continuity of care on the inpatient medicine service, our residents have developed an electronic sign-out system to streamline communication with cross-covering residents.

THE FUTURE OF FAMILY MEDICINE EDUCATION

As these recent changes are reshaping the landscape in family medicine education, additional changes are close on their heels.

Learner-Centered Residency Education

One of the attractions of a career in family medicine remains the variability and choice in scope of practice, from rural practice to hospitalist medicine, urban underserved care, academic medicine and research, and a host of other options. The debate within our specialty about whether all family physicians should be trained in obstetric care rages, although the national organizations have reiterated their commitment to full-spectrum training. However, training residents for this wide range of choices will require more emphasis on individual learning plans. We envision a system in which residents, in collaboration with their advisors, will develop concentrations. We offer residents a road map to identify mentors and educational resources in several areas of concentration, including maternal and child health, health policy and advocacy, sports medicine, international health and reproductive health.

Beyond the Competencies

This era of residency education will be marked by competency-based assessment. However, in many areas of medicine, attention is shifting from measuring physician or resident behaviors to assessing patient outcomes, as exemplified by pay-for-performance initiatives by private insurers and government agencies. Leaders in medical education research have called for a focus on patient-centered outcomes, linking medical education to quality of care rather than just physician competency.⁸ Medical educators have also emphasized using data on health outcomes to guide the content of graduate medical curricula and continuing medical education.⁹ Such “evidence-guided education” should prepare physicians to ameliorate the health problems of greatest significance to our patients and communities.

Evidence-Based Education

Finally, we envision a future in graduate medical education in which educators apply scientific evidence to teaching, learning and assessment. Informed by research in educational psychology on how medical trainees learn best, we are providing opportunities for active and collaborative learning, teaching clinical skills in authentic contexts, and using assessment tools to improve resident learning as well as to provide feedback on the effectiveness of the educational program.¹⁰⁻¹²

CONCLUSION

Building on our 30-year tradition of excellence, the Brown Family Medicine Residency will continue to innovate, in an effort to constantly improve the educational experience of our residents and the quality of care for our patients. Methods are changing, but the goal remains the same—to train competent, humanistic physicians who provide excellent care and leadership to their communities.

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Brown Medical School Family Medicine at Thirty: Residents' Views of Now and Then

Paul F. George, MD, and Joanne M. Silvia, MD

The Brown Family Medicine Residency turns thirty this year. Over this period, our residency and the residents that populate it, like medicine in general, have evolved. Our talented and diverse group of trainees faces challenges much different than those that presented themselves to the first residency class three decades ago. Thirty-six hour shifts no longer exist. The challenge now is learning the perpetually expanding breadth of family medicine within three years while obeying new work hour rules. Yet, like our predecessors, we remain steadfast in our mission to provide healthcare to individuals, families, and communities in the Blackstone Valley.

Today, as in the past, our residents are engaged in an intense and vibrant medical practice at the **Family Care Center (FCC)**, now a modern facility opened in 1999 with three semi-independent practices. Thirty years ago, Dr. John Cunningham, a local family physician, moved his practice to Memorial Hospital, slowly introducing his patients to the residents who became their primary care providers. Over the decades the population served by the FCC has expanded, and three generations of Pawtucket residents have come to trust us with their medical care. Each of us carries our own panel of patients. Many we “adopt” from graduating residents, while other new patients are consistently drawn to the unique atmosphere of our practice. Our range of practice is broad, providing continuity through the outpatient and inpatient settings, and through the lifecycle. We see adults for preventive care; women for gynecologic and obstetrical care; children for well visits and sick visits. We graduate from the residency knowing that we are capable and confident physicians, having become competent in the care of patients because of our time spent at the FCC.

We also spend time outside the FCC performing primary care for patients both in nursing homes and during home visits for home-bound FCC patients.

Both these experiences are rewarding and often thought-provoking for resident and patient alike. One of our residents recently followed a patient at the FCC for over a year. The patient was reluctant to discuss much of her social situation and the reasons behind her deep depression, which complicated her care. A scheduled home visit, as part of the geriatrics curriculum where residents assess a patient in the patient's home environment, revealed in minutes that the patient had lost a son to suicide and was struggling with associated guilt. The patient was also under financial stress, supporting both herself and a handicapped adult child. On return visits to the FCC, the patient has been more open and willing to discuss her emotions, and her depression has greatly improved. Similar experiences are repeated during our many home visits and demonstrate that returning to a more personal model of medicine, reminiscent of the past, augments our ability to care for our patients.

“...we know a baby's birth history and mom's prenatal course before a newborn visits FCC.”

Our inpatient hospital responsibilities are also wide-ranging and often feel immense—even if they may appear less daunting than those thirty years ago. The original residents were not only responsible for floor patients during their medicine months, but at times those in the Intensive Care Unit as well. During our three years, we spend almost one full year doing inpatient medicine, beginning as interns where we learn to manage patients on the floor and ending as third years where we rotate for two months as acting attendings (with attending super-

vision, of course). The intensity of inpatient care has increased, particularly as lengths-of-stay decreased, but thankfully, ICU patients and floor patients are now covered by different teams.

Our founding residents were also not bound by the eighty-hour work week regulations that began three years ago. While we are shielded by laws governing the number of work-hours in a shift and in a week, no such laws existed thirty years ago. On medicine, we admit six patients during a call day and carry no more than twelve at a time. The original family medicine residents at Memorial carried up to twenty-four patients at a time and worked thirty-six hour shifts every third day. The challenge for us today is not so much working with sleep deprivation. Instead, we must learn an abundance of medical knowledge and new technologies, in less time than our predecessors.

The Obstetrics service and the Pediatric service have also changed. Both are less busy now—pediatrics because many diseases treated as inpatients in the past are now managed on an outpatient basis; obstetrics because of the high cost of malpractice and the decline in obstetricians and family doctors performing deliveries at Memorial. The original residents learned deliveries from obstetricians and pediatrics from pediatricians. A large majority of our expectant moms come from the FCC where they are managed throughout pregnancy by the residents who then deliver them under the supervision of a Family Medicine attending. The same is true for pediatrics—a majority of our pediatric in-patients are now also patients at the Family Care Center although we still admit many patients from private pediatricians.

Our Obstetrics and Pediatric curriculum is unique in that we take care of moms and babies from conception. Practically, this means we know a baby's birth history and mom's prenatal course before a newborn visits FCC. Even more so, we are situated to take care of a mom's psychosocial needs should a newborn need

special care. For example, a resident recently delivered one of her prenatal patients from the FCC. Shortly thereafter, the newborn became septic and required parenteral feeding and antibiotics. Naturally, the new mom was frightened with the prospect of her sick newborn. Yet, because of the trust the resident developed with the mom throughout her prenatal course, the resident could allay mom's concerns and gently explain to her the natural course of her newborn's illness, all while taking care of the medical needs of the mom and baby pair. No other specialty allows this type of continuity and trust-building that family medicine offers from conception to baby and beyond to the family unit.

Just like the diversity of the services on which we rotate, the Family Medicine residents at Memorial are a diverse group, and have been since the inception of the Residency. Our residents span all ethnic backgrounds. We come from as close as Rhode Island and as far away as Ghana. Our current residents have gone to medical school at some of this nation's top institutions such as Yale, Stanford and Brown. Doctors of osteopathic medicine now comprise approximately one-third of the residency, and are included among the best teachers and chief residents. We are involved in basic science, clinical and anthropologic research, as well as the teaching of Brown medical students, and of each other. We testify about important issues in our State government and participate in local health fairs. As third years, we all do community-oriented projects that benefit our local neighborhoods. For example, one of our residents opened up a homeless shelter for her project while another taught about various health problems in a local middle school. Most importantly, we share the desire to improve the medical and social well-being for the citizens of the Blackstone Valley.

The patients we serve are also diverse. The original panel of patients Dr. Cunningham brought to Memorial was largely middle class background. Today, many of our clinic and hospital patients speak Spanish. We have a large West African population who speak French and African dialects. We still have a smattering of middle class patients, but most of our patients are in the lower socioeco-

nomics classes. We have patients with private insurance, others who are enrolled in Medicaid or Rite Care, and some who have no insurance. And the challenges of our system necessitate that we be not only physicians but also mental health workers, pharmacists and social workers. We diligently engage in multiple tasks, diagnosing diabetes at one moment then working with pharmaceutical programs at the next to procure medications for our indigent patients.

An increasing and different challenge than our predecessors faced is that of balancing newer technologies and specialties with meaningful and complete interactions with our patients. We have computers in each of our exam rooms; laboratory values are within the click of a mouse. Handouts on any disease can be found in less time than it would take to actually describe the disease. However, navigating insurers is difficult and frustrating. Patients often demand specialist care for common ailments that we as family physicians can treat easily. Yet we, like the original residents, know our patients and their families. We are there for them regardless of whether they have a cold or lung cancer. We counsel our patients on sexually transmitted diseases and risk factors for heart disease. We deliver their babies and then take care of them as they grow. We remain a safe haven for our patients where we take care of medical conditions and so much more even as technologies advance and specialties become narrower.

Our thirtieth birthday is both a time of joy and reflection. From our humble beginnings, we have changed much. No longer is family medicine an outlier in the field of medicine—we are physicians first, but also teachers and researchers. We are physicians for adults and children; for expectant moms and nervous dads; for one-day old newborns and one hundred year old grandparents. Our reach extends through all socioeconomic levels, yet we remain advocates for those who are most vulnerable and whom society most often forgets; the poor, the uninsured and the mentally disabled. And through it all, we have remained steadfastly loyal to those we serve—the people of Pawtucket and the Blackstone Valley.

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Fellowship Training In Family Medicine At Brown: Adding Depth to Breadth

Rick Long, MD, Sean P. David, MD, SM, DPhil, Alicia Monroe, MD, and Jane Shaw, MS

While Family Medicine is a specialty most notable for its breadth of knowledge and scope of practice, the goal of advanced fellowship training is to increase the depth of knowledge and expand a defined skill set rather than focus on sub-specialization. After completion of a Family Medicine residency, a family physician can enter into fellowship training for a period of usually 1-2 years. The Department of Family Medicine at Brown Medical School and Memorial Hospital of Rhode Island offers three post-residency fellowships: Maternal and Child Health, Health Policy, and Leadership.

MATERNAL AND CHILD HEALTH FELLOWSHIP (MCH)

The **Maternal and Child Health fellowship (MCH)** is the oldest of the fellowship programs in Family Medicine at Brown, initiated and designated as a Brown University-affiliated program in 1991. The Department of Family Medicine at Memorial Hospital of Rhode Island worked with local, federally funded, and non-federally funded community health centers to organize and restructure maternal and child health care delivery systems for women and children in surrounding, underserved communities. This followed recognition that infant mortality, prematurity, low birth weight and disparities in health care in the United States reflected a complex interaction between social factors, public health, technical innovation, and access to clinical services. Developing a program of care which is easily accessible and responsive to the needs of underserved families is a major undertaking and requires clinical and administrative leadership not present in many areas. Our MCH Fellowship was developed to produce clinical leaders in MCH care. It was structured to provide both advanced clinical skills and the public health skills required to develop, coordinate, and organize community-oriented MCH programs. From its inception, fellowship

goals have remained the same: 1) to train family physicians to provide direct care to women and children at high psychosocial and medical risk, 2) to train specialists in caring for underserved and vulnerable populations, and 3) to train leaders capable of developing, organizing and directing collaborative, community-based MCH programs.

Fellows receive one or two years of advanced clinical training in obstetrics, care of the newborn, and community/public health. Fellows in our two-year program concomitantly pursue either a MPH or a MSc in epidemiology through Brown Medical School's Department of Community Health. Table 1 lists a sample of scholarly works completed as part of fellowship training. Twenty-two graduate-fellows practice in such diverse settings as inner-city Chicago, rural Alaska, Nepal, Guam and Ecuador. Former fellows provide an entire scope of maternity care from prenatal care and routine vaginal delivery, to complicated, high-risk care, cesarean sections.

Fellows also gain experience in education through the didactic and hands-on clinical teaching of our Family Medicine residents and medical students in maternal and child health. Half of graduates have joined family medicine residency programs as MCH faculty.

Over the last decade and a half, the MCH fellowship has contributed to a stable provider base within the Brown Family Medicine Residency by providing role models for family physicians in training at a hospital where the majority of deliveries are managed by family doctors. Additionally, the fellowship encourages and fosters cooperation and exchange with our nursing, midwife, pediatric, and obstetrical colleagues. Lastly, the MCH fellowship has provided the foundation for promotion of family-centered maternity care for vulnerable and underserved women and children in a supportive, collaborative community hospital setting.

THE C. EVERETT KOOP HEALTH POLICY FELLOWSHIP

As a response to the need for training future leaders in the re-design of family medicine and to inform the process of health services policy formulation at a time when the US health care system is arguably in crisis, our Department sought to develop a training mechanism for primary care physicians seeking health policy careers. The C. Everett Koop Health Policy Fellowship (<http://bms.brown.edu/pcgl/ceverettkoop.htm>) was established in 2002 when former Surgeon General Koop endorsed and authorized use of his archives, now available online through the National Library of Medicine (<http://profiles.nlm.gov/QQ>), as a resource for training health policy professionals. The goals of the Koop Fellowship are for learners to 1) develop the requisite knowledge base and skill set in political and policy strategies to promote health, 2) apply knowledge and skills to specific health promotion issues, 3) conduct scholarly analysis of policy strategy, and to 4) prepare network in policy making circles providing access to decision makers and communication venues to advance future health policy initiatives. Koop fellows have completed masters in public health degrees at Brown Medical School and undergo a mentored health advocacy program involving an internship in Washington, D.C., analysis of national health services data, and interviews with policy makers and opinion leaders. Projects completed by Koop fellows are shown in Table 1.

THE FACULTY DEVELOPMENT LEADERSHIP FELLOWSHIP

The Faculty Development Leadership Fellowship was established in August, 2004. It seeks to cultivate a generation of visionary leaders and change agents who will model and teach patient-centered, high quality health care for underserved and vulnerable populations, improve healthcare processes and systems through redesign, and foster individual and organizational change.

Table 1. Representative description of scholarly projects by fellowship graduates

Fellowship	Representative Scholarly Projects
Maternal and Child Health Fellowship	<p>Disparities in emergency department utilization by pregnant women in Rhode Island's Rite Care program</p> <p>Predictors and prevention of teen pregnancy</p> <p>Predictors of unintended pregnancy</p> <p>The effects of continuity of care on pregnancy outcome</p> <p>Barriers to appropriate contraceptive use</p>
Koop Fellowship	<p>Promotion of international tobacco control</p> <p>Medicaid coverage of smoking cessation services</p> <p>Childhood obesity prevention</p> <p>International physician training for HIV management</p>
Leadership Fellowship	<p>Demographics and characteristics of uninsured pregnant women in RI</p> <p>Qualitative study of resident physicians' educational needs for chronic disease management</p> <p>A walking program supporting exercise in self-management of depression</p> <p>Implementing the chronic care model to improve diabetes care in a private practice setting</p> <p>A practice-based intervention to improve screening for osteoporosis</p>

The 18-month program, geared for actively practicing family physicians, promotes personal and professional growth in leadership, skills in systems-based practice, scholarship and advocacy. The fellowship faculty represents medicine, anthropology, psychology, business administration, hospital administration and public health. The program includes a weekly seminar series, weekly clinical practica, scheduled mentoring sessions, and clinical teaching. With the assistance of mentors each fellow designs and completes a "keystone" project that synthesizes the core content areas. The weekly seminars incorporate cutting edge knowledge and resources needed to improve chronic illness management, advocate for vulnerable populations, and provide state of the art primary care. The practicum enables fellows to integrate new knowledge in their practice sites and develop their office-based team. Individual mentoring sessions help fellows define individual leadership and career goals and monitor progress on the "keystone" project.

The fellowship graduated 5 fellows in the first cohort, and is now training the second cohort of 4 fellows. All fellows to date have been women, with a range of experience from 0 to 15 years post residency. Their practice settings have been diverse including community health centers, private practice, and a residency clinic. Most fellows have a strong interest in underserved populations. The keystone projects of the first cohort of fellows are listed in Table 1.

Future directions for the Faculty Development Leadership Fellowship include: program adaptation to actively elicited feedback; a component to teach coaching skills; continued support and mentoring of graduated fellows pursuing systems redesign; finding creative approaches to secure future funding; and redesigning the program to enable dissemination to other sites.

SUMMARY

The Brown Family Medicine fellowship programs share a common goal of nurturing the future leaders of our spe-

cialty. In a complex and demanding practice environment our fellowships have contributed to the development and propagation of an adept Family Medicine specialist. These fellowships endorse our specialty's broad approach to healthcare through addressing primary care and prevention, but also enhance the future of our field through melding the breadth of our discipline with the depth of expertise and the stewardship of responsible leadership.

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History of the Predoctoral Division In the Department of Family Medicine at Brown Medical School

Julie Scott Taylor, MD, MSc, Stephen R. Smith, MD, MPH, Thomas T. Gilbert, MD, MPH, Timothy Empkie, MD, MPH, Charles B. Eaton, MD, MS, and Alicia D. Monroe, MD

Since its inception in 1979, the Predoctoral Division of the Department of Family Medicine has had two major goals: to inspire medical students to choose Family Medicine as a specialty and to educate all students on basic medical principles and practices. Whether students choose our specialty or not, we aim to familiarize them with primary care to prepare them for their roles in the health care system.

Over 27 years, the division has grown from a single faculty member to two core family physicians, two support staff and 62 local sites. In 14 different courses, the division works with more than 100 students each year. The division is involved in several pre-clinical courses and programs during the first two years of medical school, the 6-week required Family Medicine clerkship, multiple electives, and an integrated advising and mentoring program for clinical students in their third and fourth years of medical school.

Stephen Smith, MD, the original Director of Predoctoral Education (1979-1981), developed a full curriculum for a new Community Health Clerkship, complete with standardized patients, videotaping of students' actual student-patient encounters, lectures, workshops, and projects. He introduced one of the first computer simulations of clinical decision-making and a national award-winning board game on health insurance coverage to the curriculum.¹⁻³ In 1980 Dr. Smith developed a summer preceptorship program, followed by a **Family Medicine Interest Group (FMIG)**. He increased family medicine faculty involvement in the preclinical medical interviewing and physical diagnosis courses, and began to offer family medicine electives. He received the division's first federally-funded medical education Predoctoral Training Grant (a Title VII grant from the **Health Resources and Service Administration (HRSA)**).

Dr. Thomas Gilbert (1981-1984) directed the newly established division, focusing primarily on the six-week Community Health Clerkship for third-year and

early fourth-year students. Students spent the first and last week of the rotation at Memorial Hospital of RI (MHRI) working with actors from the Trinity Repertory Company as standardized patients and four weeks in the middle seeing patients with doctors in their own practices.

Brown Medical School has consistently had the highest percentage of students applying to Family Medicine residencies of any Ivy League school.

Timothy Empkie, MD, (1984 to 1993) not only expanded the Community Health Clerkship, but was involved in two new projects: the establishment of a maternal-child health elective at MHRI and a medical student exchange program with the then Wilhelm Pieck University in the former German Democratic Republic (East Germany). In addition to running this Brown-wide exchange program, he arranged for East Ger-

man students to spend time at the MHRI Family Care Center.

Charles Eaton, MD, (1993 to 2001) received three HRSA Title VII grants during his tenure: one in 1994-1997 to develop a six-week required clerkship in Family Medicine; a second from 1997-2000 to develop a 3-generation standardized patient family as part of the clerkship; and a third from 2001-2004 to develop a curriculum on health care disparities. The original Family Medicine Clerkship, which has been offered continuously since 1995, consisted of six clinical sessions, two to three half days of community health each week, and a Community Health project. The first curriculum included lectures on epidemiology and alcoholism and workshops on casting and management of pharyngitis.

Julie Taylor, MD, joined the department in 2001. Since then, the four-person predoctoral team has utilized two HRSA Title VII grants, as well as other smaller medical education grants, to revise the clerkship, expand the division's participation in multiple other required and elective courses, and become a presence in the national medical education arena.

The current predoctoral division is involved in 14 courses at the medical school, six in the first two years and eight in the

Table 1: Family Medicine Predoctoral Education Leaders at Brown Medical School

Directors of Predoctoral Education

Stephen Smith, MD, MPH	1979-1981
Thomas Gilbert, MD, MPH	1981-1984
Timothy Empkie, MD, MPH	1984-1993
Charles Eaton, MD, MS	1993-2001
Julie Taylor, MD, MSc	2001-present

Assistant Directors of Predoctoral Education

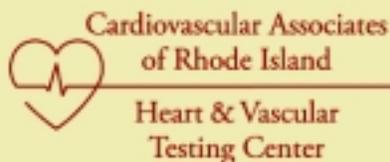
Robert Reinhardt, MD	1980-1983
Timothy Empkie, MD, MPH	1984-1985
Meredith Goodwin, MD	1994-2000
Sean David, MD, MS, DPhil	2000-2002
Judith Nudelman, MD	1998-2002
Melissa Nothnagle, MD	2002-2003
David Anthony, MD, MSc	2003-present



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Table 2: Timeline of critical predoctoral events

1975:	Brown Medical School granted full 4-year accreditation; 1st graduating class, and Family Medicine started as a Division of Community Health
1978:	Inception of the Department of Family Medicine
1979:	Community Health Clerkship commenced as 1st course in the department
1980:	1st Title VII Predoctoral Training Grant received
1981:	Dartmouth-Brown Program started
1991:	Longitudinal Ambulatory Clerkship began
1993:	1st SEARCH Program
1995:	Family Medicine Clerkship initiated
2002:	MOMS Program came to the Family Care Center, Team B
2005:	Doctoring course launched

third and fourth years of medical school. Some are solely Family Medicine efforts, while others involve collaborations between multiple departments and individuals at Brown. For example, the Doctoring course is a new two-year, longitudinal, required course for first- and second-year medical students that replaces the medical interviewing and physical diagnosis courses and is designed to teach the knowledge, skills, attitudes and behaviors of the competent, ethical and humane physician. This innovative course was initiated in September 2005 and is the first step of a major revision of the curriculum at Brown Medical School. Family medicine faculty members serve as course leaders (Dr. Alicia Monroe), small group leaders, and community mentors. The revitalized Family Medicine Interest Group runs under the guidance of Dr. David Anthony in conjunction with the RI Academy of Family Practice. Student Experiences And Rotations in Community Health (SEARCH) is a summer program that exposes students to underserved patients. Funded primarily by Title 7 grants, SEARCH has run continuously from 1993, in partnership with the Department of Health. Dr. Taylor has been the faculty advisor for the student-led preclinical **Medical Students Outreach to Mothers-to-be Program (MOMS)** since its inception in 2001. This elective pairs first-year students with prenatal patients (from Women & Infants prenatal clinic and Team B in the Family Care Center) for a continuity and advocacy experience.

The six-week Family Medicine Clerkship, a required rotation, runs eight times per year with six to fifteen students per block. Each student is placed at one of 33 outpatient sites for seven half days of clinical time

weekly. Students spend all day Wednesdays participating in a didactic curriculum which consists of a lecture and small group discussions of cases from the original three-generation family in the morning taught by community faculty followed by workshops in the afternoon taught by core faculty. Over the course of the block, there is birth and death and lots of “bread and butter” family medicine in between. The final half day of the clerkship is allotted for “Social and Community Context of Health” projects. Since early 2005, approximately half of the students have completed this requirement by working on Service Learning projects at Progreso Latino, a local social service agency. Under the supervision of Dr. Teresita Hamilton, students have created and implemented several projects relating to nutrition and obesity and maternal-child health. The predoctoral team has also implemented an iterative patient tracking system that documents clinical encounters using **personal digital assistants (PDAs)**. Members of the division have presented at regional and national meetings and published on medical education topics, often with students as collaborators.⁴⁻¹⁰

Brown Medical School has consistently had the highest percentage of students applying to Family Medicine residencies of any Ivy League school. Over the last five years, 10 to 14% of the graduating class have applied to Family Medicine residency programs each year. Virtually all our students have matched at their first choice program.

Looking forward, we envision continued participation in many of the core aspects of medical school teaching such as Doctoring, the Family Medicine Clerkship, key electives, and advising. While the medical school has begun to phase out the Dartmouth-Brown Program, there are plans to expand

the student body by 33% over the next several years. We will continue to recruit new community faculty, a critical component of our program. We are prepared for and welcome the inevitable increase in student interest in family medicine.

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Building a Successful Research Enterprise In Family Medicine: The Brown Experience

Sean P. David, MD, SM, DPhil, Charles B. Eaton, MD, MS, Larry Culpepper, MD, MPH, Roberta E. Goldman, PhD, Laura K. Lavalley, Emma M. Simmons, MD, MPH

BACKGROUND

Both the “Future of Family Medicine Project” and the National Institutes of Health “Roadmap” seek to advance the state of evidence-based primary care by creating multidisciplinary “research teams of the future” and “advancing research that supports the clinical decision making of family physicians and other primary care physicians.”¹ Two of the recommendations from the October 2000 Keystone III Conference² were that generalist physicians should be “expanding the infrastructure for practice-based research” and “developing a multi-method, trans-disciplinary, participatory research paradigm.”³ Advancing the discipline’s broader agenda of health for all and a well-trained, patient-centered, evidence-based workforce requires a major investment in the research enterprise and translation of “bench to bedside” research into practice. Several “translational blocks,” or barriers to the successful translation of basic research into clinical research and from clinical research to practice, impede this vision. (Table 1)⁴

This article traces the development of a family medicine research division over three generations of faculty members. A common pattern emerges from the growth of the research enterprise in the Department of Family Medicine; successful research ventures took root when preceded by expansion of clinical capacity and community outreach, development of undergraduate and graduate medical education, and leveraging of resources across the local hospital and university, and with national and international collaborators. By focusing on the history of research endeavors that have been successful, effective approaches to overcoming barriers to building research capacity emerge and inform the next step in advancing generalist research.

THE EARLY YEARS

In 1975, shortly after the founding of Brown Medical School, the Department of Family Medicine was established, with a broad mission of promoting primary care

and prevention through community-based research. The first Chair (Louis Hochheiser, MD) and (later to become) Research Director (Lawrence Culpepper, MD) were recruited in 1976 and 1981, respectively, and the Department’s clinical division (establishment and growth of a Family Care Center and linkage with a federally-designated Community Health Center in 1975) and educational division (establishment of the Family Medicine Residency in 1975, Community Health Clerkship in 1978) grew.

The first major research endeavors took place in the mid 1980s. Clinical effectiveness and quality improvement efforts in the local teaching hospital ultimately resulted in an examination of cesarean section rates, contributing to the national debate.⁵

The subsequent broadly-based program of research included a national survey evaluating the status of family medicine research capacity and impediments.^{6,7} geriatrics education,⁸ spirituality in medicine education,^{9,10} and prenatal care.¹¹ In addition, some of the early departmental research focused on educational outcomes, including the first quasi-experimental research design studies of the effect of computerized clinical decision-making exercises on cost consciousness.¹²

THE PAWTUCKET HEART HEALTH PROGRAM

From 1981 to 1993, the Departments of Medicine and Community Health at Brown conducted a major community-based multiple risk factor reduction trial in two southern New England cities. The Pawtucket Heart Health Program was a 12-year research and demonstration project funded by the **National Heart, Lung, and Blood Institute (NHLBI)**, based on a blend of social learning theory, community organization models, community psychology tenets, and diffusion research for the primary prevention of coronary heart disease. Members of the Department of Family Medicine, including a pharmacist, worked with the investigators of this landmark study which led over the decades to

many fruitful collaborations including the Women’s Health Initiative, a Nutrition Academic award, an Osteoarthritis Initiative, and the development of a collaborative research enterprise, the Center for Primary Care and Prevention.

INTERNATIONAL FAMILY MEDICINE

Vincent Hunt, MD, Chair from 1986-2000, brought a focus on international family medicine. With federal funding, Hunt established family medicine residency programs in Jordan, Russia, Nicaragua, Bahrain, and South Korea, and laid the groundwork for a program of international family medicine education, health policy research and work with the World Health Organization. Hunt introduced a mechanism permitting funded researchers to collaborate on-site internationally through brief but frequent mini-sabbaticals; as a result, the department developed a collaboration with the Cancer Research UK General Practice Research Group and the Department of Primary Health Care at the University of Oxford. With laboratory-based genetics fellowship training for one of the junior research faculty members, the Department developed a molecular genetics laboratory.

ESTABLISHING A PRACTICE-BASED RESEARCH NETWORK

The department has always used its clinical site as a research laboratory. Early work by Drs. Culpepper, Jack, Eaton, Davis and Monroe used the billing system to track diagnoses and audited charts to assess the quality of care. In 1993, the Department established a family medicine clerkship under Dr. Eaton’s leadership. With the support of the Rhode Island Academy of Family Physician’s Donya Powers, Stephen Davis and Charles Eaton, family medicine clerkship sites throughout Rhode Island and Southeastern Massachusetts were recruited and later formed the backbone of a primary care-based research network: the **New England Research Network (NERN)**. This network conducted several outcomes research studies including a survey of patients’ perspectives on antibiotic resistance, smoking

cessation counseling, exercise prescription and the natural history of anxiety and depression in primary care. This network expanded to include general internists and, in recent years, cholesterol management, cancer prevention (working with Quality Partners), and improving diabetes care as part of a CDC grant with the Rhode Island Department of Health.

GERIATRICS

During the 1980s and 1990s, the Department developed a program of geriatric education and research. Germinal research included secondary data analysis in collaboration with the Center for Gerontology, research into the efficacy of growth hormones, improving rehabilitative care in frail elders,¹⁵ and educational research.¹⁶

BEST PRACTICE TECHNOLOGY TEST CENTER

As part of the quality improvement research and DHHS funding, the department secured an **electronic health record (EHR)** and has performed studies aimed at improving the quality of care using technology; e.g., NHLBI-funded programs that developed (1) a computerized evidence-based decision support program for congestive heart failure prevention (HeartMetric) and (2) a cholesterol management guideline (National Cholesterol Education Program-Adult Treatment Panel III, ATPIII) decision aid through integration of patient and physician recommendations with the EHR. Recently, Dr. Arnold Goldberg with the support of a Robert Wood Johnson grant has been researching improvement in patient satisfaction and the process of care measures for diabetic patients when the patient is involved in developing self-management goals and an EHR tracks progress.

MATERNAL AND CHILD HEALTH

From the early years of the Department, educational research was performed in prenatal care/obstetrical care¹⁷ and pre-conception care.¹⁸ Building upon this legacy and the infrastructure of an established maternal and child health (MCH) clinical fellowship and a clinical outreach program, educational and clinical research emerged particularly in the area of breastfeeding. The work combined educational research from the family medicine core clerkship and studies of maternal and child health outcomes resulting from interventions to improve maternal knowledge and skills around nursing.^{19,20}

HEALTH DISPARITIES

A local research endeavor beginning in 1990, driven by a faculty anthropologist, explored pregnancy, prenatal care, delivery, and early childhood parenting among Cape Verdean immigrants in Pawtucket. The findings were used to develop cross-cultural medicine curricula for residents and medical students.²¹ Studies in the 1990s examined disparities by race and socioeconomic status with regard to cancer screening, substance abuse, and health care access. Additionally, an anthropological study analyzed perceptions and behaviors around cancer prevention and screening among Dominicans and Puerto Ricans living in RI; other studies aimed at reducing disparities in cancer prevention among working class populations of varying ethnic backgrounds, and, more recently, studies examined menopause among Latinas in RI, including ethnographic data collection and a participant-driven educational intervention via the Internet.²²

Health disparities research in the Department now includes the prevention, early management and treatment of HIV and AIDS in the primary care setting. In collaboration with a local infectious disease research center, this research is concerned primarily with the continued spread of HIV/AIDS in the African American and Latino communities and aims to reduce the barriers to HIV testing and treatment among primary care providers and patients.^{23,24}

QUALITATIVE AND MIXED METHODS RESEARCH

Jeffrey Borkan, MD, PhD, (Chair, 2001-present) brought research expertise in medical anthropology and emphasis on mixed-methods research. This new direction involves focus groups, direct observation of primary care, participant observation, and integration of these methods with epidemiological and clinical trial data.²⁵ For example, a NHLBI-funded program aimed at increasing physician and patient adherence to the ATPIII guidelines. Other studies examined educational interventions for teaching alternative medicine, early clinical exposure for medical students, physician practice patterns with regard to managing low back pain, and the impact of electronic technology on physician-patient communication and practice patterns in a family medicine clinic.

PRIMARY CARE GENETICS AND PHARMACOGENETICS

Two new investigators joined the faculty during 2000-2002, bringing expertise in molecular genetics and physician communication of cancer risk. This research included examination of the influence of genotype for dopamine-related and serotonergic genes on smoking cessation treatment response to bupropion and nicotine patch therapy^{26,27} and acceptability of pharmacogenetic tailoring to primary care physicians. Additional studies used functional magnetic resonance imaging of the brain and positron emission tomography to examine genetic influences on neurological phenotypes of nicotine addiction.²⁸ In addition, studies examined translational questions around physician knowledge, beliefs and communication skills of cancer risk.^{29,30}

With funding from the National Institute on Drug Abuse, the National Cancer Institute, the Health Resources and Services Administration, and the Robert Wood Johnson Foundation, the department established The Primary Care Genetics Laboratory and Translational Research Center (<http://bms.brown.edu/pcgl/>) with a mission to promote bench-to-bedside genetics research in primary care and to integrate genetic medicine into the family medicine residency curriculum. A grant from the National Cancer Institute and National Human Genome Research Institute supported an international video-teleconference including a link to the Royal College of General Practitioners Virtual Genetics Group in London. The center is currently conducting a randomized clinical trial of bupropion that is examining genetic influences on bupropion response for tobacco craving, neurophysiological measures, and smoking cessation.

HEALTH POLICY RESEARCH

In 2002, the Department established a Health Policy and Advocacy Division, headed by Arthur Frazzano, MD, and the C. Everett Koop Health Policy Fellowship. This division established a policy track for family medicine residents, a health policy seminar series, and an academic vehicle for health care advocacy at the state and federal levels.

One example of successful advocacy is the collaborative lobbying effort that resulted in a Rhode Island smoke-free workplace law (2003).³²

CONCLUSION

Research in Brown's Department of Family Medicine has spanned multiple disciplines, diseases, and methods. The portfolio represents three generations of investigators and thirty years of effort involving grant generation, development of clinical databases, local, regional and international collaborations, and deep investments in research career development. In most cases, a common pattern emerged that began with expansion of clinical services and outreach to the community and family medicine education. Clinical and educational infrastructure were the substrates for virtually every successful and sustainable research effort in the Department, and all came as a result of effort by investigators and departmental support in the context of busy clinical and teaching schedules.

Many of the challenges facing primary care researchers today have been navigated by our department's investigators. For example (Table 1), when the research division was first established, there was a lack of study participants. Not until a large clinical base was established was there a steady stream of willing participants. The paucity of well-trained investigators in the early years was addressed by recruiting junior clinical investigators with masters in public health and fellowship instruction who were successful in obtaining career development grants.

The fragmented clinical infrastructure and limitations to conducting clinical trials in office practices often experienced in primary care-based research, was integrated into an educational and research network and the introduction of EHRs and the high costs of establishing research infrastructure were overcome by leveraging resources throughout the University.

Finally, a new paradigm of transdisciplinary, translational research brought investigators together from multiple disciplines, departments, and institutions, making possible otherwise cost- and time-prohibitive research. A major lesson learned from three generations of family medicine research is that it is possible and desirable to develop research that spans the translational continuum (basic biomedical research to clinical knowledge and clinical studies to clinical practice and policy), but that a comprehensive translational research enterprise by family medicine departments requires leveraging of finite resources. A strong clinical and educational foundation proved to be crucial for developing capacity. Furthermore, synergistic collaborations across disciplines and institutions were equally as important in bringing about programs of research that provided local infrastructure, expertise and mentors for junior faculty.

ACKNOWLEDGEMENTS

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Table 1. Translational Blocks and Strategies for Overcoming Them

Barrier	Strategy
<u>Translational Research from Basic Science to Human Studies</u>	
<ul style="list-style-type: none"> • Lack of Willing Participants 	<ul style="list-style-type: none"> • Establishment of Rhode Island Academy of Family Physicians Practice-Based Research Network (PBRN) • "Clinical laboratories": cardiovascular disease prevention, diabetes, smoking cessation, maternal child health clinics
<ul style="list-style-type: none"> • Regulatory Burden 	<ul style="list-style-type: none"> • Research administrative support • Human Subjects and HIPPA Training
<ul style="list-style-type: none"> • Fragmented Infrastructure 	<ul style="list-style-type: none"> • Electronic Health Record and PBRN
<ul style="list-style-type: none"> • Incompatible Databases 	<ul style="list-style-type: none"> • Integrated EHR with physician support and patient education
<ul style="list-style-type: none"> • Lack of Qualified Investigators 	<ul style="list-style-type: none"> • NIH K Awards • NIH Training Grants • Collaborative funding with other departments • Faculty Development Fellowship • Mentoring • Funded mini-sabbaticals
<u>Translation of New Knowledge into Clinical Practice and Health Decision Making</u>	
<ul style="list-style-type: none"> • Career Disincentives 	<ul style="list-style-type: none"> • Career incentives for research success
<ul style="list-style-type: none"> • Practice Limitations 	<ul style="list-style-type: none"> • PBRN and electronic decision tools
<ul style="list-style-type: none"> • High Research Costs 	<ul style="list-style-type: none"> • Leverage existing research infrastructure and economies of scale
<ul style="list-style-type: none"> • Lack of Funding 	<ul style="list-style-type: none"> • Research administrative core support • Monthly investigator internal review of grant specific aims and method

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Becoming a Doctor

Joanne Wilkinson, MD, Msc

The way you become a doctor is like the way you grow up, like a beetle creeping across a green leaf in the summertime, when you watch it and watch it and it seems to just hurry in place, scratching its little legs trying to get across one tiny section of leaf, and then the screen door slams and you look up to see who's there, your other hand going up to block the sun from frying your eyes, and you swear it's only a second but when you look back down the beetle has made it all the way across and jumped down into the tall grass, safely hidden again from view.

It's how you're thirteen, dying to be fourteen so you can be in high school, or sixteen so you can drive, and the first time you drive the car alone you can barely see the road ahead of you, it's so exciting to be at the wheel, and the next thing you know driving is like breathing, and you're on your third car and you're thinking of trading it in, if you can get a decent deal, and if not, then you'll wait till the end of the model year. It's how you're reading college catalogues, dreaming of walking across a quadrangle strewn with autumn leaves and living in a dorm and you can't wait to leave home, senior year is taking way too long, and the next thing you know you're walking under your college's wrought-iron gates in a black gown, thinking: wait, but wait, wasn't there more stuff I was supposed to learn?

It's how you're twenty-two, coming out of anatomy lab on a fall afternoon stinking

of formaldehyde and thinking that someday in the future, you'll know all this stuff, you'll just know it, the untapped forces in your brain will open wide to admit all this new information and you'll be a doctor who knows whether the flexor carpi radialis is next to the...and the next thing you know you're an intern cutting corners on your H&P so you can get six of them done before midnight and when your medical student asks you a technical question about electrolytes you snap, "I don't know. All I know is, we need to get some potassium into this guy so we can get to the cafeteria before they close." And how you're twenty-five, a senior medical student desperately trying to remember the number of joules it takes to shock someone out of ventricular fibrillation, because you know you won't have time to look it up, when the time comes, and the next thing you know you're the senior resident, running the code in the middle of the afternoon with people streaming in and out of the room, and you hear your voice, strong and calm and decisive saying things like, "Only essential personnel in the room please, and turn it up to three-sixty please, so we can shock him again", and people are actually doing what you say.

It's how you're twenty-seven, a resident in the middle of the night in the ICU, looking out the window at the highway lights shining through the rain, your pale face reflected in the pane, and thinking someday

you'll be an attending, you'll sleep at night and still be able to get your patients into CT scan first thing the next morning, and the next thing you know you're wearing a black wool suit and trying not to spill coffee on the sleeve, and the nurse is asking what she can do to help you, doctor, and she really means it. And how you're thirty-three, driving home from your patient's memorial service and wondering when you are finally going to be a good enough doctor that you won't cry, and the next thing you know you're in that church again, but getting married this time, by the minister who knows the husband of your patient who died and still, after all these years, remembers your tears, and says that's how he knew that you really cared.

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Rhode Island Academy of Physicians: Then and Now

David P. Carter, MD, Michael D. Fine, MD, Alfred A. Arcand, MD, Robert P. Sarni, MD, Nancy G. Leggat

The Rhode Island Academy of Family Physicians (RIAFP) was established on May 26, 1972, by five family doctors: Alfred A. Arcand, MD, John E. Murphy, MD, Jean M. Maynard, MD, Robert P. Sarni, MD, and Charles E. Millard, MD. The official "Rhode Island Chapter, American Academy of Family Physicians, Inc.," grew out of the Rhode Island Chapter, American Academy of General Practice. The original Purposes of the Organization are just as important today as they were 34 years ago:

1. To promote and maintain high standards in the general practice of medicine and surgery.
2. To encourage and assist young men and women in preparing, qualifying, and establishing their skills in family practice.
3. To preserve the right of the family practitioner to engage in medical and surgical procedures for which he is qualified.
4. To assist in providing post-graduate study courses for family practitioners.
5. To advance medical science and private and public health.

To fulfill these goals, the RIAFP, over the past 34 years, has held regular Board, Committee and Annual Meetings, collaborated with the American Academy of Family Physicians (AAFP), and involved itself in political action. Since its inception, the organization has grown under the leadership of its Officers and Executive Secretaries. (Table 1)

The crowning event of the year has been the Annual Meeting, featuring local and national speakers. At each meeting, AAFP CME credit has been awarded to the participants; and the officers have been elected. For the first 16 years, the annual meeting agenda was a half-day of business and education, followed by an evening's social gathering with spouses and significant others. A daunting challenge that the RIAFP faced early on was

to recruit enough physicians to join the Academy and to attend meetings. To attract local physicians, the RIAFP held meetings at noon (to accommodate morning house calls, hospital rounds and

afternoon office hours) at various locales including country clubs and hospital staff rooms, from Newport to Warwick, Pawtucket, and Providence. Success was variable. In fact, one year the Annual

Table 1. PRESIDENTS/EXECUTIVES

Rhode Island Chapter, American Academy of General Practice, Rhode Island Chapter, American Academy of Family Physicians, and Rhode Island Academy of Family Physicians

1949-1951	Charles E. Millard, MD	
1951-1952	A. Lloyd Lagerquist, MD	
1952-1953	Peter C. H. Erinakes, MD	
1953-1954	Charles E. Byran, MD	
1954-1956	Samuel D. Clark, MD	
1956-1957	Gustavo A. Motta, MD	
1957-1958	Edmund T. Hackman, MD	
1958-1959	Alphonse R. Cardi, MD	
1959-1960	Walter E. Hayes, MD	
1960-1961	Frank C. Jadosz, MD	Madeline Flanigan (1960-1962)
1961-1962	Charles L. Farrell, MD	
1962-1963	Mary M. Tyszkowski, MD	
1963-1964	Raul Nordarse, MD	
1964-1965	Richard J. Kraemer, MD	
1965-1966	Jose Ramos, MD	
1966-1967	Robert C. Hayes, MD	James E. Miller (1966-1980)
1967-1968	George C. Charon, MD	
1968-1969	Paul E. Barber, MD	
1969-1970	R. Bruno Angelli, MD	
1970-1971	Raul M. Nordarse, MD	
1971-1972	Robert P. Sarni, MD	
1972-1973	Alfred A. Arcand, MD	
1973-1974	John E. Murphy, MD	
1974-1975	Joseph L. C. Ruisi, MD	
1975-1976	Simon L. Blumen, MD	
1976-1977	Daniel S. Harropp, Jr., MD	
1977-1978	Jaroslav Koropecy, MD	
1978-1979	Daniel S. Magiera, DO	
1979-1980	Nathan Sonkin, MD	
1980-1981	Jaroslav Struminsky, MD	Mary M. Davies
1981-1983	Charles E. Millard, MD	
1983-1985	Barrie Weisman, MD	Alberta Procaccini, Susan Guralnick, Nancy Leggat (1985-2004)
1985-1987	David P. Carter, MD	
1987-1989	Edward F. Asprinio, MD	
1989-1991	Arthur A. Frazzano, MD	
1991-1993	Ira G. Warshaw, MD	
1993-1995	David P. Carter, MD	
1995-1997	Colleen A. Cleary, MD	
1997-1998	Thomas T. Gilbert, MD	
1998-2000	Donya Ann Powers, MD	
2000-2002	Michael D. Fine, MD	
2002-2004	Arnold Goldberg, MD	Susanna Rhodes (2002-2006)
2004-2006	John O. Bossian, DO	Susanna Rhodes, Jennifer Bianco
2006-	Margaret Sun, MD	Kim McHale

Meeting was cancelled due to insufficient attendance. Even the business meetings, attended by the officers and the executive secretary, were uncertain.

The "modern era" of the RIAFP began as graduates of Family Medicine Residencies, particularly that of Brown Medical School at Memorial Hospital of Rhode Island, joined the medical community and the RIAFP. After 1989 all of the succeeding presidents of the Academy have been residency-trained. During this time the educational program at the Annual Meeting expanded to cover 2 days, with social gatherings in the evening. During the past 10 years, the Brown Medical School Residency in Family Medicine has co-hosted with the RIAFP these annual educational programs, and attendance has been high.

The RIAFP has established close ties with the AAFP. Delegates from the RIAFP have attended all of the national meetings and many regional cluster meetings of the AAFP. Members of the RIAFP have been appointed to positions with the AAFP including Members and Membership Services Committee, Annual Scientific Assembly Planning Committee, Urban Family Medicine Task Force among others, and Sergeant at Arms. In 1980, the RIAFP helped to elect Morris B. Mellion (born and raised in RI) as President of the AAFP.

On multiple occasions, the RIAFP was awarded plaques and citations for increased enrollment of family doctors, residents and medical student members. Numerous RIAFP resolutions have been introduced and accepted by the AAFP Congress of Delegates.

In addition to the Officers and the Board of Directors, the functions of the RIAFP have been carried out by the Standing Committees, including: Membership, Legislative, students and Residents, and Research. The RIAFP has a website (www.riafp.org), and a membership list serve.

The RIAFP has been politically active, particularly since the late 1990s, on local, state, and national issues. Multiple Governors and many local and state legislators have sought its guidance. Starting in 2001, the Governor Lucius Garvin Award was established to honor legislators who exemplify the values of Dr. Garvin – Family Physician and Governor of the State of Rhode Island (1902-03). Recipients have been Congressman Patrick Kennedy, Lt. Governor Charles Fogarty, State Senator Elizabeth Roberts, and State Representative Peter Ginaitt.

Growth of the RIAFP has been progressive, rapidly at first but then slowly, until a resurgence has brought the current membership to 174. Today the

RIAFP is an expanding, energetic and respected organization still dedicated to the principles established by the founding fathers of promoting the well being of our patients and our members.

David Carter, MD, is Clinical Associate Professor of Family Medicine. Brown Medical School.

Michael Fine, MD, is Chairman of the Department of Family Medicine at the Rhode Island and The Miriam Hospitals and Clinical Assistant Professor of Family Medicine, Brown Medical School,

Alfred A. Arcand, MD, a former president of the American Academy of Family Physicians, is a Clinical Assistant Professor of Family Medicine, Brown Medical School.

Robert P. Sarni, MD, is a former president of the American Academy of Family Physicians.

Nancy G. Leggat is a former executive secretary of the Rhode Island Academy of Family Physicians.

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Class of 2006.

Improving Health Care Access for Uninsured Rhode Islanders

Michael D. Fine, MD, and Emory E. Liscord

Health care access, defined as “the timely use of personal health services to achieve the best health outcomes,”¹ is the *sine qua non* of health services. Without access, neither the character nor quality of services has any bearing on health outcomes.² More than 40 million Americans do not have a specific and/or continuous source of health care.³ Primary care, calculated as the statewide number of primary care physicians per 10000 population, is the only medical service that is correlated with improvements in population health.⁴ Having a primary care physician as one’s standard source of care also leads to lower long-term health care costs.⁵

Those without health care coverage now comprise 15.7 % of the national population – a substantial increase from 1991 the percent of persons uninsured was between 14.1% and 14.6% depending the reporting source.^{6,7}

For a number of years, Rhode Island was among the best-insured states in the nation, but today, fewer Rhode Islanders have health insurance than at any time in the last 15 years.⁷

Rhode is now ranked 11th nationally in the percentage growth of uninsured.⁶

According to the **Centers for Disease Control and Prevention (CDC)** in 2004, 11.9% Rhode Island adults age 18 and older reported not having any health care coverage.⁷

Minorities and people of a lower socioeconomic status, both in Rhode Island and nationally, are less likely to have health coverage or a constant source of primary health care.² According to the Center for Disease Control’s Behavioral Risk Factor Surveillance System Survey, 9.2% of white Rhode Islanders 18 and older lack health care coverage versus 14.3% of Blacks and 35.5% of Hispanics. Only 5% of Rhode Islanders 18 and older earning over \$50,000 lacked health insurance, compared to 11.6% of those earning \$35,000–\$49,999, or 24.4% of those earning less than \$15,000.⁷

Educational attainment correlates with health care coverage. College graduates are less likely to lack coverage (6.4%) than those holding only a high school degree or **Graduate Equivalence Degree (GED)** (14.3%) or with less than a high school education (27.1%).⁷

An uninsured person is unlikely to have a continuous source of health care and, therefore, unlikely to receive all needed services.⁸ Twenty percent of uninsured Americans, versus 3% of insured Americans, use the emergency room for most of their

health care needs.⁹ In many instances the patient visits the hospital for conditions that could have been prevented if s/he had been receiving regular primary care.¹⁰

In 2004, 25% of Rhode Island’s uninsured utilized Rhode Island’s Health Centers.¹¹ The number of uninsured seen by the Health Centers increased by 29% from 2003 to 2004, while the number of insured patients treated increased by 1.5%. Clearly, additional solutions are needed.

The Rhode Island Family Physicians Access Alliance is an evolving network of primary care physicians that provides reduced fee-for-service primary care for people without employer-provided health insurance, and for those with defined contribution plans and health savings accounts. Three Rhode Island family practices, beginning in 2002, pioneered this new financial model. At present, approximately 300 patients have purchased primary care in this way, paying a monthly fee. Anyone who can pay for a cell phone, basic cable television, or high speed internet access can afford to purchase primary care this way. Alliance Primary care practices often provide same-day access for people who need it, provide 24-hour telephone coverage, and often care for their own patients once they are admitted to the hospital. The practices receive no grant subsidies for their services to the uninsured. (The bulk of the practices consist of patients with insurance.)

The original members of the Alliance have attracted national attention, with a number of primary care practices around the country duplicating the Alliance structure. One of these practices, Hillside Avenue Family and Community Medicine, received the 2005 Healthcare Leadership Council Honor Roll for Coverage Award, an award that highlights new and promising approaches to the care of the uninsured, for this work.

By making primary care available for a low monthly fee, these Rhode Island family practices have done what most state and the US Federal governments have failed to do: make basic health care available to all. Even more, they have suggested a pathway for a new way of thinking about primary health care, suggesting that the financing of primary care can be effectively done without health insurance companies or big government intervention.

The Access Alliance process has triggered a new look at primary care, and primary care funding. Could we remove primary care funding from the fee for service, health insurance

world, and, instead, pay for primary care with a combination of capitation and patient derived fee for service? Policy makers in Rhode Island are now rethinking the funding of primary care part of the health care system.

The Rhode Island of Family Medicine is beta-testing computer software that will simplify tracking and billing. Look for a statewide network of primary care practices providing this kind of reduced fee for service, monthly fee primary care easily available to all Rhode Islanders; and look to Rhode Island to keep it in place as a national leader in making quality primary care services available and accessible to all.

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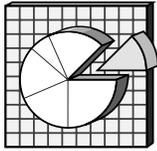
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Emory E. Liscord is a student at Dartmouth Medical School.

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Evidence of Increased Prostate Cancer Screening in Rhode Island

John P. Fulton, PhD

Screening for cancer of the prostate is controversial. Used together, the digital rectal examination (DRE) and the prostate-specific antigen (PSA) blood test may be used to detect prostate cancer at early stages of disease, and clinical studies have revealed promising outcomes from prompt, state-of-the-art treatment following positive screening results. Additionally, since the introduction of the PSA test in 1986, mortality from prostate cancer has declined in the United States.¹ However, the contribution of screening to mortality decline is unproven, and will remain so until a major clinical trial is completed in 2017.²

Until that time, recommendations for prostate cancer screening will continue to be inconsistent, as follows:

- **American Cancer Society [Recommended]:** Both the PSA test and digital rectal examination (DRE) should be offered annually, beginning at age 50, to men who have at least a 10-year life expectancy. Men at high risk (African-American men and men with a strong family of one or more first-degree relatives [father, brothers] diagnosed before age 65) should begin testing at age 45. Men at even higher risk, due to multiple first-degree relatives affected at an early age, could begin testing at age 40. Depending on the results of this initial test, no further testing might be needed until age 45. Information should be provided to all men about what is known and what is uncertain about the benefits, limitations, and harms of early detection and treatment of prostate cancer so that they can make an informed decision about testing. Men who ask their doctor to make the decision on their behalf should be tested. Discouraging testing is not appropriate. Also, not offering testing is not appropriate.³

Men who ask their doctor to make the decision on their behalf should be tested. Discouraging testing is not appropriate. Also, not offering testing is not appropriate.³

- **National Cancer Institute [No recommendation]:** **Benefits** - The evidence is insufficient to determine whether screening for prostate cancer with PSA or DRE reduces mortality from prostate cancer. Screening tests are able to detect prostate cancer at an early stage, but it is not clear whether this earlier detection and consequent earlier treatment leads to any change in the natural history and outcome of the disease. Epidemiological evidence shows a trend toward lower mortality for prostate cancer in some countries, but the relationship between these trends and intensity of screening is not clear, and associations with screening patterns are inconsistent. The observed trends may be due to screening, or to other factors such as improved treatment. **Harms** - Based on good evidence, screening with PSA and/or DRE detects some prostate cancers that would never have caused important clinical problems. Thus, screening leads to some degree of overtreatment. Based on good evidence, current prostate cancer treatments, including radical prostatectomy and radiation therapy, result in permanent side effects in many men. The most common of these side effects are erectile dysfunction and urinary incontinence.⁴



Figure 1. Incidence of prostate cancer per 100,000 population, by age group, White males of all ethnicities, Rhode Island, 1987-1995 and 1996-2003.

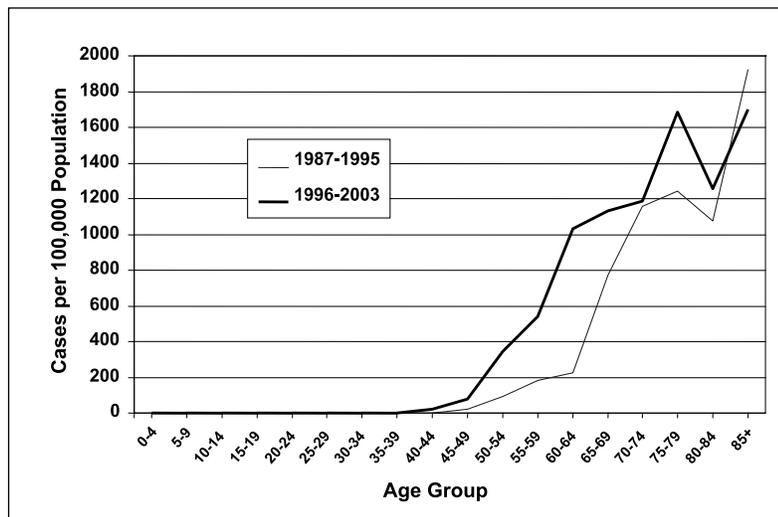


Figure 2. Incidence of prostate cancer per 100,000 population, by age group, Black males of all ethnicities, Rhode Island, 1987-1995 and 1996-2003.

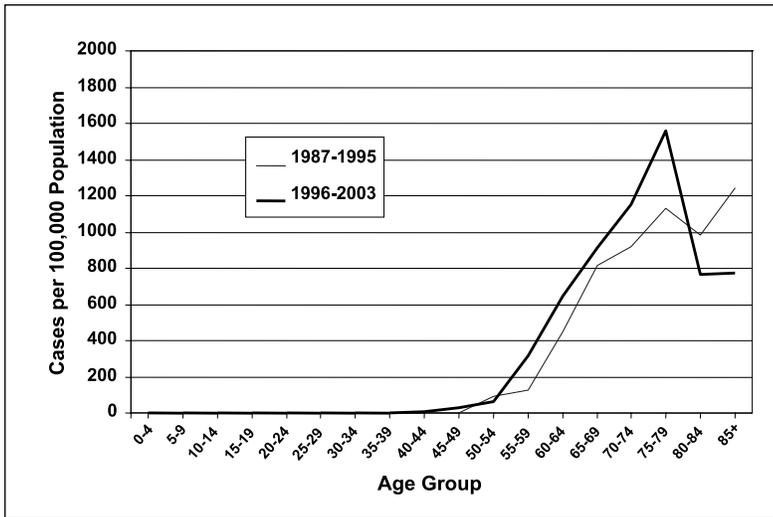


Figure 3. Incidence of prostate cancer per 100,000 population, by age group, Hispanic males of all races, Rhode Island, 1987-1995 and 1996-2003.

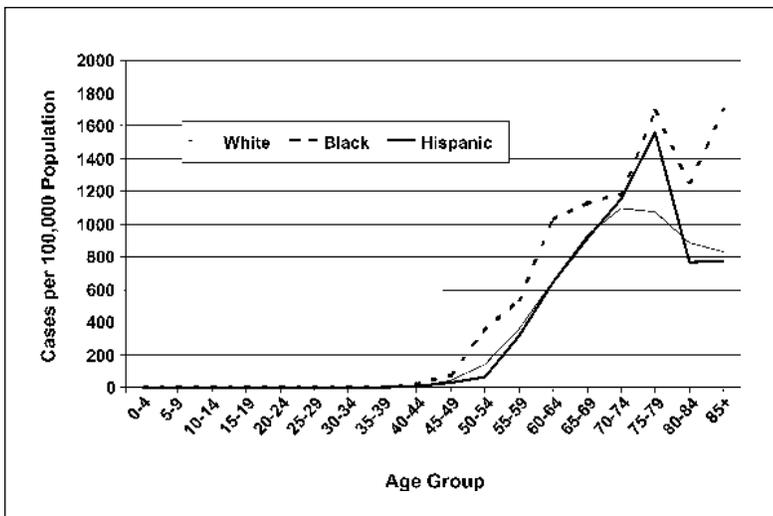


Figure 4. Incidence of prostate cancer per 100,000 population, by age group and race/ethnicity, males, Rhode Island, 1996-2003.

- **U.S. Clinical Preventive Services Task Force [No recommendation]:** The evidence is insufficient to recommend for or against routine screening for prostate cancer using PSA testing or DRE. There is good evidence that PSA screening can detect early-stage prostate cancer but mixed and inconclusive evidence that early detection improves health outcomes. Screening is associated with important harms, including frequent false-positive results and unnecessary anxiety, biopsies, and potential complications of treatment of some cancers that may never have affected a patient's health. The current evidence is insufficient to determine whether the benefits outweigh the harms for a screened population.⁵

Because screening for prostate cancer has not been a cancer control priority in the United States, surveillance for prostate cancer screening has begun only recently. For example, the Behavioral Risk Factor Surveillance System (BRFSS) of the Centers for Disease Control and Prevention began collecting information about use of the PSA test in 2002, and collected additional infor-

mation in 2004. At the time of the latter survey, the median state value for the proportion of men ages 40 and over who "had a PSA test in the past two years" was 52%, revealing widespread use despite lukewarm recommendations. Use varies by age, varying from 25% for men ages 40-49 to 75% for men ages 65 and over. The corresponding proportions for Rhode Island are statistically equivalent.⁶

Trends in incidence rates may also be used to assess the use of screening in a population. Of the two screening tests for prostate cancer, DRE has been a standard part of the complete physical examinations for decades. There is no reason to believe that DRE use has changed substantially of late. The PSA test, however, was introduced in 1986, and its rapid introduction may increase incidence rates in two ways: first, by detecting some tumors that are undetectable with the DRE (because they are out of reach), and second, by detecting some tumors sooner than they would be detectable with the DRE, thus "heaping" several future years' diagnoses in the current year. When PSA screening for prostate cancer becomes routine, the heaping effect, which is not an effect of screening but rather of its rapid introduction, can be expected to subside.

An examination of prostate cancer incidence rates in Rhode Island by age, race, and ethnicity (Hispanic origin) was undertaken to look for evidence of the rapid introduction of the PSA in subsets of the population of resident men, ages 40 and over.

METHODS

Age-specific prostate cancer incidence rates were constructed from prostate cancer case reports made to the Rhode Island Cancer Registry between 1 January 1987 and 31 December 2003 for men living in Rhode Island (numerator data) and estimates of the population of men living in Rhode Island during that period, based on US census reports for 1990 and 2000 (denominator data). Age-specific rates were calculated for White men of all ethnicities, Black men of all ethnicities, and Hispanic men of all races, dividing the seventeen years of observation into early (1987-1995) and late (1996-2003) periods. The results were plotted by age group and period, controlling for race or ethnicity, to examine changes for evidence of the rapid introduction of prostate cancer screening.

Note on Classifying Prostate Cancer Cases as Hispanic: *Data on resident prostate cancer cases identified as Hispanic were extracted from Rhode Island Cancer Registry case reports for the years 1987-2003 and aggregated by age group and year of event. Alternative counts of resident prostate cancer cases for Hispanics were estimated using a validated US Census technique for identifying Hispanics by surname.⁷ Synthetic aggregates of prostate cancer cases for Hispanics were created by adding the additional cases classified as Hispanic on the basis of the name analysis to those cases identified as Hispanic in case reports.*

RESULTS

Figure 1 reveals a shift to the left in age-specific rates of prostate cancer incidence among White men of all ethnicities between the two periods, with increased incidence in younger age groups (through ages 65-69), and decreased incidence in older age groups (ages 70-74 and higher). The same is true of Black men of all ethnicities (Figure 2) and Hispanic men of all races. (Figure 3) In Rhode Island, Blacks and Hispanics have small numbers of men in the oldest age groups, accounting for the jagged shape of incidence rates by age among Black and Hispanic elders.

Figure 4 allows a closer comparison of incidence rates across sub-populations of resident Rhode Island men in the latter period of observation, 1996-2003. White men of all ethnicities and Hispanic men of all races (most of whom in Rhode Island are White), have almost identical age-specific incidence rates through ages 70-74. At older ages the small numbers of Hispanic men and of prostate cancer cases among Hispanic men obscure rate comparisons. In contrast to these two sub-populations of resident Rhode Island men, Black men of all ethnicities have higher age-specific rates throughout the lifespan (again, partially obscured by small numbers of Black men and of prostate cancer cases among Black men at older ages.)

DISCUSSION

Rhode Island prostate cancer incidence data are consistent with rapid introduction of the PSA test in the late period of observation, 1996-2003, relative to PSA use in the early period of ob-

ervation, 1987-1995. The data are also consistent with a "natural" increase in prostate cancer incidence, but several observations argue against the latter explanation as the only explanation. First, the PSA test is now being administered to about half of all Rhode Island men over the age of 40, enough for a substantial "screening effect." Second, prostate cancer incidence rates for the United States as a whole clearly reveal the heaping attributable to the rapid introduction of a screening test, superimposed on a mildly upward trend in "natural" prostate cancer incidence.

If it is indeed true that some substantial proportion of the observed shift to the left in age-specific rates is attributable to the rapid introduction of the PSA test, it is notable that Black men and Hispanic men under age 65 seem to have experienced the effects of screening as well as White men, because on average, Black and Hispanic Rhode Island men are less likely to have a regular source of primary care than White Rhode Island men.⁸

Finally, Hispanic Rhode Island men of all races (most of whom are White) appear to have the same age-specific prostate cancer incidence rates as White Rhode Island men of all ethnicities (of whom only about 10% are Hispanic), even after applying the Hispanic name algorithm to the data, which may err on the side of over-estimating Hispanic cancer incidence rates. In short, relative to White Rhode Island men of all ethnicities, Hispanic Rhode Island men of all races do not appear to be at higher risk of developing prostate cancer.

Screening for prostate cancer remains controversial. Although screening with the DRE and PSA is useful in detecting prostate cancer at early stages of disease, the net benefit of early intervention is unclear, and may not be determined for another decade. Yet, over half of Rhode Island men ages 40 and over have had a PSA test in the past two years, and screening has gained sufficient momentum, apparently, to have contributed to higher prostate cancer incidence rates at earlier ages. Careful local monitoring of screening outcomes is indicated, as is constant monitoring of the scientific literature on the effectiveness of prostate cancer screening.

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The Rhode Island Health IT e-Newsletter Project Update

The Rhode Island Health Information Exchange project continues to gain momentum. Most recently, RTI International awarded the RI Department of Health a \$344,000, 11-month contract to participate in the Health Information Security and Privacy Collaboration. The money will be primarily used to fund a business analyst, legal counsel, and project management for the project to meet the required deliverables.

Rhode Island is one of 34 states participating in this collaboration. Each state will:

- Assess variations in organization-level business policies and state laws that affect health information exchange in its state or territory
- Work closely with Research Triangle Institute (RTI) International, National Governors Association (NGA), and other states and territories to share information and experiences regarding interoperable health information exchange (HIE) barriers and best practices
- Identify and propose practical solutions that protect privacy and security of health information and permit interoperable health information exchange
- Develop plans to implement solutions in its state, and, if applicable, at the federal level

The Department of Health will be working with existing workgroups, as well as committees organized by the Rhode Island Quality Institute, to gather broad stakeholder input during the assessment, solution development, and implementation planning phases of the collaboration.

The timeline for this project is May 2006 – March 2007.

The State and Regional Demonstration in Health Information Technology Project, also known as the AHRQ Health IT Project is a 5 year, \$5 million dollar demonstration project that was awarded to the Rhode Island Health Department by the Agency for Healthcare Research and Quality in 2004 and will continue until 2009. Rhode Island is one of 6 states to be part of this demonstration project. The contract will plan, develop, implement, and evaluate an electronic “backbone” to facilitate interoperability and sharing of patient data between hospitals, physician offices, labs and other healthcare.

STATES CHOSEN TO PARTICIPATE IN RHIO BEST PRACTICES

The American Health Information Management Association (AHIMA) reports that its Foundation of Research and Education (FORE) has chosen nine state-level regional health information organizations to participate in developing consensus on best practices for state-level RHIOs. The project, under contract with HHS’s Office of the National Coordinator for Health Information Technology (ONCHIT), will produce public information on best practices in the areas of governance,

structure, financing, operations and health information exchange policies, AHIMA reports.

The nine states selected are: California, Colorado, Florida, Indiana, Maine, Massachusetts, Rhode Island, Tennessee and Utah. Under the terms of the contract, AHIMA says, the selected RHIOs are required to have a form of public-private governance and operate at the state-level, either as a single organization or in a coordinating role bringing together multiple local health information exchanges. The organization adds that priority was given to RHIOs that exchange health care data to some degree. Other factors for consideration include geographic coverage, state population and longevity, AHIMA adds.

According to the organization, the project will include site visits and interviews and will be guided by a steering committee comprised of representatives from the RHIOs. The steering committee will develop a framework for describing and disseminating best practices and models and encouraging adoption and coordination among state-level RHIOs. For more information visit: www.ahima.org

CCHIT CHAIR PLEASSED WITH CERTIFICATION RESPONSE

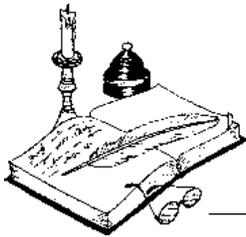
Certification Commission for Healthcare Information Technology Chair Dr. Mark Leavitt said he is pleased with the industry’s response to the first certification round and added that more than two dozen electronic health record vendors have applied to have their products tested for certification. For More Information visit www.govhealthit.com

RHODE ISLAND LEADS NATION IN ELECTRONIC PRESCRIPTIONS

When it comes to the number of doctors sending prescriptions to pharmacists electronically, Rhode Island leads the nation, according to electronic prescription network company SureScripts. About 20% of doctors in Rhode Island have connected to the system, however, more than 90% of prescriptions in the state still are handwritten and given to patients who must fill them at pharmacies. To learn more visit: www.getRXConnected.com /RI.

To subscribe to the Quality Partners of Rhode Island Health IT e-Newsletter contact Mary Ellen Casey: mcasey@riqio.sdps.org

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Physician's Lexicon

Skin-Deep In Words

The skin is the largest and certainly the most visible organ in the mammalian body. The volume of medical terms pertaining to the skin is equally extensive.

As with so many other vertebrate organ systems, three Classical languages contribute materially to its vocabulary: Greek, often for terms of pathological relevance; Latin, primarily for anatomic names but also for some disease states; and Old High German [OHG] for the more vernacular terminology.

Dermis [as in epidermis] is of Greek origin and not to be confused with *derma*, a Yiddish word meaning intestine, or *dharma*, a Sanskrit word meaning natural law; integument is from the Latin, *integere*, meaning to cover; cutis [as in cutaneous or cuticle] is from the Latin *cutis*; corium is from the Latin meaning bark or leather; and skin is from OHG.

Intertrigo, meaning a cutaneous inflam-

mation due to friction between adjacent skin surfaces, is from the Latin, *inter-*, meaning among or between, and *terere*, meaning to rub. Prurigo, skin inflammation associated with itching, is derived from the Latin meaning itching [also the root of the word, prurient, meaning lewd.] Lentigo, meaning a lentil-shaped skin discoloration is from the Latin, *lentis* [as in words such as lens, lentil and lentacula, a term describing freckles.] Lent, the 40 weekdays preceding Easter, however, stems from an OHG word meaning Spring. Impetigo, a pustular skin eruption, is from the Latin, *impetere*, meaning to attack or rush as in words such as petition or competition.

Many medically oriented nouns of Latin origin end with the letter 'o' [see above paragraph as well as words such as libido, ego, and vertigo.]

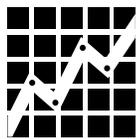
Pityriasis, a dermatosis characterized by excessive desquamation in the form of bran-

like fragments is from the Greek meaning bran or dandruff [OHG]. And the Greek noun-suffix, *-iasis*, is used to define any condition marked by pathological excessiveness [such as cholelithiasis or psoriasis.] This suffix is also employed to describe many parasitic diseases such as giardiasis, helminthiasis and filariasis.

Psoriasis, a chronic skin disorder, is derived from a Greek root, *psora*, meaning to rub or itch. This word, psora, stands alone as an English synonym for scabies. Scabies, in turn, is from the Latin, *scabere*, meaning to scratch or scrape. The word scab has come to mean the incrustation over a healing sore; and also as a pejorative term describing a worker who takes the place of one who is on strike.

A further dermatological lexicon will appear in next month's issue of *Medicine & Health/Rhode Island*.

— STANLEY M. ARONSON, MD



RHODE ISLAND DEPARTMENT OF HEALTH
DAVID GIFFORD, MD, MPH
DIRECTOR OF HEALTH

VITAL STATISTICS

EDITED BY ROBERTA A. CHEVOYA, STATE REGISTRAR

Rhode Island Monthly Vital Statistics Report Provisional Occurrence Data from the Division of Vital Records

Underlying Cause of Death	Reporting Period			
	August 2005	12 Months Ending with August 2005		
	Number (a)	Number (a)	Rates (b)	YPLL (c)
Diseases of the Heart	192	3,005	280.9	4,737.5
Malignant Neoplasms	192	2,403	224.6	6,495.0**
Cerebrovascular Diseases	40	515	48.1	850.0
Injuries (Accidents/Suicide/Homicide)	41	423	39.5	6,751.5
COPD	34	551	51.5	497.5

Vital Events	Reporting Period		
	February 2006	12 Months Ending with February 2006	
	Number	Number	Rates
Live Births	986	13,275	12.4*
Deaths	773	9,686	9.1*
Infant Deaths	(10)	(99)	7.5#
Neonatal Deaths	(10)	(82)	6.2#
Marriages	271	7,368	6.9*
Divorces	276	3,145	2.9*
Induced Terminations	338	4,905	369.5#
Spontaneous Fetal Deaths	74	999	75.3#
Under 20 weeks gestation	(68)	(924)	69.6#
20+ weeks gestation	(6)	(75)	5.6#

(a) Cause of death statistics were derived from the underlying cause of death reported by physicians on death certificates.

(b) Rates per 100,000 estimated population of 1,069,725

(c) Years of Potential Life Lost (YPLL)

Note: Totals represent vital events which occurred in Rhode Island for the reporting periods listed above. Monthly provisional totals should be analyzed with caution because the numbers may be small and subject to seasonal variation.

* Rates per 1,000 estimated population

Rates per 1,000 live births

** Excludes 1 death of unknown age



MEDICAL MALPRACTICE TOPICS

INFORMATION FOR RHODE ISLAND PHYSICIANS FROM BABCOCK AND HELLIWELL, INC.

THE VALUE OF RISK MANAGEMENT: FAILURE TO DIAGNOSE REPORT

JOHN TICKNER, CPCU, PRESIDENT, BABCOCK & HELLIWELL, INC.

As an independent insurance agent specializing in malpractice insurance, I have seen first-hand the emotional pain medical malpractice litigation inflicts on a physician. Each year, good doctors leave the practice of medicine rather than face the possibility of another claim. Risk management is the key to reducing the risk of future claims.

Last year, ProMutual Group reviewed more than a thousand closed medical malpractice claims to determine the most common causes and to spot emerging exposures. This spring their findings were released to policyholders in a report that highlighted "the universality of certain issues" and underscored "the importance of certain risk management principles that are applicable to all specialties."

In this study internal medicine was the specialty with the greatest number of claims. Other specialties with claims were family medicine, general surgery, ob-gyn, orthopedic surgery, pediatrics and radiology. While this may partly reflect the market the company writes, it gives a good indication of specialties with higher than average loss potential.

FAILURE TO DIAGNOSE

What was a single, overriding source of loss? Failure to diagnose. In nearly 40% of the cases studied and of the cases that closed with an indemnity payment, nearly half of the money the company paid (\$37.8 million) went to cases that alleged "failure to diagnose cancer."

According to the report, "The issues in some of the cancer cases were specialty-specific. For example, many of the breast cancer cases alleging negligence on the part of radiologists involved the misreading of mammograms, and at least two of the surgical cases involved failure to perform an excisional biopsy. In most instances, however, the problems were more general and related to cases in all specialties. They were: failure to have or to adhere to a cancer screening protocol; failure to include cancer in the differential diagnosis; and inadequate follow-up."

The report points out that "physicians need to be more aggressive in their cancer screening and in their diagnostic workups of symptoms that may be related to cancer." To help avoid cases alleging failure to diagnose cancer, the report offered a dozen specific risk management suggestions.

The study also uncovered cases in which defendant physicians were alleged to have been negligent in their failure to diagnose a number of other conditions and diseases. As with failure to diagnose cancer, the report also made numerous suggestions to help physicians avoid other types of failure to diagnose problems.

THE FINAL REPORT

The final 16-page report: *Failure to Diagnose: Putting the Pieces Together*, looked at the unique failure to diagnose issues of the seven specialties that were identified in the study and made a number of specific suggestions by specialty.

The report's conclusion states: "In raising their awareness to the possibility that any patient encounter may represent a failure to diagnose, physicians must be ever alert to the need to practice excellence in clinical medicine, and to remember that risk management offers effective steps for helping medical practitioners in all specialties identify and then correct the risk exposures in their own practices."

In addition, reducing such incidents would save patients' lives and would save millions of dollars in medical malpractice indemnity payments, thus helping to stabilize malpractice insurance rates.

AN OFFER FOR PHYSICIANS

Babcock & Helliwell has a limited supply of the full report. We would be happy to send a copy at no charge to any Rhode Island physician who would like one. Email John Tickner at jtickner@babcockhelliwell.com or call 401-782-1824.

In coming months we will examine other medical malpractice issues, and we welcome suggestions for future topics. Email John Tickner at the address above or write to him at the agency.

John Tickner, CPCU, is president of Babcock & Helliwell, Inc., a privately held independent insurance agency established in 1892, that provides professional insurance-related services of all kinds. They are an agency for ProMutual Group, New England's largest medical malpractice insurance provider and the second largest provider in Rhode Island.

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NINETY YEARS AGO, AUGUST 1916

An Editorial, "Using the Abnormal Mind," suggested "that we should put to practical use the output of the abnormal mind." Since "genius is first cousin to insanity," the conclusion was clear: "If it is true then that many valuable ideas are going to waste in our insane hospitals, is it not possible to avail ourselves of this material and put it to some profitable use?"

Peter Pineo Chase, MD, in "Nitrous Oxide Anesthesia and Analgesia in Obstetrics," discounted the past use of chloroform and ether. As for scopolamine and morphine, "large obstetrical clinics of the country have given it a thorough trial and have decided against it." In the last 2 years a group of physicians in Chicago praised nitrous oxide, combined with oxygen. "Consensus of opinion seems to be that it is like the little girl with the curl on her forehead: 'When it is good, it is very very good, and when it is bad it is horrid!'"

Harold E. Smiley, ScM, contributed "Report on 20000 Wassermann Tests Made at the Providence City Hospital During 1914 and 1915, Together with a Study of the Comparative Value of the Antigens Used." In 1914 the City Hospital started doing the tests free for Providence physicians. Of the 2,000 tests, 1,113 were negative. The 2 antigens – acetone and choletserin - used together were most effective.

FIFTY YEARS AGO, AUGUST 1956

This issued featured three faculty from Harvard Medical School.

George W. Thorn, MD, Hersey Professor of Medical Theory and Practice of Physic, Harvard Medical School, delivered the 15th Charles Value Chapin Oration, "Advances in the Diagnosis and Treatment of Adrenal Disorders."

Jack R. Ewalt, MD, Clinical Professor of Psychiatry, Harvard Medical School, and Commissioner, Massachusetts Department of Mental Health, contributed "Correlation of Public and Private Agencies Serving Mental Health Needs."

Arthur L. Watkins, MD, Assistant Clinical Professor of Medicine, Harvard Medical School, and Chief, Physical Medicine Department, Massachusetts General Hospital, contributed "Medical Rehabilitation in a General Hospital."

In "It Can Happen: Case Report at a Clinico-Pathological Conference at Woonsocket Hospital," Francis King, MD, ACS, and George A. Keegan, MD, reported on a 38 year-old woman admitted "for what was thought to be a premature separation of the placenta with intra-uterine hemorrhage." Eventually, after an operation, the pathological diagnosis was hydatiform mole, probably malignant. The woman recovered.

TWENTY-FIVE YEARS AGO, AUGUST 1981

Tom J. Wachtel, MD, in "The Less Common Etiologies of Hyperthyroidism, An Algorithmic Approach," cautioned: "Conditions other than Graves' Disease or toxic disorder can cause the disorder."

John L. Ferruolo, from the Division of Occupational Health Radiation Control, Rhode Island Department of Health, contributed "Mammographic Exposures in Rhode Island: A Report on the BENT Study." He reassured readers that the current tests reduced patients' exposure without lessening the quality of the image.

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