A TRIAL SEEKS TO HELP WOMEN ADVANCE IN ACADEMIC MEDICINE

What Can the Class of 1960 Tell Us?
A Deeper View of Psoriasis
Dr. Rook Collaborates with Dr. Rook
I RE LAB RESULTS

A WAREHOUSE FOR STORING AND ORGANIZING INFORMATION

enormous amount of statistics, clinical ing down and sorting what they need in Penn's clinicians and researchers, track-
a number of inpatient databases. It cur-
says Brian Wells, chief technology officer for ready to use makes everyone's life easier."
The Penn Data Store is fully automated. Every night, it receives and classifies pre-
ers can retrieve data quickly, either by directly accessing it themselves or by sub-
fessor of medicine, credits the Data Store carry out important research. "We were
pain. Through the PDS, we identified the Emergency Department with chest
nearly 600 patients who met our research
Penn investigators explore strategies for doing exactly that.

THE GOAL IS TRANSFORMATION
By Lynn Selhat
Even today, women in academic medicine are severely underrepresented in the ranks of tenured professors and in leadership positions. Achieving equity is a not-so-simple matter of changing the culture of medical schools. A recent grant will help Penn investigators explore strategies for doing exactly that.

MORE THAN SKIN DEEP
By Jennifer Baldino Bonett
Psoriasis can make life miserable for millions of Americans, and Joel M. Gelfand, M.D., seeks to relieve his patients who have this chronic inflammatory disease. He was also the first to demonstrate a direct connection between psoriasis and cardiovascular disease.

A 50-YEAR PERSPECTIVE
By Susan Worley
When members of the Class of 1960 gathered on campus in May to celebrate their 50th year reunion, the time seemed right for listening to their experiences since graduation. They recounted a variety of paths taken and commented on the enormous changes in medicine and health care. And they looked ahead, sometimes with wariness.

ART, SCIENCE, AND GREG DUNN
By John Shea
A Ph.D. candidate in neuroscience, Greg Dunn creates stylized images of ganglion cells and neurons . . . as well as autumn branches and summer grasses.

THE TWO DR. ROOKS
By Lisa J. Bain
Dr. Katie Rook, a graduate of Penn's School of Veterinary Medicine and now a dermatology resident, took advantage of an opportunity to do collaborative research with one of the most distinguished profes-
s of dermatology in the School of Medi-
– Dr. Alain Rook, her father.

A NEW APPROACH TO PRACTICING MEDICINE
By Kim Menard
In what he terms "desktop medicine," a Penn professor sees reducing risk of disease as a primary goal. The approach has implications for how to educate and train new doctors.

A WAREHOUSE FOR STORING – AND ORGANIZING – INFORMATION
By Mark Gaige
For health practitioners and researchers, tracking down and sorting data can be an immense challenge. That's where the Penn Data Store, a virtual warehouse, comes in.
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By Lynn Selhat
Photographs by Candace diCarlo
Walking through the hallways of Penn's medical school, a visitor would find that much has changed in the past 30 years or so. The hospital has expanded significantly, the once-omnipresent beeper has been replaced by the cell phone, and computers are just about everywhere. But perhaps the most striking change is the makeup of the student body. Back then, nearly 70 percent of the young folks walking around in starched white coats were men. Today, it's evenly divided. In 30 short years, women have made tremendous gains in medicine, not just at Penn but across the nation.

That makes it even more perplexing that women who pursue a career in academic medicine seem to be hitting a glass ceiling (or “sticky floor,” as some have characterized it). Indeed, national data indicate that women in academic medicine are less likely to attain promotion and tenure than their male colleagues; are significantly underrepresented in leadership positions; and are overrepresented in junior faculty ranks.¹ Studies that have compared men and women in academic medicine have also confirmed that women are not advancing at the same pace as their male colleagues.² One study found that after roughly 11 years on a medical school faculty, 59 percent of women had achieved the rank of associate or full professor rank. For men, it was 83 percent. Only 5 percent of women, compared with 23 percent of men, had achieved full professor.³

For years, most observers believed that the problem was in the pipeline and that as more women entered academic medicine, there would be just as many women senior professors and academic leaders as men. That prediction was not borne out. Instead, during the same period (1985-2005) that women's representation in American medical schools jumped from 34 percent to 50 percent, the percentage of all women faculty at the full professor rank increased by a mere 1.6 percent, from 9.9 percent to 11.5 percent. Now that the pipeline theory has been debunked, the problem appears deeper and more entrenched than was originally thought.

Although the statistics clearly show that women lag in academic medicine, the reasons are not so evident. Some schools of thought identify conscious and unconscious biases. Other research has shown that women have fewer opportunities to be mentored than men, whose career trajectories in academic medicine occur more naturally from the start within a diverse and easily accessible network of professional alliances. Still other observers point to family responsibilities, which traditionally weigh more heavily on women than on men.

Stephanie Abbuhl, M.D., vice chair and associate professor in the Department of Emergency Medicine at Penn, uses the metaphor of “a thousand pounds of feathers.” There is no single problem that is holding women back, says Abbuhl, who also has served as executive director of FOCUS on Health & Leadership for Women since 2001. Instead, it appears to be an accumulation of seemingly small barriers over time. Just as important as understanding why the
problem persists, she says, is understanding what can be done about it. More specifically, she wonders whether it is possible to create an environment where women can succeed fully in their careers, thus making the most of their contributions to academic medicine and improving the workplace for all faculty, both men and women.

This puzzle is the reason for a $1.3 million grant the National Institutes of Health awarded last year to Abbuhl and Jeane Ann Grisso, M.D., M.Sc., professor of public health in the Department of Family Medicine and Community Health and joint principal investigator. The N.I.H.-T.A.C. Trial (“Transforming Academic Culture”) is a first of its kind in terms of scope and magnitude. With enthusiastic support from Arthur H. Rubenstein, M.B.,B.Ch., dean of the School of Medicine and senior vice president of the University of Pennsylvania for the Health System, all eligible departments and divisions in the school, as well as the junior women faculty, have been randomly assigned to intervention groups or control groups. The intervention, involving 13 different departments and divisions, operates at three levels: junior women faculty, senior leaders, and groups of men and women faculty working in task forces to make recommendations and implement institutional change.

“It is time for us to apply our best scientific rigor to interventions that can deepen our understanding of the factors that influence women's careers in science while making a difference through action-based research,” Abbuhl and Grisso wrote in their N.I.H. proposal. Additional financial support has been provided by Dean Rubenstein and Ralph Muller, CEO of Penn’s Health System, as well as by Steven M. Altschuler, M.D., president of the Children’s Hospital of Philadelphia, and Alan R. Cohen, M.D. ’72, G.M.E. ’76, chair of the Department of Pediatrics. These funds will strengthen and deepen specific aspects of the trial in what is the first large-scale study of interventions aimed at women in academic medicine.

Why Penn?

Penn took the lead on this topic in the late 1990s with FOCUS on Health & Leadership for Women, founded in 1994 by Grisso, then associate professor of medicine. Originally set up to help fill the large gaps in knowledge about women’s problem persists, she says, is understanding what can be done about it. More specifically, she wonders whether it is possible to create an environment where women can succeed fully in their careers, thus making the most of their contributions to academic medicine and improving the workplace for all faculty, both men and women.

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The Intervention

Typically, randomized trials in medicine compare two groups: a treatment group that receives a specific treatment (e.g., a drug, a surgical intervention, a new treatment protocol) and a control group that receives no intervention. Because Abbuhl and Grisso wanted to measure institutional change as well as how the interventions affect a particular group of individuals (women faculty), they chose to conduct a cluster randomized trial in which the eligible departments or divisions in the School of Medicine were randomly assigned to intervention or control status. Data are collected from both groups throughout the four-year trial.

The N.I.H.-T.A.C. trial interventions are multi-level, meaning that interventions target different levels in order to achieve lasting changes in institutional culture and practices. The different levels include junior women faculty, faculty and administrative members of intervention department/divisions, and senior leaders. For benchmarking purposes, it has also collected and organized data on gender distributions of medical faculty by rank, academic track, and department across the medical school, and compared them to the national statistical averages published annually by the Association of American Medical Colleges.

According to Abbuhl, the results have been promising. For example, FOCUS has sponsored a manuscript-writing course for junior faculty, developed by two senior faculty members, Karin McGowan, Ph.D., and Seema Sonnad, Ph.D. Abbuhl notes that the course has been enormously helpful. Not only is scientific writing not taught in medical school, but there has been little guidance on how to get a manuscript published despite the fact that publications are critical for promotion at Penn. The course covers such topics as picking the right journal, writing an abstract, and resubmitting manuscripts. Publications by the participants have increased dramatically, and they report that the course stimulates collaboration with other faculty members and provides support. For these reasons, Abbuhl and Grisso have included this training as a central component in the multifaceted controlled trial. Indeed, there is a strong overlap between FOCUS and the N.I.H. trial, and Patricia Scott, the FOCUS director of operations, serves as project manager for the trial.

The program’s many initiatives over the past 16 years include mentoring programs; faculty development sessions; writing programs for junior faculty; an annual leadership mentoring conference; an extramurally funded program that allows FOCUS to offer medical student research fellowships and junior faculty investigator grants in women’s health. For benchmarking purposes, it has also collected and organized data on gender distributions of medical faculty by rank, academic track, and department across the medical school, and compared them to the national statistical averages published by the Association of American Medical Colleges.

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Mendations are implemented over the three-year follow-up period. Senior leaders – department chairs and division chiefs – will oversee the implementing of the task forces’ recommendations and work together to achieve high-priority institutional changes throughout the school. Over the four years, Abbuhl, Grisso, and other members of the study team will be holding intervention group meetings with senior leaders to discuss their goals, the barriers to change, and potential solutions. The investigators will interview the senior leaders to track which goals were met.

Over the next three years, Abbuhl and Grisso will keep a national advisory committee involved in the process through updates and progress reports. Dean Rubenstein will chair the committee, which comprises leaders in academic medicine and experts in institutional change. Amy Gutmann, Ph.D., president of the University of Pennsylvania, is a member of the committee. As needed, members may be asked to advise on specific areas of the study.

Abbuhl and Grisso are convinced that, by the end of the trial, they will have strong evidence of effective strategies to influence the institutional culture and to take steps toward closing the gender gap in academic medicine. What’s more, if the model proves effective, the results will be shared with medical schools across the nation. Women will not be the only beneficiaries. According to Abbuhl and Grisso, interventions that help women advance and achieve their full potential in academic medicine are likely to help men as well. Increasingly, men are facing the same kind of family pressures that have traditionally affected women. And any changes that help women do better will likely bring positive changes to entire institutions. The ultimate beneficiaries of such a transformation will be professors, students – and patients.
Stewart D. Friedman, Ph.D., is often referred to as “the work/life balance guy.” But for the founding director of The Wharton School’s Leadership Program and its Work/Life Integration Project, this moniker doesn’t sit so well. The problem with “balance,” says Friedman, is that it implies tradeoffs or sacrifice.

Instead, Friedman’s approach is one of integrating what he considers the four key aspects of one’s life: work, home, community, and self (mind, body, and spirit). His research has shown that integration is possible if people begin to think differently about how the four might fit together and then act on this knowledge. His Total Leadership course, which is based on his best-selling book, Total Leadership: Be a Better Leader, Have a Richer Life (Harvard Business School Publishing, 2008), is one of the major interventions for junior faculty women at Penn Medicine during the “Transforming Academic Culture” trial.

The program offers participants a structured way to identify what and who are most important to them, to find out what the people in their lives expect of them, and to recognize where their time and energy are spent.

Armed with this knowledge, participants then run experiments to try to find ways to improve all four aspects of their lives. An experiment might involve working from home one half-day per week and monitoring how this change affects outcomes at work, at home, in the community, and for the private self. Another experiment might be delegating more and observing its effect on one’s productivity and life beyond work.

Friedman has used the process for more than 10 years with groups from all over the world and in various industries. Participants of Total Leadership often attribute quantifiable dollar results to the program (e.g., savings through greater efficiencies) as well as more qualitative results like improved relationships with customers and colleagues, greater satisfaction with one’s job, and less stress. Perhaps most important, participants gain confidence and competence as leaders of sustainable change – sustainable, that is, because it works not just for one’s work but for all those who matter.

Friedman became involved with Penn Medicine two years ago when leaders of FOCUS approached him to discuss the possibility of using Total Leadership within the context of academic medicine. Lucy Wolf Tuton, Ph.D., director of professional development for FOCUS, notes that it was looking for an innovative approach to address the issues of gender equity in academic medicine.

“We were so fortunate that Richard Shannon, M.D., chair of the Department of Medicine, agreed to pilot the program in his department,” says Tuton. In all, 14 faculty members (10 women and 4 men) took part. According to Tuton, the siloed nature of academic medicine can leave faculty feeling disconnected. “Total Leadership gave this group of junior faculty a unique opportunity to step back and reflect on what they’re doing and why they’re doing it,” she explains. As a result of this “mini pilot,” FOCUS felt confident that the program would be a strong intervention to test on a larger scale as part of the N.I.H. Trial.

Up to 60 junior women faculty will complete Total Leadership training, while roughly the same number, not in the course, will serve as the control group. Both groups will complete questionnaires to test two main hypotheses. The first is that, compared to the control group, junior women faculty in the intervention departments and divisions will report greater increases in job satisfaction, commitment to the job, and job self-efficacy, as well as a lessening of work-family conflict. The second hypothesis is that women in the Total Leadership program will report greater increases in performance and quality of life and will be more committed to staying than those in the control group.

Friedman believes medical faculty are particularly receptive to the program because of its “trial and error” approach, which is similar to the scientific method. “It works because the process compels participants to find solutions for themselves,” he says. “I don’t come in with the answers.”

Notes
4 Barry Salzberg, interview with Leaders Magazine. 2010, Volume 33, Number 1.
5 Beyond Bias and Barriers, p. 13.
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