Developing a stable academic department virtually from the ground up is a challenge under any circumstances in today’s climate. It is an even greater challenge for an orthopedics department affiliated with a public hospital, which receives no direct research support from its institution. Yet the Department of Orthopaedic Surgery at Denver Health Medical Center has done just that, moving from a one-person department in 1998 to its current 12 physicians—all with a subspecialty focus, and establishing a research department in only eight years.

“People who go into academics are few in number and have significantly different interests and needs” from orthopedists who go into private practice, says Wade R. Smith, MD, Director of Orthopaedic Surgery at Denver Health Medical Center and Associate Professor at University of Colorado Health Sciences Center. “We have to try to make sure that we fulfill those needs. Teaching, research, the opportunity to develop in a focused area, creativity in lifestyle—if you can offer those things, that will keep that small group of people who like academics happy.”

The key is “keeping the work environment balanced with the hospitals need to be productive and run a good business,” Dr. Smith continues. His department functions in a synergistic way with the other three hospitals in the institution’s system. “We’re the trauma portion of the University of Colorado,” he explains. “We see the highest volume of patients every month. It’s very intense, but it decreases the pressure on the other hospitals in the system, so they can focus on other services.”

Concentrating trauma services in one area among the four hospitals frees up other orthopedic surgeons to focus on the subspecialties of their choice. Dr. Smith elucidates: “Elective surgeons have gone into academics because they want to work at an advanced tertiary level; they’re doing... Continued on page 4
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their own research and they’re never going to be good trauma surgeons. University hospitals that are not willing to support a strong trauma program will force these surgeons to take call, which is meaningless in terms of their academic interests. If you can get things focused—if you can establish a separate hospital or academic department that has enough people who are compensated appropriately and have the academic incentive to form a trauma program, they will also enable the elective portion to grow.”

Transparency
Transparency is another key feature of the department. “We run a very open department,” Dr. Smith observes. “We’re all salaried, and our salaries are competitive enough so that we can hire top-quality people, and the fact that there are no financial incentives becomes irrelevant. Because they’re not competing with each other, they work better together, which improves the quality of care.

The key is ‘keeping the work environment balanced with the hospital’s need to be productive and run a good business.’

“We have no hidden pool of money. Everyone knows what everyone else makes and we make all our financial decisions openly. We have economic, financial, and political realities just like any business, but in general, all decisions are made transparently, with input from every level.”

Research and Mentoring
“You have to make it clear to the people you hire that research is part of the job,” says Dr. Smith. “We mentor them, but we also have accountability that works within the system for productivity.” Mentoring takes place on a number of different levels. “We have a resident research program within the university, and we have initiated a formal research mentoring program to teach young researchers how to be mentors for residents. This has also proven to be a great way to teach researchers how to do research—in reality, you’re mentoring them too.

“In our department, we sit down with new faculty and outline their goals and areas of interest and we create timelines. If their interests aren’t obviously available here, we’ll figure out how to change that.”

Kagan Ozer, MD, Assistant Professor at the University of Colorado Health Sciences Center, gives a concrete example of how the system works: “Working in a level 1 trauma center is the challenge that attracted me the most. I am a hand/microsurgeon who previously spent quite some time in microvascular research; we are currently setting up a microvascular lab for research and training.”

One of the catalysts for a successful research program is, of course, funding. In these strained financial times, funding must arise from a variety of sources. “If you have a critical mass of initial research in your department and your group works together and keeps good records, you can start to accumulate some industry research money, which can become seed money for bigger studies and peer-reviewed grants,” Dr. Smith notes. “We’re currently approximately 60% funded by industry grants and 40% peer-review funded, but we hope to reverse that to 60-40 the other way soon.”

Most people who remain in academia are interested in research, teaching, or both. The ‘carrot’ for them is to have strong research support, having a research department that is large enough to run clinical and nonclinical studies,” says Steven J. Morgan, MD, Associate Professor of Orthopedics and Residency Program Director at University of Colorado School of Medicine. Ideally, he says, the institution should support funding to the extent that the core of the research department should not be dependent on outside funding. “The pressure is always on to get funding. Some research will not be funded at all, ultimately not every study is going to get peer-reviewed funding. There ought to be a core of research support that is funded by the institution. The general practice, however, is to offer someone funding for the first few years; then they are required to become self-supporting. In many cases the emphasis of the researcher then ultimately becomes locating funding sources as opposed to research. A quality partially sup-

ported research department alleviates some of this stress. You have to have some sort of core resources available to do research.”

Funding, of course, is not the only “carrot” for researchers, particularly in this department. “You also have to make it a fun place to work,” says Dr. Morgan. There are other incentives as well for those inclined to academic careers. “People typically don’t have to build a practice in these institutions. There’s a large volume of patients that you can care for, so the system allows people to concentrate on their areas of interest. You can just focus on your own area without having to spend time on other things.

‘If people have an acumen for academics, we try to steer them in that direction. Trainees are introduced to research during residency; they have to do two research projects over five years. They participate in the research process from start to finish—they work on developing the research, recruiting funding, doing the research, and producing a publication-quality paper.”

Directions and Goals
Dr. Morgan reports that the department is attempting to develop a researcher residency program, in which the resident will be placed on an academic track that will incorporate one or two years of mentored research during the course of the residency. “We could do a better job of rocketing them into academic positions if we train them that way,” he says. “If you can identify someone early, as they enter the residency program, they can get the mentoring to be a good clinician and a good scientist. They’d also get a head start on building a body of work that would enable them to compete for peer-reviewed research grants.”

“Our department is going to continue to expand,” declares Dr. Smith. “Our real goals are to continue our education mission in training trauma fellows from all over the world, as well as continuing to expand our research in trauma and our patient care volume.

“You can never expand until you suffer—you’re suffering will prove that you need to grow.”

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