www.nature.com/pr

Pediatric RESEARCH

COMMENT

The APS and SPR Virtual Chat Series

Challenges facing academic medicine: the Deans' view

Thomas Boat[1], A. Wesley Burks[2] and Barbara J. Stoll[3]

Pediatric Research (2022) 92:10–17; https://doi.org/10.1038/s41390-021-01490-x

Steven Abman (SA): As the COVID pandemic led to cancellation of our Pediatric Academic Societies (PAS) meeting last spring, we lost the opportunity to present cutting-edge science along with many seminars and symposia related to important issues regarding child health. These include critical themes, which range from career development; issues of equity, diversity, and inclusion; navigating career choices; mentorship and mentee responsibilities; and many others. To address these challenges, the American Pediatrics Society (APS) and Society of Pediatric Research (SPR) have jointly created a ten-part series of monthly "virtual chats," in which we tackle high priority issues and challenges facing academic medicine. Our structure for these "chats" differs from many traditional seminars, as we provide an informality to these presentations by leading experts on a given topic, followed by a question and answer session from other participants.

We are very excited about today's "chat," which is entitled "Challenges facing academic medicine in the modern era: the Dean's view" and are especially grateful to have three outstanding academic pediatricians who, in addition to having achieved mightily throughout their academic careers, are or have been medical school deans.

I have the privilege to introduce our three speakers. The first discussant is Dr. Wesley Burks (WB), the Stuart Bondurant Distinguished Professor of Pediatrics, CEO of the University of North Carolina (UNC) Health, Dean of UNC School of Medicine and Vice Chancellor for Medical Affairs at UNC. Dr. Burks has had extensive leadership roles throughout his career, including Section Chief of Allergy and Immunology at Duke University and Chair of Pediatrics at UNC-Chapel Hill, in addition to a very successful research career.

We are especially delighted to have Dr. Barbara Stoll (BS) as one of our presenters today. Dr. Stoll has had an amazing career as an outstanding academic leader throughout her career. She served as Chair of Pediatrics at Emory University School of Medicine before being recruited as the Hightower Distinguished Professor in Medical Sciences, Dean and Professor of Pediatrics at the McGovern Medical School at UT Health in Houston. Dr. Stoll has just stepped down as Dean and will be returning to the global health arena. We welcome her to today's seminar.

Finally, we are also honored to have Dr. Tom Boat (TB) join us. As you may know, Stephanie Davis, President of the SPR and Chair of Pediatrics at UNC, and I are both pediatric pulmonologists and have been both deeply influenced by Dr. Boat's extraordinary role as a major founder of the field of Pediatric Pulmonary Medicine and was a role model for so many of us in the field. In addition to his highly successful academic career as an investigator, teacher and clinician, Dr. Boat has been an outstanding and highly regarded leader at the University of Cincinnati and Cincinnati Children's Hospital and Medical Center in many different roles. Importantly, Dr. Boat is a former Dean and Professor at the University of Cincinnati College of Medicine, as well as past President of the SPR, American Board of Pediatrics and other academic societies.

Another member of our all-star cast is Dr. Stephanie Davis, President of the SPR and Chair of Pediatrics at UNC-Chapel Hill. Dr. Davis will be moderating today's session.

Stephanie Davis (SD): We are excited to have this wonderful and wise panel discussing our current challenges in academic medicine. We are going to ask each of them to highlight their personal story and then we will follow that with questions from the audience. We will start with Dr. Burks.

WB: Thank you, Stephanie. I'm originally from Arkansas where I attended medical school and then completed my pediatric residency at Arkansas Children's. We then moved to North Carolina to do my allergy and immunology fellowship at Duke, after which my wife, young son and I moved back to Little Rock. I joined the faculty at Arkansas Children's and for almost 20 years, I worked my way through the administrative academic ranks, but really spent most of my time primarily doing research with some administrative duties later in my career. We really weren't anticipating leaving Arkansas, as it was where our extended families were living. However, the Division Chief Position became available at Duke after Dr. Buckley decided to step down, and having trained there and for reasons that are hard to articulate even now almost 20 years later, we decided to move for that opportunity. I really liked that position and the institution, but in the last couple of years in that role and for whatever reasons, I just felt like I would like to serve and lead a pediatric department as chair. I felt fortunate to be offered the position and 3 years into the Chair role at UNC, the Executive Dean at the UNC School of Medicine left to take a position in Michigan, and after talking with several people, the Dean offered me the role as the Executive Dean, a role that I really liked. This executive dean role opened my opportunity to the position I have now. About 18 months ago, I became the Dean and the CEO of the UNC Healthcare System, which I really enjoy. The variety of opportunities, working with donors, faculty, hospital personnel, operational strategic planning, and many others—each of whom are interesting in their own way—allowed me to have input and an opportunity to think and influence our strategic directions. I definitely didn't plan on this

[1]Division of Pulmonary Medicine, Department of Pediatrics, Cincinnati Children's Hospital Medical Center and the University of Cincinnati, Cincinnati, OH, USA; [2]UNC School of Medicine and UNC Health, The University of North Carolina at Chapel Hill, Chapel Hill, NC, USA and [3]UTHealth McGovern Medical School, Houston, TX, USA
Correspondence: Barbara J. Stoll (Barbara.J.Stoll@uth.tmc.edu)

Received: 1 October 2020 Revised: 11 December 2020 Accepted: 13 January 2021
Published online: 13 April 2021

opportunity 30 years ago, much less, 10 years ago. As I have described to Stephanie and many others, you come to a stop sign and sometimes you go right and sometimes you go left. But what you realize after a period of years is that as you look back, each of those opportunities enabled you to do one of those new opportunities in the future. And so, I'm thankful for this opportunity now. It's definitely a challenge in the time of COVID, but I come to work every day thankful for the things that we are able to do.

SD: Thank you for sharing your story. Our first question is "what are the biggest challenges you face leading a large health care system"?

WB: Definitely, this is a multi-faceted answer. The important part I would start with is that every academic medical center is put together so differently. We have two separate institutions. We have a School of Medicine that is part of UNC Chapel Hill and we have UNC Health, which includes 13 institutions statewide and 33,000 employees. UNC School of Medicine and UNC Health come together in our clinical work, but they are separate legal entities. They were created separately in the late 1990s, and the clinical work of the providers holds them together. The structure will be different at every institution, which is important to understand as you will learn from other places. The mission that we have at UNC Health is to improve the health and well-being of the people in North Carolina and others whom we serve. This encompasses patient care, education, research, and community service, which is a big part of what we do as a state institution. Healthcare is an extremely competitive space currently, the changes that happened over the past 5 years were huge. And now, as we are in the COVID world, these changes are monumental, a number of which have been definitely accentuated during the time of COVID. The first big category I'll talk about is consumerism. It is a concept related to the effect that Apple, Amazon, Uber, Netflix, and others have had on the people that we work with, the patients that we take care of, their expectations around affordability and other issues. As an example, many of the tens of thousands of state employees cared for at UNC work a week per month to pay for their healthcare and that just doesn't feel right. Affordability is a big part of what we talk about. Consistency across our system: if you go into a clinic or a hospital, does it feel the same, look the same, is the experience for that person the same and of the same value? Transparency increasingly is an issue. Also people want their care personalized. They want the appointment when they want it, and accessible at a convenient time. That's the part that COVID really has highlighted. People want choices and don't want to be told who and when they're going to be seen. These consumer-driven issues have been there for some time, but have been accelerated since COVID started.

The next big issue is value-based care versus the old way of fee for service. The way I think about value-based care is how do we best help people stay or become healthy? When people talk about value-based care, it seems a little pejorative, or financial or economic, and that doesn't feel good. It really is about healthy based care. For our state, almost half of Blue Cross care is value-based. For us personally, at UNC, it's about 30% of what we do now. Within 5 years, Blue Cross North Carolina will be 100% value-based care, we are faced with taking care of people differently. A lot of it is good, but it's a different approach. There are other challenges, which I call disrupters. These are non-healthcare organizations that have moved into delivering healthcare. Blue Cross Blue Shield of North Carolina has moved into the provider space. They are setting up boutique specialty clinics, particularly for the geriatric age. CVS has their minute clinics. There are the national and regional consolidations of Health Care Systems, particularly in a state like North Carolina that has a large rural population, where this is increasingly an issue. There are very few unaffiliated hospitals left in our State, particularly those with less than 100 beds. Also, mental and behavioral health care, for both our patients that we care for and people with whom we work, is increasingly a bigger issue; it was pre-COVID and it really is now during the time of COVID.

And then the last big issue is the revenue challenge for all of us, which has also been accentuated by COVID. Our system is already more than $300 million in deficit over the last five months.

Other issues that we talk about include the government regulators with issues like certificates of need, and whether the Affordable Care Act is going to stay? Also, we have support from a health care system to the school of medicine to build and support the research enterprise. There's increasing competition nationally for the funding, but how do we, as a health care system, best support the researchers to gain access to data and to do the research that's needed to change people's lives?

Another significant issue are the people we work with and also recruit. There's a mismatch between the number of physicians and their geographic locations, and it's again accentuated in a state that is rural. The shortage of physician scientists is a significant issue; individuals that want to enter that pipeline and spend most of their time doing research that changes people's lives, but still want to take care of patients are vanishing. That's far harder now than it was 30 years ago.

Diversity is a big and important issue for a health care system, as we strive to look like the communities that we serve by hiring more women and black and brown individuals. It's important that we pay attention to this major issue.

SD: Thank you Wesley. As you highlighted, your role has certainly been quite different as Dean and CEO versus when you were Executive Dean. One of the themes we want to highlight is the differences in Dean responsibilities depending on whether you are a Dean of a medical school versus a Dean and a CEO. The next question is, "what have you learned as a Dean that you wish you had known in your previous roles"?

WB: I have two specific issues that might be helpful. The first one is that generally the people that I work with are really good and know what's going on. Administrators are not as out of touch as I thought they were 20 years ago. In general, administrators that I worked with were often not communicating what they were doing, and I thought they weren't really thinking about certain issues. This knowledge now has helped me remember that I always need to think what and how we are communicating.

The second issue is that literally every day, people come with a really good or great ideas. Some of these issues are related to research, some in education, in clinical care, or in service. It's unusual for somebody to share an idea or project, either by e-mail, by written proposal, or even through an in-person meeting, that isn't a really cool initiative. But they come with the idea that you have this money tree, that you just go over to the shelf and pull off some money and that you will fund what they want to do. The proposals are really well done and thought through well. There's often a compelling need, and most of them are really good. But what they don't really understand, what I wished I understood, is that, literally, this happens ten times a day, every day. And so, what would helped me to have my ideas stand out from all the other ten really good, but competing ideas, is to have known that the proposal should be written from the dean's standpoint. That is, developing and presenting a plan, whether it's related to a research, clinical or administrative problem, should include establishing the compelling need, the number of faculty that are needed, etc. and the well-developed business plan needs to be very well-outlined. But most importantly, identifying the resources needed for the project or initiative is key. It's not just, "here's a great idea, and a big ask." The more that you can think through these details really well, including a strong business plan and expressing "here's my contribution to the issue," the easier it will be for the person in this position to say "yes." You've given them a stronger reason to say "yes" compared to the other nine proposals that day, or the other fifty ones that week. Just that person's

motivation for wanting to help and contribute, even though there are ten great compelling needs, puts that person an extra step ahead and makes a huge difference. So, that's the big issue I wish I had understood.

SD: Thank you, Wesley. We are now going to hear from Dr. Stoll.

BS: Thanks, Stephanie. My career has had a more winding path than many, defined by serendipity, work in several countries, and a non-traditional, but committed family life. I was lucky early on to have a woman role model. My college biology professor taught, by example, that it was possible to have a serious family life and a serious career. I met my husband when I was 19 and we married in medical school. Who you choose as a life partner matters. My husband has been my greatest champion. I went to medical school at Yale, a school that supported an academic career. I entered pediatric training at Columbia hoping to be a general academic pediatrician. A confirmed Northeasterner who grew up in New York City, I had no idea that I would ever live or work outside of the Northeast. I moved to Atlanta unexpectedly when my husband took a position at the CDC, leaving to start a fellowship in Neonatology. I was fortunate to find life-long mentors at Emory in both neonatology (Al Brann) and infectious diseases (Andy Nahmias).

My career continued with a wonderful opportunity to live and work in Bangladesh. Unlike today, when schools embrace global health opportunities, I was cautioned that I was throwing away a promising academic career. We spent 4 years in Bangladesh that were life changing. We learned important lessons about health equity and improving maternal and child health in low resource settings. The experience set the stage for a career long commitment to helping mothers and babies, a journey that took us to a Cambodian refugee camp in Thailand and to the WHO some years later. My career continued with a detour working in basic science labs in Sweden and the US, which although not a career path for me, taught me to respect the rigor and hard work of lab-based investigators. After this peripatetic life and career, I returned to my roots in Neonatology by joining the faculty at Emory with interests in infectious diseases, clinical trials, and global child health. The last several decades, we've witnessed a remarkable period for mothers and babies. The prevention strategies, diagnostic and treatment modalities that are routine in the US today were developed and refined during that period-- a reminder to all of us that research really does save lives. I'm so glad that Steve Abman, who's been a very important part of improving neonatal care, is with us today.

Like many women, I never aspired to a leadership role. I agreed to serve as the Interim Chair of Pediatrics at Emory for a year, with no interest in the permanent position. But, as the year progressed, I realized that from a leadership perch, I could accomplish so much more to move the department forward and to help promote the careers of others. Being a Department Chair was an extraordinary experience. I was fortunate to be Chair at a special time in the history of child health in Atlanta, with a shared commitment to children by both the university and our partner children's hospital. It was incredibly rewarding to help build a wonderful department, in many ways because of that partnership-- and of course, because of the hard work of a great faculty. I had the best job possible, with no intention of ever leaving Emory. I won't go into the very skillful courtship by the President of UTHealth. Although it was difficult to leave the department and community I loved, I decided to seize the opportunity to take on a new challenge. I was impressed by the people I met-- smart, hard-working, mission driven-- and was intrigued and excited by a new adventure. Moreover, I believe strongly that if women are offered leadership roles, they need to seriously consider them. Please don't say no.

Eleanor Roosevelt is quoted as having said, "do one thing every day that scares you". Leaving the comfort of Atlanta, a community I knew and loved, was daunting. But I'm delighted that I decided to move to Houston. I served as Dean of the McGovern Medical School, the eighth largest school in the country, for 5 years, just recently stepping down. The winding road of my own career has several messages. Perhaps most important is that we are fortunate to be members of a wonderful profession that allows us to find meaning in our work and allows us to pursue different and varied career options. For those of you who are building your careers, my advice is simple. Find wonderful and committed mentors and forge relationships with them that will last a lifetime. Seize opportunities that arise, sometimes nontraditional, sometimes outside of your comfort zone. Find champions, who care about you as a person, as well as your career. And finally, think big. You can accomplish a lot more than you think you can.

SD: My question is "how did you promote diversity, equity, and inclusion in your role as Dean, and could you specifically address challenges faced by women leaders"?

BS: Recent events have shed a powerful light on systemic racial injustice in our society. This is an unprecedented time in our history—A time for each of us to consider what we as individuals and what our institutions can do to work for real and sustained change. I am not an expert on diversity and my comments reflect the work of a really great team.

When I was a medical student in the mid-1970s, just 20% of medical school graduates were women. Today, women slightly outnumber men in US medical schools. Young women are entering medicine and science in unprecedented numbers and are making an impact on our profession. Still, we need to ask, "are we where we should be"? Women lag far behind men in senior academic ranks and in leadership roles, and gaps in salary are well documented. The numbers are even more embarrassing and concerning for underrepresented minorities. While African Americans and Hispanics each make up about 13% of the US population, they only represent about 7% of medical students and about 5% of faculty. Representation at senior academic ranks and in leadership positions is even lower. A few years ago, the NIH formed a working group on women in biomedical careers to address barriers to advancement and retention in science. Common themes, which apply to underrepresented minorities as well as women, were access to career mentorship and sponsorship; work-life integration and understanding different life courses; gender gaps in research funding and in compensation. Unconscious bias is increasingly recognized. Moreover, harassment is real, and includes not only unwanted sexual advances, but also actions that treat women and minorities as second-class citizens in the workplace. Actions that are dismissive of one's work and ideas undermine self-esteem and have long term psychological and career consequences and need to be addressed. Microaggressions, both unconscious and intentional, need to also be addressed.

The Macy Foundation has had several conferences on women in medicine. They've laid out ambitious goals-- 50% of department chairs will be women by 2025, 50% of Deans by 2030-- but progress has been slow. There is a substantial body of data that diversity promotes excellence, enriches the educational environment, and leads to innovation of thought. Diversity matters and women and minorities bring a lot to the table. The current emphasis on teamwork, both clinical teams and team science, is a call to action to embrace diversity and to see how we can work creatively together to learn from disparate backgrounds, expertise, and viewpoints. Health disparities across racial and ethnic groups are well documented. The current COVID pandemic has highlighted the increased risk for minority populations, as well as the importance of health equity in addressing public health emergencies. Data suggest that underrepresented minorities are more likely to work in underserved areas, to choose primary care specialties, and to care for underserved patients. As leaders we have a shared responsibility to make sure our stakeholders hear that diversity is valued by our institutions and their leadership.

A few of the specific things our school is doing, not necessarily unique to our institution: We conduct faculty and student climate surveys every other year with the eye to analyzing data and implementing changes. We mandate unconscious bias training for all search committees and for all departments. We invest in our faculty, with a focus on women and minorities—sending them to local and national programs on career and leadership development. We support networking activities for various groups including women, minorities, LGBTQ. Our Women's Faculty Forum is the most established, with meetings and speakers throughout the year, an awards program, and a symposium to celebrate the International Day of Women and Girls in Science. As part of our Diversity Awareness Speaker series, we've invited a broad array of speakers from Georges Benjamin of APHA, to David Acosta from AAMC, to Hala Sabry, founder of Physicians Moms Group, and have held special events for Black History Month and for Veterans Day—reflecting the breadth of diversity. As Dean, I made it a priority to attend those gatherings.

We established vice chairs for diversity and inclusion in our larger departments. This sent a message that diversity was important at the department level as well as school-wide. Prompted by the movie, "Hidden Figures", where I watched remarkable, black women scientists running from building to building to find a bathroom, we built our first gender neutral bathrooms. Pretty simple, but important.

I would be remiss if I didn't comment on leadership. In an op-ed piece in The New York Times referring to women in electoral politics, but relevant to leadership roles in other professions and to minorities as well as women, the authors wrote, "the problem with women is not winning. It's deciding to run". Women are hesitant to promote themselves and quick to doubt themselves. Many women, even highly qualified women, underestimate their abilities. The "imposter syndrome" is rampant, but real imposters are rare. August 26th is the 100th anniversary of the passage of the 19th Amendment guaranteeing a woman's right to vote. We need to finally close the leadership gap for women and for minorities. At the right time, in your careers and in your life, please consider leadership roles, and if offered, seize the opportunity. Finally, current events have increased our awareness of social justice and of personal and institutional accountability. It is incumbent upon schools to integrate social justice topics into our curricula, and to support activities to enhance equity, diversity, and the inclusiveness of our society. Thanks for including this important topic, especially today.

SD: I would also like to ask "what challenges did you face leading the medical school"?

BS: I suspect that every school has challenges that are similar, and some that are unique. As Wesley said, every Dean's job is somewhat different, but they are all big jobs, with a lot to pay attention to. They are jobs that stay with you 24 hours a day—something you need to understand if you aspire to becoming a Dean. In my role, I was primarily responsible for medical education and research. I wasn't the President of our practice plan, and although I sat on the Medical Executive Committee and was on the children's committee of the board of our hospital system, I had no formal role in any of our hospitals. The Department Chairs reported to me, and we met frequently. Although I was involved in and had oversight of our clinical programs, leadership was matrixed. For those of you considering a Dean's position, understand the position—who you report to, who reports to you, your authority, the school's relationship with hospital partners, and your relationship with both university and hospital leadership—because they're very different at different institutions.

One of the great joys of being a Dean is the ability to continue to learn. I often joke that you go from knowing a lot about a little- your department, your division, your area of research expertise- to knowing a very little bit about a lot- an entire school's portfolio of work. And that's what makes these jobs really fun.

My comments will focus on undergraduate medical education, building and sustaining research, and faculty recruitment, retention, and career development. I came to my Dean's job with relatively little involvement in undergraduate medical education. My biggest learning curve and, ultimately, a source of unexpected satisfaction, was to understand the complexity and challenges of medical education in the twenty-first century. When I started at UT, the school had just completed a major revision of the curriculum. I was involved in the rollout of the new curriculum, with evaluation and revision over the first few years and funding for designated teachers and new programs. The biggest challenges we tackled as an institution were enhancing a supportive learning environment, confronting issues of student mistreatment, and promoting student well-being.

A few of the things we did included development of a comprehensive program to enhance student well-being and resiliency. This program has been particularly important during the current pandemic. We started societies for small group advising (academic and personal) with about eight students assigned to a faculty mentor who would get to know and shepherd them over 4 years. To specifically address the thorny issue of student mistreatment, we appointed directors of the learning environment at each of our teaching hospitals, with authority to make changes. We started a new office of professionalism and named the school's first Assistant Dean for professionalism. I held monthly lunches with groups of about twenty students to get to know them and to understand issues they were confronting from their perspective. The sessions were led by students and focused on a specific topic that they chose. Perhaps the most popular thing we did was to build a beautiful new student lounge that unfortunately is closed during COVID. Finally, the school was in the final stages of our LCME accreditation visit when COVID hit, with postponement of our site visit. As every Dean knows, a LCME review is an enormous amount of work, involving many people. We had the good fortune to have a wonderful experienced Dean for educational programs leading the process. Although we submitted the extensive documentation required by LCME and had a virtual site visit, the process is not yet complete, because of COVID.

The challenges of building and sustaining academic programs also differ widely across schools. One of the reasons I moved to UTHealth was to help promote scholarship. The school had been in a period of substantial clinical growth and I hoped to mirror that growth with expansion of research programs and scholarly activities. With a very large clinical program, our school has the opportunity to become a premier learning healthcare system, integrating research into everyday patient care with both observational and intervention studies and QI initiatives, to rapidly enhance care and outcomes.

The school has outstanding programs in quality improvement, in training clinical investigators, and is a longstanding NIH CTSA site, but has a relatively small cadre of dedicated clinical investigators-- a challenge that will take time to address. Both fundamental science and clinical/translational research need constant support from leadership-- setting the tone that research matters and ensuring financial support to build and sustain programs. It's well known that clinical revenue is often used to support academic programs. For many schools, obtaining funding to grow and sustain research and teaching is a delicate balance between medical school leadership and those who control the purse strings. Clinical faculty interested in academic pursuits face the competing demands of clinical service, versus time for research or teaching. An ongoing challenge for Deans and Department Chairs is to earmark sufficient funding to support investigators and teachers, especially early in their careers.

At the end of the day, academic programs are built by creative, innovative, hard-working people. The most important message is to find great people and to invest in them. One of the most

important and rewarding parts of leadership (the absolute joy of my time as a Department Chair and Dean) is recruiting, retaining, and promoting the careers of outstanding faculty. Much has been written about the challenges and risks to the physician scientist and the importance of career development and support of young investigators. We need to be mindful that all early career faculty need guidance. Mentorship and sponsorship are not limited to research intensive faculty. Supporting programs for career development is important for all Deans. I worry more and more about the demanding and stressful lives of our young faculty, trying to balance building a career with building a life outside of work. The magic ingredient that is often missing in their lives is time: time to reflect, to think and to be creative.

More broadly, we are at a critical period in our profession with physicians suffering from high levels of stress, loss of joy in work, and burnout. Attention to these issues is a concern for every single medical school dean. I think I speak for everyone on the panel, despite the many challenges, being a dean is a wonderful job. You become the conductor of an important and meaningful orchestra, able to help individuals and to help programs. You are responsible for the tone and culture of the school. I feel incredibly privileged and grateful to have served as a Dean. Thanks again for inviting me.

SD: Thank you, Dr. Stoll. We will now hear from Dr. Boat.

TB: The route that I took to the Deanship and my experience as a Dean is much different from that of Dr. Burks, Dr. Stoll and likely many others. My professional career started at Case Western Reserve University. I spent 10 years as a member of the pediatric pulmonary division and I greatly enjoyed that role. I could be a triple threat at that time, something that's increasingly hard to do. And I think I contributed substantially in all three areas. But interestingly, I came to a conclusion after about a decade that I was not a national leader in any of these areas. For example, I had a research lab that was fairly large and funded by the NIH, but I wasn't as innovative or clever or impactful as some of the young people coming along like Steve Abman or Jeff Whitsett. So I began to look at where my strengths resided. I was better at visioning, I was better at managing programs, and I think I was better at supporting other people than I was at advancing my own career. This recognition opened a number of doors for me.

The first of those doors came from the University of North Carolina. They asked me to look at the Pediatric Chair there. I readily connected with the faculty and with the leadership, and I've always been grateful for that early leadership opportunity. Let me take an aside and share something that was important to me and may be to others. I didn't say yes to that position until my wife had secured an appointment as a clinical psychologist in the psychiatry department. I have found that moving when both of us are enthusiastic about the opportunity has allowed us to be mutually supportive during times of career change and transition, which is always a challenge. So, in Chapel Hill, I continued research and limited clinical activities while taking on the management role and found it very satisfying, After 11 years, I felt good about helping the department expand its programs and its impact. At that time, I also discovered that I worked best in a growth mode.

After a decade, I was beginning to wonder if I had helped to take the department about as far as it could go, at least until the system built the children's hospital we had begun to plan. Doctors Burks and Davis know that the children's hospital ultimately was constructed, but it wasn't going to happen on my watch. So, this opened up an opportunity for me to think about other positions. About that time, I was asked to look at the Chair and the Research Foundation Directorship at Cincinnati Children's. The hospital was poised for a robust future, but with the need to embrace a culture change, moving from a community hospital perspective to impacting health at a much broader level.

I spent 14 very special years as a member of an exceptional leadership team working toward clinical, educational and research program development and expansion. And remarkably, nearly everyone at Children's Hospital bought into creating synergies among the three missions, something that was so important, I think, for being able to move rapidly forward. Growth was fueled by ability to recruit some of the best available talent for program leadership. My role was, yes, to make sure that there were expectations, but also to support new leadership to succeed as faculty recruiters, and program developers. So, let me pass along another tip to those of you who are contemplating Chairs or other leadership roles. Recruitment of top talent to Cincinnati back in the early nineties was not easy. However, when the word got around, that what was committed upfront, was delivered without exception and usually with increased generosity, over time, people began to say to me, "you know, we hear that we can trust you." Trust is so important. Anyway, rapid growth worked, because we not only had strong program leaders, but we had strong business plans that resulted in healthy returns on investment, which is essential for sustaining a growth mode, a point already made by Dr. Burks.

Stepping down from my Children's Hospital leadership position, I missed the broad exposure. I love challenges and I jumped at the chance when the Dean asked me to lead re-organization of fifteen separate departmental faculty practice plans into a single practice. Two years later, after lots of deliberate conversation and a little arm twisting but no casualties, we created a unified UC Physician's practice that improved care, and also the bottom line. Unfortunately, at the same time, the large health system that included our university hospital imploded, and the university walked away from its oversight of the health care system. So that changed things drastically. I found myself working closely with the Dean and others to create a new health system that is now thriving.

The health system, unlike the situation that Dr. Burks described at UNC and that is in place in some other forward thinking institutions, was created operationally independent from the medical school and from the other health professions colleges. I think this has created obstacles to partnership among the healthcare, education, and research sectors of the academic health system, and, in my opinion, continues to be a barrier to academic medical center advancement.

So let me reflect on two dimensions of my career progression to that point. First of all, being recruited to attractive leadership positions was in many ways easier than pursuing advancement, which is, as I have observed for a lot of faculty, a distraction, often leading to disappointment. I was always fortunate to be able to move to the next challenge having contributed to considerable success in the previous engagement and didn't need to waste time and energy seeking out opportunities. Secondly, I want to emphasize that any success I had come from finding talented leaders and then empowering them to be successful.

So, how did I come to take on the Dean role? Well, I was blindsided; it was a Sunday evening, and I got a call from the University President asking me to serve as Dean. I really surprised myself, by saying, "yes," even though up to that time I had always said, "I really do not want to be a Dean." I knew that there were big challenges, both academic and economic. But I thought I could make a difference. And I was welcomed by the clinical faculty whom I'd gotten to know quite well. Because of my age, I was actually 71 at that point, I know I was viewed by the UC President and Board as being a short-term fix. But shoring up the status quo wasn't really a page in my play book. So I pushed hard and in many cases successfully for what I considered essential program development for the college. Along the way, I ruffled some feathers. That was OK. I didn't have a lot to lose at that point. My strong advocacy for the college did lead to a university management and board decision not to extend my tenure much beyond the original contract period. So, was I disappointed and somewhat hurt? Yes, because I wanted a couple more years to finish what we had started. But looking back, would I do it again? Absolutely. It

was an experience that, otherwise, I wouldn't have had. It had disappointments. It also had a lot of positives. It gave me a chance to contribute in different ways, and I'll always be grateful for that. So that's my trajectory to and through the Dean's role. Dr. Davis, I think you might have a couple of questions.

SD: My first question is "what surprised you the most about being a Dean"?

TB: I had a lot of surprises. I think what I didn't anticipate was the need to navigate amongst so many constituencies with widely differing agendas, including university management, hospital management, fifteen other Deans and multiple Department Chairs, all of whom had different backgrounds and agendas. And then there were a lot of little aggravations, like a university development office that really wanted to work independent of input from the College of Medicine. When I led clinical care, teaching, and research programs at Cincinnati Children's, an enterprise the size of a lot of medical schools, I had encountered relatively few difficult to manage challenges. I encountered a lot of them right away as a Dean.

Clearly, I had to come to grips with the fact that I needed a different leadership strategy and set of tactics if I was going to have an impact. Let me share an example. What surprised me most was a lack of recognition across the university leadership concerning the needs of the College of Medicine even though the College of Medicine housed half of the university faculty. The university system for disbursing state support dollars was solely based on incentives for enrollment increases. Colleges with small, fixed enrollments were penalized. It took a year of stunned disbelief on my part to recognize that it was I who needed to play a different game. They weren't going to change.

So, one response was to build a pre-health professions undergraduate program in the College of Medicine. Actually, we may have been one of the first, if not the first, to do that. I appointed one of the basic science faculty to head this program, and with partners in the faculty of arts and sciences, it was hugely successful. The program now brings in 150 new and highly talented students to campus every year, provides teaching opportunities for basic science faculty, and also is populating professional and graduate programs downstream with stronger students. It's generating a substantial increase in flow of tuition dollars for the College of Medicine, an example of the kind of thing that can be done with out-of-the-box thinking.

I also was surprised at the sad shape of the basic science departments. What I found was that this was a challenge at many medical schools at that time. Basic science funding from the NIH was less robust; a lot more was going into clinical and programmatic research, rather than individual R01s. So aging, loss of grant funding, and fewer teaching opportunities had demoralized many of these faculty. Further the university, including a number of the other Deans, refused to consider a plan that I prepared to sensitively manage faculty who were no longer contributing. Longstanding modes of management do take a long time to change in a complex, diverse environment. And fostering change as a Dean was surprisingly harder than when I was working with colleagues in pediatric cultures. As another example, I was surprised at how hard it was to create multi-disciplinary programs and to get basic science and clinical science faculty to collaborate. But working at it was a challenge that I enjoyed. Let me stop at this point; as my two colleagues may want to talk about their surprises, You know, if we don't have surprises, it's less fun, right?

SD: Very true! The next question is "how did you promote change and development in the role as Dean or in any of your previous roles"?

TB: In my opinion, the most constructive thing I did was build a College of Medicine leadership team. I rapidly appointed five Associate Deans, four of them new to the position. The team worked very effectively. We met every Monday morning first thing, and shared perspectives and ideas on all dimensions of the College. Interestingly that team is intact today. They survived my time as Dean, and two subsequent Deans. The Associate Deans came internally from diverse departments creating a sense of more broadly informing and connecting with the faculty. And I think that if I had not had those five colleagues, we would not have been able to make the advances or the progress that we made.

Let me also say that I found other talented people to take on specific tasks. An example was a need to find more diverse faculty, but particularly to create a more diverse student body. My approach to this was to find a person who could tackle this challenge. When at Children's, I had appointed a black female Emergency Medicine physician, Dr Mia Mallory, as one of our residency program directors. She quickly turned things around, in terms of enhancing diversity of Children's pediatric residents. Our College of Medicine had a hard time matriculating 7, 8, or 9% under-represented minorities into entering classes. Dr Mallory joined our team and immediately changed how we recruited URM students. She began active recruitment on undergraduate campuses across the country. She went to organizations like the Student National Medical Association and interacted with the minority students. She set up special, underrepresented minority recruitment days. Most of all, she connected with each student, supporting them, allowing them to feel safe and engaged in Cincinnati. Interestingly, I talked to her recently and learned that the University of Cincinnati's entering medical school class has more than 25% under-represented minority students. One person made a big difference. Getting the right people into the bus, and getting them in the right seats is one of the most important things a Dean can do.

SD: Thank you, Tom, Wesley, and Barbara. We've received several questions from the audience. The first question, is "How do you motivate your faculty leaders to build up strong academic departments, divisions, or sections"?

BS: I'll start since I made some comments on growing academic programs. Deans have the opportunity to set a tone and to promote a culture that values and supports scholarship. Tom Boat and Wesley Burks have been masters at that. In an era where many institutions, our hospital partners, and practice plan leaders push clinical productivity-- sometimes at the risk of harming our more academically focused colleagues, we need to convey to all stakeholders that scholarship matters.

TB: One of the challenges for colleges of medicine and academic medical centers, I believe, is to determine how best to build programs across disciplinary efforts to push health care forward. Getting population health or public health faculty, working together with basic science researchers, and medical clinicians or clinical researchers, is important. One questions is: "do you do that through departments? Or do you do that through institutes and centers"? I'd be very interested in what Dr. Burks thinks and how he's approached that question.

WB: Thanks, Tom. As Stephanie knows, I sit on probably three decades of work that is at the crux of the question that you asked. And so we have the traditional departments, basic science and clinical, 27 of them in total. But we also have in the range of twenty plus centers or institutes that are across departments, across both the basic and clinical parts of our school and then across the School of Medicine, the School of Public Health, and the rest of the university. These centers include Global Health to Alcohol studies. There are a number of them. Increasingly the research that comes out of them, at least in the last decade, has been out of the centers and institutes because they've been able to bring people from various parts of the university together to compete for R01s and large program project grants.

BS: You can't underestimate the importance of thoughtful communication to our hospital leaders, that research matters, and that research drives and enhances patient care.

SD: Your responses lead to the next question, "how can one achieve successful collaborations with the C suite and/or the hospital leaders? How do you achieve this successful collaboration to really promote all your missions when clinical productivity is really, often at the forefront for hospital leadership"?

TB: One of the things that's emerged in the last decade or more has been a desire on the part of hospital leadership to manage and even control all clinical activities. I think that this is and has been a challenge when hospital and college leadership work in separate domains. I always enjoyed being in a position where I had input into clinical as well as research and education program development and management. I feel strongly, that there was great value in the synergies between these dimensions of academic medicine. I think that segregating education and research from clinical activities is a risk. But that's just my personal opinion. Anyway, these forces are currently active.

WB: Stephanie, I'd say a couple of things. One would be to have a relationship with the people that you're talking about, that is outside of your "asks." If, that's the only time they ever see you, it doesn't set up a good dynamic, and so to have coffee or lunch, or now I have a Zoom call too, they, like, any of us, respond to the messenger, as well as the message. And so, to develop good relationships with the colleagues in the C Suite, or whatever you want to call it, in Hospital Administration, is the biggest critical thing, I think, that anybody could do. And then the second part of it would be what I alluded to earlier, what I wish that I had known before becoming Dean, is that most people come in, come with an ask and assume that there is this plethora of money, piggy bank, a money tree, or whatever. And clearly, on the hospital side is where the financial resources are right now. Be able to come with a well thought out plan, which has all the things that a hospital administrator would look for to make a decision. They're used to business plans, so you need to understand that, and so you need to talk their language. Then you come with some support for your plan. Highlight resources, or a plan to get resources, and don't just come in for an ask. This repetitiveness of people proves challenging. For those who visit hospital administrators and come in with just an ask without a relationship and without a well thought out plan may receive an answer that is not always positive.

BS: I agree with Wesley that relationships are key. It's hard to get angry with someone or to dig in your heels when you have a genuine fondness for a colleague, someone you've broken bread with, someone you know. At the same time, it is important to have a seat at the table. When you take on a leadership role, be sure you understand your role in decision making. To quote a song from the musical Hamilton, you need to be in "the room where it happens" to help push decisions forward.

SD: Thank you! Is interprofessional education and practice an important focus area for academic medical centers? And, if so, how should academic medical centers approach the development of interprofessional practices and foster the curriculum needed to teach these students?

TB: I think it's very important, but difficult, given the way that different health professionals are trained in separate colleges. One of the things we did at the University of Cincinnati was to get the four health professional Deans together on a regular basis. We began to think about how we could create clinical training encounters in which not only medical students, but nursing students, pharmacy students, and allied health students participated. I think it is so important, because much of what we do right now, if we use the example of sub-specialty pediatrics, is team care. If we're practicing team care, why shouldn't we be training people in that mode? I don't think we're doing that very often or well, but we need to get started.

BS: We'd all agree that interprofessional education is important. Although our specific programs may differ, perhaps most important is that we teach respect for each other's professions —and we help our students understand what others in the healthcare team do. At UTHealth, we hold a mass casualty event with over 500 students from multiple schools. Although complicated to do, it builds teamwork and humility and respect. Anyone who has worked in the hospital knows the importance of the team. I'm a neonatologist. We need interdisciplinary care and communication to help babies.

SD: One of the participants stated that at the University of Iowa, all healthcare professional students actually participate in a course entitled "interprofessional education." Thank you for mentioning this course. Let's move to the next question: "the COVID pandemic has cast a budget crisis across almost every academic medical center. Research funds have now become the most stable component of financing. How would you present a persuasive need for investment in the future to a Dean, when there really are no funds to spare? What would be your advice to someone coming to you during this time if they were pitching a program"?

WB: If you're thinking about something now from a research standpoint, that would make one invest limited resources into a program, it's going to take a relationship with that person, as we talked about it. So take heed, someone in the position that has the resources that is forward thinking enough will know that now is a really good time to invest in some things. Certainly, investing in any of the COVID related research broadly is good and is going to be important for a while. Other global infectious diseases might also fit into that same category. It may be a really good time to expand your programs in those areas that will have a significant return on investment in 3, 4, 5 and 10 years. Now, really is a good time to think about how you can come up with a good plan, try to take the limited resources, and really invest in things for the future.

BS: Good news is that there are opportunities for federal funding for COVID related research. For those who are in areas where they can partner with other institutions, and do both multi school and multi-disciplinary research, this is the time. We also need to consider how to be better prepared for the next emergency, including how we can provide more cost-effective care so that we don't have a financial disaster when we have the next pandemic. If we've been taught anything, we've been taught that this is not the last pandemic or other healthcare emergency we will face.

TB: I don't want to make light of this challenge. Fortunately, I am not in a position anymore where I have to worry about handing out money, or not handing out money that's no longer there. But, I think a couple of things. First of all, sharing the perspective that things do and will change, which I have experienced repeatedly, is important. Anticipating that change is also important. And maybe COVID is also going to teach us a little bit about how we do things more efficiently. Many things about what we're doing is working right now.

SD: Absolutely. The next question, is, "in your leadership roles, what is your perspective on graduate medical education and the underfunded goal of supporting high quality education? How might one interested in improving the quality of medical education in innovative, and forward-thinking ways, change a culture that often feels more focused on clinical revenue and physician scientists"? I'm sure each of you may have had this question, or have dealt with this issue. The unfunded mandate of education.

WB: I'll back up just a second and make one comment about culture. Someone that you know has written a book about academic healthcare. And writes that culture is king. And when you think about either the institution that you're in, or one that you are moving to, particularly, then both the expectations for your position, and the culture that would allow you to meet those expectations is huge. So, there's simple ways of thinking about culture, both top-down or bottom-up, but that doesn't really

describe it, because in a school, with twenty-seven departments, there are twenty-five different cultures. But overall, at that institution, there's a culture that you have to understand in order to work in that culture. The ability of a person to dramatically change how that culture works – is pretty limited. I mean, not to be pessimistic, but if it's a culture that is top down and you're trying to change from the bottom-up, for one person or a small group of people, it is really hard, because that culture has been built into decades of that particular place. So, it's a question of, how do you change the culture around education. You have to understand the culture of that place, and how things work. Is it a bottom-up culture where people work from the grassroots to make change, or is it the opposite? So understanding the culture is part of the discussion on how you would make a change. Then, the education question, again, going back to some of the things we've talked about earlier. How do you present your compelling need for what you want to do? Understanding the priorities of the person that has the resources is important; educational resources is just going to have to come from clinical and research initiatives, or maybe from the community at that point. You're not going to necessarily change culture to make education a top priority, if you've walked through the things I just said. So understanding clinical needs and research needs and being realistic about how to obtain educational resources is imperative. Understand how the cultural works and you can make a difference. But you have to understand all of this and how to present the best, compelling case of what you want to do.

BS: Maybe I should chime in and say, I am more optimistic than you are, Dr. Burks, because I think that culture can be changed, but it takes tenacity—and time. As you said, it's not a short-term project.

WB: I think that's one of the opportunities, the exciting things about some of the leadership roles that we've been afforded. We have the opportunity that can have that effect. And, you know, if I think back 20 years ago, as an assistant professor, could I have changed the culture broadly? I can change the culture around the people I work with. And I can lead culture change within that group or lab. I can have an effect there; this is the opportunity that each of us have in a broader sense. So I wasn't trying to be pessimistic. It's just where you sit gives you an opportunity to have an influence on the culture.

BS: One of the reasons to aspire to leadership roles, is that you can have a role that allows you to, if not change, influence the culture.

SA: I would like to thank each of our Deans, and for presenting their personal experiences, perspectives and insights into the many challenges facing academic pediatrics.

ADDITIONAL INFORMATION

Competing interests: The authors declare no competing interests.