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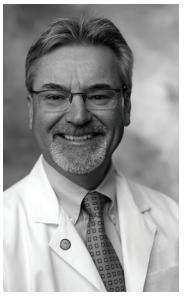

Gregory J. "Jerry" Jurkovich, MD
President 2008–2009

Dr. David H. Livingston

The classic and most obvious question is about your choice of career in trauma, critical care and now acute care surgery. How did you get there? At what point in your training did you decide?

Dr. Gregory J. "Jerry" Jurkovich

During elementary and middle school I definitely thought I was going to be an astronaut. That was the time when the Mercury program and Apollo moon shots were capturing the imagination of the nation, and people were influenced by their success. People were talking about what just seemed to be the future direction of the world. I was attracted to that and since I was naturally good at the math and sciences I thought I was on the way. But then I ran into one of those big disappointments in life: you had to be a perfect human specimen in terms of vision and physical stature. At that time you also had to become a pilot first, and join the military. The harsh reality of all of those issues made it obvious that this not going to work out very well.

So I went to college to study math and sciences. I was going to be an engineer. I still hadn't completely given up on the whole astronaut thing and thought maybe a way through NASA was on the engineering side. I did mix it with medicine and got a degree in biomedical engineering. By the end of the degree I realized I enjoyed and wanted more people contact than I was getting in engineering so I decided to go to medical school.

In medical school, I thought I was going to be an internist or family practitioner because that's the role model I knew about. To me that was what doctors were like and I think this gets at the essence of this question. It really is all about role models and being exposed to something that seems exciting. One reason I went to medical school was because our family practitioner was a good guy and well admired and I thought he did cool stuff so that's what I going to be. But I hated internal medicine. Rounds took forever. You never made a decision. The decisions were obvious, yet no one ever acted on them. It was interminably difficult for me.

But once again I was struck by someone who would become a mentor—this time it was John Najarian who was the chief of transplant surgery at the University of Minnesota. It was a time when transplant surgery was taking off. It seemed like being able to transplant organs was the most avant-garde, coolest, thing that had ever happened. So I was going to be a transplant surgeon. I ended up coming to Colorado for my residency because Tom Starzl was the chief of transplant surgery here, and he was doing the world's first liver transplant. I thought, this will be spectacularly fun and great and I will be a transplant surgeon. Once again, reality struck when I realized what it took to do transplant versus how much work they did versus how much fun they looked like they were having. I thought it was very discordant and just didn't fit.

One more time I was influenced by mentors and advisors who looked like they were having a lot of fun and very energetic and very enthusiastic and just loved what they were doing. That was the trauma group at Denver General. That group was just taking on all-comers, doing anything and everything, all sorts of surgery, and seemed to have a great time of it. Ben Eiseman and Gene Moore were the real mentors there at that time.

So I followed that pathway, David, and it's really much more a pathway. Finding and following a mentor or mentors, seeing what they're doing and thinking what you would like to do it. It's feeling that it's exciting and avant-garde and something that captures your imagination and your attention.

My mentors during residency were Ben Eiseman and Gene Moore. Tom Starzl falls in that category, too, because he was the chairman. Mainly it was the trauma group. During that time period all the disciples of G. Tom Shires were running sections and departments working on shock and resuscitation. That's one reason I took my first job at the University of South Alabama in Mobile when Bill Curreri was chairman. Bill was one of G. Tom Shires' faculty members, along with Jim Carrico. The whole concept of being a surgeon who was a physiologist and someone who was into the science of resuscitation fit with my math and science background and interest, coupled with the fact they were operating surgeons. If you're not exposed to some things it's really hard to know if you would like it or not. For me I was exposed to transplant surgery or trauma surgery. Those were the two for me that motivated and excited me most.

Livingston

So of all the mentorship advice you got, what was some of the best?

Jurkovich

Oh, that's a great question. Pick something and focus on it. The advice was: "I know you like to do everything, Jerry, but you've got to pick something and focus on it." The other good advice was if you go to a big place that has a lot of resources, you will be able to find someone who is interested in the same thing you are, and collaboration makes both of you stronger. That was good advice.

Livingston

What about bad advice?

Jurkovich

Let me think of some more good advice before I get to the bad advice. The issue of not being afraid to be a small fish in a big pond—that you will grow—was good advice. Because I've done it both ways. Other good advice: Well, I've always had this advice which is the basic golden rule of doing unto others as you would have them to unto you. It applies to so many things. I hear that over and over again but it is just good advice.

Bad advice. I don't think I've had much, actually.

Here is another good piece of advice I've always stuck with. I was once told not to do something in the following way. A boss of mine once said, "Jerry, don't put me in a position where I am forced to choose. You might not like what I opt for." This gets at the issue of ultimatums. I use that a lot now, saying, "You really shouldn't put me in a position where you are forcing me to choose because you might not like what decision I make."

The only other advice I never got was to take a year off. Whenever I thought about doing it, the advice I always got was that if you just keep focusing early, you will get further ahead. I actually wish I would have taken time off.

Livingston

Of all your scientific contributions, what are you the most proud of and how did it influence trauma/critical care?

Jurkovich

Three things come to mind. The first one is the work on developing the concept of acute care surgery and being the new type of trauma surgeon. I think the work through the AAST on developing the Acute Care Surgery Committee, on developing the training protocol, developing the curriculum, getting the training programs in place and pushing the concept of the new trauma surgeon. Watching that develop into an actual common language and to see resident applicants come through and say that they want to be an acute care surgeon is quite rewarding. That is the terminology they are using and it's been very satisfying. It's not been on the scientific side, but it's been in the field development/career choice side.

The second most rewarding thing has been my collaboration with Ellen MacKenzie and Fred Rivara, two disparate people. Fred is a pediatrician in injury prevention and Ellen is an

epidemiologist. For whatever reason, the three of us have worked together so well and have done work on a whole variety of injury-related topics, including alcohol and its influence in trauma, the national study on costs and outcomes of trauma care, lower extremity fractures and return-to-work issues, and pediatric trauma, to name a few. They have made me so much more than I ever could have been myself. The collaboration has been very rewarding and satisfying simply fun. This leads back to the advice about finding colleagues in different disciplines who are interested in the same things.

The third one is something I've done fairly recently with Doug Zatzick, a psychiatrist with an special interest in PTSD and alcohol and drugs and its important role in trauma centers. Our goal is to get trauma centers to incorporate mandatory drug and alcohol screening and interventions as part of the trauma center designation. I really think that has added a whole other dimension to trauma care. It's really added to the field, not just caring for the injured individual but caring for the entire population. It is why we are here in the first place. We know that many of these people have a lot of psycho-social problems, which is how they get to us in the first place. So those are the three I would point to.

Livingston

Anything you've championed and then go, "Oh, why did we do that?" or "That wasn't such a good idea"?

Jurkovich

What have I changed my mind on how I used to do something? That's fascinating. Well, I don't know that I've changed my mind, but I've been disappointed at the disappearance of DPL and the disappearance of a physical examination and the reliance on technological imaging before we do anything. I've been very slow to embrace that change.

Livingston

ABC is now "Admit, begin CT scan."

Jurkovich

Exactly. So that's one. I've been slow to give up some of the old techniques, and DPL would be one of them. I still don't believe in FAST. I'm probably wrong about it but I'm just having a hard time figuring out why the heck we're doing it so much.

Let's see, what else have I thought was a really good idea and it turned out to be not such a good idea? There was actually a time when I really bought into the anti-ICAM, white-cell blocking adhesion-molecule blocking technology as the key to cure sepsis. I really did think that we could shut down the whole inflammatory response by blocking white cells sticking to things, and subsequently actively pursued this research line. I was really sold on that concept and it failed miserably. As a result of that I've become rather cynical about any new product.

Whatever the latest greatest thing. Whether it is Factor VIIA or tranexamic acid or 1:1

blood resuscitation or hemostatic packs or whatever is out there that is going to help everything, I am skeptical about the latest greatest new fad. I think as a result that I am probably slow in accepting new things. I never bought into Xigris because it came shortly after it. Some more advice I received—back to the advice part—was this concept of being an early versus a late adopter. The advice I received from a surgeon was never be the first to jump on the bandwagon and never be the last to try to get on the train that's long left the station. Maybe I've been erring toward the trains leaving the station.

Livingston

Well, you shot FAST down. So, during your career, what do you think the two or three biggest advances in trauma and acute care surgery have been?

Jurkovich

Well, I do think that the cross-sectional imaging which has allowed us to adopt successfully non-operative management has been the single biggest advance from a clinical care standpoint.

I think injury prevention being incorporated into trauma care and adopting strategies to decrease injury, whether it is safer automobiles or decreasing violence. Violence has really dramatically dropped off in this country in 20–30 years. I don't know that that's our doing necessarily, but it's a societal doing that been quite dramatic for us.

I think the next thing that we're seeing right now is the entire spectrum of endovascular techniques. I think we may not be adopting them very rapidly because they are so technical, but I think that's a huge advancement and will change in medicine. Ruptured aortas have been first, but it will extend to anything else where we're going to be slipping in an intravascular balloon and occluding other blood vessels. I don't think we are far from the day when the whole concept of a resuscitative thoracotomy to cross-clamp the aorta will be replaced with an occluding intra-aortic balloon—forget the fact that it doesn't work almost ever anyway. You also can't ignore the entire explosion of laparoscopic capabilities at first used to treat elective conditions but now it has totally changed how we would deal with an acute gallbladder with perforated diverticulitis or even perforated duodenal ulcer. The necessity and use of endoscopic skills and possibly endovascular skills is an essential component of acute care surgery.

Livingston

What are the major practice pattern changes? Obviously, and I'll say it for you, a big one would be the move to acute care surgery.

Jurkovich

Yes, that's been tremendous. For trauma surgeons to take the concept of doing the emergency general surgery, for us to be the experts, and to develop that into a really practice specialty paradigm is huge. And it has been a natural extension of our surgical heritage to become sur-

gical intensivists as well. Not just for us as surgeons in making a career attractive alternative, but also for hospitals and health care delivery in providing coverage. It has really worked.

Livingston

What parts of the job are the most rewarding parts for you?

Jurkovich

The patients and their families. I think on a one-on-one basis it's having someone say "thank you." That would be number one. What I mean by that is not the getting an actual "thank you," but from the sense that you actually made a difference and helped somebody. To me, being allowed into people's lives at their most challenging, difficult times, remains an honor and something very special—a sacred privilege of being a professional in the field that we do. Those are very satisfying. You know the operating room still is a fun, creative, enjoyable, satisfying environment when it all goes well.

Another part which is still satisfying is showing a trick or a technique or just explaining something to a naïve resident or student and forgetting that they've never heard that before and never seen that before and that they look at it in wonder is always—still amazes me. Because you can get pretty repetitive and used to it and thinking that you've done this all before. Finding an interested student who shares your enthusiasm and you can see your past self in their enthusiasm is still quite rewarding. But the beauty is that you can do it again with the next resident. When you do it so many times, you sort of forget that it is still amazing to them. Then once it sinks in it's still amazing, that's quite rewarding.

Livingston

What is the most difficult or challenging part of the job?

Jurkovich

Well, call is becoming harder. Just hard to stay up at night. I just get worn out. I think the most challenging part of the job is when someone dies. There are a lot of people that come in dead, but there are not many people that actually end up dying on the service.

I mean those that come in and after you provided care, whether it is just the emergency room or just an operating room or weeks in the ICU, and they end up dying. The first thought of which we surgeons should be rightfully proud of is asking, "Could you have done better?" It's problematic both externally and internally. There is the internal one which is, "Am I losing it? Am I slipping? Should I have done more?" There is that.

But there is also the external challenge, the institutional or environmental challenge. The frustration is not with the people we work with as a rule, but the environment or setting. Like most or perhaps every surgeon, I am a perfectionist. The environment that we're all working in and the way we're doing things could and should be better, but it is just not going to happen without an incredible amount of work and it still might not happen. That's very frustrating.

It is the issue that you know what you want things to be like, but you can't move the entire institution and practice and culture of your environment in that direction no matter how hard you try. Or they're not moving fast enough for you. Or you're running out of energy to move them. Or the struggle not to give up on trying to change stuff is very hard, very frustrating.

Livingston

You're supposed to be the captain of the ship and the ship is not moving where you want it to move?

Jurkovich

Yes. Well, that's the other part. I think accepting that there may not be a captain of the ship is hard. I find that hard because it is not totally true and there is more than a bit of a mixed message. Organized medicine doesn't really want a captain of the ship unless the shit really hits the fan—then they want somebody to blame.

Livingston

What is the advice you give to your trainees, your medical students? What's your life advice to them?

Jurkovich

Pick something you love and go for it. Follow your gut. Read Malcolm Gladwell's book, *Blink*, and follow your initial instincts. They're usually right. Do something you love. There is that great adage that if you find a job or a career doing something you love to do you never feel like you're working a day. I've felt that way my entire life. It's really true.

Livingston

Anything specific on being an academic surgeon?

Jurkovich

Yes, pick a topic and focus. Oh, and don't give your boss an option where he is forced to choose, you might not like the decision. I'll stick with those two. They are pretty good. Don't be afraid to change your mind. I would really say go down a pathway and if you really, really get to the point you don't think it is right for you, change. Within academics it doesn't matter what you pick. Honestly, it doesn't matter whether you pick—it could be as weird as say, "I'm going to study the role of copper in the water and wound healing in the population of Ethiopian immigrants into the high plains mesa of the desert Southwest." It doesn't matter what you pick. Just pick something and really focus on it.

Be nice to others. Assume that they're trying to do their best and that they want the same things that you want and give them a chance to prove you wrong about that. Remember that surgery is a profession and, as such, it is a privilege to be let into peoples' lives the way

we are, and do not abuse that privilege.

Livingston

There are huge opportunities in acute care surgery and it wouldn't have gotten anywhere near where it is today without a lot of your pushing and effort. Where do you still think the challenges are? The opportunities are pretty obvious in some respects.

Jurkovich

Yes, great question. The challenges are convincing the all-purpose general surgeons that acute care surgery is not a threat to their existence, that it's more their ally than a competitor. I think that's point number one.

Point number two would be to not accept the role of a surgical hospitalist as the same as a career in acute care surgery. Acute care surgery combines in our practice trauma, emergency general surgery, and surgical critical care. It is not doing the things that others don't want to do at night. They need to be kept distinctly different. The third thing would be the challenge of an acute care surgery service in a major university hospital. I think that's a huge challenge because fundamentally I don't think university hospitals are naturally inclined to be good Level I trauma centers.

Livingston

So the trauma centers should be separate from the university hospitals?

Jurkovich

Yes. This idea needs a more examination and contemplation on my part, as I have only recently begun to think my way through the concept of acute care surgery in a tertiary referral university hospital.

Acute care surgery has really shown its worth and mettle in the urban safety-net hospitals where, in fact, that is the practice paradigm of what they've always been doing. They've been doing emergency general surgery call, trauma call, running the surgical ICUs. They just now have a better name for it and a better definition of what their practice is like, and it has had wide appeal for other hospitals.

Bits and pieces of that have been nibbled off in other hospitals where the ICU is all run by pulmonologists or they don't have an ICU and yet the general surgeons are no longer broad general surgeons. They don't want to take hospital call because they're too busy doing their specialized elective practice.

These hospitals are trying to hire surgeons who don't have an elective practice to provide their in-house emergency surgical coverage—I have heard them called "nocturnalists, or "on-call-ogists". That's not acute care surgery. That is a surgical hospitalist program which I think in the long run is not good for surgery and certainly not good for acute care surgery because, once again, it puts the acute care surgeon into the box of being the surgeon who does what nobody else wants to do. That's our biggest challenge. Our biggest challenge is to not

have acute care surgery be a definition for a practice pattern or caring for patients that nobody else wants to take care of. That's what it can't become.

The challenge is most dramatic in community hospitals where the general surgeons no longer want to take call and in university hospitals where all the specialists think that being on-call is too disruptive and beneath them, yet they expect the bigger cases that come at night to be referred to them the next day. This is certainly not an issue in the rural acute care hospital where there are only one or two or three general surgeons to take all the call that exists in the hospital, always have and always will. They're our heroes.

Livingston

They *are* acute care surgeons.

Jurkovich

Agree. The other extremes are the urban/suburban hospital where the general surgeons aren't taking call because they don't want to because they've got a busy enough practice. So the ones that are taking call are the providers that everybody considers newcomers or those without a practice, and by nature this is a disparaging assessment. Lastly, in the university hospital are all of the people who once were general surgeons are now super-subspecialists. They don't want to do it, figure they don't have to, but yet they still want whatever cases are in their domain to be transferred to them in the morning. That's a disaster.

Livingston

What are the next great things in the next decade? How are we going to cure trauma, acute care surgery?

Jurkovich

Well, I think we will adopt some level of endovascular technology into acute care surgery, just like we've adopted some level of endoscopic surgery, minimally-invasive surgery into our acute care surgery practice. I think there will be more advances in cross-sectional imaging. Whether the machines will get faster or use less or no radiation or be able to generate 3-D constructions more rapidly so you can put up a hologram of a person. I envision that, not so far off, the time will come where you will be able to put someone through a whole body scanner without concerns for radiation, the time it takes to acquire the images or not having to send them to CT "death row" far from the trauma bay.

I would also hope that we will make some inroad on neurotrauma. We certainly haven't. I don't know what it will take but we have to do a better job of managing the brain injured than we have been.

Elderly trauma care is another area where I know changes in care are bound to happen, yet I cannot foresee what they will be. Perhaps we will have geriatric trauma services that are focused on older patients that will incorporate internists or geriatricians into the trauma team. I think the concept of geriatric trauma care will be a next-decade push.

Livingston

Anything you would change in your professional career?

Jurkovich

Let's see, I would have taken time off between college and medical school to tend bar in Jackson Hole. I would have done that. I would have taken a sabbatical and gotten my MPH. Either my MPH or an MBA, but I think given my interests and collaborations it would have been an MPH. I would have done that first and now I should take a sabbatical and get my MBA. I think the concept of doing something for a solid block of time and then coming back energized in a new direction is valid. The whole concept of the original sabbatical which you took time off and you reestablished expertise in a different line and then went after it is great. Basic scientists take time off and learn new techniques that they want to use in the lab. As surgeons, I don't think we've constructed our lives where we are afforded that opportunity. Whether it is to take time off and become a really expert endoscopic surgeon, get a degree in public health or epidemiology, or learn more business skills. Not embracing the concept of a sabbatical—I have often thought was a shortcoming of our profession so that we could reinvigorate and reinvest and reenergize ourselves and take a different pathway. I think if I could have done that once in the middle, it would have been good.

Livingston

Any other words of wisdom on the 75th anniversary of the AAST? Any other parting shots?

Jurkovich

Yes, I have to say that I love my friends in the AAST. I love going to the meetings. I love looking forward to seeing them. They are more than professional colleagues and they are more than professional friends. They are real friends. They are real lifelong, emotionally bonding friendships that came out of this career. And I am forever in debt to that and find that extraordinarily valuable.