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The Academy Newsletter

Greetings AACP members and distinguished guests,

I hope all who desire vaccination for themselves and their loved ones have been successful. I would like to offer condolences to those who lost love ones to COVID-19 over the past 16 months and well wishes to those who continue to suffer with the effects of this disease.

I'm not a terribly superstitious person but I have done well by avoiding a "jinx" whenever presented with a lesser fate-tempting pathway forward. As such, it is with cautious enthusiasm that I write this piece regarding the 2022 AACP Annual Meeting, which will be held IN-PERSON February 9-12, 2022 in Lost Pines, Texas – a suburb of Austin.

As the inaugural two-term AACP President I have the unique distinction and opportunity for a second shot (note clever vaccine reference) at organizing a meeting program that appeals to the academic curiosity and professional interests of my colleagues involved with this occupation that I so deeply care for. The enormously dedicated team of people who endeavored to make the 2020 meeting successful have been (voluntarily?) assigned a second year of service.

There is no telling what breadth and depth of social and travel restrictions may be in place when February rolls around, so our modus operandi is to proceed with tenacity toward putting together an in-person event while installing contingencies along the way. We will take lessons learned you're your comments and evaluations submitted following the entirely virtual 2020 Annual Meeting and put them into action. The AACP program committee will identify portions of the meeting particularly suited for pre-recorded sessions, live webinar capabilities and other quarantine-resistant techniques to provide options for virtual participation of audience members and presenters alike. I am eager to witness discussions cut short as computer screens went dark in February rekindled instantly as faces greet each other and light up, in person a year later.

Please consider joining us in Texas.

Sincerely,

Bill Riley
President, American Academy of Cardiovascular Perfusion

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From Operational Awareness to Situational Awareness: How a Combat Zone Helped Influence Preparation and Perception in the Operating Room

I had the honor of serving my country on a tour to Iraq in 2018 in support of Operation Inherent Resolve. In preparation for this assignment, our group had to undergo several training modules, simulations, and skills challenges to acclimate ourselves to the different scenarios we may face in an operational environment. This is comparable to what we train for every day as perfusion students. Our classes, bioskills labs, and simulation training, all prepare us for the day we walk into the OR for the first time and begin our hands-on training.

You can never fully grasp the gravity of a situation unless you have a true understanding of what is happening. Situational awareness is a detrimental skill to possess, whether you are leaving the base to go on patrol or crashing on bypass during an aortic dissection. Each moment is crucial towards the success and survival of your team or your patients. Situational awareness can be defined as a “quality or state of being aware; having the knowledge and understanding that something is happening or exists” (Merriam-Webster). This skill and mindset has been linked to effective combat decision making in a tactical environment as well as effective communication and coordination in the operating room.

Two phrases that I learned during my time in the service that I apply every day in the OR are “See Something, Say Something” and “Keep Your Head on a Swivel.” These phrases directly apply to the method of situational awareness because of their ability to keep your team informed and possibly save someone’s life. As I contemplated an article, I couldn’t help but link my past with my present. Life has a way of preparing each of us and placing us where we need to be. There are countless situations that occurred while I was deployed that could have been avoided by someone having the moral courage to speak up. The borders of our base were patrolled on a daily basis; checking for problems in the structure or anything out of the ordinary. The previous night our base had a severe storm that caused a small break in the fence. The hole was not big and so it was not brought to anyone’s attention. This small example of “See Something, Say Something” could have saved us all from a situation that happened later that night. A local Iraqi man was able to slip onto our base through that exact hole and made his way down to where we all slept. One soldier, who was out working, was paying attention to their surroundings and had a gut feeling that something was off. They “kept their head on a swivel” and continuously scanned their surroundings to make sure there was nothing wrong. They noticed this man approaching from the high grass field and was able to alert others and subdue the intruder before anything could happen. This soldier could have possibly saved dozens of lives that night by their quick thinking and action to-

wards the situation. One thing is certain, you never want the loss of someone else's life to be on your conscience because of your failure to say something. This rings true in the OR from the moment the patient enters the room until they leave to go to the CTICU. Their life is as much your responsibility as it is the surgeon who operates on them and the nurse who assists during the case. Each person has a different level of situational awareness in that room that creates a cohesive picture of what is going on through assimilation and communication of the known data.

There are multiple levels to understand in the situational awareness model that will lead to effective decision making and expedient action in response to that decision. The three levels include perception of the elements, comprehension of the situation, and projection of future status (Pew & Mavor, 2003). The aforementioned permeates our lives in the operating room.

Level one of the situational awareness model, perception of the elements, is comprised of discerning the elements within your environment that are relevant to your task. Recognizing the relevant items and monitoring them continuously is important since items in your environment can change overtime. Level two involves comprehension of the entire situation. This involves incorporating all elements from level one, in order to fully comprehend the significance of the elements and events that are occurring. Finally, level three is the projection of future status of all elements involved. Knowing how all elements interact dynamically while combining levels one and two, create a well-rounded approach to situational awareness in the field or in the operating room (Pew & Mavor, 2003).

For example, one of the most crucial moments in cardiac surgery, between the surgeon and the perfusionist, is the application of the aortic cross clamp and delivery of cardioplegia. It is our job to maintain a level of situational awareness of what is happening at the field, based on commands and actions by the surgeon. The moment you hear "cross clamp" should trigger a level of recognition as to where you are at in the surgery.

Throughout the majority of the procedure, the surgeon is primarily focused on manual manipulations of the patient's chest and heart, while the perfusionist is primarily focused on the functioning of the heart-lung machine. Each has access to information that the other does not: the surgeon has visual access to the surgical field, and tactile information about the temperature and compliance of cardiac tissue, while the perfusionist has visual access to the various displays and controls of the heart-lung machine, as well as other displays and equipment not visible or accessible to the surgeon. Successful execution of the cardioplegia initiation and management tasks requires effective integration of this information (Hazlehurst, McMullen, & Gorman, 2007).

It is the perfusionist's responsibility during this portion of the surgery, to maintain awareness of all elements involved with cardioplegia



delivery/myocardial protection and communicate those elements to the surgeon. From my experience, this is where “keeping your head on a swivel” has helped me tremendously. I always maintain eyes on the elements that are being effected by the delivery of cardioplegia to the patient. Announcing delivery flow, line pressures, amount delivered, and myocardial temperatures will provide key information to the surgeon on the effectiveness of the cardioplegia being delivered. If the myocardial temperature isn’t dropping or the electrocardiogram isn’t widening, slowing, or flattening out, it will indicate there is a problem with the delivery method. This communication and awareness by all staff members, can make the difference between a well-protected heart and one that slowly becomes ischemic and has a hard time recovering.



Situational awareness is not a skill you are born with, but one that needs to be molded and perfected over time. Being deployed to an operational environment has provided a level of perception in the OR during my time as a perfusion student. Constantly monitoring patient pressures, flows, line pressures, and the surgeon’s actions in a systematic loop, has allowed me to maintain a higher level of awareness in the OR so I can speak up when something is wrong. Closed loop communication and the moral courage to speak up is both essential in the operative setting and the military. I have known many soldiers who regret not speaking up about something they have seen that was deemed out of the ordinary; whether it’s a local watching too closely, or carefully placed garbage on the side of the road. This lack of communication and coordination has led to lives lost and crippling guilt because speaking up could have saved a life. We owe it to our patients, and their families, to develop a high level of awareness in the operating room in order to assimilate the data, communicate effectively, and execute a well-rounded approach to cardiac surgery. I appreciate the opportunity to share my experience. Good luck and stay alert.

References

Hazlehurst, B., McMullen, C. K., & Gorman, P. N. (2007, February 8). Distributed cognition in the heart room: How situation awareness arises from coordinated communications during cardiac surgery. *Journal of Bio-medical Informatics*. <https://www.sciencedirect.com/science/article/pii/S1532046407000081>.

Merriam-Webster. (n.d.). Awareness. In Merriam-Webster.com dictionary. Retrieved May 29, 2021, from <https://www.merriam-webster.com/dictionary/awareness>

Pew, R. W., & Mavor, A. S. (2003). In *Modeling human and organizational behavior: application to military simulations* (pp. 172–175). essay, National Academy Press.

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The Academy Archives

This section contains previously published material from the Archives of The American Academy of Cardiovascular Perfusion.

This edition features the Thomas G. Wharton Memorial Lecture from 1998.

Many of the issues addressed in this lecture are still pertinent today.

Proceedings of the American Academy of Cardiovascular Perfusion. 1998; 19: 7-10.

WHAT WILL BE OUR LEGACY?

For the past fifteen years, it has been the honor and privilege of the President of the American Academy of Cardiovascular Perfusion to deliver the Thomas G. Wharton Memorial Lecture. The topics over the past fifteen years have been diverse but most have covered reflections on the past or problems confronting perfusion at that time.

Who was Thomas G. Wharton? Thomas Wharton was not a perfusionist, but a friend of perfusion in the true sense of the word. He worked for Travol Laboratories for sixteen years starting in 1958. Tom then started his own company, Human Resources, Inc. During this time he served as the first Executive Director of the Journal of Extracorporeal Technology, the Executive Director of the American Society of Extracorporeal Technology (1977) and the Executive Director of the American Board of Cardiovascular Perfusion. In 1978, Tom moved to California accepting the position of Product Manager of tubing packs for William Harvey Research Corporation.

Thomas Wharton believed in perfusion as a career and a profession. He also believed in formal education for the perfusionist. In the summer of 1979, Tom handed a perfusionist from Birmingham, Alabama, \$2000.00 and told him to "go out and start that organization of professional perfusionists that we all need." That is how this Academy was founded. Unfortunately while driving to work that fall, Tom had a heart attack and died. He never witnessed the formation or attended the first meeting of this society he was so instrumental in forming.

The title of my talk today is "What Will Be Our Legacy?" Legacy, as defined by Webster, is something handed down from one who has gone before or from the past.¹ Before we can predict or plan what we will leave for perfusionists in the future we need to examine the present and the past to see what we were left by our predecessors.

If you will indulge me, I would like to give you a brief review of our past as seen through the eyes of our past presidents. Have we learned from their experiences? Have we taken their advice and heeded their warnings? I would also like to address some of the problems facing perfusion today. Their solutions will affect perfusion far into the twenty-first century.

Perfusion in the Past

Cardiovascular perfusion is a relatively young profession. Many of the early perfusionists were physicians. Some were surgical residents, anesthesiologists and even cardiac surgeons. As the field of cardiac surgery grew so did the need for pump technicians. Laboratory technicians, engineers, Navy corpsman or anyone with a keen interest and desire to become involved in this new and challenging field of endeavor were trained to operate the heart-lung machine.

*"During this period, we perfusionists were privileged to work with heroes and that's what the surgeons and anesthesiologists were, because of their courage to face new challenges without guidance or precedence, without sophisticated monitors or equipment and with only their intelligence and clinical accumen to contribute to the surgical outcome. Open heart surgery was encouraged by an extraordinary group of surgeons who had courage together with imagination, vision, skill and determination. This was a golden era. Almost every operation was a new experiment and every experiment was relevant. There were no animal models for the diseases treated, no alternative therapies and no human experimentation committees. The diseases were essentially incurable, many with fairly predictable high mortality. The downside risk was small. To try was better than to do nothing. And the perfusionists in the early days were heroes too. They had no teachers, save experience. They learned from empiricism. It was a day of glass and stainless steel."*² Charles Reed, 1984

During the infancy of cardiac surgery, there were many remarkable successes. There were also many failures.

*"The early practice of perfusion was an uncertain and not entirely predictable course of events."*³ Aaron Hill, 1986

But we learned from those failures and negative experiences and developed better equipment and techniques.

For a glimpse at the past history of cardiac surgery through the eyes of the perfusionist, I encourage you to read, *"Perfusion Lessons from the Past"* a short thirteen page presentation that Charlie Reed delivered at the Eighth Annual Seminar of the American Academy of Cardiovascular Perfusion in Toronto, Canada in 1988. Charlie's closing comment notes repeating.

*"If I have anything to say, I would urge you to go back and read the early literature, you will find, to your absolute amazement, that an astounding amount of work was done before 1965 that will answer most of the questions that we can pose today."*⁴ Charles Reed, 1988

By the early to mid-1970s we see the evolution of pump technicians into perfusionists. Perfusion was evolving into a profession. Formalized training programs were emerging and there was the formation of a national organization, the American Society of Extracorporeal Technology.

With the advent of coronary artery bypass grafting in the mid to late 1970s, many new open-heart surgery programs were established further increasing the need for trained perfusionists. The American Academy of Cardiovascular Perfusion was formed in 1980 out of a need for a national organization whose primary focus was perfusion education.

"The field of perfusion is such that the opportunities for a perfusionist's input and study are nearly unlimited."

*We no longer routinely prime with whole blood as we did in 1972, mortality has decreased significantly, but cardiopulmonary bypass is still not a benign procedure. While perfusion is no longer an experiment, it does remain a challenge and that challenge can be met through education."*⁵ Mark Kurusz 1983

As a direct result of a perceived shortage of perfusionists, the mid to late 1980s witnessed a tremendous increase in the number of perfusion schools and the number of students being trained. New graduates were entering the field of perfusion in larger numbers than ever before. Questions were arising though as to the motivation of these new members to the perfusion profession.

*"Perfusionists' salaries have improved dramatically in the last five years, thus making perfusion a very attractive profession. Combine the attractive salaries with an ever-increasing number of perfusion schools and all of a sudden everybody wants to become a perfusionist. The 'new breed' expects a high salary, short hours, great benefits, and very little call. Most of the students entering the profession are purely money motivated, and the idea of being there for the patient first and foremost does not exist."*⁶ Dennis Williams, 1990

The concern for quality perfusion education was a primary concern for much of the late 1980s and continues until today. In his 1992 address, Terry Crane made several good points.

"The success of our careers has not been in doing something unique, but in mastering the technology of the time, and in having the courage and vision to carry it to its limits in a process that others would follow. This success has not been a sudden outburst of genius but it has been the result of continual, patient, commonplace work. Those of us willing to learn from the experience of others will escape a great deal of trouble, sorrow and regret. We must constantly remember that our mistakes will be failures if we do not learn from them. It seems so strange that a few of us are unwilling to profit from the experience of past perfusionists. There are many of us who prefer to learn by our own experience of disaster, but think that we might have known without its sorrow and cost. We have often read journals, bulletins, magazines, manuals, and textbooks written by experienced people, but many of us will rush headlong without a glance at the warnings they have left.

*What could be a more fulfilling goal for us today than to make a significant difference in the life of another perfusionist and help them reach their full potential?"*⁷ Terry Crane, 1992

The changing health-care system has had a major impact on all of us throughout the 1990s. As early as 1987, John Meserko was giving us insight into what was to come. John reminded us though that our primary responsibility is not just providing service but providing quality.

"I implore perfusionists today to go back to their individual teams and institution and rethink the concept of quality. We owe it to our patients to provide them with the best service in these somewhat uncertain times. If every support group that provided health care to individuals would rethink and re-quantify their quality issues then I believe that the uncertainty and the purported lack of quality issues could be done away with forever. The business of health care can certainly be weighted in dollars. The most ideal situation would be able to weight the business of health care in terms of quality. Then the business definition could become an altruistic definition. Quality is service.

*We are in the business of providing service. We should be in the business of providing quality."*⁸ John Meserko, 1987

In more recent years, the focus of most of the Thomas G. Wharton memorial lectures have dealt with the perfusionist as an individual. His or her needs, stresses, responsibilities and goals are all touched upon throughout the addresses. James MacDonald, in 1993, reminded us of our responsibility to our patients in his address on professionalism.

*"Being a perfusionist is much more than establishing the extracorporeal circuit of choice and conducting cardiopulmonary bypass. We must remind ourselves that the recipient of our specialized care, the patient, deserves special mention. We know that to be a clinical perfusionist is to belong to a quality control profession. For the well-being of our patients, we cannot make a mistake. When mistakes are made, it is just as devastating to the perfusionist as it might be to our patient."*⁹ James MacDonald, 1993

Jim also points out to us our responsibility not to compromise the patients under our care.

*"If, as a perfusionist, your personal caring of the cardiac surgical patient does not receive a very high priority, you fail in the attempt to provide dedicated professional service, and the patient is compromised. Perfusionists who compromise patient care are not tolerated."*⁹ James MacDonald, 1993

As professionals, it is important that we strive to attain certain qualities and virtues.

"If we as educators fail to impact the intangible aspects of education, I fear that we as a profession will fail to

*thrive and survive, and will only become, once again, pump techs. We must remember that the past is always underfoot and we must tread very carefully toward the future. I can only hope that the Academy will continue to teach, by example, the sustaining principles of dignity and propriety which will lead perfusion very carefully into the future."*¹⁰ Sue Reaves, 1994

*"We need to love ourselves enough to represent ourselves as professionals, not only to people we work with, but also our peers."*¹¹ Jerry Richmond, 1995

We also need to maintain balance in our daily lives.

*"I decided that I would address an issue that is the greatest struggle in my life and perhaps yours too. That is FINDING A BALANCE IN LIFE when your work is as demanding as ours is."*¹² Richard Berryessa, 1997

It is extremely important for us as perfusionists to make the right choices.

*"The American Academy of Cardiovascular Perfusion may continue to change, but I hope we will continue to make the correct choices. ... difficult choices are better made in an environment of compassion, support, and wisdom than amidst adversity, deceit, and ignorance."*¹³ Diane Clark, 1996

Perfusion Today

There are several problems or issues that confront the field of perfusion today that will greatly impact its future. Too many perfusionists today, disenchanted with the changes health care has made on our practices see perfusion as a job not a career.

*"Somewhere on the way to this new day, the dedication, pursuit of excellence, and sense of purpose appears to have been lost."*³ Aaron Hill, 1986

We need to regain the enthusiasm and interest in our profession that has been lost over the past several years. Another area that has seen a decline is research. The number of manuscripts being published by perfusionists has been steadily decreasing. This could be due to several reasons. With the recent changes in the health-care system and reimbursement, monies allocated to research have been drastically slashed. Even though the number of publications has declined the overall quality and substance has increased. In some respects this is true but not totally. We need to spend the extra time to do research. I realize that not everyone can do controlled laboratory experiments or complex clinical studies, but we can still be involved. Collaborate with other centers who have the facilities and capabilities. Enlist the help of good authors who may not be as active clinically as they once were. There are plenty of interesting cases that can be reported. Literature reviews on special topic areas is another area that could be explored.

There are a large number of senior perfusion students' research papers that go no further than the desk of the program director. Why? Submit them to the Student's section of the Academy's newsletter. Get the information out. Use the internet. Do not be afraid to get patient consent or petition your institutional review board for an investigation of equipment or technique comparisons. We will become stagnant unless we strive to continually improve the way we conduct cardiopulmonary bypass.

We need to continue to develop national standards for perfusion. We need to reexamine how and why we do things the way that we do. Are our present acceptable standards founded in true clinically evaluated facts or just myths? We need to conduct the investigations to validate our techniques and practices.

A big issue today is job security. How do we protect our place within the hospital without fear of being replaced by a lower bid. One way is to get involved. Spend the extra time needed to be on the various committees that directly or even indirectly affect your existence. Join your hospital's patient outcomes committee. Educate the

members as to how perfusion, in particular what you do or do not do, can directly affect patient outcomes. Inform administration as to what perfusionists do and can do.

*"Become active participants in public relations yourself."*¹⁴ Dr. Raymond Stofer, 1988

If you are an integral part of the decision-making affecting perfusion, what better way to maintain job security. We need to return to the days when the perfusionist was a key resource within the operating room and the hospital not just another employee.

Continue to educate yourself. Stay current. Read the literature. Communicate with other perfusionists about their research, their practices, how they handle quality assurance issues as well as many other areas.

Perfusion in the Future

What will the future bring? What will truly be our legacy? It is up to us. We were handed a rich heritage from those that came before us in perfusion. We need to follow their examples and guidance. We are in desperate need of strong leaders to steer the course of the perfusion profession well into the next century. We need to put our hearts back into our practices. I leave you today with some enlightening words that were spoken at this same forum sixteen years ago. Their meaning and guidance still ring true today.

*"We are functioning in the constantly changing and challenging field of medicine. We each have a brain, the ability to use it and combined with the ability to observe, it is not unrealistic to imagine that anyone or all can leave something during that heartbeat of time. However, do not build for acknowledgement or reward in your time. If you need justification for your efforts then consider it fair payment for the privilege of being in the most challenging and exciting specialty in medicine during its most important period in recorded history."*¹⁵ Charles Reed, 1982

I thank you for your patience and your attention.

References

1. Webster's 11 New Riverside Desk Dictionary. Stamford, CT. Longmeadow Press, 1995; 241.
2. Reed CC. Perfusion reflections and perspectives. *Proc Am Acad Cardiovasc Perfusion* 1984; 5: 7-9.
3. Hill AG. Perfusion - a career? *Proc Am Acad Cardiovasc Perfusion* 1986; 7: 8-10. 9-21.
5. Kurusz M. A career in perfusion. *Proc Am Acad Cardiovasc Perfusion* 1983;4: 8-9.
6. Williams DR. Perfusion education: quality versus quantity. *Proc Am Acad Cardiovasc Perfusion* 1990; 11: 7-8.
7. Crane TN. Together in excellence and education. *Proc Am Acad Cardiovasc Perfusion* 1992; 13: 7-10.
8. Meserko JJ. The business of health care: Quality or Quantity? *Proc Am Acad Cardiovasc Perfusion* 1987. 8: 1115.
9. MacDonald J. On a personal note ... *Proc Am Acad Cardiovasc Perfusion* 1993; 14: 7-11.
10. Reaves Sue. Reflections on the future. *Proc Am Acad Cardiovasc Perfusion* 1994; 15: 8-9.
11. Richmond JW. Love and perfusion. *Proc Am Acad Cardiovasc Perfusion* 1995; 16: 7-8.
12. Berryessa R. Life hangs in the balance. *Proc Am Acad Cardiovasc Perfusion* 1997;18:7-9.
13. Clark D. If I do this, I cannot do that. *Proc Am Acad Cardiovasc Perfusion* 1996; 17: 7-8.
14. Stofer RC. The cause and cure for the shortage of perfusionists. *Proc Am Acad Cardiovasc Perfusion* 1988; 9:7-8.
15. Reed CC. The decline and fall of the perfusion empire: an editorial comment. *Proc Am Acad Cardiovasc Perfusion* 1982; 3: 7-9.

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Important Academy Dates

The ACADEMY ANNUAL MEETING DEADLINES

ABSTRACT DEADLINE **October 15, 2021**

MEMBERSHIP DEADLINE **December 9, 2021**

PRE-REGISTRATION **January 14, 2022**

2022 ANNUAL MEETING **February 9-12, 2022**

Other Meetings

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2022 Annual Meeting



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