



the **JOURNAL**

of the Pennsylvania Osteopathic Medical Association
Fall 2021

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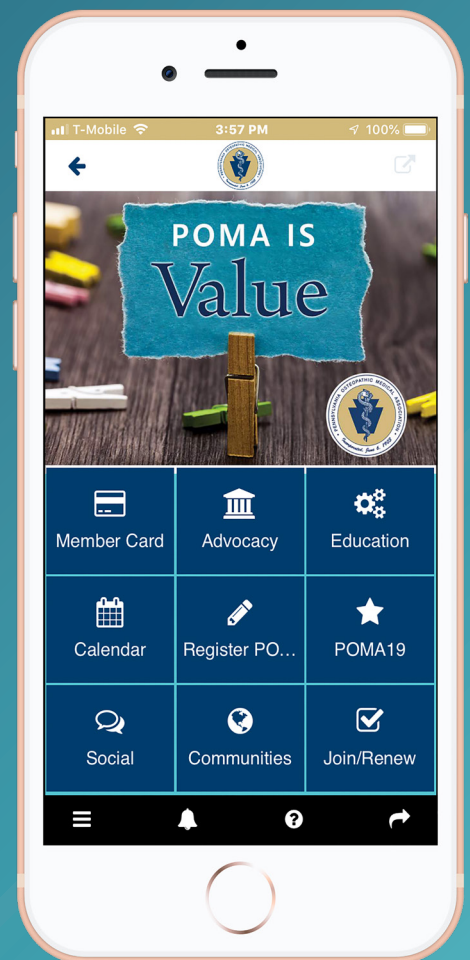
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FROM THE EDITOR'S DESK

Mark B. Abraham, DO, JD



Mark B. Abraham, DO, JD
Editor-in-Chief

Burn out the day
Burn out the night
I can't see no reason to put up a fight
Blue Oyster Cult

I am fairly sure when Donald “Buck Dharma” Roeser and Richard Meltzer put pen to paper and wrote those words the concept of a worldwide pandemic was not even a consideration, under any circumstances. The song is about something completely different than why I am including those particular lyrics, but they do apply.

Before COVID, we all heard the term BURNOUT. Maybe we had patients dealing with it; maybe some us or our family members experienced it. But, as what seems to be with “all things COVID”, BURNOUT has taken on its own life. Oh sure, we all have had rough stretches in school, family life, and in practice. You know all of the things that might have contributed to it in the past — too much work with too little time, trying to maximize reimbursement, dealing with insurance companies, trying to read and keep up on literature, maybe even going to a conference. When those hours were finished, at some point we wanted to find time to spend with friends and family. Maybe take a vacation to “refresh ourselves” or take time out to read a book for pleasure. Exercise. Working exercise into the schedule was important on many levels, including to give ourselves a break from the rest of the work difficulties. It was hard to balance. When we could no longer balance it and needed to start fresh, many of us felt we were “burned out.”

Now, that dynamic has been completely disrupted. We still have the same stressors at work as we always have had. For some, being up close and personal with the battle against COVID has been more of a challenge than any expected when they chose to get into medicine. The early days of the pandemic were especially challenging. We were experimenting with therapeutics (and then arguing about which ones would or would not work based upon anecdotal evidence); we did not have the vaccines and did not know if they were going to even get developed in a timely fashion. The cytokine storms were leading to higher morbidities and mortalities in some otherwise healthy individuals. After a while it became overwhelming. We could not go

to the gym to exercise — they were closed. We could not go to a restaurant — they were closed. We could not go to watch a sporting event — they were cancelled. We weren't even supposed to socialize with anyone outside of our household.

Add to all of that, most of us had family members separated. Some were in skilled nursing facilities. Some had serious medical conditions and were not going to see their providers because their appointments were either cancelled or changed to virtual. Virtual visits helped in some ways (including economically for those who provided the service), but the provider could not lay hands on the patient. A virtual visit with a cardiologist is not very useful if the physician cannot auscultate the lungs and heart, palpate pulses, check an EKG, etc. Worrying about family (or friends) in this way became one more stressor that we were not used to — not to this extent, and many times we were helpless. We could not just go over and “make a house call” because of the lockdowns.

How many of us lost family members or close friends? Funerals, memorials and mourning took on a new and unfamiliar feel. For the most part, it was even more uncomfortable and difficult.

Some family members, whether immediate or extended, could not work because of the shut downs. School became a bedroom, a kitchen, a family room. We watched our children's stress and anxiety increase. That all continues and now the American Academy of Pediatrics is offering guidance on helping kids as their stress and anxiety continue to mount. As a parent watching a child deal with this, it is heartbreaking. It is also another stressor one did not expect.

Supply chain issues — cannot easily stock the shelves in the stores or sometimes the offices. Personnel issues. Too many businesses, including medicine, are short staffed. What happens when the work load increases and there aren't enough people to handle it — we BURNOUT.

With COVID it has all built upon itself. We all have breaking points. Some of us are getting there much faster than we ever anticipated. This is not just isolated to medicine. Many professions and occupations are in the same

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OUT OF MY MIND

Samuel J. Garloff, DO, WGRP

Docere, am I right?

WGRP here. In psychiatry, you are taught not to self disclose. Fortunately, as a P.I.N.O., I am no longer bound by such constraints. I confess to you and all those you choose to inform, one of the heroes of my youth was Horace Mann.

Horace Mann was born into a poor family. He taught himself Latin and Greek and by the age of 20, entered and excelled at Brown University. He eventually became an attorney, a state Representative and taught at various universities. He became an advocate of free, public education and insisted that teachers be university trained professionals. My favorite quote of his is, "Be ashamed to die until you have won some victory for humanity."

Docere, a Latin term meaning "to teach," was first used by Cicero in his book, *De Oratore*, in 55 BC. Docere became the root word of Doctor. We teach. Moreover, as Osteopathic Physicians we teach both our students and our patients. Our obligation to humanity has been fulfilled. We die without shame.

But, do we live without shame? Daily we are told we suffer from burnout. Burnout, really? Just who determines what burnout is and who is afflicted? Personally, I disavow the term. We worked hard to prepare for a lifelong profession. We endeavor daily to provide succor to those who seek our help. At times we are depleted. We are not "burned out." We are at times injured. Morally injured.

Non-physicians look at our frustrations, dismay, disappointments and label us as suffering from burnout. They have my permission to go fly a kite.

Daily, we are confronted with obstacles not of our making. Prior authorization. Pre-approval. I vividly remember being consulted on a nursing home patient. First, I needed to call the insurance company and be approved simply to see the individual. After consultation I submitted my bill. It was denied. Intrigued, I called and asked why. The response? "We approved you to see the patient. We didn't approve payment." This was followed by an offer to be the exclusive psychiatric provider for their company in the county I practiced in. I declined the offer. Moral injury.

EHRs, outrageous demands placed on us by CMS including individual state regulations,

insurance limits on medications, artificial limits concerning the number of physician visits "allowable." Moral injury.

Patients die. In spite of our best attempts to attend to their needs, they die. We internalize it. Don't kid yourself, we do. Sometimes we conduct our own personal M&M investigations. What else could I have done? Should I have referred? Should I have insisted they have surgery? Should I have changed meds? Moral injury.

Patients don't always reveal full histories. The PCP only learns later that their patient was seeing another physician and utilizing multiple pharmacies, resulting in a drug induced death. The surgeon performs a flawless surgery only to see the patient expire due to an unknown cardiac defect. The psychiatrist is told by the patient their depression has improved and their self report is verified by their significant other, only to be called by the coroner to be told that they found the patient and a suicide note. Moral injury.

Can we seek refuge in our professional associations? In our specialty societies? Who imposes certification requirements? Test, now retest. "You took some great CME courses, but we can't count them for continuing certification." Wow! "You may have fulfilled your goal of acquiring additional knowledge, but you still need..." Moral injury.

What can we do? We can support each other. We can be the physicians we trained to be for each other. We can communicate with POMA leadership to inform them of our needs and present them with suggestions to help us. More than anything, we need moral support. We deserve it. We earned it. Moral imperative.

Do we have an obligation to help ourselves? Of course. We can't control all external factors, but we can control most internal factors. We can actually be good to ourselves. We can reach out not only to our colleagues, but to those who love us. They don't need to share our injury, but they can share themselves with us and we can reciprocate. Mutual interdependence can be healing. Find some time daily to invest in yourself. Read. Listen to music. Exercise. Create. Find your thing! While I was in practice, I remember my wife laughing and

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Samuel J. Garloff, DO

LECOM DEAN'S CORNER

Lake Erie College of Osteopathic Medicine

Balance in Life Overcomes Burnout



*Silvia M. Ferretti, DO
LECOM Provost,
Vice President and
Dean of Academic Affairs*

In this present age, it seems that people are busier than ever before: transfixed by technological devices and myriad media, juggling added responsibilities with their families, and all while enduring a pandemic and its related vicissitudes.

Whether daunted by additional responsibilities at work or put upon by the stress of demands attendant to mandates and health concerns, it would appear that many people are struggling with burnout — from shattered nerves to nervous exhaustion or simply to that which one may call stress.

Just how does one face these burgeoning and mounting external life transformations?

LECOM has been an unabashed champion of healthful living; and as the largest medical school in the nation and its only osteopathic academic healthcare center, it emphasizes whole body health as central to its core mission.

In his work *Nicomachean Ethics*, Aristotle defined a virtuous life as one balanced between deficiency and excess. However, balancing action is not simply the "mean" (mathematically speaking) between these two opposite extremes.

An action "at the right times, about the right things, towards the right people, for the right end, and in the right way," constitutes the needed balance, he explained.

Which characteristics and traits do we, as medical professionals — and indeed, as meaningful contributors to our society — hold close? This is the question that explicitly informs our well-being. It becomes our personal compendium of character and ultimately of a balanced and healthful life.

At LECOM, the high and noble calling of the medical profession embraces life balance as the fulcrum of mental and physical fitness; and it is further bolstered by a keen focus upon the science of prevention.

Physician well-being is a complex issue; many scientific tools have been developed

both to measure and to assist in alleviating burnout.

A host of solutions for combating physician burnout include: establishing fair productivity targets, setting duty hour limits, appropriate distribution of job responsibilities, respect for hometime, flexible work schedules, promoting core values, promoting physician communities, offering professional development, and leadership training.

LECOM has long been a determined champion in drawing upon strengths and in aligning values with purpose to increase personal and career satisfaction — all which lead to a balanced and more fulfilling life.

Balance enables one to make sense of that which one encounters in life and it helps one to live that life well.

General principles that encourage a healthful balance allow individuals to make meaningful, conscious decisions in new and difficult situations, and such objectives are of a seminal focus at LECOM.

Just what are the virtues of balance that imbue the life of a medical professional?

They are certain fundamental traits of character for which the vast majority of Americans share a respect: Self-Discipline, Perseverance, Personal Responsibility, Judgment, Purpose, Compassion, Courage, and Faith.

Each of these is a Credo of our Calling, and, applied to any life hurdle, will help individuals not only endure, but thrive.

Facing the pressures of the day, one who seeks these virtues with a balanced objective will be immeasurably better equipped to face the tough issues than will those who lack such perspective.

Time will tell if a world in turmoil will calm, or if what many call "normalcy," will again inhabit our days.

Nonetheless, if one seeks balance and places a focus upon the greater virtues that guide our better angels, we can survive even the darkest of days.

PCOM DEAN'S CORNER

Philadelphia College of Osteopathic Medicine

You are feeling worn out, run down and generally missing the zip you once had. It could be you just need some rest. Maybe you are overdue on taking that planned vacation with your family. Perhaps, however, you are experiencing what nearly half of healthcare workers, particularly frontline providers, describe as “burnout.”

For many, the pandemic has brought on heavy workloads in addition to high levels of stress, anxiety and depression. These elements combined have led to a population left weary and exhausted — with little end in sight. Medical students, the heirs of the pandemic who will inherit its legacy, have not been spared the acute feelings of fatigue experienced by many on the front lines.

At PCOM, we have tried to address these feelings among our student population through a number of support services, health and wellness opportunities and individual and group counseling sessions coordinated by our Student Affairs department. The goal since the start of this crisis has not only been to help students who might be struggling, but to be proactive in our outreach, and provide opportunities to prevent burnout. We know that if we can give our students the tools — take inventory of their feelings, make time and space for themselves, address stress and anxiety through healthy avenues — then we can impart lifelong skills to prevent burnout. The hope is that these lessons will follow them into their personal and professional lives.

To provide these resources, we needed staff trained to address the signs and symptoms of burnout. Early on in the pandemic, we created a brochure to help faculty and staff identify students in crisis. We also developed a newsletter addressing the angst many students were feeling and provided resources and other tools. Our staff wrote inspirational

messages and provided volunteer opportunities for students to empower them to engage and become vehicles for change. In addition, we highlighted and promoted our on-campus food pantry, shared information about virtual tourism and identified ways in which students could stay connected to their classmates and instructors. Our counselors held virtual support groups and shared mindfulness activities. We have also recently opened relaxation rooms on our campuses to offer a space for students to enjoy a brief respite.

With the pandemic now approaching its third year, it is not hard to feel the weight of this enormous challenge on our national psyche. There was a brief period at the end of the spring and early summer when things finally seemed to be returning to normal. When we thought we might put this dark moment behind us. With that possibility now a memory, the creeping symptoms of burnout felt so acutely in the early days of the pandemic have returned, or perhaps, for some, never left. My fear is that these symptoms are more likely a chronic condition needing routine maintenance to keep at bay. Regular check-ups on our mental and physical health, crucial even without a pandemic, will only grow in importance.

As our students traverse the peaks and valleys of four years of medical school, they acquire the skills — among other critical tools in their toolbox — to deliver compassionate patient care. My sincere hope is that at the end of their journeys, after they have exhausted themselves only to do it all over again in residency, they save a bit of grace and humanity for themselves. To check up on themselves and provide for their own care and well-being as they would for their patients. And to use the inheritance of this crisis to support and encourage their colleagues through the next crisis.



*Kenneth J. Veit, DO
PCOM Provost, Senior Vice
President for Academic
Affairs and Dean*

A STUDENT'S VOICE

Ketki Chinoy, PCOM OMS-II and Navkiran Kaur, PCOM OMS-II

Burnout



*Ketki Chinoy,
PCOM OMS-II*



*Navkiran Kaur,
PCOM OMS-II*

Medicine is an artistic realm of gray areas, muddled with unfathomable diagnoses and an alphabet soup of acronyms. For this reason, we rejoice at the sight of concrete numbers, tangible facts and figures and, in the case of physician burnout, the numbers don't lie. According to the 2020 Medscape Physician Burnout Report, 42% of physicians in the US reported burnout. Female physicians overall are 25% more likely to report burnout compared to their male counterparts at 37%. This epidemic has a pervasively negative effect on physician health, patient care, and the healthcare system. Over the last decade, this topic has taken center stage in the debate about ramifications we need to make in the healthcare field. Despite this fact, every year, thousands of new medical students promise to fulfill the oath to do no harm, to honor and do right by our patients while, in the process, neglecting to make that same promise to ourselves. As such, we aspire to use our voices to address their concerns about the field we are devoting their lives to. While we understand the dedication necessary to make a lifelong commitment to our patients, we also need to recognize our duties to our families, friends, and ourselves.

If physician burnout truly was just a combination of balancing the demands of medicine with living a life that makes you happy, perhaps it wouldn't be so difficult to conquer. If this was the case, perhaps the well-meaning seminars, workshops, and activities aimed to address burnout would be enough. However, it seems that the initiatives currently in place are not working as well as we'd want them to, and yet we continue to do them. Einstein's definition of insanity is "doing the same things over and over and expecting different results". It is time for the upcoming generation of physicians to break the seemingly insane and repetitive cycle of burnout, and to address this as a systemic issue, ingrained in the structure and expectations of the field from the very day we start our pre-medical education.

As we see it, medical education conditions students to become workaholics, perfectionists, and the very semblance of mini caffeine-fueled superheroes. Combined with an incred-

ibly rigorous training process and stressful work conditions, physicians become hard-wired for self-denial and burnout. Seeing this, newer generations of medical students put this same kind of pressure upon themselves, adopting it as a rite of passage. We now challenge this notion and, in an increasingly digital world, have been able to connect with other medical students across the nation and around the world. This interconnectedness has helped students realize that we are not alone and the simple act of foraging these connections has done a lot to give us hope. Students are using their free time to create clubs, mentorship programs, and forums aimed at advocating the needs of students, allowing them to put their mental and physical health at the forefront of their focus. From on-campus yoga classes and intramural sports teams to therapy and networking with current physicians for advice, medical students are now focused on showing what this balance should look like. Just as we would not diagnose a patient's broken arm and do nothing but hope for it to heal, we cannot write off the consequences of burnout as 'tragic' and choose to look the other way. It is on us to lead by example and help lift one another up.

We cannot deny that the root problem of physician burnout is the imbalance between demand and supply of healthcare, potentiated by a flawed system. The ultimate resolution is replanting the very roots of the healthcare system. In the long game, this may involve lowering the cost of medical school to encourage more aspirational physicians to join our teams, bolstering the importance of interprofessional education and collaboration, and eradicating the notion that becoming a physician is committing to a life in which you are married to your career. In the meantime, we will continue to advocate for personal and professional balance, recognizing that change starts at the individual level. With the utmost confidence, we believe that if we trust ourselves to provide a better quality of life for our patients, we can absolutely address burnout and find a way to provide a better quality of life for ourselves and for our colleagues.

ABOUT THE AUTHORS

Jeffrey M. Kalczynski, DO, was awarded third place in the 2021 POMA Clinical Writing Contest for his article, *"Measuring the Effect of a Resuscitation Academy on Out of Hospital Cardiac Arrest Resuscitation Rates."* Dr. Kalczynski is an emergency medicine intern at the Naval Medical Center San Diego and an ensign in the United States Navy. A graduate of the University of Delaware and a 2021 graduate of the Philadelphia College of Osteopathic Medicine, he served as an emergency medical technician in Delaware while in undergrad and medical school and was the director of administration and crew chief at the University of Delaware Emergency Care Unit in Newark. Dr. Kalczynski is a member of the Emergency Medicine Residents Association, the American College

of Emergency Physicians and the Academy of Wilderness Medicine.

Shane C. Lohss, DO, MBA, was awarded honorable mention in the 2021 POMA Clinical Writing Contest for his article, *"Improving Colorectal Cancer Screening Compliance Rates through Marketing and Performance of a 2 for 1 Combined Colonoscopy-Prostate Screening Exam."* Dr. Lohss is second year family medicine resident at Millcreek Community Hospital in Erie, Pennsylvania. A graduate of York College of Pennsylvania and a 2019 graduate of LECOM at Seton Hill in Greensburg. Dr. Lohss is happily married with a two-year-old daughter and three cats.



Jeffrey M. Kalczynski, DO



Shane C. Lohss, DO



What is POMPAC?

POMPAC is POMA's political action committee and the political voice of the osteopathic profession in Pennsylvania.

What does POMPAC do?

POMPAC takes in monetary donations from DOs across the state and contributes those funds to targeted state candidates for public office.

Why do we need POMPAC?

POMA has many friends in the state elected office holders that support DOs and the excellent patient care they provide. POMPAC provides monetary donations to assist targeted candidates with their election efforts.

How can I contribute to POMPAC?

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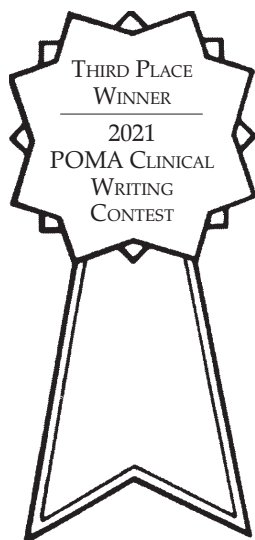
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Medical Update

Measuring the Effect of a Resuscitation Academy on Out of Hospital Cardiac Arrest Resuscitation Rates

by Jeffrey M.
Kalczyński, DO



Abstract

According to the American Heart Association (AHA), rates of successful resuscitation after out of hospital cardiac arrest (OHCA) vary across the country. Amongst 132 counties in the United States, the rates of CPR survival to hospital discharge ranges between 3.4%-22.0%, and the rates of CPR survival with functional recovery ranges from 0.8%-20.1%. This large degree of variability between regions has been improved through programs that educate Emergency Medical Service (EMS) departments on ways to improve outcomes through an evidence-based lens. The Medic One EMS department in Seattle and King County, Washington developed a resuscitation academy (RA) that improved cardiac arrest survival from 26% in 2002 to 62% in 2013. In 2015, the New Castle County, Delaware EMS (NCCEMS) department modeled a RA after the Medic One EMS department. This study measured the effect on the number of patients experiencing return of spontaneous circulation (ROSC) and the cerebral performance category (CPC) scores for discharged patients. Data from 599 atraumatic out-of-hospital cardiac arrests (OHCA) was collected from 2009-2019, and 99 cases met Utstein inclusion criteria. Next, the study categorized if at least one RA was implemented prior to these cases to determine the RA's effect. Implementation of one RA on ROSC outcomes yielded a significant improvement ($p=.028$), with a small to medium strength of effect (Cramer's $V=0.221$); this indicates that the administration of at least one RA had a moderate and significant effect on increasing ROSC in patients suffering from OHCA. Administration of at least one RA did not demonstrate a significant effect on eventual patient outcomes as indicated by discharge CPC score ($p=.488$). This indicates that there was no statistically significant effect

on the cerebral performance of patients who suffered OHCA upon discharge.

Introduction

Definitions

Cardiac arrest — The abrupt loss of heart function in a person who may or may not have been diagnosed with heart disease. It can come on suddenly, or in the wake of other symptoms.¹

Return of Spontaneous Circulation (ROSC) — In cardiopulmonary resuscitation (CPR), the resumption of a normal heart rhythm with a perceptible pulse. ROSC differs from the ultimate goal of CPR, which is the survival of the patient, without injury to the brain, heart, kidneys, lungs, or other organs.²

Utstein survival — Refers to survival to hospital discharge of those cardiac patients whose arrest events were witnessed by a bystander and that involved persons who had an initial rhythm of ventricular fibrillation or pulseless ventricular tachycardia.³

Cerebral Performance Category (CPC) score is widely used in research and quality assurance to assess neurologic outcome following cardiac arrest. A score of 1 is the most favorable outcome, indicating little to no neurologic deficit. A score of 5 indicates brain death.⁴

Basic Life Support (BLS) — Ambulance staffed by Emergency Medical Technicians (EMTs) who are trained in CPR, as well as other basic prehospital life saving interventions. BLS units can also administer basic medications such as intramuscular epinephrine, aspirin, and oral nitroglycerin.

Advanced Life Support (ALS) — Ambulance or chase car staffed by Paramedics, who are trained in Advanced Cardiac Life Support (ACLS), airway management, and other advanced medical procedures.

Out of Hospital Cardiac Arrest (OHCA) — A sudden failure of the heart’s function in the prehospital environment. This leads to unconsciousness and eventually death if no life-saving intervention is made.

Introduction

According to the American Heart Association’s (AHA) Heart Disease and Stroke Statistics 2018 update, “large regional variations in survival to hospital discharge (range, 3.4%-22.0%) and survival with functional recovery (range, 0.8%-20.1%) have been observed between 132 counties in the United States”.⁵ It has been postulated that this large variability in outcomes is multifactorial in nature, though the following have large impacts on recovery rates: rate of bystander CPR, overall performance of EMS systems, and quality of care received in hospital prior to discharge. Programs initiated by the AHA to increase the rates of bystander CPR have led to an overall uptrend in the proportion of cardiac arrest patients who receive resuscitative interventions prior to EMS arriving on scene.⁶ Many changes to post cardiac arrest care have been implemented in recent years, but these are outside the scope of this paper.⁷ The improvement of the EMS system has been identified as one area where a large impact can be made.

This was pioneered by the Medic One program in Seattle, Washington (*Figure 1*). A program called the Resuscitation Academy (RA) was implemented in 2008 in an effort to place an emphasis on the response made by EMS to out of hospital cardiac arrest.⁸ Following the implementation of this program, improvements in outcomes were noted.⁹ The leadership of New Castle County, Delaware EMS (NCCEMS) approached Medic One and requested approval to attend their RA with the hope of implementing a similar program in New Castle County. The content and delivery were modeled after that of Medic One, and delivered over a two-day conference in Delaware. The curriculum and learning goals of the Delaware Resuscitation Academy will be detailed later in this paper.

Materials & Methods

Background

New Castle County, Delaware utilizes a tiered Basic Life Support (BLS) unit/Advanced Life Support (ALS) chase-car deployment model to efficiently and expeditiously meet the ever-increasing public need for Emergency Medical Services (EMS). The Delaware Office of EMS (DE OEMS) has shown a continuous commitment to providing high quality response

to Out of Hospital Cardiac Arrest (OHCA) by including High Performance CPR (HP-CPR) in adult and pediatric cardiac arrest protocols. Both protocols were updated for FY 2019 and 2020 to include a mandatory twenty-minute on scene time prior to initiating transport to a receiving facility (“2019 BLS Standing Orders”, 2018, pp. 32-38). New Castle County EMS (NCCEMS), the sole provider of 911 ALS services, created an annual continuing education and performance improvement initiative in 2016 to educate BLS and ALS providers in OHCA evidence based best practices. This program, dubbed the Delaware Resuscitation Academy (DRA), has been repeated annually since 2016. The Resuscitation Academy in Seattle, Washington was mirrored quite closely, with one major change: live action demonstrations were performed by faculty rather than showing videos to attendees. The goal of this was to engage participants more and allow them to see how “Pit Crew CPR” looks in person. The program engages NCC fire department ambulance personnel, NCC EMS personnel, and local hospital nursing and medical staff. The conference aims to educate individuals in departmental leadership roles, with the goal of having them bring what they learned back to their individual department. Approximately fifty attendees were present at all DRAs. The course is taught over two eight hour days and includes lecture, hands on demonstrations, and scenario participation. The objectives of the RA focus on improving the efficiency of interdisciplinary and interagency operations while promoting evidence based resuscitation practices. This is a particularly important issue in New Castle County, Delaware because the EMS deployment model involves over thirty independent fire companies, each with their own standing orders and procedures for responding to cardiac arrest. Frequently these companies

are called upon to work together to adequately meet the needs of the communities they serve. The RA curriculum includes the latest evidence in resuscitation science and a train-the-trainer module to provide attendees with the tools necessary to implement policy

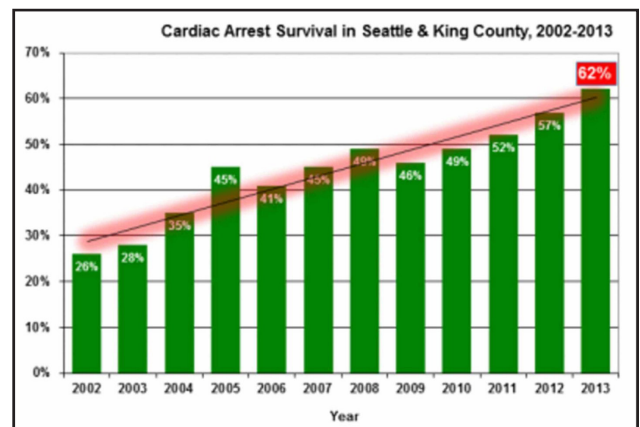


Figure 1: Cardiac Arrest Survival in Seattle & King County by Year, Measured by CPC 1&2 Survival to Hospital Discharge in Utstein Criteria OCHA Patients.

Didactics	Hands-On
- Physiology of cardiac arrest	- Live action demonstration of 2,3,&4 rescuer CPR
- Dispatcher considerations (rapid dispatch and telephone CPR)	- CPR quality assurance with feedback mannequins
- Inter-agency cooperation	- Training with LUCAS 2 Device
- High-Performance CPR (AKA Pit Crew CPR)	- Inter-agency practice simulations
- Resuscitation “choreography”	
- Measurement of Professional Resuscitation	
- “Culture of Excellence”	

Table 1: Curriculum of the Delaware Resuscitation Academy

RA conducted		ROSC was achieved	ROSC was not achieved	Total	% achieved ROSC
	No	33	26	59	56 %
	Yes	31	9	40	78 %
Total		64	35	99	

Table 2: Effect of DRA on ROSC

RA conducted		CPC 1&2	CPC 3-5	Total	% CPC 1&2
	No	21	38	59	36 %
	Yes	17	23	40	42 %
Total		38	61	99	

Table 3: Effect of DRA on CPC scores

CPC 1	CPC 2	CPC 3	CPC 4	CPC 5
Good cerebral performance, able to care for self with little to no deficits.	Moderate cerebral disability, able to care for self with some deficits.	Severe cerebral disability. Conscious, dependent on others. May be ambulatory.	Coma or vegetative state. No interaction with the environment.	Brain death, areflexia, apnea, or death.

Table 4: CPC score criteria

and practice changes at their individual departments. There are a variety of delivery formats utilized across the country, including: online self-paced course, one and two day conference style lecture/skills hybrid. The model being investigated by this study is the two day conference style hybrid — believed to be the more robust and potentially impactful option. See Table 1 for a brief overview of the two day curriculum. This study aims to examine the potential effects, if any, that this program has had on OHCA ROSC, survival to hospital, and Cerebral Performance Category (CPC) 1 and 2 survival to discharge.¹⁰

Specific Aims

- 1) Measure the number of patients experiencing Return of Spontaneous Circulation (ROSC).
- 2) Measure the number of patients discharged from hospital.
- 3) Measure the Cerebral Performance Category scores for discharged patients.
- 4) Discuss the potential benefits of implementing a similar program in another community.

Methods

An IRB at the Philadelphia College of Osteopathic Medicine reviewed and approved this

protocol. Cardiac Arrest Registry to Enhance Survival (CARES) data was obtained from the participating hospital (St. Francis Healthcare, Wilmington, Delaware). This included metrics such as number of presenting patients in current or recent cardiac arrest, condition of the patient when found, treatment interventions, and discharge CPC scores. Data was normalized to enable comparison across years of varying data input styles and patients who meet Utstein-style criteria (witnessed OHCA and presented to arriving first responders in a shockable rhythm) were selected for inclusion in the study.

Statistical analyses were performed to determine if the implementation of an RA had a significant relationship to the above metrics including ROSC rate and CPC score on discharge. Analyses were performed in SPSS utilizing Pearson’s chi-squared test (2-sided asymptomatic significance) to examine the relationship between ROSC and CPC scores to the administration dates of the DRA. A p-value of <0.05 was used to indicate significance. Cramer’s V was applied as a measure of the strength of association between two variables, reported from 0 to 1. Trend lines were determined by applying a best-fit line to the data before and after the first DRA.

Results

In the time period of all available data, 2009-05-01 to 2019-12-31, 599 patient records were obtained, representing all atraumatic out-of-hospital cardiac arrests (OHCA) presenting to St. Francis Hospital. The research team was unable to obtain CARES data from the entirety of New Castle County. Data included patient demographic information, treatment interventions administered, and eventual patient discharge outcome. Of the 599 cardiac arrest patients, 99 met Utstein-style inclusion criteria (a witnessed OHCA found in a “shockable” rhythm upon patient arrival).¹¹

These 99 patients who qualified for this study were tabulated based on ROSC at any point in resuscitation (Table 2) and CPC score on discharge (Table 3). Patients coded in the category of “No” experienced OCHA prior to the first DRA on 2015-10-31, while patients coded “Yes” experienced OCHA after the first DRA. ROSC indicates that at some point in the resuscitation, the patient’s circulation resumed at a non-negligible systolic pressure (measured in the field by the return of a carotid or femoral pulse). The CPC is a widely-accepted measure of a patient’s cognitive function at discharge and is standardized as shown in Table 3.⁴ ROSC

and CPC outcomes were charted and a trendline was fit to each data set as shown in Table 4.

A chi square analysis was performed to examine whether there was a relationship between initiation of the DRA in 2016 and ROSC scores.

A significant relationship was found between the administration of at least one RA and improved ROSC outcomes ($p=.028$) (Figure 2). The Cramer's V of 0.221 indicates that there was a moderate strength of association. This indicates that the administration of at least one DRA moderately predicts an increase in ROSC in patients suffering from OHCA.

The relationship between at least one RA and a CPC score of 1 or 2 was also examined. Administration of at least one RA did not demonstrate a significant relationship with the percentage of patients with a favorable CPC score ($p=.488$) (Figure 3). Thus, cerebral performance of patients who suffered OHCA did not appear to be significantly improved to a CPC level of 1 and 2.

Discussion

We have analyzed resuscitation outcomes using a variety of tools and metrics, including the percentages of patients with ROSC and CPC scores. Each of these tools has been designed to look at what we define as "success" in the setting of OHCA.

There was a statistically significant increase in the number of OHCA resuscitations resulting in ROSC in Delaware after at least one iteration of the DRA. An increase in the incidence of ROSC post RA implementation would be an expected outcome because the program is designed to ultimately increase the efficiency of pre-hospital resuscitation personnel. While this study establishes a correlation between RA and ROSC, analyses of additional data from other medical centers in the county will further substantiate the effectiveness of the DRA program.

The CPC is perhaps the most significant lens through which we look at OHCA survival because it speaks to quality of life and residual sequelae. Categories segregate patients by residual functional capacity, ability to perform activities of daily living independently, and a continuing need for complex medical care. This study found no significant relationship between the percentages of patients with CPC 1 and 2 at discharge before and after instituting the DRA.

Our findings must be viewed in light of the increasing incidence of OHCA and overall EMS calls for service amid a growing and aging

population. With the population of Delaware increasing by 8.4% from 2010 to 2019, and the incidence of OHCA increasing, maintaining a consistent rate of CPC 1 and 2 survival is perhaps a reasonable benchmark to strive for, given the growing incidence of OHCA.¹² The absence of a statistically appreciable increase in CPC 1 and 2 recoveries is almost certainly multifactorial. Further inquiry into the relationship between resource availability, time to first compressions, and CPC outcomes could inform policy and response guidelines.¹³ The DRA may be able to further levy improvement in outcomes by expanding the initiative to include a bystander education arm to capitalize on the low hanging fruit of OHCA in public locations where communal resources are easier to access.

Although significant relationship was not found between the percentages of patients with a CPC score of 1 and 2 before and after the DRA, the percentage of patients with a CPC score of 1 or 2 was higher than those with a 3-5 score after DRA. Analysis of data from additional medical centers will reveal whether or not there is an improvement in CPC outcome as a result of an RA training module. However, the slight shift from a CPC 3-5 to 1-2 with DRA (or better the slight reduction in CPC 3-5 after instituting the DRA) at discharge is encouraging because further improvement in cerebral performance may occur months to years later. This highlights the need for analyzing long-term outcome data of patients that experienced ROSC before and after the DRA program was initiated because a significant amount of neurologic recovery oc-

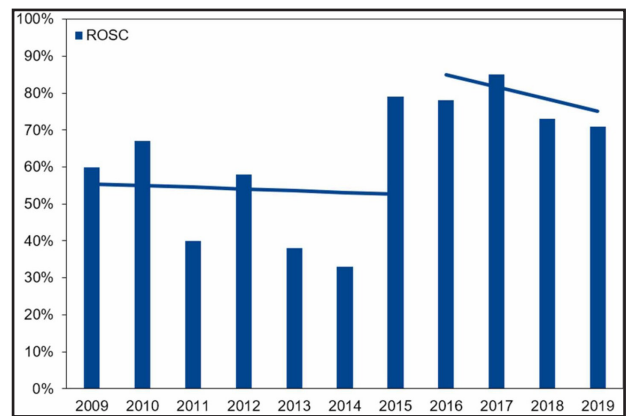


Figure 2: ROSC outcomes before and after instituting the DRA. The percentage of patients with ROSC was calculated each year. The first DRA took place on 2015-10-31. Trend lines indicate best-fit of data before and after the first DRA.

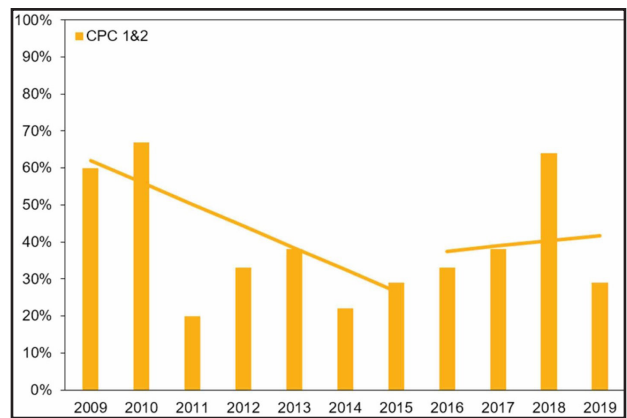


Figure 3: Percent of patients with: CPC scores of 1 and 2 before and after instituting the DRA. The first DRA took place on 2015-10-31. Trend lines indicate best-fit of data before and after the first DRA.

curs after hospital discharge. The juxtaposition of an increase in incidence of ROSC upon no immediately significant improvement in CPC, may raise the question of whether or not this is a topic worth further inquiry. While further analysis is required to more definitively determine the impact of the DRA on CPC, we would assert that this teaching method is worthwhile for two reasons. First, ROSC rates were significantly improved by the program without an apparent decline in CPC scores. Second, a CPC outcome of 1 is what we strive for; however, CPC 5 outcomes have their own implications for a different type of life-saving through organ donation and transplantation.^{12,13}

The care and recovery of OHCA patients is multi-layered and complex.

Additional research may reveal that improved survival is the extent of what the EMS link in the AHA Chain of Survival has to offer.¹⁴ Qualitative improvement may require RAs elsewhere in the chain of survival or a paradigm shift in the overall delivery of prehospital care (introduction of ECPR and other novel techniques such as heads up CPR and strong bystander CPR education).

In addition to the need for analyses of data from other medical centers, this study has the added limitation of the fact that the population was, for the most part, sampled from patients in the area of Wilmington, Delaware. This is an urban environment. Research has demonstrated a markedly lower rate of bystander CPR occurs in urban environments.^{15,16} It is possible that enhanced delivery of EMS as a result of a RA program compensates to some degree for limited bystander CPR.

Conclusions

The cardiac arrest Chain of Survival will only be as strong as the weakest link in the chain. Each link in the chain improves strength and overall performance. Quality improvement programs and education in EMS have been focused on a "time is brain" model, encouraging high efficiency operations, expeditious, coordinated responses and appropriate delivery of best practice resuscitation techniques. The New Castle County Paramedics in Delaware approached this mission, in part, with the implementation of the RA, modeled in partnership with the King County Medic One RA Program was developed by Dr. Mickey Eisenberg (reference). Although the data pool available for this study was limited, we did observe a statistically significant improvement in ROSC rates post-implementation of the training module. There was no significant im-

provement in CPC, although the percentages of patients with CPC 1 and 2 were higher than those with CPCs 3-5 with the DRA. Expanding the analyses to both urban and rural communities will reveal the full impact of the DRA. Modifications in the DRA modules themselves may be warranted, as well as development of additional teaching programs that focus on different "links" in the chain of survival, arrest management, and incorporation of innovative treatment paradigms into the standard of care.

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(continued on page 21)

Medical Update

Improving Colorectal Cancer Screening Compliance Rates through Marketing and Performance of a 2 for 1 Combined Colonoscopy-Prostate Screening Exam

Abstract

Numerous professional and governmental organizations have advocated for colorectal cancer (CRC) screening beginning at age 50 for individuals of average risk with pushes to become more aggressive. Despite an abundance of screening tests allowing for early identification and treatment of CRC, previous studies showed compliance rates of only roughly 50% with significantly lower compliance than other common cancers. For instance, patients in prior studies were found to be both more concerned about their prostate and more compliant with testing relative to CRC screening despite contradicting guidelines. This study sought to examine the current perceptions and understanding of patients related to both colorectal and prostate cancer. It also sought to determine if through offering a combined screening option whereby a prostate exam would be performed during a colonoscopy, if CRC screening rates could be improved. While limited, the study showed CRC compliance rates similar to those obtained over a decade ago with only 48% of survey respondents age ≥ 50 reporting having ever completed CRC screening. Participants also responded positively to the proposed joint screening with 77% of those ages 45-74 responding they would be "more likely to have a colonoscopy performed" if also receiving a prostate exam.

Introduction

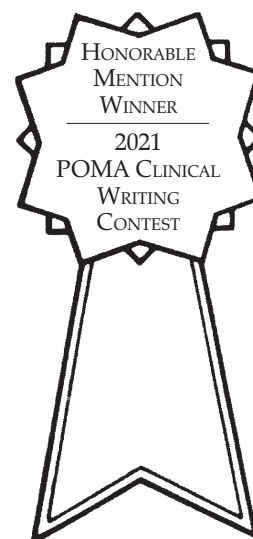
Colorectal cancer (CRC) has remained the fourth overall cause of cancer related deaths in the USA and third overall among American men for over two decades.¹ This mortality remains despite the abundance of effective

screening methods able to detect it at early and highly treatable stages and improved access to screening and preventative care which were included in the Affordable Care Act (ACA) close to a decade ago.² Unfortunately, despite the advances in both screening coverage and screening convenience a significant portion of adults fail to complete recommended screening.

Colorectal cancer is ubiquitous within our adult population with approximately 75% of all cases occurring in people of "average risk," indicating they have no underlying risk factors such as family history or associated medical conditions.³ Despite this, two studies performed prior to the ACA found that only 44% and 48% of responding adults age ≥ 50 had completed any form of CRC screening within recommended guidelines.^{1,4} Another study performed prior to the ACA which looked at first time colonoscopy referrals for patients ≥ 50 years old found that only 50% of patients (55.5% of men) referred for colonoscopy actually had one completed within 6 months. Among the noncompliers of the study, 50% did not believe they were at risk for CRC due to a lack of symptoms and family history.⁵

These CRC screening completion rates are notably lower relative to other common cancer screening rates, such as roughly 75% compliance with both mammography and prostate via PSA.^{5,6} Interestingly in one study noted above, while only 48% of men were compliant with CRC guidelines, 61% of them were compliant with prostate cancer screening (PCS) guidelines. This showed that despite the significance of CRC screening in reducing mortality relative to PCS, roughly one-third of

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participants were compliant with only the less advantageous testing. Interestingly, it identified that adherence to PCS had the greatest influence on compliance with CRC screening with men compliant with PCS being 2 to 3 times more likely to be compliant with CRC screening.⁴ Similarly, another study found that men between the ages of 50-79 were 15%-20% more likely to be up to date with PSA screening vs CRC screening.⁶

The emphasis on screening for prostate cancer has diminished significantly since multiple studies concluded that the morbidity associated with further testing/treatment following PSA blood testing outweighed the benefits in mortality. The US Preventative Service Task Force among other professional organizations have since stressed for “shared decision making between patients and providers”.^{7,8} However, following these changes in guidelines one Canadian study found that 79% of men continued to believe PSA testing was important or very important to their overall health.⁹ Two additional studies in 2015 and 2017 found that less than one-third of

patients reported ever discussing PSA testing and that less than 10% of patients responded they had ever discussed the main aspects of prostate cancer screening and treatment.^{10,11} While these studies demonstrate the need for improved patient-provider discussion about PCS, they may also represent an opportunity to aid in increasing compliance of CRC screening through combining with PCS discussions and possibly joint testing.

A 2017 gastroenterology paper noted that performance of a digital rectal exam (DRE) is standard practice before beginning a colonoscopy. They proposed that this DRE should include examination of the prostate in order to “simultaneously screen for the second and third leading causes of cancer related mortality in American males,” which they dubbed “two for the price of one.” In support of their assertion they noted the high volume of procedures performed allowing for improved competency over most providers, minimal additional time/effort relative to colonoscopy, similar screening guidelines centered around age 50, and improved patient comfort due to sedation.¹²

While the study was focused on expanding potentially beneficial PCS, from our perspective it also represents an opportunity to expand and improve compliance of CRC screening through joint marketing and patient perceived value.

As previously noted, many American males have been both more concerned about their prostate and more likely to be compliant with PCS relative to CRC screening despite numerous studies and organizational guidelines recommending the opposite. While the reasons for this are multifactorial, the patient-physician discussions which it shows to be needed offer the opportunity to better discuss both CRC and PC screening. It is also postulated that due to remaining concerns over PCS, many male patients may become more receptive to CRC screening, namely colonoscopy when provided with the “two for the price of one” option offered above. The goal of the following study is to identify if in fact patients would be more willing to have a colonoscopy performed when presented with the “two for

Figure 1: Participant Survey

Men ages 45 and up please complete following questionnaire	
1. Please write your current age...	Write age...
2. Have you ever discussed screening for colon cancer with your physician?	Circle Yes or No
3. Has your physician ever set up colon cancer tests for you such as Cologuard mail in test, checking your stool for blood, or scheduled a colonoscopy/sigmoidoscopy?	Yes or No
4. Have you ever completed a scheduled or provided test for colon cancer screening?	Yes or No
5. Have you ever discussed Prostate cancer screening with your physician?	Yes or No
6. Have you ever undergone Prostate cancer screening either PSA blood test or physician performed rectal exam?	Yes or No
7. Between Prostate and Colon cancer which are you more concerned about? Please circle	Prostate Cancer Colon Cancer
8. Were you aware that colonoscopy is the Gold standard for colon cancer screening?	Yes or No
9. Were you aware that if any Colon cancer screening test other than a colonoscopy is positive and therefore concerning for cancer that the next step is to have a colonoscopy?	Yes or No
10. If you knew that while having a colonoscopy you would also receive a thorough prostate exam which would therefore be screening for 2 common types of cancer during the same procedure, would you;	
a) Be more likely to have a colonoscopy performed?	Yes or No
b) Be more likely to have a colonoscopy as your first colon cancer screening test?	Yes or No
Thank you for your time and participation, please fold this survey for your privacy and place in marked box or envelope at front desk.	

the price of one" marketing point within the population of Erie, Pennsylvania. An additional goal of the study is to gain better insight into the current perception and understanding of CRC and PC within the community.

Methods

Data Source:

This study utilized a voluntary paper survey for its data collection. The survey was comprised of 10 questions (Figure 1) related to prostate and colon cancer screening along with patient age. Paper surveys with non-exhaustive questioning were selected for data collection in attempt to improve participation by older male patients. The surveys were conducted within the lobby of a large academic dental practice as well as multiple provider offices within the greater Erie, Pennsylvania area. Some surveys were provided to patients meeting inclusion criteria by office receptionists while others were placed in visible locations within lobby areas for patients to pick up at their leisure. Upon completion the surveys were either placed within a collection box or given to a receptionist to be placed in a collection folder.

Inclusion Criteria:

Survey targeted all men age ≥ 45 with this age restriction printed on the survey sheet. Question 1 of survey asked for patient age for additional analytical value and to remove surveys entered in error.

Measures/Statistical Analysis:

The survey consisted of nine Yes or No questions pertaining to prior discussion/screening of prostate and colorectal cancer and knowledge of related screening topics. Additionally, it included one question asking for patient age and one asking directly which cancer, prostate vs colorectal, they were more concerned about. The survey responses were then recorded in Microsoft Excel and grouped based on patient age within the age ranges of 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, and ≥ 75 . The data from these groups were then combined in various age ranges for further interpretation. Microsoft Excel was used for performing basic statistical analysis for comparison.

Results

Table 1 displays the age demographics of all survey participants from the study along with weighted percentages for each specified age range. The average age of the study's total (N=41) respondents was 57.41 years old. Of the total, 8 participants (19.51% of total) were

between the ages of 45-49 which while lying within some guidelines for both CRC and PC in patients with elevated risks, is otherwise below the more commonly utilized age of 50. Within the conventional CRC screening guidelines for ages 50-74 y/o, 31 respondents (75.61%) were within this range with 26.83% age 50-54, 12.20% age 55-59, 26.83% age 60-64, 4.88% age 65-69, and 4.88% age 70-74. There were 2 respondents (4.88%) age ≥ 75 y/o placing them above current screening guidelines.

Tables 2 through 11 each represent the responses broken down by specified age range to each of the additional questions from the survey. Table 2 shows that 56% of total participants and 70% of those age 50+ responded as ever having discussed CRC screening with their physician.

Table 3 shows that 46% of total participants and 58% of those age 50+ have had a CRC screening set up for them in the past while

Table 1. Demographic breakdown via age for research participants (Question 1)

Average Age	57.41 y/o	
Age Range	# Participants	% of Total
45-49	8	19.51%
50-54	11	26.83%
55-59	5	12.20%
60-64	11	26.83%
65-69	2	4.88%
70-74	2	4.88%
75+	2	4.88%
Total (N)	41	

Table 2.

Question 2: Have you ever discussed screening for colon cancer with your physician?

Age Range	N	Yes	No	Blank/NA	% Yes	% No	% Blank
45-49	8	0	8	0	0%	100%	0%
50-54	11	7	4	0	64%	36%	0%
55-59	5	3	2	0	60%	40%	0%
60-64	11	7	3	1	64%	27%	9%
65-69	2	2	0	0	100%	0%	0%
70-74	2	2	0	0	100%	0%	0%
75+	2	2	0	0	100%	0%	0%
Total	41						

Table 3.

Question 3: Has your physician ever set up colon cancer tests for you such as Cologuard mail in test, checking your stool for blood, or scheduled a colonoscopy/sigmoidoscopy?

Age Range	N	Yes	No	Blank	% Yes	% No	% Blank
45-49	8	0	8	0	0%	100%	0%
50-54	11	8	3	0	73%	27%	0%
55-59	5	2	3	0	40%	60%	0%
60-64	11	3	8	0	27%	73%	0%
65-69	2	2	0	0	100%	0%	0%
70-74	2	2	0	0	100%	0%	0%
75+	2	2	0	0	100%	0%	0%
Total	41						

Table 4.

Question 4: Have you ever completed a scheduled or provided test for colon cancer screening?

Age Range	N	Yes	No	Blank	% Yes	% No	% Blank
45-49	8	0	8	0	0%	100%	0%
50-54	11	7	4	0	64%	36%	0%
55-59	5	2	3	0	40%	60%	0%
60-64	11	3	8	0	27%	73%	0%
65-69	2	2	0	0	100%	0%	0%
70-74	2	0	2	0	0%	100%	0%
75+	2	2	0	0	100%	0%	0%
Total	41						

Table 5.

Question 5: Have you ever discussed Prostate cancer screening with your physician?

Age Range	N	Yes	No	Blank	% Yes	% No	% Blank
45-49	8	2	6	0	25%	75%	0%
50-54	11	5	6	0	45%	55%	0%
55-59	5	1	4	0	20%	80%	0%
60-64	11	4	7	0	36%	64%	0%
65-69	2	2	0	0	100%	0%	0%
70-74	2	2	0	0	100%	0%	0%
75+	2	0	2	0	0%	100%	0%
Total	41						

Table 6.

Question 6: Have you ever undergone Prostate cancer screening either PSA blood test or physician performed rectal exam?

Age Range	N	Yes	No	Blank	% Yes	% No	% Blank
45-49	8	0	8	0	0%	100%	0%
50-54	11	6	5	0	55%	45%	0%
55-59	5	1	3	1	20%	60%	20%
60-64	11	2	9	0	18%	82%	0%
65-69	2	2	0	0	100%	0%	0%
70-74	2	2	0	0	100%	0%	0%
75+	2	2	0	0	100%	0%	0%
Total	41						

Table 7.

Question 7: Between Prostate and Colon cancer which are you more concerned about?

Age Range	N	Prostate	Colon	Blank/NA	% Prostate	% Colon	% Blank/NA
45-49	8	4	2	2	50%	25%	25%
50-54	11	5	6	0	45%	55%	0%
55-59	5	0	4	1	0%	80%	20%
60-64	11	3	6	2	27%	55%	18%
65-69	2	2	0	0	100%	0%	0%
70-74	2	2	0	0	100%	0%	0%
75+	2	2	0	0	100%	0%	0%
Total	41						

Table 8.

Question 8: Were you aware that colonoscopy is the Gold standard for colon cancer screening?

Age Range	N	Yes	No	Blank	% Yes	% No	% Blank
45-49	8	2	6	0	25%	75%	0%
50-54	11	6	5	0	55%	45%	0%
55-59	5	5	0	0	100%	0%	0%
60-64	11	8	3	0	73%	27%	0%
65-69	2	2	0	0	100%	0%	0%
70-74	2	2	0	0	100%	0%	0%
75+	2	2	0	0	100%	0%	0%
Total	41						

Table 9.

Question 9: Were you aware that if any Colon cancer screening test other than a colonoscopy is positive and therefore concerning for cancer that the next step is to have a colonoscopy?

Age Range	N	Yes	No	Blank	% Yes	% No	% Blank
45-49	8	2	6	0	25%	75%	0%
50-54	11	6	5	0	55%	45%	0%
55-59	5	2	3	0	40%	60%	0%
60-64	11	6	4	1	55%	36%	9%
65-69	2	2	0	0	100%	0%	0%
70-74	2	2	0	0	100%	0%	0%
75+	2	2	0	0	100%	0%	0%
Total	41						

Table 4 shows that 39% of total and 48% of age 50+ have ever completed any form of CRC screening.

Tables 5 through 7 are related to prostate cancer screening with Table 5 showing 39% of total and 42% of those 50+ responding having ever discussed prostate cancer screening with their physician. Table 6 shows that 37% of total and 45% age 50+ responded as ever having any form of prostate cancer screening completed. Table 7 shows responses to whether patients are more concerned about prostate vs CRC with total participants being evenly split 44-44% for each type and 12% of respondents either circling both cancers or leaving no response. Of patients <50 y/o, 50% were more concerned with prostate compared with 25% for CRC. For those age 50+, 42% were more concerned with their prostate compared to 48% for CRC.

Tables 8 and 9 show responses based on knowledge of colonoscopy procedures. Table 8 shows that 66% of total respondents and 76% of those 50+ reported awareness that colonoscopy is the Gold standard screening method for CRC. Table 9 shows that 54% of total and 60% of those 50+ responded awareness that a colonoscopy is the next step following a positive result for any other CRC screening method.

Tables 10 and 11 show the two-part responses to the posed question of how patients would act if they knew that while having a colonoscopy, they would also receive a thorough prostate exam during the same procedure. Table 10 shows responses to part one with 73% of total participants and 77% of those ages 45-74 responding they would be "more likely to have a colonoscopy performed." Additional comparison shows as high as 100% of the youngest age cohort and 81% of those age 45-69 would be more likely to have a colonoscopy. Similarly, Table 11 shows responses to the second part which asks if patients would be "more likely to have a colonoscopy as their first CRC screening test." Here, 68% of total participants and 76% of those ages 45-69 reported being more likely to have colonoscopy as their first screening choice. For Tables 10 and 11, one participant in the age 65-69 range did not provide a response.

Discussion

This study examined various aspects concerning CRC and PC including current perceptions and understanding held by male patients and whether a new discussion tactic may be beneficial in increasing compliance of

CRC screening. The study identified that only 48% of male participants age 50+ have ever completed any form of CRC screening. Similar studies performed over a decade ago showed CRC screening compliance ranged from 44% to as high as 55.5% in males.^{1,5} While the study is limited due to sample size it could indicate that we have made little to possibly negative progress in increasing CRC screening compliance despite a decade of effort combined with the expanded coverage of the ACA.

While the reasons behind this issue are multifactorial, one of the most evident solutions is through improved communication between patients and their health care providers. While this study showed that 48% of eligible males completed CRC screening it also identified that only 70% of respondents age ≥ 50 and only 56% of total respondents had ever discussed CRC screening with their provider. Due to similarities in screening age and possible combined screening procedures prostate cancer was also addressed in the study. The study identified that 45% of responders age ≥ 50 had completed PCS compared with 48% for CRC despite the greater importance of CRC screening. The study showed a similar breakdown with participants split 44-44% each when asked which type of cancer, CRC vs PC, they were more concerned with. Interestingly a further breakdown by age showed that 50% of patients <50 y/o were more concerned with prostate compared with 25% for CRC. These findings further indicate the need for enhanced patient-provider communication while also affirming the potential benefit of simultaneously screening for both cancers during a colonoscopy.

For the principal goal of this study which was to identify a potential value in offering “two for the price of one” screening,¹² the study found that 77% of those age 45-74 responded they would be “more likely to have a colonoscopy performed.” This includes 100% of the youngest age cohort and 81% of those age 45-69 being more likely to have a colonoscopy. The study also found that 76% of respondents ages 45-69 reported being more likely to have a colonoscopy as their first screening choice if combined with a prostate exam.

While a larger study is needed, the results from this study show the potential benefit in improving CRC screening compliance through offering a simultaneous prostate exam. As discussed in Fang's study, this will require cooperation among the patient's various providers. The principal marketing role will likely fall on the primary care providers who will be

Table 10.

Question 10a: If you knew that while having a colonoscopy you would also receive a thorough prostate exam which would therefore be screening for 2 common types of cancer during the same procedure, would you be more likely to have a colonoscopy performed?

Age Range	N	Yes	No	Blank	% Yes	% No	% Blank
45-49	8	8	0	0	100%	0%	0%
50-54	11	9	2	0	82%	18%	0%
55-59	5	5	0	0	100%	0%	0%
60-64	11	7	4	0	64%	36%	0%
65-69	2	1	0	1	50%	0%	50%
70-74	2	0	2	0	0%	100%	0%
75+	2	0	2	0	0%	100%	0%
Total	41						

Table 11.

Question 10b: If you knew that while having a colonoscopy you would also receive a thorough prostate exam which would therefore be screening for 2 common types of cancer during the same procedure, would you be more likely to have a colonoscopy as your first colon cancer screening test?

Age Range	N	Yes	No	Blank	% Yes	% No	% Blank
45-49	8	8	0	0	100%	0%	0%
50-54	11	8	3	0	73%	27%	0%
55-59	5	5	0	0	100%	0%	0%
60-64	11	7	4	0	64%	36%	0%
65-69	2	0	1	1	0%	50%	50%
70-74	2	0	2	0	0%	100%	0%
75+	2	0	2	0	0%	100%	0%
Total	41						

tasked with educating the patient along with placing the referral. The endoscopists will be tasked with expanding their skillset to include DRE of the prostate while urologists will need to coordinate with endoscopists to determine guidelines regarding a referral process to their care when indicated.

Conclusion

Based on the results of this limited study it can be inferred that too few male patients are currently compliant with CRC screening guidelines. It can also be concluded that enhanced communication and education between patients and their providers is one way of improving compliance though it has failed to do so over the past decade. This study also establishes a new possibility which is improved compliance through offering “two for the price of one” screening to take advantage of patient's concerns for prostate cancer with their desire to seek perceived value in the care they receive. Through the collaboration among providers and combining of screening for the second and third leading cause of cancer related death in U.S. men it is believed the compliance rate for CRC screening can be meaningfully improved.

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Measuring the Effect of a Resuscitation Academy (cont'd from page 14)

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FROM THE EDITOR'S DESK *(continued from page 4)*

situation. This summer when I was in Hilton Head, one restaurant had a sign out front announcing "THE NEW PANDEMIC. WE ARE SHORT STAFFED. PLEASE BE PATIENT AND KIND TO YOUR SERVER. THANK YOU." Right next to it was the Help Wanted sign.

In this issue you will read various takes on BURNOUT. One plan which had to be delayed in this issue (due to time) was to have a point/counterpoint type of discussion. We will save that for the next issue. Dr. Garloff will provide his input and comments about what I have written and I will respond. Depending upon how it works, I would like to try and do that in the future. Perhaps some of you amongst yourselves would like to submit a point/counterpoint discussion. Please do. I know you have the conversations whether in the office or on the golf course or in a well-ventilated restaurant.

Jimi Hendrix once asked "Are you experienced?" I now ask are you burned out (again) after reading this? If so, good. Then I made my point.

Our next issue will also deal with COVID but in a slightly different way. I want to know

what you think the "leaders" got WRONG. Yes, WRONG. I am not looking for this to be a "blame game" or become political. That is not the point. We are all physicians. We have lived this pandemic. We have watched and read the lay press. We have read the published literature. We are approaching the two year mark for SARS-COV-2 doing its damage. Is there something which you feel was a glaring error. I am sure you have an opinion. If you ask your family members, they can probably think of something specific when you watch the news or read the news and you then voice your opinion (I know, if asked, my wife and daughter could fill an entire *JPOMA* about my rants).

Hopefully, if any of you are suffering from BURNOUT, it will resolve quickly. Just remember:

Time is the essence, time is the season...

Time everlasting, time to play B-sides...

Blue Oyster Cult

Until then, stay healthy and safe. I hope you all have a Happy Thanksgiving and Holiday Season since they are quickly coming up.

OUT OF MY MIND *(continued from page 5)*

saying, "you're the only person I know who studies for fun." She was right. At that time in my life it was fun! So are movies, plays, concerts and countless other activities. A good meal at a restaurant. A vacation. Sometimes, doing nothing. Moral imperative.

You are not alone. We are not alone. We are neither helpless or defenseless. We do not suffer burnout. We endure moral injury, but

we can protect ourselves. We can rely on our training, our families, our friends, our state association and ourselves. That my friends is a powerful team.

If you read my column, you know my love of literature. Let me quote Lewis Carroll. "Begin at the beginning," the King said gravely, "and go on till you come to the end; then stop."

We do not suffer burnout.

CME Quiz

Name _____ AOA # _____

1. Which of the following was NOT involved in the curriculum of the Delaware Resuscitation Academy?
 - a. Training with LUCAS-2 device
 - b. "Pit Crew CPR"
 - c. Hands Only CPR
 - d. Inter-agency Practice Simulations
 - e. Physiology of Cardiac Arrest
2. The Delaware Resuscitation Academy (RA) was modeled after the original RA, held in which city?
 - a. New York
 - b. Dallas
 - c. San Diego
 - d. Seattle
 - e. Miami
3. Which of the following is not an element of the Utstein Survival?
 - a. Cardiac arrest was witnessed
 - b. Arrest was traumatic in nature
 - c. Initial rhythm was ventricular fibrillation or pulseless ventricular tachycardia
 - d. Patient survived to hospital discharge
 - e. Arrest was presumed to be cardiac in nature
4. Colon/Rectal and Prostate cancer are the 2nd and 3rd most common causes of cancer related death in Americans?
 - a. True
 - b. False
5. More than 75% of all colorectal cancer occurs in patients with strong family history of colorectal cancer?
 - a. True
 - b. False
6. Colonoscopy is often the preferred method for Colorectal cancer screening because it typically allows for both the screening/diagnostic and treatment to occur during the same procedure?
 - a. True
 - b. False

To apply for CME credit, answer the questions in this issue and return the completed page to the POMA Central Office, 1330 Eisenhower Boulevard, Harrisburg, PA 17111; fax (717) 939-7255; e-mail cme@poma.org. Upon receipt and a passing score of the quiz, we will process 0.5 Category 2-B AOA CME credits and record them in the POMA CME portal and forward them to the AOA.

Complete the CME quiz for this issue of the JPOMA online — <http://bit.ly/jpoma2021-3>

Answers to Last Issue's CME Quiz

1. c
2. b
3. b
4. c
5. b
6. c
7. b

(Questions appeared in the Summer 2021 Journal.)

We know you have an opinion! Share your thoughts with us!

**WE WANT TO
HEAR FROM
YOU!**

The Winter 2021 issue will focus on what you think could have been done better as it relates to the management of the COVID pandemic so we can learn from the mistakes and not repeat history. This is not meant to be political blame game, rather, as a physician, is there something you feel was a glaring error?

We value your input and respect your privacy. If you wish to remain anonymous, we are happy to remove any identifiers from your piece. Please, write us today!

Submit entries or questions to Mark Abraham, DO, JD, JPOMA Editor via email to bdill@poma.org or mail to POMA, 1330 Eisenhower Blvd., Harrisburg, PA 17111. Submission deadline is **November 30, 2021**.



Now more than ever – we're in this together.

As a physician-led insurer, ISMIE recognizes the continuing challenges healthcare professionals face with COVID-19 — from new variants to vaccination distribution, it seems there's a battle at every turn. Our Wellness Center includes resources to help you navigate personal and professional challenges. Learn more by visiting ismie.com/wellness.

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