PANHANDLE HEALTH

A QUARTERLY PUBLICATION OF THE POTTER-RANDALL COUNTY MEDICAL SOCIETY

Winter 2019 | VOL 30 | NO. 1

New Specialties and Subspecialties



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Editor's Message: *New Specialties and Subspecialties*

by Steve Urban, MD

This issue of Panhandle Health addresses new specialties and subspecialties in the medical field. Some have been around for a while but have not permeated the Panhandle area (e.g. pediatric emergency medicine, approved as a subspecialty in 1991). Others have been around a bit longer (e.g. hospice and palliative care, since 2006), while female pelvic medicine and reconstructive surgery was approved only in 2011. Some topics, such as bariatric surgery, are interesting niche areas where training requirements and full certification exams have yet to be established.

The American Board of Medical Specialties was established in 1933 (the name was a little different then) to create standards for certain specialized disciplines (dermatology, ob/gyn, ENT, and ophthalmology). These areas were felt to require specialized skills or expertise in limited areas that the generalist physician might not master. Within a few years, specialization in areas such as general surgery, internal medicine, pediatrics were included. Now, each specialty or subspecialty establishes its own standards, usually involving requirements for residency or fellowship training, certifying exam, and maintenance of certification. Although board certification is optional and is not required for licensure to practice medicine in most states or in some hospitals, certification does indicate that the practitioner has, at the very least, completed the specified requirements.

Some more recently approved specialties include interventional radiology (2017) and laboratory genetics and genomics (2019). Among the subspecialties, several have been approved by the ABMS quite recently; for instance, sports medicine was approved in 2003, sleep medicine in 2006, and pain medicine in 2014. The newest subspecialties include addiction medicine (2015), micrographic dermatological surgery (also 2015) and neurocritical care (2018). In 2017, the ABMS created a new category termed Focused Practice Designation, which recognizes doctors who have built a niche of expertise for themselves through practice and continuing education. One example Is hospital medicine, designed for the many hospitalists who did general internal medicine or family medicine residency (i.e., no additional training in hospital medicine) but who demonstrate expertise as a hospitalist through and hours of CME credits and years of inpatient practice. Another interesting new area of Focused Practice is advanced emergency medicine ultrasonography.

Almost half a million practitioners are now board certified. The largest number are internists (including the medical subspecialties) at around 240,000. Pediatricians are next at 105,000, with family medicine practitioners at 91,000. Perhaps not surprisingly, the most exclusive club is colorectal surgery, with only 2,400 certified practitioners. Over the past 10 years, the ABMS has certified more internists (75,000), family doctors (33,000) and pediatricians (31,000) than any other specialty. We have produced 23,000 psychiatrists and neurologists (they share a certifying board) and 11,000 surgeons. The smallest number of specialists (I'm not counting subspecialists here) include thoracic surgeons (984), colorectal surgeons (860) and, glowing off there in the distance, nuclear medicine practitioners (621).

I must admit to having some reservations about this process of grinding medical practice into finer and finer pieces. Statistics demonstrate that medical systems based around the primary care physician-ideally, one who carefully assesses the patient and refers only when necessary--produces slightly superior outcomes at significantly reduced cost. I regret the increasing rarity of the primary doc who embraces the role as captain of the ship and refers for specialized procedures or the occasional perplexing case. Few PCPs now contribute to the care of their patients during hospitalization; the modern PCP has become a traffic cop for referrals. Unless we see a dramatic change in the way the American medical system is structured and remunerated, however, the unending subspecialization of medicine is here to stay. With robust certification, we can at least have some assurance that our minutely pulverized medical delivery system is peopled with rigorously trained and well recertified specialists and subspecialists.

Our Next Issue Of *Panhandle Health* Features: Highlights of the last five years

POTTER RANDALL COUNTY MEDICAL SOCIETY (PRCMS) OFFERS HELP TO TROUBLED PHYSICIANS

If you, or a physician you know, are struggling with addiction, depression or burnout and are unsure what to do or whom to contact, the Potter-Randall County Medical Society is here to help. We offer face-to-face confidential sessions with the PRCMS Physician Health and Wellness Committee, made up of your physician peers who know and understand recovery. Please don't struggle alone when help is a phone call or an email away. Whether you are calling for yourself, your practice partner, or as a family member of a physician, contact Cindy Barnard, PRCMS Executive Director, at 806-355-6854 or <u>prcms@suddenlinkmail.com</u>. Membership in PRCMS is not required.



Potter-Randall Alliance NEWS





November 2019

In September, the Potter-Randall County Medical Alliance, Society and Circle of Friends hosted the Fall Couples Social at the beautiful home of Dr. and Mrs. Assadour Assadourian. It was great getting to know new faces and catching up with old friends. We hope you enjoyed the evening and will attend another one of our events in 2020.

It's time to renew membership for 2020! There are three options for paying dues:

- 1. Go online to <u>www.texmedalliance.</u> <u>org</u> (look for blue button in the upper-right corner of website; click on "Renew" if you're a current member and want to renew your membership)
- 2. Call TMA Knowledge Center at (800) 880-7955 with credit card information
- **3. Mail an application or mailed invoice** with payment to the address indicated on the form. If you are not already a member, please consider joining.

The Alliance is a great organization for developing lifelong friendships, building a network of colleagues, and finding a support system that understands the unique challenges of life in a medical family. If you are a physician, the spouse of a physician, resident physician or medical student, you can also join this dynamic organization that advocates on behalf of medicine.

Please check Facebook and email for a list of upcoming events. <u>www.potterran-dallalliance.com</u>

SHOUTOUTS

Thank you Elisa Hemmerich and Mackenzie Sigler for providing meals to the Ronald McDonald House in September and October. Thank you Michelle Agostini and Christine Cox for helping plan the Fall Couples & Ladies Social in September and October. Weather has not been on our side this year, with rain and snow, but these ladies put together lots of hard work to make sure our events ran smoothly. A huge thank you to Dr. and Mrs. Assadourian for hosting the Fall Couples Social. The food and drink were delicious and without your generosity we would not have had the opportunity to have fellowship with friends and colleagues.

VOLUNTEER OPPORTUNITIES

The Alliance needs your help to make a difference in our local community for 2020! We are currently seeking volunteers to provide meals to the Ronald McDonald House in 2020. This is a great way to give families peace of mind and allow them to unwind without the stress of cooking or expense of going out while their child is hospitalized here in Amarillo. We need only 11 volunteers for 2020 who are willing to commit to sending a restaurant catered meal for typically 10-15 people on the 2nd Tuesday of the month. This can be as simple as pizza delivery or a family meal pack from United. If interested, please send an email to potterrandallallince@yahoo.com.

In addition, if you are interested in helping plan and execute events in 2020,

please send me an email at <u>potterrandal-lallince@yahoo.com</u>. We have opportunities to suit many types of personalities... family events, socials, community outreach and advocacy.

Sincerely,

Ashley Troutman-PRCMA President www.potterrandallalliance.com

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Executive Director's Message

by Cindy Barnard, Executive Director

It may be news to many of us, but there exist many medical subspecialties unfamiliar to you and me! From Allergy (A) and Anesthesiology (AN) to Urology (U), i.e. from A to U (if a Z specialty or subspecialty exists, I don't know of it!), a physician's choices are anything but limited when it comes to medical specialties and subspecialties. It is fairly obvious that a subspecialty is a narrow field within a specialty such as Pediatric Ophthalmology (PO), a subspecialty within the specialty of Ophthalmology (OPH). These advanced fields of medical expertise require 1-2 years of postresidency training or a fellowship "in a recognized program" and often end with an exam and further certification. Some of the more common subspecialties exist within Cardiology (CD), Internal Medicine (IM), and Emergency Medicine (EM).

The need for subspecialties has increased as medical research and technology have become infinitely more complicated. For example, the American Academy of Orthopedic Surgeons (ORS) states that approximately 2500 Orthopedic Surgeons (ORS) are Board Certified in Orthopedic Sports Medicine (OSM), and another 2000 are Board Certified in Hand Surgery (HS). These diverse subspecialties indicate a physician with a unique body of education and knowledge in his or her field who is able to care for a patient with a unique illness. We highlight some of these subspecialties in this Winter issue of Panhandle Health.

As the year ends, I want to thank the 2019 Board of Directors for their service and dedication to our Society. Under the leadership of our President, Dr. Daniel Hendrick, 2019 has been an exceptional year. The following physicians deserve a big thank you for their support as well:

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Another thank you goes to the 2019 *Panhandle Health* Editorial Board, led by Dr. Walter Bridges, Editor, and Dr. Scott Milton, Associate Editor. Other Editorial Board members are Tracy Crnic, M.D., Tarek Naguib, M.D., Steve Urban, M.D., Rouzbeh Kordestani, M.D., Paul Tullar, M.D. and Ravi Bharadwaj, M.D.

A final thank you goes to our 2019 "Circle of Friends" for their contin**Board of Censors:** Evelyn Sbar, M.D. Tarek Naguib, M.D. William Holland, M.D. Gerad Troutman, M.D. Neil Veggeberg, M.D. Lisa Veggeberg, M.D.

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ued financial support and generosity. Their commitment is absolutely essential to the success of all our events. They are Amarillo National Bank, Baptist Community Services, Neely, Craig & Walton Insurance Agency, Texas Medical Association Insurance Trust, Texas Medical Liability Trust, Happy State Bank, Cenveo Amarillo, Daryl Curtis, CLU, CHFC, and Physicians Financial Partners.

In Memoriam

HOLLIS HANDS, M.D. Obstetrician and Gynecologist, died on January 22, 2019 at the age of 90. He was a member of the Potter-Randall County Medical Society for 58 years.





Robotic Surgery

by LaJohn B. Quigley, MD, FACS

Surgery is a fundamental tool of therapy in our healthcare system. Robotic surgery now plays an integral role in the improvement of surgical care. Advances in technology have led to better patient outcomes and shorter stays in the hospital. Surgical robots have been developed to facilitate minimally invasive surgical techniques and to assist surgeons performing advanced surgical procedures which otherwise would not be possible with traditional open or laparoscopic techniques.

History of robotic surgery

Robotic surgery is one of the most advanced forms of Minimally Invasive Surgery. Application of robotic technology to surgical robotics started approximately 20 years ago. A robot is defined as a mechanical device that can be programmed to carry out instructions and perform complicated tasks usually done by people. The first robot to imitate human movements of the jaw, arms, and neck was designed by Leonardo da Vinci in 1495 and named the Metal-Plated Warrior. This served as inspiration to Gianello Torianno, who created a robotic mandolin-playing lady in 1540. Invented by Jacquet-Droz in 1772, "The Writer" was a programmable wheel designed to write whatever the user desired, replicating tasks previously only performed by humans (1).

Surgical robots can be either passive or active. Autonomous (passive) robots, such as Probot©, perform a sequence of movements which are typically preprogrammed. Active robots involve a surgeon directly moving the surgical instruments intraoperatively. The surgeon feels as though he or she is within the operative field. Puma 560© was a robot used to perform neurosurgical biopsies in 1985. In 1988, a transurethral resection of the prostate was performed using the same technology. ROBODOC© was designed to machine the femur with greater precision in hip replacement surgeries (1,2). These early robots contributed to the development of more advanced and current robotic systems.

"AESOP, look up." "AESOP, zoom in." As I looked around the room I could see no one responding, but the camera did exactly what the attending said. As I scrubbed in with a new attending, I noticed a small machine attached to the operating table. I had never seen this device before, and it was very impressive. Approved in 1994, AESOP (Automatic Endoscopic System for Optimal Positioning) was the first robot approved by the FDA for surgical procedures of the abdomen. Controlled by voice commands, the device can be connected to the operating room table and holds the laparoscopic camera. AESOP is capable of doing exactly what is commanded, with steadiness and precision. The ability of the surgeon to control the camera was a major technological advancement, allowing the surgical assistant to be replaced by a robot. Later generations have 7 degrees forward motion to mimic the human hand.

Concepts in immersive telerobotic surgery began their development with the military. Scientists envisioned the application of telecommunication and robotic technology to allow a surgeon to operate on a wounded soldier from a workstation at a remote location. Newly developed technology was taken from the battlefield and incorporated into the field of medicine.

Developed by Akhil Madhani, "Black Falcon" was the first teleoperated surgical instrument for minimally invasive surgery. The robot was able to be manipulated from a remote location using a hand piece. The success of AESOP as an assistive device, combined with the potential clinical applications of the "Black Falcon", resulted in commercial interest in robotic surgical applications. In 1995, Intuitive Surgical Inc. bought the patent for "Black Falcon" which led to the development of da Vinci Robotic Surgical System (Figure 1). First used in 1997 to perform laparoscopic cholecystectomy in Brussels,

[|] continued on page 10



Figure 1

Belgium, the da Vinci Surgical System is a robotically controlled endoscopic instrument controlled by a surgeon at a remote location. The operating surgeon controls 2 or 3 arms to manipulate the instrument and an additional arm to control the video endoscope. An infrared sensor detects the surgeon's head position to trigger the activation of the robotic arms. The system has been approved by the US Food and Drug Administration for urologic, general laparoscopic, gynecologic, and general non-cardiovascular thoracic surgical procedures in adults and children since 2000.

My first encounter with the da Vinci Surgical System occurred in 2013 during my fellowship in Minimally Invasive and Bariatric Surgery. Minimally Invasive and Bariatric Surgery fellowship is an intensive one-year fellowship focused on less invasive approaches for surgical procedures. Approximately 60% of the year is spent on training for bariatric procedures, and the remainder of the time focuses on minimally invasive techniques (laparoscopic and endoscopic) for general surgery cases. Fellowship is not required to perform laparoscopic and endoscopic procedures, but the fellowship allows a newly trained surgeon to become even more facile with minimally invasive techniques. Laparoscopic surgery can be very difficult technically. In order to perform certain surgical maneuvers, I noticed myself standing on one foot and performing balancing acts as if I were a ballerina. Operating on obese patients can be even more difficult due to body habitus and inability to reach the opposite side of the abdomen. Although fellowship significantly improved my technical laparoscopic skills, I often found myself physically and mentally exhausted at the end of the day. In an observational study, 8 to 12% of surgeons reported pain and numbness in their wrist, arms, or shoulders after performing conventional laparoscopic gastrointestinal surgery (3).

Advantages of robotic surgery

Laparoscopy has several established advantages over conventional open surgery including shorter length of stay, more rapid recovery, decreased morbidity, and improved aesthetics of the incisions. Conventional laparoscopy,

however, does have limitations. Poor ergonomics can lead to surgeon fatigue or joint strain. Additional surgical training is required for more advanced techniques such as laparoscopic suturing, knot tying, complex dissection, and stapling. Robotic assisted laparoscopy allows a surgeon to perform more complex maneuvers and has features to help overcome poor ergonomics and surgeon fatigue. Conventional laparoscopy provides twodimensional imaging of the operative field, whereas the robotic system affords a three-dimensional view of the surgical field. With telerobotic systems, surgeon fatigue is minimized by use of a console which allows the surgeon to sit comfortably. If the patient is obese, there is more torque placed on the instruments which may lead to fracture of smaller caliber instruments such as the laparoscopes. "Endowrist" technology with the da Vinci system allows wrist-like movements to facilitate suturing and complex maneuvers (Figure 2). Conventional rigid laparoscopic instruments only allow four degrees of freedom. Robotic systems provide seven degrees of motion and allow the ratio of motion of the surgeon's hand to that of the robotic arms (motion scaling), as well as the speed at which the instruments move, to be modified.



Figure 2

Although robotic surgical systems have many advantages over conventional laparoscopy, they do have limitations. The bulkiness of the device, risk of mechanical failure, lack of haptics (tactile feedback), increased cost and operating room time can all limit the implementation robotic surgery. Operative time is typically longer, particularly when the surgeon is in the early stages of training.

The lack of haptics (tactile feedback) is one of the more challenging adjustments with robotic surgery. As the surgeon, you cannot feel resistance of the tissues. One must use experience from previous surgical laparoscopic cases and visual cues to accommodate. Ensuring that knots are tied down adequately and avoiding excessive tension on tissue can be quite challenging and require many hours of experience with the robotic platform.

Training and Education

Surgical training has remained more or less unchanged for several decades. Surgeons in training gain operative experience through supervised training on real patients. Training and credentialing standards have not yet been established for robotic surgeons. Training programs are becoming more readily available through many surgical residency and fellowship programs, although proficiency with robotic systems is neither standardized nor required. With the help of da Vinci Surgical Systems, a surgeon can obtain the education and skills necessary to implement robotic surgery into his or her practice. Several online modules are required to obtain a certificate of training. Prior to live cases, the surgeon has the opportunity to implement early training with a pig lab. Typically, a new robotic surgeon is mentored during his or her initial cases. The number of mentored procedures varies from institution to institution. The surgical learning curve depends on the total number of procedures performed and the time interval between procedures. Experts agree that a surgeon should be competent in performing a procedure via laparotomy prior to advancing to the robotic approach. During my fellowship training, my experience with the robotic platform began with hiatal hernia repair via Nissen fundoplication for management of chronic GERD, a challenging and at times technically difficult procedure to perform laparoscopically. With full range of motion

of my wrist and the surgical instruments provided by the robotic system, however, I was able to perform all tasks necessary with efficiency. Immediately, I could see the utility of this laparoscopic adjunct.

In review of studies of robot-assisted laparoscopic hysterectomy, 15-70 cases were required to achieve an operative time of approximately 2 hours (4). A similar series of 113 robot-assisted procedures performed by surgeons with advanced laparoscopic skills found that blood loss, operative time, and set-up time improved until approximate 50 cases and then stabilized (5). Virtual training (robotic simulation) in robotic surgery involves virtual reality stimulators and soft tissue models that re-create the texture of human tissue, thus allowing trainees to acquire surgical skills safely and without interaction with an actual patient. The latest stimulators allow the surgeon to perform an entire operation with use of the complete instrument panel, all through stimulation alone.

General surgery has become a specialty with rapid growth in robotic utilization. The robotic platform is being used more often for hernia, foregut, colorectal, and bariatric procedures. In my practice as a bariatric surgeon, I have implemented robotics for the majority of my surgical procedures. This allows complex surgical patients to undergo minimally invasive procedures with short length of stay, less pain, and fewer complications. Weight at the time of surgery for a bariatric patient can range from just over 200 pounds to well over 500 pounds. Once the robot is docked, there is minimal discernable difference felt physically when operating on this unique patient population. In a retrospective study comparing outcomes and complication rates for robotic versus laparoscopic Rouxen-Y gastric bypass, robotic Roux-en-Y gastric bypass resulted in similar complication rates with a trend towards shorter length of stay in the robotic group. Although operative times were longer in the robotic group, they tend to decrease following the initial robotic cases, probably secondary to a more favorable learning curve for robotic Roux-en-Y gastric bypass.

Cost-effectiveness

Robot-assisted surgery is associated with high capital and operating costs. Obtaining a new da Vinci robotic system costs between \$750,000 to \$1.9 million. depending on the system. Each instrument costs between \$2200 and \$3200; surgical instruments must be replaced after 10 uses. Cost effectiveness can be affected by operating room time and the number of surgical instruments used. Additional costs include equipment, maintenance, and set-up time. In the preliminary stages of the surgeon's training, costs can be quite high due to the need for additional instruments as well as extended length of operating time. By reducing the number of instruments utilized and eliminating the need for advanced laparoscopic instruments such as surgical tackers, surgeons are able to perform common procedures (cholecystectomy, inguinal hernia) which are cost neutral.

Conclusion

Robot-assisted surgery offers benefits to patient via minimally invasive approaches which could lead to reduced blood loss, reduction in blood transfusion, reduced postoperative pain, shorter hospital stays, fewer complications, and shorter recovery times. Since the initial phase of robotic procedures in gynecology and urology, the robotic platform has been expanded to include colorectal, head and neck, gastrointestinal, and bariatric surgery. Benefits to the surgeon through improved optics and ergonomics may lead to better surgical performance and thus improved outcomes for patients. Robotic systems have been proven to be safe and have resulted in improved patient satisfaction and quality of care.

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Obesity in the Panhandle of Texas

by Bleu Schniederjan, MD, FACS, FASMBS; Bo Neichoy, MD, FACS; Daren Peterson, MD, FACS

 $I_{15\%}^{n}$ obese adults made up less than 1990, obese adults made up less than 15% of the population in most U.S. states. By 2010, 36 states had obesity rates of 25% or higher, and 12 of those had obesity rates of 30% or higher. Today, nationwide, roughly two out of three U.S. adults are overweight or obese and one out of thirteen is considered morbidly obese. Even more alarming, the prevalence of overweight and obesity in children and adolescents is on the rise, and youth are becoming overweight and obese at earlier ages. One out of six children and adolescents ages 2 to 19 is obese, and one out of three is overweight or obese. Early obesity not only increases the likelihood of adult obesity, it also increases the risk of heart disease in adulthood, as well as the prevalence of weight-related risk factors for cardiovascular disease, hypertension, and diabetes. From a financial standpoint, an obese person in the United States incurs an average of \$1,429 more in medical expenses annually. Approximately \$147 billion is spent in added medical expenses per year within the United States. This number is expected to increase by approximately \$1.24 billion per year until the year 2030.

The obesity rate in Texas is an astounding 34.8%. Compare this to 10.7%

in 1990 and 21.7% in the year 2000. This number continues to rise at a linear rate and has not plateaued. Obesity in the Texas Panhandle was 33.4% in 2016 and is obviously a major concern for our local health care providers. Over 12% of Texans have diabetes, and this rate continues to increase. Many of the current health issues related to weight include type II diabetes, obstructive sleep apnea, coronary artery disease, hypertension, and arthritis of the hip, knees, and back. In addition, obesity has been linked to an increase in multiple types of cancers. Currently the American Medical Association has recognized obesity as a chronic disease for which there is no cure. Over 95% of patients fail traditional commercial diet programs. This does not mean that patients cannot lose weight, but they ultimately regain weight over time. Losing weight in a sustainable and durable fashion would address these medical issues at the root cause and bring about meaningful life change to our collective patient population.

We anticipate that, over the next 25 to 50 years, there will be significant advancements in the treatment of obesity. Currently the best approach is a multifaceted, multidisciplinary approach to



weight loss. Sustained weight loss includes intense education involving nutritional counseling, exercise counseling, psychological counseling, behavior modifications, stress management, and sleep management. The treatment involves an individualized approach for each patient with a basic foundation in the above stated modalities followed by escalation of treatment for certain patients who do not respond. Additional treatments could involve short-term weight loss medications, weight loss endoscopy procedures, and lastly bariatric surgery. The most important aspect for durable weight loss appears to be the behavioral changes related to nutrition and fitness. Of course, this is often the most difficult of post bariatric lifestyle changes for a patient to fully integrate into their regular routine.

Panhandle Weight Loss Center (PWLC) has put together a multidisciplinary team to help tackle the epidemic of obesity. There is a noticeable and intentional difference the patient will observe when first setting foot in our office. Our goal is to treat patients who are anywhere from 30 lbs. to 500 lbs. overweight with compassionate and individualized care. Their tour begins with an initial weight loss consult with one of our three physicians. This is designed to tailor the remainder of their care with a patient's weight loss needs and goals. This is followed by a series of tests to understand the physiology behind their weight struggles and includes metabolic testing, body composition scans, and cardio-metabolic analysis. A Resting Metabolic Rate (RMR) study is a test which measures a patient's C02 production and compares the results to similar age matched patients to get a picture of their overall metabolism. Patients also undergo body composition analysis to evaluate percent body fat and lean muscle mass compositions. The PNOE is a cardio-metabolic analysis that

provides our Health Coach the most comprehensive and insightful health assessment, allowing us to develop an accurate and customized nutrition and workout plan for each patient. Patients then begin working with our team, which includes a dietitian for nutritional counseling.

While goal caloric intake is estimated, a more detailed look at macronutrient composition of food intake is undertaken in relation to carbohydrates, fats, and protein. The standard USDA food pyramid published many years ago is thought to contribute to the rise in obesity in America as it emphasized a high carbohydrate and low fat diet. Our approach is evidence-based and designed to help lower patients' intake of processed carbohydrates to blunt the effects of excess insulin levels and to restore hormonal balance. We have recognized that telling patients to "eat right" and "start exercising" does not work. Our society is constantly fed a plethora of information that is directly contradictory to a healthy lifestyle, and patients simply don't know

what "eating right" looks like. Similarly, most patients with weight issues have never exercised on a regular schedule and don't even know where to begin nor do they have any desire to go to a gym. For these reasons, we have brought the Health Coaching model into our practice to educate patients about appropriate nutrition and fitness. We recognize that patients did not develop the habits that resulted in their weight struggles overnight and similarly will not develop new patterns and routines overnight. As noted previously, the PNOE system allows us to measure whether patients are fat adaptive or carb dependent, allowing us to tailor exercise and nutrition to focus on appropriate weight loss and long-term maintenance. Our personal trainer is not only certified by the National Association of Sports Medicine (NASM) but also as a Primal Health Coach. She helps develop behavior modifications related to sedentary lifestyle and poor food choices. We are also using innovative approaches to stress management, sleep management, and overall hormone management to aid

with preventing future weight regain. Patients are required to see a psychologist and are given the opportunity to deal with aspects related to emotional eating and stress management.

Our group works together as a cohesive and comprehensive team to implement a unique weight-loss strategy for each patient. This may include the use of short-term weight-loss medications, and/ or newer weight loss medical devices, as well as bariatric surgery. Surgery has become the most effective weight-loss tool for patients who need to lose 50 pounds or more. The procedures utilized today have changed significantly over the past 2 decades. These operations are more effective and have a dramatically improved safety profile. At PWLC, we currently offer the laparoscopic sleeve gastrectomy and the laparoscopic duodenal switch.

The sleeve gastrectomy involves reducing the size of the stomach from the size of a football down to the size of

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Purpose Panhandle Health strives to promote the health and welfare of the residents of Amarillo and the Texas Panhandle through the publication of practical informative papers on topics of general interest to most physicians while maintaining editorial integrity and newsworthiness.

Spectrum *The Journal* seeks a wide range of review articles and original observations addressing clinical and non-clinical, social and public health, aspects as they relate to the advancement of the state of health in the Texas Panhandle. Pertinent letters to the editor, news submissions, and obituaries listings are accepted pending editorial review. The Editorial Board accepts or rejects submissions based on merit, appropriateness, and space availability.

Submission process Material should be e-mailed to the editor at prcms@ suddenlinkmail.com or mail a hard copy to Cindy Barnard, PRCMS, 1721 Hagy, Amarillo, TX 79106. A recent photograph of the author (optional) and a curriculum vitae or a biographical summary are also to be submitted.

Conflict of Interest Authors must disclose any conflict of interest that may exist in relation to their submissions.

Journal Articles Manuscripts should be double-spaced with ample margins. Text should be narrative with complete sentences and logical subheadings. The word count accepted is generally 1200 to 1500 words. Review articles and original contributions should be accompanied by an abstract of no more than 150 words.

References References to scientific publications should be listed in numerical order at the end of the article with reference numbers placed in parentheses at appropriate points in text. The minimum acceptable data include:

Journals: Authors, article title, journal, year volume, issue number, inclusive pages.

Books: Author, title, place of publication, publisher, year.

Web sites: URL of the site and the date the information was accessed.

Other sources: Enough information must be included so that the source can be identified and retrieved. If not possible, the information for source should be included parenthetically in the text.

Illustrations Illustrations should be black and white only with complete-sentence legend.

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a banana. While the restrictive nature of the procedure is important, research demonstrates that an even more important manipulation of hormones is at play with this procedure. When the lateral aspect of the stomach is removed, circulating hormones like ghrelin and leptin are substantially reduced. These hormones are responsible for appetite stimulation as well as manipulation of our internal "set point". The "set point theory" essentially states there is a genetically imprinted "set point" within each one of us which drives our body's composition to a given level. Decreasing in the relative amounts of these circulating hormones, as occurs with surgery, is thought to reduce this "set point" to allow patients to more easily achieve and maintain their goal body composition. Patients on average can expect to lose approximately 65% of their excess body fat within the first 12-18 months. Over 60% of patients with Type II diabetes will go into complete remission, totally eliminating their need for hyperglycemic medications.

The most effective operation for weight loss is the laparoscopic duodenal switch. This procedure is ideal for patients who need to lose in excess of 100 lbs and/or have poorly controlled Type II diabetes. This surgery begins by removing about 2/3 of the stomach, reshaping it into the sleeve gastrectomy, and then bypassing roughly half of the small intestine. Patients can expect to lose up to 90% of their excess body fat over a two-year period. Similar to the sleeve gastrectomy, the duodenal switch has been shown to result in remission of Type II diabetes in over 90% of patients.

There are no "quick fixes" when it comes to the treatment of obesity, and we are emphatic about counseling patients that surgery is not a cure. Strategies for working with this disease are becoming more complex, and we are realizing there is not a "one size fits all" approach. The genetic makeup of each patient ascribes a unique metabolism and metabolic efficiency, which responds differently to certain nutritional and exercise protocols. In the future, we see genetic testing as a way to specifically tailor fitness and nutritional

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counseling to each patient's unique metabolic make up. Further, we have recognized that the number on a scale is not a precise measurement of health but should be supplemented by measures of percent body fat, stress levels, regular exercise, healthy eating, hormone balance, and adequate sleep. Old habits do not change overnight, and we realize it takes time, accountability, and health coaching to reprogram each patient's daily habits and routines. Truly astonishing, however, is the transformation a patient experiences when most, if not all, of their medical issues related to obesity are dramatically improved if not completely reversed. The



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Bo Neichoy, MD, FACS Dr. Neichoy obtained his medical degree the University of Texas in Houston and completed his surgical training at the University of Florida.

road forward for these patients is not easy and requires a huge team with significant resources to help change patients' lives. In the end, we have thousands of patients who will testify that little else is more rewarding than achieving meaningful weight loss and renewed health. Nothing in life of true value is obtained without effort.

The current training for Bariatric surgery involves a 5 year general surgery residency followed by a 1 year fellowship in Bariatric surgery. Below, I will discuss a little bit about the surgeons at Panhandle Weight Loss Center.



Daren Peterson, MD, FACS Dr. Peterson is Texas Tech SOM graduate who also completed his surgery training at the University of Florida.





The Current State of Geriatric Psychiatry in the U.S.

by Luke Bacon MBA, MS4, Ravindra M. Bharadwaj (Dr. Ravi) MD, MPH

A geriatric psychiatrist is a physician with special training in the diagnosis and treatment of mental disorders in older adults, who often have special physical, emotional, and social needs (1). In recent years there has been growing recognition that the geriatric population possesses unique characteristics and mental health needs (3), fueling a greater demand for physicians with specific expertise in this field (4).

Much attention has been given in recent years to the growing shortage of primary care physicians in the United States (5,6), as well as to a rapidly increasing geriatric population that has been predicted to grow to about 72 million Americans age 65 or older by 2030 (from about 40 million in 2010) (7). These patients often have particular healthcare needs, which will likely contribute to an increase in both the number of people on Medicare and in Medicare spending (8). Mental health will be an especially important consideration in this population, with 10.1 to 14.4 million Americans aged 65 or older expected to meet criteria for a mental health or substance use disorder by 2030. Millions of baby boomers will have difficulty obtaining behavioral health treatments unless there is a concerted effort to boost the number of providers able to supply geriatric behavioral health care, according to a 2012 report from the Institute of Medicine (7).

Older adults experience the same mood disorders found in the general population, though at different rates in some cases. Other issues, like dementia, are almost exclusively seen in the geriatric population. The most common issues facing this age group are depression and dementia, which affect 7% and 5% of those aged 60 and older, respectively. Some factors highly associated with older adults may place them at greater risk for

developing mental illness, such as reduced mobility, chronic pain, frailty, bereavement, and elder abuse (19). One national study published in 2015 found that in the past year 11.4% of elderly adults had experienced an anxiety disorder, 6.8% had experienced a mood disorder, and 3.8% had met criteria for a substance use disorder (10). Another study attempted to describe how many older adults 55 and older sought mental health services. It found that 53% of these individuals with one of the disorders described above perceived a need for help, 41% received some form of mental health services, but only 15.7% saw a specialty mental health professional (11).

Efforts to meet the current mental health needs in the U.S. will likely be difficult, as even general psychiatrists are in increasingly short supply relative to national needs (6). As of 2017, 77% of US counties were already experiencing a severe shortage of general psychiatrists (9). Calls for more geriatric mental health specialists are not a recent development, however. In the 2003 President's Commission on Mental Health Subcommittee on Older Adults, it was stated that, "at the current rate of graduating approximately 80 new geriatric psychiatrists each year and an estimated 3% attrition, there will be approximately 2,640 geriatric psychiatrists by the year 2030 or one per 5,682 older adults with a psychiatric disorder" (13). In Texas, there are currently three training programs for Geriatric Psychiatry: UT Southwestern in Dallas, Baylor College of Medicine in Houston, and TTU Health Sciences Center in El Paso. TTUHSC is also planning on starting a general psychiatry residency in Amarillo in the coming years.

With regard to formal recognition, Geriatric Psychiatry is a relatively new subspecialty for which the American Board of Psychiatry and Neurology (ABPN) administered the first certification examination in 1991. By 2015, 3,329 certifications had been awarded in Geriatric Psychiatry (2). To become certified, applicants must already be certified in general psychiatry, have passed ABPN's Geriatric Psychiatry computer-administered examination, and have completed one year of an ACGME-accredited fellowship in Geriatric Psychiatry (14).

Interest in psychiatric fellowship programs has historically been low when compared to interest in fellowships for non-psychiatry specialties, and Geriatric Psychiatry is no exception. The number of Geriatric Psychiatry fellows, as well as fellowship programs, has been steadily decreasing over the past 10-15 years. In 2001/2002, there were 94 fellows in training as compared to 72 fellows in 2006/2007. Over the same period, the proportion of filled fellowship positions dropped from 61% to 48%. In 2007, 67% of training programs had two or fewer first-year fellows and 16% had none (15). As of 2017, there were about 60-65 fellows per year, and fewer than half positions were being filled each year (2).

A survey of residents and fellows attending American Association of Geriatric Psychiatry (AAGP) meetings between 2000-2002 found that the majority first became interested in geriatric psychiatry during their PGY1 and/or PGY2 years. The greatest influencers on developing this interest were "specific teacher attributes, training experiences, personal experiences with seniors, and characteristics unique to geriatric psychiatry, such as the medical, neuropsychiatric, and multifactorial nature of the field" (16). Other surveys conducted among Canadian psychiatry residents have reported similar findings (17, 18).

Given the present environment for geriatrics and psychiatry, it's surprising how little visibility the future of geriatric psychiatry in the U.S. is receiving. It's also somewhat unclear why there isn't more interest in Geriatric Psychiatry training programs or greater attention to geriatric mental health in general psychiatric training and other primary care specialties. Like most things, the truth is that it's probably due to a multitude of factors relating to the economic and workforce environment, as well as general attitudes toward geriatric medicine. Increasing the supply of fellowship-trained Geriatric Psychiatrists will certainly be important in order to respond to increased demand for older adult mental health services. However, there are likely also opportunities to accomplish this via greater geriatric psychiatry-related training among non-psychiatrists and advanced practice providers. What's clear is that current needs are not being met and that the present state of the field will likely worsen if novel solutions to increase education surrounding mental health in older adults are not explored, among psychiatrists and non-psychiatrists alike.

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Geriatric Oncology

by Helayna Abraham, MS4; Hena Tewari, MD; Ravindra M. Bharadwaj (Dr. Ravi), MD, MPH

Recently, the concept of "Geriatric Oncology" has received more attention in the oncology community. Cancer treatment in the elderly population is challenged by suboptimal outcomes, many of which can be reduced with better personalized care that factors human physiology and sets appropriate goals for the individual based on the physical, social and mental health needs. Due to the increase in the aging population, oncologists are treating more patients in their 70's and 80's with curative intent. The prevalence of cancer in the geriatric population is on the rise due to higher age-specific incidence of cancers (1). The current cancer rate is higher in the Amarillo Metro Statistical Area compared with that of the state of Texas rate (474 versus 415 per 100,000 of population). Similarly, the age adjusted cancer incidence rate in the 65 year and older population is higher in Potter County compared to Texas in general (2,012 versus 1,812 per 100,000 of population) (2).

Because information regarding specific treatments in the aging population is lacking, these patients are often treated the same way as their younger counterpart. However, the nature of cancer and treatment outcomes may be significantly different in an older population. The medical community is now recognizing that the best cancer treatment for the older population may not be the same as in the younger population (3-5).

The aging process can cause significant changes in physiology such as decreased kidney function, lung compliance, cardiac function and bone marrow cellularity. These factors alone can hamper the recovery from the cancer; however, lifestyle factors such as poor dietary habits, inadequate exercise, and social circumstances also adversely impact outcomes. Healthier older patients recover better compared with frail ones; therefore, it is important to identify and categorize the older individuals with cancer based on their potential to withstand cancer therapy and to recover. This goal can be achieved through the use of Geriatric Assessment (GA) and making it an integral part of cancer management in the older population.

Geriatric Oncology Status: In 1983 the National Cancer Institute (NCI) conducted first symposium related to cancer care in older patients. Subsequently the American Society of Clinical Oncology (ASCO) has played an important role in promoting Geriatric Oncology. ASCO has also supported oncology fellowships and faculty development in field of geriatric oncology. The International

Name	Current Status
Boston Medical Center	Active
Duke University Medical Center	Active
Johns Hopkins University	Non-Active
Northwestern University	Non-Active
University of California, Los Angeles	Active
University of Chicago	Active
University of Colorado Health Sciences Center	Non-Active
University of Michigan	Non-Active
University of Rochester	Active
University of Texas	Non-Active

Table 1: Recipients of the ASCO-Hartford Foundation Geriatrics/Oncology Training Program Development Grant

Society of Geriatric Oncology (SIOG) has created a task force to review geriatric oncology literature and to make recommendations. The National Comprehensive Cancer Network (NCCN) has published guidelines for older adult oncology. The first textbook for geriatric oncology was published in 1992 by Lodovico Balducci et al.

In 2017 the University of Rochester published a survey of current Hemato-Oncology fellows and reported that 84% of fellows perceive geriatric oncology as an important issue, whereas only 25% had access to a geriatric oncology clinic, and 53% had no lectures in geriatric oncology (6).

Realizing the need for geriatric concepts in cancer patients, ASCO with support from the John A. Hartford Foundation started pilot programs of 3-4 yrs. of geriatric oncology at 10 institutions (Table 1). At present there are 8 fellowship programs that provide combined 3-4 years fellowship program of geriatric- oncology (Table 2) (7). ACGME also requires that fellows be able to provide care to older cancer patients (8).

Understanding Geriatric Oncology: A core effort in the field of geriatric oncology is establishing a comprehensive geriatric assessment which aims to address the issue of physiologic versus chronologic age. Chronologic age often fails to consider physiologic and functional status of older adults, thus disregarding important information needed to guide cancer treatment. In contrast, physiologic age reflects the body's ability to maintain homeostasis which affects the body's ability to stave off organ damage despite physiologic stressors, such as cancer and its treatment. Several biomarkers that correlate to physiologic age have been noted but have limited clinical application due to their quantitative variation. Thus, the current mainstay in

evaluation of physiologic age remains the geriatric assessment (GA), a multidimensional tool that evaluates several domains, including physical function, cognition, nutrition, co-morbidities, psychological status, and social support (9). In addition to other tools, this assessment should ultimately guide clinicians in estimating life expectancy, evaluating cancer treatment benefit, predicting treatment toxicity, and recognizing patient preferences to provide personalized care to elderly cancer patients.

Estimating the overall life expectancy of the patient, vis-a-vis the risk of cancer related morbidity and mortality during such time, helps to guide decision making and can prevent both over and underreating patients. The life expectancy tables that have historically been used to estimate prognosis simply consider epidemiological data and fail to consider co-morbid conditions and functional status. As a result, efforts have been made to design a tool that includes information from the geriatric assessment to develop non-disease specific prognostic indices to more accurately predict all-cause mortality in elderly patients (9). A widely used tool to assess life expectancy is e-Prognosis. Based on a systematic review of the literature, the tool establishes a repository of prognostic indices to help guide clinicians in forming a prognosis (10).

After estimating the overall life expectancy of the patient and weighing this against the risk of cancer related morbidity and mortality, an assessment of the benefits versus toxicities of cancer treatments helps to further guide the decision to proceed with treatment. Tools for estimating the benefits of treatment in the elderly are comparable to

- 1 University of North Carolina
- 2 Thomas Jefferson University
- 3 Boston Medical Center
- 4 Duke University Medical Center
- 5 Yale University
- 6 University of California, Los Angeles
- 7 University of Rochester
- 8 Moffitt Cancer Center, Tampa

Table 2: Current Geriatric-Oncology Programs

those in the non-elderly. They consider the biomolecular properties of the cancer and the stage of the disease to determine the ability of treatment to prolong survival, preserve quality of life, and, in some cases, provide a cure. Conversely, predicting cancer toxicity relies more on physiologic age. Geriatric oncologists have developed additional tools that use components of the geriatric assessment to estimate the risk of chemotherapy toxicity. A commonly used tool, Cancer and Aging Research Group (CARG), aims to stratify patients into three broad categories: low risk, intermediate risk, and high risk of chemotherapy toxicity based on properties of the cancer being treated, in addition to patient specific characteristics. Another of these tools, Chemotherapy Risk Assessment Scale for High Age Patients (CRASH), assesses risk of toxicity based on specific chemotherapy regimens in conjunction with the functional, nutritional, and mental status of the patient (4). Other tools focus on determining the morbidity and mortality of surgical treatment of cancer.

Finally, the clinician should consider the treatment goals of the patient. Goals of treatment in older patients tend to shift from prolonging survival to maintaining independent function and a good quality of life (4). As in all disciplines in medicine, the geriatric oncologist considers the patient's perspective and motivations in formulating a treatment plan.

A systematic review revealed a modification of treatment plan in one third of patients who underwent the geriatric assessment, suggesting that the typical patient encounter lacks vital information needed to make an appropriate plan of care for many elderly cancer patients (11). This exemplifies the need for a more comprehensive approach to addressing diagnosis and treatment in this particular population. The field of geriatric oncology focuses on providing education to physicians, nurses, and other healthcare workers to maintain a high standard of care for the elderly population, integrate geriatric evaluation into oncology decision making, develop and validate easy screening tools, and improve research to optimize treatment of the growing elderly population with cancer.

Geriatric Oncology at Amarillo: Texas Tech HSC Amarillo, with help from the Don and Sybil Harrington Foundation and the Mary E. Bivins Foundation, has established a program of geriatric oncology with an aim to benefit the community through education, screening and care to older cancer patients. TTUHSC's Comprehensive Geriatric Oncology Clinic (CGOC) is staffed with a geriatrician, a dietician, a pharmacist and a social worker to actively collaborate with area cancer providers. The clinic thoroughly evaluates geriatric issues, chemo-toxicity risks, medications, nutritional status, and frailty issues of the patients and makes recommendations to the cancer treating physicians. This clinic is unique as all the services can be provided under one roof. This clinic also provides services to indigent patients who lack financial resources. The program focuses on caregiver education through symposia, grand

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rounds and workshops. As a part of its prevention program, this center also conducts comprehensive biennial cancer screening events.

In conclusion, we can say that geriatric oncology is an expending field with a focus on an interdisciplinary approach to older cancer patients. Efforts are being taken to integrate geriatric oncology principals in the training of medical oncologists as well as other related subspecialists.

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> We are grateful for the support of these organizations and anticipate another great year of serving the needs of our members. The purpose for Circle of Friends is to provide a valuable base of

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This program has proven to be a valuable resource of services such as liability insurance, accounting, banking and much more. This year, we hope to expand the Circle to include services the physician may use in his or her personal life. Through this program, we can invite businesses serving physicians to support the Society and increase their visibility among its members. Corporate support contributes to the Society's ability to advocate and care for physicians and patients in Potter and Randall Counties.

The Medical Society thanks all of its supporters as it offers new opportunities to its membership. If your business is interested in being a part of our Circle of Friends, please contact Cindy Barnard at 355-6854 or e-mail prcms@suddenlinkmail.com.



Female Pelvic Medicine and Reconstructive Surgery

by Paul Tullar, MD

Female pelvic medicine and reconstructive surgeons (FPMRS) specialize in the care of women with pelvic floor disorders, lower urinary tract dysfunction, and complex benign pelvic disorders. Pelvic floor dysfunction can take place due to stress on the tissue during parturition, connective tissue disease, genetics, menopause, repetitive heavy lifting or pushing, and repetitive strenuous activity. Although management of these problems can be straightforward and easily managed by the general gynecologist, the occurrence of complex and refractory cases is common enough that subspecialty care has proved to be necessary.

FPMRS is one of the more recent specialties, having been accepted by the

ABMS in 2011. The first board certification exam was administered in 2012 and the first accredited fellowships emerged in 2013. The specialty is a result of the confluence of three medical societies: the American UroGynecologic Society (AUGS), Society of Gynecologic Surgeons (SGS) and Society of Urodynamics Female Pelvic Medicine Urogenital Reconstruction (SUFU). It is a joint effort between the American Board of Obstetrics and Gynecology (ABOG) and the American Board of Urology (ABU). In 2015, the first FPMRS oral boards were given. Though the specialty is quite new in terms of accreditation, the story of its origins was almost 40 years in the making.

The field of FPMRS started out as a clinic for basic incontinence run by Dr. Jack Robertson, an attending at Harbor General Hospital in Torrance, CA in the mid-1960s. At the time, a young Dr. Don Ostergard was a second-year resident at the program. The first fellowship in Urogynecology was later started by Dr. Ostergard at Harbor General. In the 1970s, interest in the management of incontinence in women was growing among gynecologists.

In 1974, Dr. Paul Hodgkinson was performing urodynamics at Henry Ford in Detroit, and Drs. Robertson and Ostergard went to watch and bring

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back the technique to their institutions. The next year, during his sabbatical, Dr. Ostergard began a literature review of the field which led to evaluating the need for an organization focused on the study of female incontinence. He visited with Dr. Stuart Stanton, a London based gynecologist, Drs. Rud and Asmussusen, two gynecologists in Oslo, and Dr. Tanagho, a urologist from San Francisco, all leaders in the field at the time. Soon afterward, Drs. Roberston and Ostergard began offering postgraduate training courses in the evaluation of female incontinence with international leaders in the field. Two years later, in 1979, the Gynecologic Urology Society (GUS) was formed by Drs. Robertson, Ostergard, Jansen, Wiggins, and Fuller. In 1980, the first scientific meeting was held in New Orleans.

The name was eventually changed to Urogynecology after the name change was suggested by Dr. Ingelman-Sundberg, a professor of OB/GYN in Stockholm, Sweden in 1980. The change was later promoted by Dr. Shingleton, president of the GUS in 1982. In 1986, the name of the society was officially changed to the American Urogynecologic Society (AUGS). In 1989, then president of AUGS, Dr. Thiede, asked ABOG to consider credentialing the Urogynecologic fellowships. In 1992, AUGS and SGS made a presentation to the ABOG board of directors to educate them about the specialty. In 1993, at an ABOG meeting, the leadership from AUGS, who represented the non-surgical side of urogynecology, and Society for Gynecologic Surgeons (SGS), who were already training people in complex vaginal surgery, were invited by ABOG to discuss formalized training in the field. At that meeting they were able to unite both sides of the specialty, both surgical and non-surgical, and ABOG was willing to study whether the field had enough breadth to warrant its own subspecialty again. The name was changed to Urogynecology and Reconstructive Pelvic Surgery, to fully incorporate both aspects of the field. In 1995, both ABOG and ABU agreed there was enough substance to warrant a formalized subspecialty. Learning objectives and guidelines were then drawn up and the first accredited program in Indianapolis, Indiana was instituted.

Since then, the field has grown steadily, currently with 64 accredited programs in the United States. Applications are submitted via ERAS for accredited programs in May, and the NRMP fellowship match for FPMRS takes place in August. New fellows start on July 1st of the following year.

There are currently three different variations in fellowship format. Some programs accept only urology trained applicants, others only gynecology candidates, but most accept both. Some combined programs, which accept applicants from both fields, accept urology versus gyn fellows in alternate years, while others run parallel tracks, where urology and gyn programs function in parallel with varying degrees of interaction. Then there are truly integrated programs, where all trainees complete the same training and didactic courses. The current trend is moving toward combining the two sides to develop a more uniform training experience and skill set representative of the field.

In order to be eligible to sit for the subspecialty board, the fellowship is 2 years long for those who complete training in urology, and three years for those from gynecology, though a growing number of programs are 3 years in length regardless of the specialty of origin. Specific information about fellowships in FPMRS can be found at AUGS.org and SUFUorg.com.

Some commonly treated problems where FPMRS physicians can assist the generalist are: urinary or fecal incontinence, urinary retention, overactive bladder, neurogenic bladder, pelvic organ prolapse/descent of the bladder, uterus, vagina, and/or rectum, and fistula care (rectovaginal, urethrovaginal, and vesicovaginal). FPMRS physicians also interpret complex urodynamic studies.

Fellowship trained FPMRS physicians are expected to be proficient at performing surgeries for the management of incontinence, pelvic organ prolapse, and other complex surgeries on the urinary system.

Surgeries for the management of incontinence include: sling procedures (placement, revision, and removal), retropubic urethropexy, periurethral injections, chemodenervation, posterior tibial nerve stimulation (PTNS), and sacral neuromodulation. Surgical management of pelvic organ prolapse includes colpopexy, uterine suspension, hysterectomy, laparoscopic procedures (with and without robotic assistance), vaginal procedures including hysterectomy, colpocleisis, colpopexy (intra and extraperitoneal approaches), and removal of pelvic mesh.

Other urinary procedures that FPMRS fellows are trained in include repair of vesicovaginal, rectovaginal, and urethrovaginal fistulae, urethral diverticulectomy, ureteroneocystotomy, ureteral stent placement, retrograde pyelography, urethrolysis, urinary diversion, construction of neovagina, and anal sphincter laceration repair. Although generalists can perform many of these procedures, once the patient has moved onto third line treatment modalities or have a recurrence or complication, a referral would be appropriate.

Most major cities have access to a fellowship trained FPMRS surgeon. Patients benefit from referral when primary treatment modalities have been ineffective, and/or their disease processes are complex in the nature requiring advanced diagnostics or major reconstruction. To find a physician in your area, you can go to <u>www.voicesforpfd.org</u>. This page is maintained by AUGS. SUFU.org maintains a list of graduates from accredited FPMRS programs, and AUGS.org maintains a membership directory.

References:

- 1) American Urogynecologic society websites: <u>AUGS.org</u>
- Society for Urodynamics, Female Pelvic Medicine and Urogenital Reconstruction website: <u>sufuorg.com</u>
- 3) Society of Gynecologic Surgeons website: <u>sgsonline</u>.org
- 4) NRMP fellowship match information: <u>www.nrmp.org</u>
- 5) ERA 2020 Fellowship application timeline: <u>students-residents.aamc.</u> <u>org/training-residency-fellowship/</u> <u>article/eras-fellowship-timeline/</u>



Space Medicine: A New Specialty for a New Age

by Rouzbeh K. Kordestani, MD, MPH

What is Space Medicine and what is its focus?

As abstract as it may sound, space medicine or aerospace medicine is concerned with the maintenance of the health, safety and maximal performance of individuals/persons in the air and in space. As can be reasoned, life and function in air and space present the medical professional with new challenges, as there are significant new terrains and environments that may affect the patient's/ pilot's well-being. The environmental challenges that are possible with space and space travel can include microgravity, radiation exposure, gravity forces, and hypoxic conditions to name only a few. The human body's response to these new environmental challenges can only be estimated. Since original data in these settings is hard to come by and the exposure in these environments can at times be deadly, the field is mired in experimental science and cross specialty training. None of the traditional fields of medicine or surgery or their subsequent sub-specialties address the specific issues faced by engineers, flight surgeons, military pilots or astronauts. To that end, the field of air/ space medicine is a combination of multiple other specialties with the focus on the clinical and the (health) support of crews and crew members during their missions and during their scientific explorations. The focus of the practitioners in turn is to foster a good and safe working culture between the crews and their equipment in the harshness of altitude of air or space in the setting of new environmental insults.

History of Space Medicine

The field of space medicine is thought to have begun in the late 1940s, following the end of World War II. It started with Dr. Hubertus Strughold. As many German scientists were liberated and were subsequently brought to the U.S., to help with the advancement of technologies here, Strughold was brought into the U.S. He was a German physician and an accomplished physiologist. Following his arrival, he started his career in the U.S. at the School of Aviation Medicine (now better known as the U.S. Air Force School of Aerospace Medicine (USAFSAM). He was given the title of Professor of Space Medicine for his knowledge of the physiology of humans in non-terrestrial settings. Most of the early ideas and hypotheses for physiology in space originated with Strughold.

The New Settings/Environmental Challenges

In space, astronauts and flight personnel are faced with new environmental challenges, far different from anything that they may have encountered on Earth. These can present themselves as external hazards or as internal changes in a person's physiology that may place them at risk. These include insults such as radiation exposure, microgravity, blindness, decompression sickness, and possible barotrauma. These environmental changes in turn have health ramifications in decreased immune system function, increased infection rates, fatigue, balance issues, and long-term sleep deprivation.

Radiation Exposure

Radiation exposure and its long-term effects are only now being understood. Astronauts and flight personnel are exposed to much higher rates of radiation effects of the sun and the stars. These radiation effects can have long-term health effects. NASA now recognizes that radiation exposure to personnel in space can be 600X the radiation effects noted on Earth. The true effects of long-term damage have not yet been ascertained. However, a dramatically increased rate of cataracts and blindness has been noted in the astronaut population. Most regard it as a known fact and do not discuss it. The Russian astronauts/cosmonauts who have the longest exposure rates in space of all human flight personal have uniformally shown progressive cataracts. Other longterm radiation damage is only now being noted and catalogued.

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Decompression sickness and barotrauma

In space and in high altitude flight, pilots and/or astronauts are exposed to increased positive pressure of gases. The positive pressure can do tremendous damage to organ systems and body parts. This is especially true of the lungs, heart, the gastrointestinal tract, the eyes and the ears. Barotrauma and possible decompression sickness can present with symptoms such as chest pain, muscle fatigue, lightheadedness, dizziness, tingling, numbness, and generalized body aches and pains. These are known symptoms and can be treated.

In space and in high altitude conditions, since the pilots and astronauts are exposed to these harsh conditions and are at risk for barotrauma and the possible resulting decompression sickness, they are routinely treated with oxygen to correct these maladies. In short doses, these interventions themselves can cause problems. Long-term exposure to pure oxygen is known to cause health problems. These environmental exposures and their treatments have not been studied long term. Concerns about such exposure in long-term flight/journeys have particular ramifications especially in light of the upcoming Mars missions.

Brain, heart and body changes

In space, most astronauts suffer from cardiac arrythmias. Studies show that in some cases the arrythmias are related to pre-existing conditions. The stresses of space travel and the environmental changes however seem to cause arrythmias to occur far more often in pilots and astronauts exposed to the harsh conditions of space and at the increased altitudes in flight. NASA is further studying this common occurrence.

Along with cardiac changes, the most common noted physical finding in astronauts and pilots is fatigue. It is well documented that astronauts and pilots have altered circadian rhythms. This in turn has effects on their sleep patterns. Test pilots exhibit this in some cases. Most often this is seen in astronauts since they are exposed to completely abnormal sunrise and sunset schedules. Astronauts are noted to sleep in 2-3-hour cycles. With this in mind, they soon develop fatigue. To treat this, they are often treated with sleeping medications. Adding to the fatigue is the actual loss of muscle mass and bone density in their bodies. Astronauts are routinely forced to exercise 2-3 hours a day simply to keep their muscle tone at a baseline. As for bone loss, a 3-4-month space trip causes enough bone redistribution that it will take an average of 2-3 years to recuperate and be at the same bone density level(s). Vibration therapy and additional medication routines are now used as possible methods to treat these losses while in space.

The newest and most concerning finding is that astronauts, especially after long-term trips, have significant changes in mental ability. In 2012, studies from NASA showed that spaceflight might in fact accelerate the onset of brain atrophy as seen in disease processes like Alzheimer's. Because of these earlier findings, MRI studies are being completed on all flight personnel at NASA. Initial details confirm that astronauts who are exposed to longer journeys and longer stays at the space stations have greater brain changes. Additional studies are currently pending.

Immune system changes and the increased rates of infection

For some time now, NASA has noted that astronauts in space have a decreased immune system response. The exact nature and degree of the immune compromise has not been well established. Coincidentally, multiple research projects in the International Space Station (ISS) have also found that bacteria and viruses have increased survival and virulence in space. Studies at the ISS have shown that bacteria such as Salmonella and Enterobacter actually are more virulent and more resistant to antibiotics in the environment of the space station and space. This series of findings is concerning since it may show increased adaptability of organisms other than human in the space environment. This continues to be a key area of study and concern.

Schools available for training

There are five (5) active programs with training in Aerospace Medicine. Three are civilian based and two are military based. Of the five, only one (Mayo) has a complete 2-year program and is the only one considered a true "fellowship" program.

The three civilian programs are located at Wayne State University, the University of Texas Medical Branch at Galveston, and the already mentioned program at the Mayo Clinic. The two military programs are located at the Wright-Patterson Air Force Base in Ohio and the Naval Aerospace Medical Institute in Pensacola, Florida.

Each program has individual strengths and weaknesses. However, their core curriculum holds to the essentials of preventative medicine and the guidelines as advocated by the American Board of Preventative Medicine (ABPM).

Certification(s)

The field of aerospace medicine is still considered a part of the ABPM. The certification process and the maintenance of certification in Aerospace Medicine is processed through the ABPM. Both the Aerospace Medical Association and the American Society of Aerospace Medicine Specialists work through the channels of the ABPM.

Conclusions

Space travel and space medicine go hand in hand. As we venture into the beyond and leave Earth to seek adventure and science in the worlds that surround us, we are faced with the fragility of our own bodies. Studies and experiments show that we have to make adjustments for space travel. Data from the ISS and NASA shows that space and space travel are truly harsh and need to be respected.

As we study our astronauts and our pilots, we gain tremendous new knowledge of what we need to survive in the harsh environments out there. For us to survive and to endure the next step in our evolution, we must be able to decipher the data and to go forward not with fear but with knowledge. In this way, aerospace medicine is a true opportunity. By using facts and knowledge we have gained, we can plan well and adjust accordingly to the needs for our future. In this way, aerospace medicine is not only an up and coming field, it is a needed tool for our survival in the decades and centuries to come.



Spotlight: Pediatric Emergency Medicine (PEM)

by Schyler Z. Grodman, MD

 \mathbf{F}^{ew} things are more terrifying than a child who cannot breathe: to watch them claw, fight, and struggle for every single breath, to see their throat tightening up, to watch the muscles in their chest retracting, and to see that, despite their best efforts, they are fighting a battle they seem destined to lose. This sight is all too familiar throughout the Texas Panhandle region, as well as the United States as a whole, from the fall through winter months, as respiratory viruses send legions of children into emergency departments with cough, congestion, and difficulty breathing. In particular, asthma and bronchiolitis, two distinct diseases impacting two different age ranges of children, are a parent's worst nightmare and account for the majority of pediatric complaints during those months. During these times of crisis, children and fami-

lies often turn towards emergency rooms for immediate care. The problem with this decision is that, across the United States, 90% of children are cared for in Emergency Departments not connected to children's hospitals, which are staffed by emergency medicine physicians, and not pediatricians. The unfortunate consequence? Children with bronchiolitis may be given treatments designed for those with asthma, or visa versa. Children with a viral infection may be given unnecessary antibiotics which do not address the issue, and may in fact result in the subsequent development of a bacterial infection that is now resistant to antibiotics. Namely, the issue is that, in most instances, the doctor treating a child with an emergency is not, in fact, given comprehensive training in pediatrics.

One major issue with having general emergency medicine practitioners treating children is the lack of specialization and comfort, and thus the over-reliance upon their ability to simply admit any "questionable" pediatric case instead of managing it from the ER. More often than not, there is a concern among not just emergency medicine physicians, but also Emergency Department nurses, to be uncomfortable handling the complexities of children in an emergency room and to simply admit every unsure pediatric case to the hospital, whether clinically warranted or not. This is fine during the spring and summer, when average pediatric inpatient censuses are relatively low. The problem arises during the months where respiratory com-

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plaints are more prevalent, and a greater number of children are brought to emergency rooms with difficulty breathing. It is at these times that the greatest vigilance in care and resource utilization must be practiced; if every single child is simply admitted, then the inpatient floor will become full of children who may not have required admission and could have been managed adequately in the emergency room. In Amarillo alone, a city with a notable patient population of children with chronic special healthcare needs, what are we supposed to tell the mother of a child in a sickle cell crisis when there are not enough beds or nurses for us to treat their child's life-threatening emergency upstairs, because we are too busy with children who simply required a few breathing treatments or a bolus of saline, and are instead taking up that space? It's an incredibly difficult question to answer; let us at least help the Panhandle region by ensuring that the gatekeepers to the pediatric inpatient floors are themselves trained in pediatrics.

To address this issue, there is an entire sub-specialty within pediatrics that deals solely with these cases: Pediatric Emergency Medicine (PEM). First officially certified as a sub-specialty of pediatrics in 1990, PEM focuses on the care of acutely ill or injured children. Fellowships can be done after completion of either a pediatric or emergency medicine residency; those applying from Pediatrics enter a 3-year fellowship, while those applying from an Emergency Medicine residency can complete a fellowship in 2 years. There are currently more than 70

PEM fellowship programs in the United States. Those trained in PEM are qualified to treat children in any emergency department in the United States, whether it be the pediatric emergency room of a children's hospital, an emergency room in conjunction with a general hospital (such as Northwest or BSA), or any free-standing emergency room. These physicians are specially trained to handle pediatric emergencies in terms of diagnosis, management, and procedures. Additionally, given the need to manage neonates, many fellowship programs have their trainees spend time rotating through Neonatal Intensive Care Units (NICUs) so that they may provide emergent, life-saving care to early term or preterm infants, such as respiratory support or even intubation (which is technically very different, especially when comparing the intubation of an adult with the intubation of the much smaller airway of a child or infant).

How would this impact the Panhandle region? Having pediatricians in the emergency rooms of Amarillo would help ensure that only those children who absolutely must be admitted to the hospital are admitted. These children, and their families, might be spared the financial, time, and emotional cost of unnecessary admissions. The system as a whole would more efficiently tend to the needs of all children, and not have those who desperately require admission be turned away, or be delayed in receiving the specialized care that they need. The number of hospital-acquired complications or infections could be reduced. The time of hospital house staff could be directed towards

In Memoriam

MORGAN HOY MCCALEB, M.D.

Family Physician, died on June 3, 2019 at the age of 88. He was a member of the Potter-Randall County Medical Society for 18 years.



comprehensive care of patients rather than being spread too thin.

When a child has a heart problem, they go to a pediatric cardiologist. When they have a stomach disorder, they see a pediatric gastroenterologist. When a child has an emergency, shouldn't they be able to see a doctor who is specially trained to address the emergencies of children? Additionally, wouldn't it be of great benefit for the physician seeing children in such acute settings to not only be able to recognize a sick child, but also the vast spectrum of healthy children who, though they may have chronic conditions (cerebral palsy, congenital cardiac conditions, colostomy bags, epilepsy, and many more), may not require immediate admission to an inpatient service?

There is a saying that is used many times in Pediatrics: children are not just small adults. PEM addresses the problem of trying to merely apply adult medicine to children in terms of simply using "smaller doses." The problems facing children, medical or otherwise, are vastly different from those facing adults. We have separate training routes for physicians who treat adults versus those who treat children; we have pediatricians, pediatric surgeons, pediatric cardiologists, etc. In the most trying of times for families, when there is the most chaos, the most uncertainty, the most tension, why should the Panhandle region not seek to address the emergent needs of children differently than the crises of adults?

3 Year Programs Nationwide: 52

- **3 Year Programs in Texas:** 3 (UT-Austin, UT-Houston, UT-Southwestern)
- 2 Year Programs Nationwide: 25
- 2 Year Programs in Texas: 1 (UT-Houston)

Emergency Medicine Resident Positions: 50/50 filled in 2018. **Pediatric Resident Positions:** 146/146

filled in 2018.

Applications Open: June. Programs Receive Applications: July. Application Season: September – November. ERAS Match: December Examinations:

ERAS Match: December Examinations: Biennially (even years).



Clinical Cardiac Electrophysiology

by Ismaile S. H. Abdalla, MD, PhD, FACC, FHRS

Clinical cardiac electrophysiology (also referred to as arrhythmia services or electrophysiology) is a subspecialty of cardiology that is concerned with the evaluation and treatment of cardiac rhythm disorders. Cardiologists with expertise in this area are usually referred to as electrophysiologists.

The training required to become an electrophysiologist is lengthy and entails seven to eight years after medical school (in the U.S.). Physicians must complete three years of internal medicine residency and three years of clinical cardiology fellowship, before enrolling in an accredited electrophysiology fellowship program for at least two years. During fellowship training, future electrophysiologists will be trained on all aspects of diagnosing and treating various cardiac rhythm disorders, as well as evaluation of patients with fainting disorders and those who suffer from palpitations. Also, they will be trained on all aspects of device management of cardiac arrhythmias including pacemakers, cardiac defibrillator implants, and cardiac resynchronization devices (used to treat certain patients with congestive heart failure). In addition to that, in certain programs they learn to explant pacemaker and defibrillator leads.

Once they successfully complete their fellowship program, fellows become eligible to sit for the examination to become Board Certified in Clinical Cardiac Electrophysiology. They are subject to the American Board of Internal Medicine (ABIM) rules and regulations for maintenance of certification; currently recertification is required every 10 years.

In the management of patients with cardiac rhythm disorders, the electrophysiologist must evaluate and treat the whole patient, not just the rhythm disorder. Some arrhythmias are life threatening to the patient irrespective of the clinical situation (e.g. ventricular fibrillation or hemodynamically compromising ventricular tachycardia), whereas others are dangerous because of the clinical setting (e.g. atrial fibrillation with rapid ventricular response in patients with severe coronary artery disease or with manifest accessory pathway or preexcitation syndrome—WPW syndrome--with capability of rapid conduction of the very fast atrial rate leading to ventricular fibrillation). Some arrhythmias, such as premature ventricular complexes (PVCs), may be highly symptomatic but not be associated with adverse outcome, whereas other patients with atrial fibrillation may have no symptoms at all but may still be at significant risk of stroke.

Evaluation of patients with cardiac rhythm disorders begins with a careful history and physical examination, and should usually progress from the simplest to the most complex tests, from the least invasive and safest to the most invasive and risky, and from the least expensive out of hospital evaluations to those that require hospitalization and complex costly procedures. At times, depending on the clinical situation and patient's presentation, the physician may choose to proceed directly to a high risk, expensive procedure, such as Electrophysiologic Study (EPS), before getting noninvasive electrocardiographic monitoring.

Electrophysiologists work closely with other cardiologists and cardiac surgeons to assist or guide therapy for heart rhythm disturbances (cardiac arrhythmias). In doing that, one of the tools they use is the EPS. An Invasive EPS involves introducing multipolar catheter electrodes into the venous system (and sometimes the arterial system) and positioning the electrodes at various intracardiac sites to record or to stimulate cardiac electrical activities. The heart is stimulated from portions of the atria or ventricles and from other sites as needed (e.g. near the accessory pathway in WPW). Such studies are performed diagnostically to provide information about the type of the clinical rhythm disorder and insight into its electrophysiological mechanism, which will guide the treatment. The remainder of this article will focus on the invasive EPS.

Durrer et al in Amsterdam and Coumel and his associates in Paris independently developed the technique of Programed Electrical stimulation of the heart in 1967. This began the first decade of Clinical Cardiac Electrophysiology. The early years of electrophysiology in man were dominated by descriptive work exploring the presence and timing of His

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Panhandle Area Physician Rosters are on sale for \$10.00

Bundle activation (and that of a few other intracardiac sites) in a variety of spontaneously occurring physiologic and pathologic states. A quantum leap occurred, however, when the techniques of programed stimulation were combined with intracardiac recording by Wellens in the Netherlands. Use of these techniques subsequently furthered our understanding of the functional components of the AV specialized conduction system, including the refractory period of the atrium, the AV node, the His Bundle and the ventricles.

This led to the development and the use of EPS as a tool for treating arrhythmias. The ability to reproducibly initiate and terminate arrhythmias by programmed atrial and ventricular stimulation led to the development of serial drug testing to assess the efficacy of antiarrhythmic drugs.

The other major thrust of the last 2-3 decades has been the use of catheter ablation techniques to treat, and in many cases to cure, cardiac arrhythmias. Focal ablation of the area of the myocardium involved in the tachyarrhythmia, using radiofrequency energy, is now the treatment of choice for patients with a variety of supraventricular tachycardias including AV nodal reentry tachycardia (AVNRT), atrio- ventricular reciprocating tachycardia (AVRT) utilizing a manifest or concealed accessory pathway, focal or reentrant atrial tachycardia, atrial flutter, ventricular tachycardia in normal heart and in certain patients with coronary artery disease and previous myocardial infarction. Recently, radiofrequency ablation has become important in the management of certain patients with atrial fibrillation. Finally, EPS has been used prognostically to identify patients at risk of Sudden Cardiac Death who would benefit from an implantable cardioverter-defibrillator.

In summary, EPS can be helpful in patients who have sinus node dysfunction, AV nodal dysfunction, intraventricular conduction disturbance, tachyarrhythmias, unexplained syncope, near syncope and palpitations. Therapeutically, EPS have been very successful in treating and curing a variety of cardiac arrhythmias. Research continues particularly in the area of catheter ablation of atrial fibrillation where, although many patients undergoing this procedure enjoy a high percentage of success with the first procedure, some of them will require a second ablation. If the pace of advancement of the past half century continues, these and other complicated rhythm problems will be more successfully and easily treated by clinical electrophysiologists.

Happy Holidays

from the Potter-Randall County Medical Society Retired Members

Ismaile Abdalla, M.D. Walter Allison, M.D. John J. Alpar, M.D. Masoud Alzeerah, M.D. Leora R. Andrew, M.D. William A. Anthony, M.D. Richard K. Archer, M.D. G. Emily Archer, M.D. Bill Barnhill, M.D. Richard H. Bechtol, M.D. David F. Beggs, M.D. Howard Berg, M.D. Gayle H. Bickers, M.D. Andrew Brooker, M.D. Turner Caldwell III, M.D. Dennis L. Canon, M.D. Arturo Carrillo, M.D. David G. Carruth, M.D. R. Lowell Chaffin, M.D. Pam Chandler, M.D. John Coscia, M.D. Robert E. Cotton, M.D. R. H. Cox, M.D. Hugh Bob Currie, M.D. Edwin L. Dodson, M.D.

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Hospice and Palliative Care Training

by Susan Meikle, MD

People with serious illness have priorities besides simply prolonging their lives," writes Dr. Atul Gawande in *Being Mortal.* "If your problem is fixable, we know just what to do. But if it's not? The fact that we have had no adequate answers to this question is troubling and has caused callousness, inhumanity, and extraordinary suffering."

Chronic illnesses and cancer are now the leading causes of death in industrialized countries. 78% of the US population lives past their 65^{th} birthday, and more than $\frac{3}{4}$ will have cancer, stroke, heart disease, obstructive lung disease or dementia. Most cancer patients are in their 60's to 70's. This shift in the aging of the population and increase in chronic, severe disease with life-limiting impact has led to the development of the subspecialty Hospice and Palliative Care.

Suffering has been deconstructed by the medical establishment. Debilitation and the dving process occur contemporarily over months to years instead of days to weeks as in the past. This creates a situation where suffering occurs. Suffering is an all-encompassing effect on the patient. Medicine has focused on pain as the sole representative of suffering because it is quickly assessed and is accessible. However, this has created a false sense of control, equating relief of pain with alleviation of suffering. This distances patients from providers by avoiding other equally important dimensions. Dying has become the final stage of psychosocial development.

In 1990 The World Health Organization identified Palliative Care as a specialty. In 2002, the WHO defined palliative care as "an approach that improves the quality of life of patients and their families facing the problems associated with life threatening illnesses, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychological, and spiritual." Hospice and palliative care encompasses the interdisciplinary evaluation and treatment of physical, emotional, spiritual and social realms. The hospice and palliative care physician is trained in the skillful management of distressing physical symptoms, alleviating psychological distress, providing support for evolving sense of identity, enhancing relationships, and, finally, setting achievable goals.

A comprehensive palliative care assessment is the basis for treatment. The palliative care assessment includes clinical assessment, social history, functional status, and mental status exam as well as a review of the medical records. Symptom burden is assessed often by the Edmonton Symptom Assessment Scale (ESAS), which is a ten-point numeric scale that measures average intensity over previous 24 hours for symptoms of pain, fatigue, nausea, depression, anxiety, drowsiness, appetite, feeling of wellbeing, shortness of breath and sleep. Two additional items have recently been added: spiritual pain and financial distress (The MD Anderson Supportive and Palliative Care Handbook, Fifth Edition 2015, pp. 166). In addition to physical symptoms, palliative care physicians often carry out decisional capacity testing with varied tools such as the Memorial Delirium Assessment Scale or the Mini-Cog[®].

Advance care planning is another important component of the palliative care evaluation and treatment plan. Advance care planning is the process of communication between the patient, the family or health care proxy, and medical staff in prospectively identifying a surrogate decision maker, clarifying treatment preferences, and developing individualized goals of care near and up to end of life. The primary goals of the palliative care evaluation are to enhance education about illness (including prognosis and outcomes), to define key priorities in endof-life care, and to develop a care plan that addresses these issues. Advance care planning is important to help patients find hope and meaning in life, to help achieve a sense of spiritual peace, and to strengthen relationships with loved ones (Fast Facts #162, Advance Care Planning in Chronic Illness).

Referrals to palliative care services are available to help patients at any time in the cancer trajectory, whether that be during active treatment, palliative treatment, or hospice (6 months or less life expectancy). Other life-limiting diseases are also be eligible for palliative care ser-

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RICHARD D. CHANDLER, D.O. Family Physician, died on June 10, 2019 at the age of 85. He was a member of the

In Memoriam

He was a member of the Potter-Randall County Medical Society for 6 years.



vices including end-stage renal disease, COPD, late stage heart failure, dementia, or stroke. Palliative care can be delivered in the hospital, emergency room, long term care facility and office setting. Palliative care in the last six months of life is hospice care, and programs often deliver both palliative care and hospice care in the home setting. Both adults and children can be offered palliative care. Compassionate palliative care works best when there is a team approach, usually including physicians, nurses, social workers, and other professionals.

The American Medical Association states that Hospice and Palliative medicine is a new and a rapidly growing field. One of 10 residency programs must be completed before electing to spend an additional year undergoing specialized hospice and palliative medicine training. Elegible primary specialty programs include internal medicine, surgery, obstetrics and gynecology, anesthesiology, family medicine, pediatrics, neurology, and psychiatry, among others. The one-year palliative care fellowship supplements the base residency, and its completion allows for dual certification. The fellowship typically includes inpatient, outpatient, long term care, home hospice, and pediatric rotations. During the inpatient rotation, it would be common to see patients in the emergency department, in the intensive care unit, and on the wards. Fellows are educated on breaking bad news, pain management, delirium, and other symptoms associated with life-limiting diseases and dying.

Board certification is achieved by passing the biannual exam. Board certification in the primary specialty must be maintained in order to remain board eligible for hospice and palliative medicine. Many possible career routes can be chosen after completing formal training in hospice and palliative medicine. Palliative medicine careers cover a spectrum ranging from direct patient care in a variety of settings to administrative roles with less patient care contact. This field also provides expanding opportunities for research. Palliative care outpatient clinics and new models of concurrent care delivery will further expand the diversity of this career.

In summary, subspecialists in Hospice and Palliative care offer specialized medical care to patients with incurable disease, from pediatric to geriatric age groups, in both inpatient and outpatient settings. This one-year fellowship focuses skills acquired during the base residency (e.g. internal medicine, family medicine) onto the care of appropriate patients, and the physician so trained achieves dual certification. This focused training in symptom control, spiritual care and end-of-life preparation allows these practitioners to manage transitions and to alleviate suffering for all of our eligible patients.

Happy Holidays

from the Potter-Randall County Medical Society Resident Members

Kerolos Abdelmalek, M.D. Mais Abdou, M.D. Kholud Alarji, M.D. Aparna Alavalapadu, M.D. Ikha Al-Azzawi, M.D. Ibraheem Algarni, M.D. Khaled Alhbshi, M.D. Hamsa Aljumaili, M.D. Abdulelah Almutairi, M.D. Farah Alsaati, M.D. Muath Alsharif, M.D. Muhammad Amin, M.D. Dalya Agel, D.O. Shyla Arismendez, M.D. Chandralekha Ashangari, M.D. William Baladron Guerra, M.D. Abigail Batson, M.D. Lynn "Kevin" Benson, M.D. Oluwatosin"Tosin" Bewaji, M.D. Elspeth Bittle, M.D. Solomon Boagale, M.D. Victoria Bzik, M.D. Divya Cheruku, M.D. Rasmey Chhin, D.O. Eliza Contreras, M.D. Steven Cummings, M.D. Dhara Dave, M.D.

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The Evolution of HIV Care

by Scott Milton, MD

The HIV epidemic began around 1980 when healthy young gay men developed a rare pneumonia termed pneumocystis. These individuals also developed the rare cancer Kaposi's sarcoma. This new syndrome, called the Acquired Immune Deficiency Syndrome or AIDS, was found later to be caused by a novel virus. Despite this discovery, testing for acquisition of the virus was not available until 1985. I entered medical school in Houston Texas in the fall of 1985 and clearly remember a large open room filled with young men on ventilators dying from this pneumonia. I also recall around this time the Houston newspapers reporting that the city of Houston would build a 5000 bed hospital designated just for AIDS patients. The response to the epidemic was clearly an unprepared and desperate attempt to grapple with the enormous burden on the healthcare system.

AZT or zidovudine was the first drug that was shown to be effective against the HIV virus. This was developed in the mid-1980s. It wasn't until the late 1980s and early 1990s when multiple drug regimens were found to be more effective that using one drug alone. A new class of antiretroviral drugs called protease inhibitors were invented in early 1990s, with saquinavir being the first commercially available drug. The highly potent integrase inhibitors became available in 2007 with raltegravir. These are the most important class of drugs in use today and are essentially the backbone of therapy.

Therefore, in my career, HIV has gone from an untreatable fatal infection to a highly treatable (although incurable) disease that can be managed over time much like any other chronic medical condition. Initially, HIV was almost exclusively treated in the hospital. Most clinically- based internal medicine programs and infectious disease fellowships were overwhelmed with the HIV epidemic. Almost all HIV patients had

advanced disease requiring long hospitalizations and expensive treatment protocols with generally poor outcomes. Antiretroviral therapy was limited and the drugs were expensive; many believed that two or three drug regimens would bankrupt the health care system. If individuals were diagnosed prior to becoming ill it was a common practice to withhold antiretroviral therapy and monitor their parameters over time. However, as the clinical regimens for any retroviral drugs became established and as combination pill therapy became commonplace, which improved compliance, the nature of HIV care and where and when it was delivered began to change. By the mid to late 1990s the regimens were good enough that most people with HIV could avoid hospitalization. It also became clear that patients placed on treatment as soon as they were diagnosed had improved outcomes over time. HIV care became almost exclusively an outpatient disease. Ironically a common complaint of our internal medicine residents is the lack of experience caring for HIV patients. This is truly a testimony to the great advances in HIV care and specifically to the drugs that have been

invented. While these drugs remain very expensive they are highly cost-effective by allowing these individuals to maintain their health and productivity. Further, the risk of transmission is much reduced when an individual is receiving effective therapy, which further reduces the burden of this disease on our society.

As the HIV epidemic evolved over this time, the individuals and treatment team also evolved and began to include individuals who did not obtain training through an infectious disease fellowship. The specialty of infectious diseases has been recognized by the American Board of Internal Medicine since the early 1970's as a distinct subspecialty with a certification exam. Infectious diseases is a broad field, and no discipline of medicine is spared. I believe this is why I've been able to meet most practitioners on staff at our hospitals. Infectious diseases also touches many other medical disciplines such as public health and global health that are beyond the scope of a traditional hospital setting. The breadth of knowledge in this field is illustrated when the content cat-

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100 % Membership

Thanks to the group practices* whose entire physician staff are members of Potter Randall County Medical Society and TMA.

Amarillo Emergency Physicians Amarillo Family Physicians Clinic Amarillo Heart Group • Amarillo Urology Cardiology Center of Amarillo High Plains Radiological Association Panhandle Eye Group Texas Oncology Women's Healthcare Associates Amarillo Anesthesia Consultants Texas Tech/Dept. of Surgery *those groups of seven or more egories for certification are reviewed from the ABIM website. These include: bacterial disease 27%, HIV 15%, antimicrobial therapy 9%, viral diseases 7%, travel and tropical medicine 5%, fungi 5%, immunocompromised host (non-HIV infected) 5%, vaccinations 4%, infection control and prevention 5%, general internal medicine, critical care, and surgery 15%.

Competency in HIV care has always been incorporated in the curriculum of the infectious diseases fellowship. Infectious diseases fellowships are usually a minimum of two years. A year of research often is added to training programs with significant research opportunities. HIV training usually includes managing an inpatient service as well as an outpatient clinic. Over the two or three year fellowship, trainees manage complicated medical issues unique to HIV inpatient care and deal with social barriers that prohibit optimal care. The outpatient care experience many times involves a comprehensive approach to patient care with social services, psychiatric and medical care all offered under the same roof. Trainees can gain competency by working in each setting. Thus, individuals who are fellowship trained in Infectious Diseases are broadly trained with HIV care being an important but relatively small subset. Further, the practices of many infectious disease doctors are focused on other specific aspects of infectious diseases such as transplant medicine, ICU medicine, or even global medicine. In fact, HIV care is best delivered by those to practice this exclusively.

Within the American Board of Internal Medicine is the HIVMA, an organization of medical professionals who practice HIV medicine. This entity serves those who were trained through an infectious diseases fellowship and a residency in internal medicine after medical school. There are many clinicians and scientists who only care for HIV infected patients. The HIVMA website also offers an HIV provider directory. There are videos and clinical practice guidelines as well as resources and links to professional development and other subjects useful to those researching HIV or caring for HIV infected patients.

Another alternative that has evolved separately is the American Academy of HIV Medicine. This professional organization supports HIV practitioners to promote quality care for all Americans living with HIV. Credentialing is offered not only to physicians but also to nurse practitioners, physician assistants, and pharmacists. The HIV specialist is available to clinical providers while the HIV expert is offered to nonpracticing clinicians. The HIV pharmacist is available to eligible HIV-specialized pharmacists. This entity offers a core curriculum which is a web-based learning resource covering both the basics of HIV care as well as the latest advances in care. The core curriculum is designed to assist providers new to the field as well as those with experience. The program is produced by the American Academy of HIV Medicine and is supported by unrestricted grants from Gilead Sciences and Viiv Health.

In summary, just as the HIV epidemic has evolved so has the care and the individuals trained to treat HIV. Traditionally, HIV care was mastered through an infectious disease fellowship with prior training in internal medicine. The American Academy a HIV medicine has evolved separately from the American Board of Internal Medicine and offers its own credentialing to individuals not formally trained with an infectious disease fellowship. Further, this entity offers accreditation to individuals other than physicians including nurse practitioners, physician assistants and pharmacists.

Yes, I Would Like To Contribute To The Potter-Randall County Medical Society Endowment Fund

The endowment fund was established in 1981 to promote the advancement of general education in medical science in Potter and Randall counties through discussion groups, forums, panel lectures, and similar programs. It is the hope of the society that, through the endowment fund, the work of our physicians will be continued by increased public awareness and understanding of the advances in medical science.

We are happy to accept memorials and/or honorariums. Notification of gift is sent immediately. Amount remains confidential. Your contribution is tax deductible. Please make checks payable to Potter-Randall County Medical Society, and send to PRCMS, 1721 Hagy, Amarillo, Texas 79106.

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Incidental Right-Sided Aortic Arch with Aberrant Left Subclavian Artery

David P. Foley, MBA; Alyssa R. Byrd, BS; Allison S. Gracey, BS; Chandralekha Ashengari, MD Texas Tech Health Sciences Center Department of Internal Medicine, Amarillo, Texas, USA

Introduction:

Right-sided aortic arch (RAA) is commonly asymptomatic and found incidentally on radiographs. This case report aims to distinguish the types of RAA, clarify the alternative management plans, and assess for common cardiovascular comorbidities.

Case:

A 71 year old white female with a past medical history of COPD, renal disease, atherosclerosis, hypertension, and atrial fibrillation presented to the ER with vomiting and diarrhea. The patient was afebrile, hypotensive (79/40), and reported a cough. She was given 2L NS. Thoracic CT showed an isolated pulmonary nodule. Type II RAA (Figure 1) was also noted. She denied dysphagia, dyspnea, angina, claudication, syncope, edema, and a family history of medical conditions.



Figure 1: Axial CT shows RAA with aberrant left subclavian originating from dilated dorsal aortic root (white arrow).

Surgical history included carotid endarterectomy, appendectomy, and hysterectomy. Medications included amiodarone, amlodipine, aspirin, clopidogrel, metoprolol, omeprazole, prednisone, and simvastatin. Physical examination was unremarkable. Urine demonstrated mild acute kidney failure. Fluid resuscitation was given, and blood pressure improved. She was discharged and instructed to follow up for evaluation of the lung nodule.

Discussion:

Aortic malformation beginning in the 4th through 7th weeks of embryonic development is responsible for RAA. Normal development begins with two arches, followed by involution of the right. In RAA, the right side of the double arch persists while the left involutes. RAA occurs in 0.05% of the general population and is associated with many vascular anomalies (1). The most common of these, vascular ring, is a failure of left ductus arteriosus (LDA) involution which may compress the trachea and esophagus. Although associated with 22q11 deletion syndrome, RAA is not typically related to genetic abnormalities. Current literature has not yet established a definitive etiology (2).

RAA is classified by the branching pattern of arch vessels: mirror type [I], aberrant left subclavian (LSCA) [II], and isolation of the LSCA [III]. Type I is the presence of left innominate, right common carotid, and right subclavian arteries. It is associated with left pulmonary artery (LPA) stenosis/isolation. In type II, the LSCA exits the left dorsal aortic root leading to increased risk for vascular rings. Type III is characterized by an isolated LSCA connected to the LPA by the LDA and presents with absent left upper extremity pulse (3).

Recognizing RAA type is important for determining management and predicting complications. In asymptomatic patients with Types I or III, no further management is needed. All patients with Type II RAA or RAA concomitant with atherosclerosis should be screened via Doppler ultrasonography for carotid and subclavian artery stenosis (4). While providers should be aware of the potential sequelae of RAA's associated vascular malformations, management is limited to symptomatic treatment such as surgical correction of compressing vascular rings (5). Patients with RAA have increased risk of comorbid 22q11 deletions. Physicians

should recognize common features of this syndrome such as abnormal facies and hypocalcemia.

Literature provides many examples of unwarranted surgeries and tests conducted on asymptomatic RAA. The authors hope that accurate identification of RAA and its types will prevent these unnecessary interventions.

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Nonalcoholic Fatty Liver Disease – NAFLD

by Tarek Naguib, MD, MBA, FACP

What is Nonalcoholic Fatty Liver?

Nonalcoholic Fatty Liver Disease (NAFLD) describes fatty accumulation and inflammation in liver cells from any cause other than alcohol use. This can progress to severe liver failure over time.

What is the Cause of Nonalcoholic Fatty Liver?

Exact causes are not well known, but obesity is a risk factor for the condition.

Why Nonalcoholic Fatty Liver?

NAFLD has the potential to advance to a condition called nonalcoholic steatohepatitis (NASH), which is an advanced accumulation of fat in the liver causing fibrosis and scarring of the liver. This further leads to cirrhosis and liver failure. Severe cirrhosis can lead to death.

How Do I Suspect Having Nonalcoholic Fatty Liver?

If you are obese you have a higher risk of NAFLD. Metabolic syndrome puts you at high risk to develop NAFLD. Metabolic syndrome is a condition of overweight, high blood pressure, poor response to insulin, and high blood lipids (fat).

How Do Doctors Diagnose Nonalcoholic Fatty Liver?

Blood work for liver functions, liver ultrasound, and CT scan have all been used in order to diagnose NAFLD.

What is the Plan to Manage Nonalcoholic Fatty Liver?

Increase of physical activity, weight loss through better diet, control of blood

lipids, blood glucose, and blood pressure all have been used with success to control the condition. Liver biopsy has been used to characterize suspected severe liver involvement in order to define the exact cause.

What is Liver Biopsy?

Liver biopsy means obtaining a small piece of the liver, usually using a needle with no need to use surgery. The needle is inserted through the skin into the liver using ultrasound or CT guidance.

For more information: National Institute of Diabetes and Digestive and Kidney Dieases.

www.niddk.nih.gov/health-information/ liver-disease/nafld-nash

UPCOMING EVENTS 2020

TMA Winter Conference

Jan. 24-25 Hyatt Regency Austin Area, TX

TexMed 2020

May 1-2 Fort Worth Convention Center and Omni Fort Worth Fort Worth, TX

AMA House of Delegates Annual Meeting

June 6-10 Hyatt Regency Chicago, IL

TMA Fall Conference

Sept. 11-12 Hyatt Lost Pines Austin Area, TX

AMA House of Delegates Interim Meeting

Nov. 14-17 Manchester Grand Hyatt San Diego, CA

TMA Advocacy Retreat

Dec. 4-5 Omni Barton Creek Austin, TX **Opioids in Texas in 2017** *Tex Med* (11/19) – There were 1,458 overdose deaths in Texas involving opioids and 53 opioid prescriptions per 100 people (less than national average of 58).

Texas Sues Opioid Maker *Tex Med* (11/19) – Texas attorney general announced a suit against Johnson & Johnson for "misrepresentation" to Texas Medicaid program about their fentanyl opioid drug to doctors. Oklahoma won a \$572 million judgment against the drug maker in a similar law suit.

Marijuana Use on the Rise *JAMA* (10/19) – Marijuana continues to be the most widely used illicit drug in the United States, with 15.9% of people aged 12 years or older reporting that they had used it in the past year. Federal government still considers the drug illicit even though many states have legalized it.

Preexposure Prophylaxis for HIV *JAMA* (11/19) – A new combination drug called Descovy (emtricitabine and tenofovir alafenamide) was approved by FDA for men and transgender women who have sex with men. It is taken daily to prevent catching HIV from high risk behavior. Cisgender women (non-transgender women) were not tested. Descovy is safer than its predecessor Truvada in terms of kidney side effects.

Drug Costs in the US *JAMA* (10/19) – The Drug costs in the US have increased more than three fold in the last 20 years. Three of every 10 report not taking their medicines due to cost!

Pregnancy Related Death in the US *JAMA* (10/19) – About 28% of deaths in relation to pregnancy in the US are shared equally among hemorrhage and cardiovascular conditions. Approximately 70% of these deaths are preventable!

USPSTF Recommends Urine Screen in Pregnancy *JAMA* (9/19) – The US Preventive Services Task Force (USPSTF) has updated its recommendations for screening pregnant women for asymptomatic bacteriuria using urine culture (B recommendation).

New Nasal Glucagon for Low Sugar *JAMA* (9/19) – The first non-injectable glucagon therapy for treating severe hypoglycemia has received FDA approval. The intranasal powder is called Baqsimi and is used for severe hypoglycemia in diabetics aged 4 years or older.

A Pill for Women at Risk of Breast Cancer JAMA (9/19) – USPSTF recommends that clinicians offer to prescribe risk-reducing medications, such as tamoxifen, raloxifene, or aromatase inhibitors, in women who are at increased risk of breast cancer and low risk of medication side effects (B recommendation). This applies to women 35 years or older who are without symptoms.

Counseling Doctors! JAMA (10/19) – Physicians reported less burnout and emotional exhaustion after receiving short-term professional coaching according to a pilot trial. After 5 months of being counseled (on average 3.5 hours a month), doctors reported 50% less emotional exhaustion compared to doctors who were not counseled.

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Spotlight on New Members

Board of Censors Report:

The following were approved for membership on January 15, 2019:

REGULAR MEMBERSHIP:

HERNANDEZ, HECTOR, M.D. OTOLARYNGOLOGY (OTO)

3501 Soncy #140. Amarillo TX 79119.

Graduated from University of Pennsylvania School of Medicine, Philadelphia PA 1990. Internship and Residency at Hospital of the University of Pennsylvania, Philadelphia PA 1990-1995.

TRANSFER MEMBERSHIP:

CRABTREE, ROBERT N., M.D.

ANESTHESIOLOGY//PAIN MANAHGEMENT (AN/APM) 6819 Plum Creek Drive, Amarillo TX 79124. Transfer from Dallas County Medical Society Graduated from Texas Tech University Health Science Center, Lubbock TX 1987. Internship and Residency, Dallas TX 1987-1991.

PEARSON, DAVID M., M.D. FAMILY MEDICINE (FM)

1400 S. Coulter, Ste. 5100, Amarillo TX 79106. Transfer from Galveston County Medical Society Graduated from University of Texas Medical Branch, Galveston TX 2014. Internship and Residency at Texas Tech Health Science Center, Amarillo TX 2014-2018.

POAGE, FREDERICK DEAN, D.O. FAMILY MEDICINE (FM)

1400 S. Coulter, Ste. 5100, Amarillo TX 79106. Transfer from Galveston County Medical Society. Graduated from University of North Texas Health Science Center, Texas College of Osteopathy Medicine, Fort Worth TX 2014. Internship and Residency at Texas Tech University Health Science Center, Amarillo TX 2014-2018.

Board of Censors Report:

The following were approved for membership on March 19, 2019:

REGULAR MEMBERSHIP:

AHMED, HASSAN, M.D.

GENERAL SURGERY/THORACIC SURGERY (GS/TS) 1400 S. Coulter, Amarillo TX. Graduated from University of Gezira, FAC of MED, Wad Medani, Sudan 2002. Internship and Residency at Texas Tech Health Science Center, ending 2017.

ARTHO, BRENT, M.D.

ANESTHESIOLOGY (AN) 2201 Civic Circle, #503, Amarillo TX. Graduated from Texas Tech University Health Science Center, Lubbock TX 2004.

BARAJAS, JORGE, M.D.

ANESTHESIOLOGY (AN) 2201 Civic Circle, #503, Amarillo TX. Graduated from Universite Del Bravo, Reynosa, Tamaulipas, MX 1998. Residency at MFPRP-UTHSC. McAllen TX 2001-2004.

CAMPIN, RICHARD C., M.D.

RADIOLOGY, DIAGNOSTIĆ (DR) 1901 Medi Park Dr., #2050, Amarillo TX. Graduated from Dartmouth Medical School 1999. Residency and Fellowship at Boston Children's Hospital, Boston MA ending 2009.

CORNELIUS, DENA, M.D. ANESTHESIOLOGY (AN)

2201 Civic Circle, #503, Amarillo TX. Rejoined. Graduated from University of Texas, Houston, TX 2000. Internship at Kansas University, Wichita KS 2000-2001. Residency at University of Texas, Houston TX 2001-2004.

GOETTSCHE, STEVEN, D.O. ANESTHESIOLOGY (AN)

2201 Civic Circle, #503, Amarillo TX. Graduated from Des Moines University of Osteopathic Health Science, Des Moines, IA 1990. Residency at University of Iowa, Iowa City IA (1991-1994.

HANSEN, NATHAN, M.D.

GENERAL SURGERY (GS) 1400 S. Coulter, Amarillo TX.

Graduated from Pennsylvania State University, Milton S. Hershey Medical Center, Hershey PA 2007. Residency at Pennsylvania State University, Hershey PA 2007-2012.

HASHIMOTO, YOHEY, M.D.

GENERAL SURGERY/COLON/RECTAL SURGERY (GS/CRS) 1400 S. Coulter, Amarillo.

Graduated from Yokohama City University, Yokohama, Kanagaw 2005. Internship and Residency at Allegheny General Hospital, Pittsburgh PA 2012-2016. Fellowship at New York-Presbyterian/ Weill Cornell Medical Center, New York NY 2016-2017 (Critical Care).

HOLMES, HEATHER M.D.

OBSTETRICS/GYNECOLOGY - **(OBG)** 1400 Coulter, Amarillo TX 79106. Rejoined. Graduated from University of Texas Medical Branch, Galveston TX 1998. Internship and Residency at Texas University Health Science Center, Amarillo TX 1998-2002. Residency/Post Grad at University of Texas Southwestern, Dallas TX 2002-2005 (Maternal & Fetal Medicine, MFM).

MALKUCH, GERALD, M.D.

ANESTHESIOLOGY (AN) 2201 Civic Circle, #503, Amarillo TX. Rejoined. Graduated from Texas Tech University Health Science Center, Lubbock TX 1999. Internship and Residency at Scott & White Memorial Hospital, Temple TX 1999-2003.

MARTIN, LANCE, M.D.

FAMILY MEDICINE (FM) 1215 S. Coulter, Amarillo. Graduated from Texas Tech University Health Science Center, Lubbock TX 2010. Residency at Texas Tech University Health Science Center, Lubbock TX 2010-2013.

NAZIM, MUHAMMAD H., M.D.

GENERAL SURGERY (GS)

1400 Coulter, Amarillo TX. Graduated from Aga Khan Medical College, Aga Khan University, Karachi, Pakistan 2003. Internship and Residency at West Virginia University, Morgantown WV, 2005-2010. Fellowship at Indiana University, Indianapolis IN 2010-2011 (Burn and Reconstructive Surgery).

PATTON, STEVEN, M.D. ANESTHESIOLOGY (AN)

ANESTRESTOLUGY (AN) 2201 Civic Circle, #503, Amarillo TX. Rejoined. University of Texas Medical Branch, Galveston TX 1990. Internship at University of Texas Medical Branch, Galveston TX 1990-1991. Residency at Texas Tech University Health Science Center, Lubbock TX 1991-1994.

PYRON, BRADDEN REX, M.D.

INTERNAL MEDICINE (IM) 1600 Wallace, Amarillo TX.

Graduated from Universite Auto de Guadalajara, FAC DE MED, Guadalajara, Jalisco MX 2001. Internship at University of Texas Health Science Center, San Antonio TX, 2003-2004. Residency at William Beaumont Army Medical Center, El Paso TX 2007-2010.

QUIGLEY, LAJOHN, M.D.

BARIATRIC SURGERY/GENERAL SURGERY (BRS/GS)

1400 S. Coulter, Amarillo TX. Graduated from Texas Tech University Health Science Center, Lubbock TX 2007. Residency at Texas Tech University Health Science Center, Lubbock TX 2007-2013. Fellowship at Greenville Health System, Greenville SC 2013-2014 (Minimally Invasive and Bariatric Surgery).

RICO, FERDINAND R., M.D.

SURGERY/TRAUMA (TRS) 1400 S. Coulter, Amarillo TX

Graduated from University of Santo Tomas, Manila 1985. Internship at Harlem Hospital, New York NY 2001-2002. Residency at Our Lady of Mercy Medical Center, Bronx NY 2002-2004. Residency at University of Rochester Medical Center, Rochester NY 2006-2008. Fellowship at University of Rochester Medical Center, Rochester NY 2005-2006 (Surgical Critical Care.)

SBAR, ALAN D., M.D.

GENERAL SURGERY (GS) 1400 Coulter, Amarillo TX.

Graduated from George Washington University School of Medicine & Health Science, Washington DC 1996. Residency at US Army San Antonio, San Antonio TX (General Surgery) 1996-2002.

Spotlight on New Members

SCHNEIDER, BRIAN, M.D.

GENERAL SURGERY (GS) 1400 S. Coulter, Amarillo TX 79106. Graduated from University of Texas Medical Branch, Galveston TX 2000. Internship and Residency at Wayne State University/DMC, Detroit MI 2000-2005.

STARK, AMY L., M.D. PSYCHIATRY (P)

1400 Wallace, Amarillo TX.

Graduated from Texas Tech University Health Science Center, Lubbock TX 2013. Residency at Mayo Clinic, Rochester MN 2013-2017. Fellowship at Yale University School of Medicine, New Haven CT 2017-2018 (Addiction Psychiatry).

STUART, ANTHONY, M.D. ANESTHESIOLOGY (AN)

2201 Civic Circle, #503, Amarillo TX.

Graduated from University of Texas/Houston, Houston TX 1990. Internship and Residency at Texas A & M College of Medicine, Temple TX 1991- 1994.

TRAHERN, LANCE L., M.D.

ANESTHESIOLOGY (AN) 2201 Civic Circle, #503, Amarillo TX. Rejoined. Graduated from University of Kansas Medical School, Kansas City KS 2001. Internship and Residency at University of Texas/Houston, Houston TX 2001-2005.

WILLIAMS, JACOB, M.D.

ANESTHESIOLOGY (AN) 2201 Civic Circle, #503, Amarillo TX. Graduated from University of Texas Medical School/Houston, Houston TX 2010. Residency at UTMB, Galveston TX 2010-2014.

TRANSFER MEMBERSHIP:

NICKENS, WESLEY, M.D. FAMILY MEDICINE (FM)

FAMILT MEDICINE (FM) 4514 Cornell, Suite B, Amarillo TX Transfer from Greenbelt County Medical Society. Graduated from Texas Tech University Health Science Center, Lubbock TX 2006. Residency at Texas Tech University Health Science Center, Lubbock TX 2006-2009.

Board of Censors Report: The following were approved for membership on May 21, 2019:

REGULAR MEMBERSHIP:

FELDER, RANDALL, M.D.

ANESTHESIOLOGY (AN) (rejoined)

1501 S. Coulter, Amarillo TX 79106 (Lone Star Anesthesiology Consultants) Graduated from Texas Tech University Health Science Center, Lubbock TX, 1985. Internship at University of Oklahoma, Oklahoma City OK, 1985-1986. Residency at University of Oklahoma, Oklahoma City OK, 1986-1989.

JOHNSTON, JACK C., M.D.

ORTHOPEDIC SURGERY (ORS) 6010 Amarillo Blvd W., Dept 112, Amarillo TX 79106 (VA) Graduated from Boston University School of Medicine, Boston, MA 1992. Internship at Jacobi Hospital, Bronx NY. 1992-1993 (GS). Residency at Montefiori Medical School, Bronx NY, 1993-1997 (ORS). Fellowship at Long Beach Memorial, Long Beach CA, 1997-1998. (OSM).

TRANSFER MEMBERSHIP:

BASHOVER, EVA, M.D. PATHOLOGY (PTH)

TRANSFER FROM HARRIS COUNTY MEDICAL SOCIETY P.O. Box 51525. Amarillo TX 79159

Graduated from American University of the Caribbean School of Medicine, Cupecoy Saint Maarten, 2012. Residency at Case Western Reserve University, Cleveland OH, 2012-2016 (Combined Anatomic and Clinical Pathology). Fellowship at MD Anderson Cancer Center, Houston TX, 2016-2017 (Surgical Pathology). Fellowship at MD Anderson Cancer Center, Houston TX 2017-2018 (Cytopathology).

DANESHFAR, BAHRAWN (DANIEL), M.D.,

GENERAL SURGERY/VASCULARY SURGERY (GS/VS) TRANSFER FROM HUTCHINSTON/HANSFORD COUNTY MEDICAL SOCIETY 2 Care Circle, Amarillo TX 79124

Graduated from Texas Tech University Health Science Center, Lubbock TX. 2006. Internship at University of Arkansas, Little Rock AR, 2006-2007. Residency at Virginia Tech-Carilion Clinic, Roanoke VA, 2007-2013. Fellowship at Baylor University, Dallas TX 2013-2015 (Vascular Surgery).

RETIRED:

GARY POLK, M.D.

PULMONARY DISEASE/SLEEP MEDICINE (PUD/SM). 3507 Edaewood, Amarillo TX 79109

Board of Censors Report:

The following were approved for membership on July 16, 2019: REGULAR MEMBERSHIP:

CLARK, SUMMER, M.D.

DERMATOLOGY (D)

1611 Wallace Blvd., Proffer Surgical Association, Amarillo TX 79106.

Graduated from University of Oklahoma College of Medicine, Oklahoma City OK 2014. Internship and Residency at University of Oklahoma Health Sciences Center, Oklahoma City OK 2014-2018. Fellowship (Micrographic Surgery and Dermatologic Oncology), Vanderbilt University, Nashville TN 2018-2019.

TRANSFER MEMBERSHIP:

WOODWARD DYRSTAD, SARA, M.D. DIAGNOSTIC RADIOLOGY (DR)

Transfer from Ector County Medical Society 1000 S. Coulter, #100, Amarillo TX 79106. Graduated from Southern Illinois University School of Medicine, Springfield IL 2007. Internship and Residency at Washington University School of Medicine, St. Louis MO 2008-2012. Fellowship (Breast Imaging) at Washington University School of Medicine, St. Louis MO 2012-2013.

Board of Censors Report:

The following were approved for membership on September 17, 2019: REGULAR MEMBERSHIP:

McKENNY, JAMES R., M.D.

AN (ANESTHESIOLOGY) P.O. Box 51793, Amarillo TX 79159. Graduated from Texas Tech University Health Sciences Center, Lubbock TX 2013. Residency at University of Texas Health Science Center, San Antonio TX 2013-2017.

MILNER, JENNIFER, M.D.

PD (PEDIATRICS)

1411 Amarillo Boulevard E., (JO Wyatt), Amarillo TX 79106. Rejoined PRCMS. Graduated from Texas Tech University Health Sciences Center. Lubbock TX 2008. Residency at Texas Tech University Health Sciences Center, Lubbock T 2008-2911.

KEELIE TUCKER, M.D.

OBG (OBSTETRICS & GYNECOLOGY) 1301 S. Coulter, #300, Amarillo TX. Graduated from Texas Tech University Health Sciences Center, Lubbock TX 2007. Residency at Texas Tech University Health Sciences Center, Amarillo TX 2007-2011.

RETIRED MEMBERSHIP:

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Wayne S. Paullus, MD Neurological & Spinal Surgery Board Certified - American Board of Neurological Surgery

Wayne "CP" Paullus III, MD Neurological & Spinal Surgery Board Certified - American Board of Neurological Surgery

Brad Hiser, MD Board Certified by the American Board of Neurological Surgery #11 Medical Drive Amarillo, TX 79106 (806) 353-6400 • (800) 358-2662 www.swneuro.com

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Obstetrics & Gynecology

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Ophthalmology

PANHANDLE EYE GROUP (Con't) C. Alan McCarty, MD Comprehensive Ophthalmology, Cataract Surgery 7411 Wallace Blvd. Amarillo, TX 79106 (806) 351-1177 • (800) 782-6393

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