PANHANDLE HEALTH

A QUARTERLY PUBLICATION OF THE POTTER-RANDALL COUNTY MEDICAL SOCIETY

Spring 2020 | VOL 30 | NO. 2

Highlights of the Last Five Years

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Editor's Message:
Past Favorites and Current Pandemics

by Scott Milton, MD, FACP

This edition of *Panhandle Health* is a review of the best articles in the last five years. First, however, I would like to give a review of the Coronavirus outbreak. In December of 2019, a new corona virus (COVID-19) was discovered as the cause of an outbreak of severe pneumonia in Wuhan City, Hubei Province, China. Coronaviruses are a family of viruses that are common in many species of animals. COVID-19 is a betacoronavirus, as were MERS and SARS, and have their origins in bats. The genomic sequence of U.S. patients is similar to that posted by Chinese Health Authorities suggesting a recent single emergence of this virus from an animal reservoir. The initial outbreak was traced to a large seafood and live animal market suggesting animal to person spread. Shortly thereafter, persons with no link to the market developed the illness suggesting person to person spread. Later, asymptomatic spread of the illness was documented. Thousands of cases are occurring throughout China and a growing number of international locations are also reporting cases. At the time of this writing, laboratory confirmed cases are more than 60,000 cases with more than 1500 deaths. Mathematical models suggest expansion of the epidemic in an exponential fashion, implying far greater spread and numbers approaching 100,000 at the time of this writing.

As a result, the World Health Organization has declared this outbreak a global health emergency. On January 31 2020, the United States declared a public health emergency and a quarantine of citizens returning from Hubei province in China and denying entry to some foreign travelers. The quarantine is truly historic as the last time this was enacted was more than 50 years ago. There are currently more than 500 U. S. citizens under legal quarantine. At the time of this writing, the risk to the U. S. public is considered to be low. However, experts caution that this is a rapidly evolving situation and the risk may not remain low.

The current mortality rate for 2019-nCoV is felt to be between 2 and 3%. The mortality rate for influenza is around .1%. There are currently 15 cases confirmed in the US of the new coronavirus. There are millions of cases of influenza every year in the U.S. and tens of thousands of deaths. Clearly influenza is the greater threat to the U.S. public. The question is whether the efforts put in place can curtail the spread of COVID-19. At present, more and more experts seem to fear this may in fact become a pandemic.

At this time all health care providers should interview patients who have a respiratory infection about their travel history. If there is a travel history to China, or exposure to someone who has traveled, they should be isolated and evaluated. It appears that most individuals can be isolated at home and monitored. Contact our local health authorities for any suspected cases. The CDC posts regular updates on their website about the outbreak and recommendations for healthcare providers. The City of Amarillo Health Department will also issue ongoing guidance as this unfolds.

As mentioned, this edition of *Panhandle Health* is a "best of "edition. We tried to select articles from the last 5 years that we believe were the most interesting. You will find the subject matter quite varied and at times eclectic. All are insightful and well written. We hope you enjoy this edition of *Panhandle Health!*

Cover Photography

Gare is a native of Amarillo, Texas who has lived here for about half of his life, moved away, then returned in 2012. His professional career in industrial electrical and automation has taken him throughout the Western United States and some of the East. **"They don't build gas plants in our backyard, so you gotta' go where the work is."** This has allowed him to gather a vast array of photographs from different places and in different styles.

Gare had his first camera at nine years old. Photography didn't become a passion until he was a ski bum in Montana for a full season, after which he was hooked. The challenge of photographing weddings paid for the equipment needed, but did not fulfill the emotion Gare longed to express through his Photographic Art. In came the digital age and he bought his first Nikon DSLR in 2013. This purchase **re-ignited his passion for photography, which took off like wildfire!**

He doesn't use Photoshop for editing, just a few simple programs for basic enhancement to recreate the realism he originally saw through the lens.

"I like to grab that scene or detail that catches my eye and spins my head around. I want everyone to see the beauty I see."

Preferring the Western and back roads scenes that are slowly dwindling away, this is where you will find Gare and his camera. Or you may find him focusing his lens on some small detail that is overlooked by others in their busy lives.

Executive Director's Message

by Cindy Barnard, Executive Director

The Spring issue of *Panhandle Health* is a collection of some of the best articles culled from our magazines of the last five years. *Panhandle Health* will be 30 years old in August, and we are proud of the popularity and longevity of our journal. We feel that the selected articles of the last five years are particularly relevant and interesting. Some deal with recent advances in health care and medicine, some are more personal, but all are innovative and thought-provoking, shedding new light on well- known and not so well-known issues. We hope you enjoy the articles our Editors chose for "Highlights of the Last Five Years", *Panhandle Health,* Spring 2020.

The 117th Annual Meeting of the Potter Randall County Medical Society was held February 27th at the Holiday Inn, Amarillo West Medical Center. The gold-headed cane was passed from Dr. Daniel Hendrick, our 2019 President, to Dr. Neil Veggeberg, 2020 President. Officers for 2020 were installed by Dr. David Fleeger. The evening was underwritten by our Circle of Friends.

Get ready for "First Tuesday" at the Capitol. Pack your white coat and travel to Austin on March 3rd, April 7th, or May 5th to participate in TMA's First Tuesdays. Please don't miss the chance to meet with legislators and their staffs to make sure the voice of medicine is heard. Remember, YOU, our physicians, are the best lobbyists for our patients. You will visit with your Senator, Representatives, and their aides about key issues facing your profession, attend committee hearings and House and Senate sessions, and learn about the obstacles medicine faces: taxes, Medicaid, CHIPS, physician ownership, and scope of practice. Physicians are asked to wear white coats while at the Capitol. Legislative talking points and other materials will be provided. A course on lobbying is also conducted early each First Tuesday. A $25 charge for each First Tuesday covers your breakfast, lunch and all materials. For more information, visit www.texpac.org.

On March 29th, we will celebrate Doctors Day which was first observed in Winder, Georgia in 1930. According to Wikipedia, Eudora Brown Almond, a physician's wife, decided to declare a day in honor of doctors. The red carnation was chosen as the symbolic flower for National Doctors Day. In 1958, a resolution commemorating Doctors Day was adopted by the U.S. House of Representatives, and legislation was introduced both in the House and Senate to establish a National Doctors Day in 1990.

President George Bush signed S.J. RES #336 which became public law 101-473 in 1991, forever designating March 30th as National Doctors Day. President Bush wrote in the Proclamation, "In addition to the doctors whose names we easily recognize, there are countless others who carry on the quiet work of healing each day in communities throughout the United States—indeed, throughout the world.

Common to the experience of each of them, from the research specialist to the general practitioner, are hard work, stress, and sacrifice. All those who serve as licensed physicians have engaged in years of study and training, often at great financial cost. Most endure long and unpredictable hours, and many must cope with the conflicting demands of work and family life." President Bush urged that all Americans "observe this day with appropriate programs and activities".

Our Next Issue Of
Panhandle Health
Features:
Summertime Illnesses and Conditions

Sexual Addiction

by Kaye Renshaw, M.A. Ph.D., Gerald Rogers, M.A., M.S.W.,Ph.D.
Reprint from Winter 2015

Sexual addiction, also known as compulsive sexual behavior and hypersexuality in the field of treatment of sexual behaviors, continues to present an elusive if not impossible diagnostic formula for classification. Once again, sexual addiction has failed to be acknowledged in the latest edition of the Diagnostic and Statistical Manual published by the American Psychiatric Association in 2013. The DSM-V is the current standard for all mental health professionals to diagnose, classify and communicate regarding mental illnesses. (1) In the field of diagnosis and treatment, there is limited consensus on the nature of sexual addiction. Professionals cannot agree on the questions of whether sexual addiction stands alone as an addictive disease, co-occurs with chemical or other addictions, is paired with a compulsive disorder or is considered an impulse control disorder. Consequently, agreement on diagnostic criteria and formal diagnosis of Hypersexuality was rejected by the American Psychiatric Association, despite a field trial suggesting that proposed diagnostic criteria were valid and reliable. It appears that Hypersexuality will not be included in the Diagnostic and Statistical Manual of Mental Disorders of the American Psychiatric Association, until: (1) defining features of sexual addiction have been identified (2) reliability and validity of specific sexual addiction criteria have been obtained cross culturally, and (3) prevalence rates of sex addiction are determined in representative epidemiological samples across the world, and finally (4) etiology and associated biological features are evaluated. (2)

Clinical Features of Sexual Addiction

Despite the absence of a formal diagnosis, the problematic behaviors associated with Hypersexuality continue to rise. Technology has played a role in increased concerns about sexual addiction. Pornography sites, sexual chat rooms, and other cyber sexual behaviors have become available at the flip of a switch and the touch of a fingertip. It is estimated that there are over 4 million pornography sites on the Internet, and over 2,000 new sites are added on the Internet every week. The late Dr. Alan Cooper, sex researcher, coined the phrase "The Triple A Engine", referring to the use of the Internet in facilitating sexual addiction. The Triple A Engine refers to accessibility, affordability, and anonymity. Prior to the development of the Internet, individuals had to go to great lengths to fulfill the needs of their sexually addictive behaviors. One could not easily talk to someone face-to-face about sexual desires, could not easily set up a rendezvous for sex with a stranger, and could not easily find pornography that would address sexual behaviors beyond the imagination.

Easy accessibility to a myriad of sexual behaviors can lead to excessive time taken away from family and work responsibilities. The accessibility can damage marriages, friendships and day-to-day functions. The organization "Sexual Addicts Anonymous," uses a 12 step approach to sexual addiction. Their first step is: "We admitted we were powerless over addictive sexual behavior – that our lives had become unmanageable." (3).

A sexual addict's life becoming unmanageable is what leads to marital breakups, destruction of families, and occasionally legal entanglements for illicit sexual behaviors. This also leads the individual to seek professional intervention for their sexual behaviors.

The ease of access, affordability and anonymity associated with online sexualized sites has further increased the need for structured and consistent diagnostic criteria. Although these diagnostic criteria have not been formally endorsed by the American Psychiatric Association, they have informally been agreed upon by numerous clinicians in the field, faced with providing treatment to patients and families seeking interventions for problems related to hypersexual issues. In assessing an individual with complaints of sexual addiction, it is important to determine if the individual experiences recurrent and intense sexual fantasies, sexual urges, or sexual behaviors lasting more than six months, and at least three of the following are present:

- Time consumed by sexual fantasies, urges or behaviors repetitively interferes with other important obligations such as work or family life.
- Repetitively engaging in sexual fantasies, urges or behaviors in response to negative mood states such as anxiety, depression, boredom or irritability.
- Repetitively engaging in sexual fantasies, urges or behaviors in response to stressful life events.
- Repetitive but unsuccessful efforts to control or significantly reduce these sexual fantasies, urges, or behaviors.
- Repetitively engaging in sexual behaviors while disregarding the risk for physical or emotional harm to self or others.

There is significant personal distress or impairment in social, occupational, or other important areas of functioning associated with the frequency and intensity of these sexual fantasies, urges, or behaviors. Further, these sexual fantasies, urges, or behaviors are not due to the direct physiological effect of a drug of abuse or a medication.

These criteria are assessed specifically, but diagnoses for treatment generally take

the form of another mental condition such as unspecific disruptive, impulse control, and conduct disorder as sexual addiction often cooccurs with additional mental or emotional conditions. (3)

Clinical Assessment of Sexual Addiction

Assessment of sexual addiction provides a further dilemma in the arena of patient management. Frequently the patient has been coerced at the direction of the courts, an unhappy spouse, an employer or other entity whose assessment of the behavior is a much greater problem than the patient acknowledges. Further, the patient will likely engage a protective stance of denial well before the behavior is exposed or treatment is engaged. Frequently, the patient is not acknowledging a problem and, unless the courts are involved or the family is upset, there is no motivation for treatment. However where there is legal, family, or employment disruption, there may be multiple starts and stops to treatment before the identified patient acknowledges a problem. Provided the patient recognizes that there is a problem, assessment takes the form of self-report through multiple forms of sex history, trauma history, review of comorbid addictions and compulsions, history of traumatic brain injury and history of mental health disorders. There are few formal screening instruments available for assessment of sexual addiction. More research is currently being geared to this field, but there continues to be a lack of reliable resources for assessment. Screening checklists are available online and in a number of magazines. Screening checklists are not based on empirical data, and can lead to misdiagnosis of oneself, or misdiagnosis by a spouse or family member. Quickly administered checklists are not a substitute for professional assessments and opinions. Self labeling oneself as a sexual addict, or labeling by a family member as a sexual addict, can have far-reaching social implications.

Treatment of Sexual Addiction

The treatment of sexual addiction in no way fits the brief treatment model of standard counseling and therapy. Treatment of Hypersexual behaviors takes the form of individual therapy, group therapy and couples therapy. Cognitive Behavioral Therapy is the recommended therapeutic approach for treating addiction. CBT looks at the emotions and events that reinforce the desire to engage in the behavior and identifies alternative behaviors to short circuit the compulsive process. Focused group therapy can be helpful in providing external reinforcement and support. Twelve-step programs, behavior modification programs, rational behavior programs, and biofeedback are also treatment modalities used in treating sexual addiction. Psychoactive medication is frequently indicated, with antidepressant medications, anti-anxiety medications, and medications identified specifically for compulsive disorders. When indicated, inpatient treatment may be recommended to reduce the outside stress of the patient while allowing focus on the treatment process. Treating sexual behavior problems requires careful consideration of the needs of the individual. Consideration must be given to avoidance of misdiagnosing individuals. Patients seeking treatment for sexual addiction must be given adequate informed consent regarding their diagnoses and treatment.

References

1. American Psychiatric Association: Diagnostic and Statistical Manual Of Mental Disorders, Fifth Edition. Arlington VA, American psychiatric Association, 2013.
2. Reid RC, Kafka MP. Controversies about Hypersexual disorder and the DSM-5. Curr Sex Health Rep (2014) 6:259-264. doi:10.1007/s11970-014-001-9.
3. Sex Addicts Anonymous, Third Edition. Houston TX, Sex Addicts Anonymous, 2012.
4. Kafka MP. What happened to hypersexual disorder? Arch Sex Behav. doc:10. 1007/s 10508 – 014 – 0326 –y.

Kaye Renshaw, M.A. Ph.D., *received her bachelor of science degree in psychology from West Texas State University, and her master of arts degree in Psychology from West Texas A & M University. She received her Ph.D. in Human Sexuality from the Institute for Advanced Study of Human Sexuality. She is in full time private practice as a counselor.*

Gerald Rogers, M.A., M.S.W.,Ph.D., *received his Bachelor of Science degree in psychology and his Master of Arts degree in Counseling from West Texas State University. He also received a Master of Social Work degree from Our Lady of the Lake University. He received his Ph.D. (not CHEA recognized) in Human Sexuality from the Institute for Advanced Study of Human Sexuality. He is in full-time private practice as a Clinical Social Worker.*

The Impaired Physician

by Robin Martinez, MD
Reprint from Winter 2015

At some point in his or her career, a healthcare executive will have to deal with an impaired physician. In 2010, The American College of Healthcare Executives stated, "healthcare executives have a professional responsibility to create and maintain an organizational culture that promotes quality patient care and a healthy work environment that protects staff from inappropriate and disruptive behavior. The purpose of this paper is to educate how to recognize, confront, support, and manage the impaired physician.

Introduction

The American Medical Association (AMA) defines an impaired physician as one unable to fulfill professional or personal responsibilities due to psychiatric illness, medical illness, or chemical dependency (Anonymous, 1973). Approximately 15 percent of physicians will be impaired at some point in their careers (Boisaubin & Levine, 2001). The lifetime prevalence of substance use disorders for physicians is similar to that of the general population, which is 16 percent (Schorling, 2009). The prevalence for other medical disorders is similar to that of the general population; however arguments have been made that physicians may have a higher incidence of psychiatric disorders such as depression and Post Traumatic Stress Disorder than the general population. This is due to physician personality types, which often include compulsive personality traits, marked by a triad of self-doubt, guilt over perceived deficiencies, and an excessive sense of responsibility. As physicians are frequently overloaded with the demands of caring for sick patients within constraints of fewer organizational resources, they are at high risk for burnout. Burnout is associated with impaired job performance, poor health, anxiety, depression, and may contribute to substance use (alcoholism and drug addiction).

Impaired persons are at danger to others and themselves. The ramifications of impaired physicians include, of course, patient care errors, unsafe work environment for other ancillary healthcare workers, and increased risk of litigation. Other ramifications of impairment for the physician include loss of collegial respect, personal losses (family and friends), financial losses, loss of medical license and pharmaceutical prescribing license, loss of health, and death, either from the disease process or suicide. As mentioned earlier, depression is high in the medical profession and an estimated 400 physicians suicide annually (the actual number is probably higher). Male physicians have a 70% higher suicide rate than males in other professions and female physicians have a 400 % higher rate of suicide than females in other professions.

The Joint Commission made a requirement that hospital organizations had to have the medical staff implement a process to identify and manage matters of individual licensed independent practitioners which was independent from disciplinary review on January 1, 2001 (MMS, 2015). This requirement is Joint Commission Requirement (JCR) MS.11.01.01 that set up hospital Physician Health and Wellness (PHW) committees. State and county medical societies also implemented Physician Health and Wellness committees. These Physician Health and Wellness committees help physicians who had impairment issues, boundary issues, and interpersonal issues. Many times, these PHW committees can manage physicians before being sent to the state Medical Board.

Types of Impairment

Some of the common disorders encountered in impaired physicians include substance use disorders, clinical depression, bipolar disorder, generalized anxiety disorders, adjustment disorders (e.g. Post Traumatic Stress Disorder), dementias, Parkinsonism and other neurologic disorders, diabetes mellitus, seizure disorders, cardiovascular diseases, and pulmonary disease (TMA, 2012). The cognitive and physical decline associated with the normal aging process can cause impairment, also. A physician is said to be impaired when he or she is unable to practice medicine with reasonable skill and safety to patients due to the before mentioned processes. It is important to remember that the presence of a disease or disability is not equivalent to impairment.

Nearly 90 percent of physicians with substance use problems also have a comorbid psychiatric illness, usually depression, anxiety, or bipolar disorder (Cicala, 2003). Other factors associated with substance use disorder include divorced or separated marital status, family history of alcoholism or substance abuse, family history of psychiatric illness, history of childhood or adolescent abuse, and male gender. Cicala (2003) writes that physician-specific factors associated with substance use disorder include cigarette use > 1 pack per day, high stress or long work hours, history of multiple affairs and/or multiple marriages, history of multiple jobs (especially in multiple communities), occupational access to controlled substances, practice in academic medicine, practice in emergency medicine, anesthesiology, or psychiatry, and self-medicating or self prescribing behavior. Data from state physician health programs have shown that alcohol or opioids are the drugs of choice for physicians enrolled for substance use disorders. Among 2429 physicians followed by the Georgia Program from 1975 to 1995, alcohol was the drug of choice for 47%, opioids for 30%, cocaine for 7%, and 16% for all others. The drugs of choice were similar among 292 healthcare professionals followed by the Washington Program from 1991 to 2001, including 232 physicians: alcohol, 56%; opioids, 32%; cocaine, 3%; and all others, 9%. A recent study of 125 women and 844 men in 4 state phy-

sician health programs found that the female participants were younger (40 vs 44 years old), more likely to abuse sedative-hypnotics (11% vs 6%), and more likely to have a comorbid psychiatric disorder (42% vs 27%)(Schorling, 2009).

The American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders (DSM-V)* addresses substance use disorder resulting from the use of ten separate classes of drugs: alcohol, caffeine, cannabis, hallucinogens (phencyclidine or similarly acting arylcyclohexylamines), other hallucinogens such as LSD, inhalants, opioids, sedatives, hypnotics, anxiolytics, stimulants (including amphetamine-type substances, cocaine, and other stimulants), tobacco, and other or unknown substances. In order to be diagnosed with Substance Use Disorder the patient must meet at least 2 of the 11 criteria for the diagnosis. A patient meeting 2-3 of the criteria indicate mild substance use disorder, meeting 4-5 criteria indicates moderate, and 6-7 indicates severe (American Psychiatric Association, 2013).

Diagnostic Criteria

- Continuing to use substance despite negative personal consequences
- Repeatedly unable to carry out major obligations at work, school, or home due to substance use
- Recurrent use of substance in physically hazardous situations
- Continued use despite persistent or recurring social or interpersonal problems caused or made worse by substance use
- Tolerance as defined by either a need for markedly increased amounts to achieve intoxication or desired effect or markedly diminished effect with continued use of the same amount
- Withdrawal manifesting as either characteristic syndrome or the substance is used to avoid withdrawal
- Using greater amounts or using over a longer time period than intended
- Persistent desire or unsuccessful efforts to cut down or control substance use
- Spending a lot of time obtaining, using, or recovering from using substance
- Stopping or reducing important social, occupational, or recreational activities due to substance use
- Consistent use of substance despite acknowledgment of persistent or recurrent physical or psychological difficulties from using opioids
- Craving or a strong desire to use substance (*Note - This is a new criterion added since the DSM-IV-TR)

Recognition

In physicians, impairment may present with changes in personality, mood swings, frequent medical illness or exacerbation of known medical illness. The most consistent initial symptoms of substance use problems involve changes in personal relationships and community activities with increasing isolation being a common sign. Ancillary staff may notice that the physician is sleepy, has slurred speech, is late to see patients, leaves early, takes long breaks, or does not come to see patients at all. Many times, a problem is not suspected until a physician has criminal charges from self-prescribing or driving while intoxicated, loss of hospital privileges, malpractice suits, suicide attempts, or hospitalization for underlying illness.

Confrontation

The American Medical Association (1992) states that physicians have an ethical obligation to report impaired or incompetent colleagues. The duty to report under such circumstances, which stems from physicians' obligation to protect patients against harm, may entail reporting to the licensing authority (Opinion E-9.0305 and Opinion 9.031). If a physician is suspected of being impaired, referral should be made to the Physician Health and Wellness (PHW) committee. This can be done through the hospital or county medical society. Many state medical societies (e.g. Texas Medical Association) have a 24-hour toll free number that can be called at any time should a physician be suspected of impairment. A meeting is called where the physician suspected of impairment meets with concerned physician peers of the PHW committee. During this meeting, information is gathered regarding health, stressful events, coping skills, criminal charges, substance use, interpersonal relationships, financial worries, and other factors that may be contributing to the physician's poor performance. It is imperative that this meeting is not punitive, judgmental, or shaming. Ideally the committee should include members who have been impaired themselves and are in recovery; they can share their experience, strength, and hope with the suspected impaired physician and create an environment of safety. The impaired physician can be rehabilitated and continue to be a valued member of the medical community and the community at large. The information obtained at the PHW committee meeting is held at strictest confidence, unless of course, the physician is at immediate danger to

| *continued on page 12*

himself or others. If that is the case, then immediate psychiatric intervention is mandatory.

After meeting with the PHW committee, recommendations are made, which include a physical exam and appropriate testing to rule out various disease processes or cognitive impairments. Psychiatric evaluation is recommended as well. Since many people use substances to self-medicate, urine drug testing can be performed to rule out substance use. The PHW committee will select examining physicians to perform these evaluations in a time sensitive and confidential manner. Many times, while the medical and psychiatric workup is being done, hospital privileges are "suspended" to allow the physician suspected of impairment to be evaluated. This "suspension" is not punitive and is not reflected in the National Physician Data Base or in hospital communication. If the physician is in private practice, patients can be diverted to partners while the workup is being completed. After the data from the medical and psychiatric workup is reviewed, the PHW committee meets again with the physician to review the results and formulate a treatment plan. Medical or psychiatric care can be initiated to treat the underlying disease process. During this time, the PHW committee informs the physician that the executive committee will be informed of the findings and treatment plan. If the workup reveals dementia or a debilitating degenerative disease process, then the PHW committee will counsel the physician about this diagnosis and inform the physician that the hospital executive committee will be informed. Should substance use disorder be suspected, the PHW committee would recommend evaluation and treatment through a drug and alcohol rehab facility.

Based upon the PHW committee findings and recommendations, the hospital executive committee may counsel the impaired physician to resign his or her privileges should dementia be present or if the debilitating degenerative disease process be so severe that the physician may no longer practice medicine in a safe manner. The executive committee may counsel the impaired physician to complete treatment and provide documentation of continued treatment of the underlying medical or psychiatric disorder to remain on the hospital staff. Once again, none of this is punitive. The communication is presented in a way so that the impaired physician feels nurtured and accepted.

Management

The impaired physician's physician manages medical and psychiatric disease processes. Treatment and follow-up is documented and the physician sends documentation to the hospital credentials committee. For substance use disorders, the impaired physician attends a drug and alcohol treatment facility for evaluation and treatment. These usually are residential and require three months of treatment. There are rehab facilities especially geared for physicians; however, this is not mandatory. Insurance will help pay for the drug and alcohol treatment and for physicians who are financially strapped; some state Physician Health and Wellness committees have loan opportunities to help. If a physician is in private practice, he or she can hire a locum tenems provider to cover the practice or, if there is a call group, many times the call group will cover the practice while the physician is in rehab. Many of the clientele at drug and alcohol rehabs have dual diagnoses; a psychiatric condition (depression or generalized anxiety disorder) in addition to the substance use disorder.

Most drug and alcohol rehabs are based in the Twelve Step programs such as Alcoholics Anonymous (AA) or Narcotics Anonymous (NA). The approach is a three pronged to address emotional, physical, and spiritual health. While in rehab, the impaired physician will receive psychotherapy, learn coping mechanisms, and have psychiatric and medical matters addressed. Family days are held so that the physician can be with his or her family, damaged relationships can heal, and education be provided. Alcoholism and drug addiction are progressive, debilitating diseases, and the impaired physician's family and support group need to be educated on the disease process of alcoholism and drug addiction.

Follow-up

At discharge from the alcohol and drug treatment facility, a copy of the discharge is sent to the impaired physician's physician and/or psychiatrist. The impaired physician is now said to be recovering. He or she will follow-up with his or her physician and/or psychiatrist. The recovering physician is required to report to the Physician Health and Wellness committee, usually though a county or state medical society, or to the state Physician Health Program (PHP). Physician Health Programs were started in the 1970s due to the initiatives taken by the American Medical Association (AMA) that focused on rehabilitation and monitoring of physicians with substance use disorders. These entities operate independently of the state Medical Boards.

In a landmark policy paper prepared by the AMA Council on Mental Health, "The Sick Physician: Impairment by Psychiatric Disorders, Including Alcoholism and Drug Dependence," the AMA acknowledged physician impairment. In 1974, model legislation was developed that offered a therapeutic alternative to discipline, recognizing alcoholism and other drug addictions as illnesses. The AMA held a Physician Health Conference in April 1975 and a second in 1977 where it officially recognized the psychiatrically disturbed physician. A flurry of articles published in the late 1970s increased education and awareness about physician addiction. By 1980, less than a decade after the AMA's policy paper, "all but three of the 54 U.S. medical societies of all states and jurisdictions had authorized or implemented impaired physician programs." Today, all states have responded and developed programs, which operate within the parameters of state regulation and legislation and provide many different levels of service to physicians in need (FSPHP, n.d.).

After reporting to the Physician Health and Wellness committee or the state Physician Health Program, the recovering physician signs a contract for monitoring. The contract is usually for five years. Recovering physicians are extremely compliant with the monitoring process, as they do not want to be reported to the state Medical Boards and jeopardize their medical license. Should the recovering physician be in breach of the contract, the state Medical Board may be notified. The

recovering physician is monitored with random urine drug screens (UDS) during the five-year contract. Initially, the frequency of the UDS is high (~96/year), but the frequency lessens to as few as 26/year as the contracted time period continues. Also the recovering physician is required to attend a set number of AA or NA meetings weekly (usually 5-7) initially and then decreasing to 3-5 weekly per the contract. If the recovering physician lives in a larger city, there may be Caduceus meetings held. The Caduceus meeting is a physician only AA meeting. Some recovering physicians are required to attend a set number of Caduceus meetings in the contract. The recovering physician is required to obtain a mentor to help them with the recovery process and to follow-up with set or *ad-hoc* meetings with the Physician Health and Wellness committees or the Physician Health Program.

If the physician tests positive on a UDS, an *ad hoc* or emergency meeting of the PHW committee or PHP is called. The recovering physician meets with the committee to determine triggering events, whether or not the UDS is a false positive, patient care issues, and status of recovery. The PHW committee or PHP may then elect to notify the state Medical Board of the UDS result, require more extensive monitoring, or make other suggestions or amendments to the contract.

Studies have shown that physicians who are monitored have a greater chance of recovery than the general population. Cicala (2003) writes that physicians who go through the intensive residential alcohol and drug treatment, followed by outpatient monitoring, have a 90% success rate. Many of these recovering physicians are happy to share their recovery with other impaired physicians by sitting on their local Physician Health and Wellness committees or by becoming involved on state or national levels.

Summary

With proper education and awareness, impaired physicians can be confronted and managed so that an environment of safety is present. This will allow for better patient care, healthier interpersonal relationships, and healthier physicians.

The Joint Commission has been instrumental in adopting policies to help with this. Leadership standard, which was created by Joint Commission Sentinel Event Alert of 2008, requires all hospitals and organizations to have a code of conduct which defines acceptable, disruptive, and inappropriate behaviors (Element Performance 4) as well as a process for managing disruptive and inappropriate behaviors (Element Performance 5) should they wish to be accredited. In addition, the Joint Commission formed Requirement (JCR) MS.11.01.01 to set up hospital Physician Health and Wellness (PHW) committees should the hospital organization wish to be accredited.

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With treatment, impaired physicians can continue to be a valued member of the medical society. Education of disease processes and substance abuse are key. Physician Health and Wellness committees along with state Physician Health Programs play important roles in physician health and recovery.

With proper support and management, impaired and recovering physicians can continue to contribute to the healthcare milieu in a safe, effective manner.

References

American Medical Association. (1992). Opinion 9.031 - Reporting Impaired, Incompetent, or Unethical Colleagues. *American Medical Association Code of Medical Ethics.* Retrieved from http://www.ama-assn.org/ama/pub/physician-resources/medical-ethics/code-medical-ethics/opinion9031.page

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: Author.

Anonymous. (1973). The sick physician: Impairment by psychiatric disorders including alcoholism and drug dependency. *Journal of the American Medical Association*, 223, 684-687.

Boisaubin EV, Levine RE (2001). Identifying and assisting the impaired physician. *The American Journal of the Medical Sciences*, 322, 31-36. Retrieved from http://ovidsp.tx.ovid.com.proxy.libraries.uc.edu/sp-3.15.1b/ovidweb.cgi?QS2=434f4e1a73d37e8c9ea8b035782f3c43d21110454a8583e30af62a7f9ffc7710b34fcbe562b239aa86f0ed948931604d8a196ad18ef1a9fc36734a7f7b2bb15097f3e7e6d

Cicala RS. (2003). Substance abuse among physicians: What you need to know. *Hospital Physician.* Retrieved from http://www.turner-white.com

Federation of State Physician Health Programs. (n.d.). Federation of state physician health programs: History. Retrieved from http://www.fsphp.org/History.html

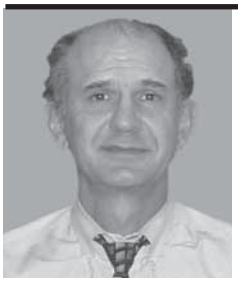
Institute of Medicine. (1999). *To err is human: Building a safer health system.* Washington, DC: National Academy Press. Retrieved from http://books.nap.edu/openbook.php?record_id=9728&page=R1

Joint Commission. (2008). *Behaviors that undermine a culture of safety.* Retrieved from http://www.jointcommission.org/assets/1/18/SEA_40.pdf

Lubin G. 2015. The 19 jobs where you're most likely to kill yourself. *Business Insider*. Retrieved from http://www.businessinsider.com/most-suicidal-occupations-2011-10?op=1

Massachusetts Medical Society. (2015). Joint Commission requirement-MS.11.01.01. *Physician Health Services, Inc.* Retrieved from http://www.massmed.org/Physician_Health_Services/Joint_Commission/Joint_Commission_Requirement_-_MS_11_01_01/#.VSkQOBeSOJY.

Schorling JB. (2009).Physician impairment due to substance use disorders. *Medscape Internal Medicine*. Retrieved from http://www.medscape.com/viewarticle/712291_2



The Mediterranean Diet

by Steve Urban, MD
Reprint from Spring 2016

The land of dietary science is where evidence-based medicine goes to die. The medical literature on healthy diet is replete with observational studies, poorly-designed prospective studies, surrogate markers, anecdotal reports, and recommendations based on hypotheses and evolutionary speculations. The popular literature is worse. Hundreds—perhaps thousands—of diets have been proposed over the years, usually with the intent of selling books to a gullible and desperate public. Each diet has initial success; as long term reports and compliance data emerge, however, each one fades into oblivion, soon to be replaced by the next fad. Recently, though, reasonably well-designed studies have suggested that one diet—the Mediterranean Diet—is successful at preventing cardiovascular morbidity and mortality, despite the fact that it has only modest effect on weight. In this paper, I will review the evidence behind this diet and will explain why I have said goodbye to the Burger King Whopper.

Diet and obesity

I am close to being a nihilist about the effectiveness of diet for the long term treatment for obesity. We have a better track record at curing cancer of the pancreas than curing obesity with diet (bariatric surgery works, but you can die from it). In my 30+ years of practice, I convinced many smokers to give up the habit and quite a few alcoholics to take the cure. But I can count on one hand the obese patients who kept their BMI below 25 with diet alone. Why is that?

Here's my hypothesis. By constant wheedling and recounting horror stories of emphysema, erectile dysfunction, and facial wrinkling, you can convince most smokers to quit. And the best way is simple to understand: quit cold-turkey and never pick up a cigarette again! Medications can help, but the goal—abstinence-- is clear. But you can't tell an obese person to stop eating. Telling them to follow a prudent diet, to exercise portion control, to eat out infrequently, to exercise regularly, etc. is like telling an alcoholic to drink moderately. If an alcoholic could drink moderately, they wouldn't be an alcoholic. If an obese person could eat prudently, they wouldn't be an obese person. That 5% of patients who are able to lose their excess fat and to keep it off experience a "religious conversion" and change their expectations for eating—i.e. they get their pleasure from other activities of life—just like an alcoholic who commits to AA. And in the world of obesity management, such religious conversions--while cause of celebration for practitioner and patient alike—are rare.

The wacky world of popular diets (short version)

So, as I stated, most popular diets are marginally effective. They work in the short run and fail due to non-compliance in the long run. I can't count the number of patients who lose 15 pounds on the Atkins' diet (or whatever the latest diet-of-the-month may be) but who, 6 to 12 months later, have gained their weight back. They give in to their craving for a French fry, and it's all over.

Many diets just make no sense to me—including that most popular of recent visits to fantasyland, the "paleo" diet. Forget the fact that diet completely ignores an important calorie source for hunter-gatherers—insects and larvae. The whole idea that a prehistoric diet was selected by evolutionary forces to prevent diseases of aging (such as heart disease, cancer, or stroke) is nonsensical. Once you have reproduced, natural selection has no use for you. If the paleo diet has any evolutionary benefit, it would be to keep the person alive until the age of reproduction. To look to primate evolution as an answer for the medical ills of industrial society seems misdirected (I could be convinced otherwise by outcomes-based data).

So, if dietary manipulations have a such poor track record--and no outcomes data in terms of cardiovascular disease (CVD) prevention whatsoever--maybe it doesn't even matter what you eat. Perhaps our byword should be carpe pizzam (I'll bet you didn't know the word "pizza" had an accusative form). It turns out, however, that there is a dietary approach that, while not great in prompting weight loss, is supported by reasonable data in terms of disease reduction. This is the Mediterranean diet. As you can tell from the preceding paragraphs, I am a skeptic at heart, but at last I have been convinced by evidence that dietary modification can provide some benefit. The rest of this paper will be dedicated to showing you why the time has come for the general application of the Mediterranean diet.

Enter the Mediterranean diet

Dr. Ancel Keys (castigated nowadays for some of his other conclusions) was actually one of the first to note the Mediterranean paradox—that cardiovascular disease is less common in Greece, Italy, and other Mediterranean countries, even though their total fat consumption is similar to Northern nations. In particular, he noted a very low CVD incidence among the population of Crete, where the consumption of fish, olive oil, and red wine is prevalent. Subsequent studies showed beneficial effects on serum lipid profiles, inflammatory markers and markers of endothelial function. Other population-wide studies supported the observation that countries with a Mediterranean-like dietary pattern have a lower incidence of heart disease and stroke.

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A novel element in the diet debate—evidence

The first well controlled, prospective, outcomes-based trial of the Mediterranean diet was the Lyon Heart study, which was conducted in the 1990s. This was a secondary prevention trial (i.e. patients were identified because they had had a previous heart attack) which was carried out over almost 4 years. Patients in the Mediterranean diet group received intensive training from a dietitan and had serum fatty acid profiles to determine compliance. This trial showed a statistically-significant decrease in cardiovascular outcomes in the Mediterranean diet group—a relative risk (RR) of CVD events of 0.35 and a RR of all-cause mortality of 0.44 (both statistically significant). Impressive.

The PREDIMED study

This landmark study was published in the New England Journal of Medicine in 2013. PREDIMED stands for Prevencion con Dieta Mediterranea; as you can probably guess, it was carried out in Spain. This was one of the best outcomes-based dietary studies ever conducted. The patients were randomized and followed for 4.8 years; the study was stopped early when the beneficial effects of the Mediterranean diet became overwhelming.

Control patients were instructed in a standard low fat diet; study patients were assigned to receive either dietary instructions plus extra virgin olive oil (EVOO) or dietary instructions plus daily consumption of mixed nuts. After the follow-up period, a major and statistically significant reduction in CVD events was demonstrated (RR 0.60). The relative risk of total CVD mortality in the Med diet group was 0.83 (CI 0.54-1.29); perhaps because of early discontinuation of the study, this number did not reach statistical significance.

In the tried-and-true academic tradition of getting as many papers as possible out of your data, the PREDIMED study group has published many subgroup analyses of their population. To summarize, these analyses have shown that most of the CVD reduction was due to stroke prevention, that the incidence of diabetes was reduced (RR in the EVOO group 0.60, in the mixed-nut group 0.82), and that the incidence of atrial fibrillation was reduced (RR 0.62 in the EVOO group). They have shown that the incidence of the metabolic syndrome was lower in subjects who consumed low fat dairy products (RR for low fat yogurt consumers 0.78, for cheese-eaters 1.31), and that the subgroup that did not follow their diet and consumed more saturated fats and trans-fats had a higher risk of CVD (RR as high as 1.81 in the saturated fat group). There is even preliminary evidence that EVOO decreased the incidence of breast cancer.

So, what IS the Mediterranean diet

Interestingly, in the PREDIMED study, the interventions were simple. The intervention groups received instruction in a high fish, low red meat diet. The EVOO group was given free EVOO

(average consumption per family was almost ONE LITER PER WEEK!!!) and the mixed nut group was given 30 grams of mixed tree nuts (walnuts, hazelnuts, and almonds) per day.

To start with, the Mediterranean diet should be high in olive oil. Since extra virgin olive oil is highest in phenols (felt to be anti-inflammatory) and was the product studied in PREDIMED, most experts recommend EVOO, even though it is more expensive. Seafood should be the major source of protein and should be consumed 3-5 times a week. The Mediterranean diet is high in nuts, fruits and vegetables; in particular, pulses such as beans, peas, and lentils are emphasized. Whole grain breads and pastas are allowed, as are low fat dairy products such as yogurt—most experts extend this to fat free milk and dairy products. The studies I have seen suggest that most of the benefit comes from the EVOO, the fish, the nuts, and the fruits and vegetables.

Other studies suggest that red wine in moderation (maximum one 5 oz. glass per day in women, two 5 oz. glasses in men) contributes to the beneficial effect of the Mediterranean diet, although this was not studied in the PREDIMED analysis. Numerous other analyses have suggested slight cardiovascular benefit from modest alcohol consumption; so I'm for it.

Foods to be avoided include: red meats, processed meats (such as bacon, lunch meats, etc), yellow cheeses, sugary beverages, commercial bakery goods, and spread fat. Goodbye Whopper with cheese; I loved you in my youth, but my current diet doesn't want me to have anything to do with you.

Does this mean that I should add extra virgin olive oil to everything?

Practically speaking, the answer is "yes." Sauté your vegetables in EVOO. Make your own salad dressing using EVOO. I just whisk my EVOO with an acid (balsamic vinegar is my current favorite but lime or lemon juice works well too) and add whatever spices are at hand (no salt!). Then, I drink whatever dressing is left over in the bowl. My wife makes a great traditional Greek salad with tomatoes, green bell peppers, onions, Kalamata olives, a little feta and –you guessed it—EVOO. The tomatoes provide the acid. Vegetable and bean-based soups such as home-made minestrone are great. Saute your shellfish in EVOO; coat your salmon or tuna with it before grilling. Snack on hummus, unsalted nuts or low-fat yogurt; sop up EVOO and balsamic vinegar with a crust of whole-wheat bread. Try it; you'll like it!

Caveats and conclusions

Here are some drawbacks of the Mediterranean diet:

1. It is more expensive.
2. The effect of the Mediterranean diet in promoting weight loss is modest. After all, EVOO has as many calories as lard (both are fats with 9 Kcal/gram). Nuts are calorie-dense, too.
3. The Lyon and PREDIMED studies may be wrong. We have all seen prospective controlled studies in the NEJM that were superseded by better studies or paradigm shifts in the understanding of disease processes. All conclusions are preliminary conclusions.
4. All diet studies published so far can be criticized. Even the best trials, for instance, are single-blind (it's basically impossible to double-blind a long-term dietary study, as you could well imagine). In addition, all-cause mortality was not decreased in the PREDIMED study. Was the study underpowered, or were other negative aspects overlooked (for instance, the mercury content of most seafood)?
5. Like all diets, the Mediterranean diet is restrictive. (This may be why the vision of Cameron Diaz emerging from a huge bowl of macaroni and cheese seems to be haunting my dreams of late). Perhaps the Mediterranean will prove as unsustainable as other diets.

Despite these caveats, I believe that we now have sufficient evidence—based on prospective, randomized, single-blind, outcomes-based studies—to recommend the Mediterranean diet to our patients, at least to those with a significant risk of cardiovascular disease. In my estimation, the evidence in favor of the Mediterranean diet has exceeded the tipping point of equipoise, and we have robust enough evidence for us to act upon. On an individual basis, I kind of like this EVOO and fish diet. On a population-wide basis, the health benefits could be dramatic.

Selected bibliography

Davis C, Bryan J, Hodgson J, Murphy K. Definition of the Mediterranean diet: a literature review. Nutrients 2015; 7: 9139-9153.

deLorgeril M, Salen P, Martin JL, et al. Mediterranean diet, traditional risk factors, and the rate of cardiovascular complications after myocardial infarction: final report of the Lyon Diet Heart Study. Circulation 1999; 99: 779-785.

Estruch R, Ros E, Salas-Salvado J, et al. Primary prevention of cardiovascular disease with a Mediterranean diet. *N Engl J Med* 2013; 368: 1279-1290.

Lakkur S, Judd SE. Diet and stroke: recent evidence supporting a Mediterranean-style diet and food in the primary prevention of stroke. Stroke 2015; 46:2007-2011.

Medical Practice in the Panhandle– Fifty Years and Counting

by Mitch Jones, MD
Reprint from Fall 2016

I grew up in Canyon Texas and majored in Chemistry at West Texas State University. When it became clear I wasn't cut out to be a chemist, one of my first mentors, a kindly chemistry professor, suggested that I might make it in medical school. It is clear that my career has been marked by simply falling into things rather than by careful planning, by considerable luck rather than any notable talent, and by unending dependence on kindness and help from others.

Following medical school [UTMB], internship [Detroit Receiving Hospital] and residency [Menninger Foundation in Kansas], I fell into a job as Medical Director of a Mennonite sponsored psychiatric hospital and clinic in Newton Kansas. I had little administrative experience but learned from that job that the secret to building a good program is to hire the brightest, most competent, creative people you can get [the smarter they are than you are, the better]; make good friends with them and give them room to develop their own ideas and style of working. We did well together; I loved the job and the people but felt drawn back to the Panhandle and came with my family to Amarillo in the fall of 1969.

In Amarillo I started a solo private practice in Psychiatry. I shared an office with Jaime Quintanilla and we became close friends. Jaime was the only board certified child psychiatrist in town. He was a marvelous, gentle clinician and was socially charming and outgoing. [He also had a fiery side which served him surprisingly well on occasion.] With the help of a group of influential citizens, Jaime had established the Kilgore Children's Psychiatric Hospital which he ran as Medical Director for several years. Because of my working relationship with Jaime, I began doing child as well as adult psychiatry and began to put serious study and effort into that field.

In Amarillo in 1969, many, maybe most, physicians were in solo private practice; the specialty groups which existed were relatively small compared to now. There were no subspecialty groups—there were still at least a couple of "double ENT"-[Eye, Ear, Nose and Throat] Docs here. There were fewer than 200 physicians in town and we almost all knew each other. Essentially every doctor in town belonged to the Potter Randall Medical Society and the entire membership of the Society met for dinner once a month. In the meetings whatever medical/political issues were current were brought up and debated [sometimes heatedly]. In those days the Medical Society was the primary forum for open expression of ideas and opinions of physicians and had strong influence on outcomes in community projects affecting them. I remember, for example, a long night's discussion about the proposed move of Northwest Texas Hospital from Sixth Street to the medical center on Coulter, and another about bringing full time Emergency Physicians to staff the Emergency room at Northwest Texas Hospital [to replace the system of coverage by private physicians]. Strong feelings were expressed on all sides of these questions, as in many other situations over the years. Usually the problems were settled by agreement or workable compromise.

At every Medical Society meeting, after the meeting and the program, doctors moved about the room discussing mutually held patients, possible referrals, requests for call coverage and other clinical concerns. This way of interacting and communicating changed with increased numbers of physicians in practice, large and somewhat self-contained groups, importance of Hospital Staff membership and meetings, increase in specialty and super-sub specialty groups, establishment of the medical school and increase in salaried positions for physicians.

I was greatly influenced and helped by physicians and office personnel in the medical community in ways ranging from learning to manage a private practice to use of new or different medications [much help from fellow psychiatrists], to adapting a practice style or even copying mannerisms of certain docs. I have noted below a few of these local physicians who set standards of accomplishment and service that were exemplary and stand as larger than life examples of good practice.

The psychiatrists in Amarillo were all independent practitioners but worked closely together. Hugh Pennal was unofficial "Dean." Hugh was an expert clinician, a prodigious worker and was direct and outspoken. [Never had to wonder what Hugh was thinking; he told you]. Hugh was tough and funny. He had been a fighter pilot in World War II and was fearless. He was instrumental in the development and building of the Psychiatric Pavilion and was a leader in all other aspects of organized psychiatric care in the Panhandle. He, through sheer force of personality, held the rest of the psychiatrists' feet to the fire to take our fair share of call for each other and the emergency room and to take care of all patients regardless of circumstances.

Dewey Britain was another close colleague. He was informed and disciplined in clinical practice. He was the best dressed of the psychiatrists in town, which with his thoughtful and measured speech, his pleasant voice and his unlit pipe made him come on as professorial. He had a knack for clear precise writing and was assigned to produce any official document we needed.

Buster McCoy was my greatest support, the best psychiatrist I ever knew. He was always available and never fazed by anything. He was a superbly competent physician who was as calm in the face of

crisis as anyone I have ever worked with. He was personally kind and gentle. He sometimes sang snatches of gospel hymns in the nursing station with a sweet voiced nurse's aide. ["Swing Low Sweet Chariot" was their favorite and could be heard drifting down the hall often on days she was on duty.] Buster was not only unhurried in dealing with tough situations but seemed to relish them, and his calmness and control steadied the nerves of everyone around him. Buster and I were in the Nurses' station one morning working on charts. I had some worrisome problem and I mumbled aloud, "O Lord." Buster looked over and said, "Yes, my Child?" I still laugh when I think of Buster.

Henry Martinez was an early cardiovascular surgeon who, according to the surgeons who operated with him, was unbelievably technically skilled and innovative in surgery. Henry was an amiable, friendly man, self-assured, unassuming and unflappable. When asked for help he never turned down a colleague or a patient.

Bill Klingensmith was co-founder of an early surgical group. He was a highly trained general surgeon who pushed for front edge technologies and procedures to be included in local surgical practice. He and Henry Martinez bought a heart lung machine and, when the local hospitals wanted nothing to do with it, set it up in Bill's garage where Bill, Henry and his wife Ann, a nurse, practiced with it until St. Anthony's brought it to their facility. Dr. Klingensmith held himself and those he worked with to exacting standards of practice. He was personally engaging, an accomplished raconteur and host and, with his wife, a major player in the arts and cultural activities of the city.

Dr. Early B. Lokey not only was a leading specialist in O.B. Gynecology, but also saw to it that organizations and facilities existed to care for the medical needs of poor and uninsured women.

In those days there was a group of independently practicing pediatricians who were closely allied to each other in providing service to patients and backup for each other. They were all seasoned clinicians and committed to taking good care of kids. It was not uncommon for any one of them to stay close by the bedside of a sick patient night and day until the child got better. Among those good people were John Pickett, George Waddell, Joe Lipscomb, Bill McCue, Mo Dyer, John Jones, and Holley Reed.

Dr. Vic Ellis and Dr. Bill Price arrived about the same time to be the first neurosurgeons in Amarillo. Both were excellent surgeons and strong, influential personalities and, in the early years, worked literally day and night to meet the demand for their services.

As different in outlook, tastes and personality [some genuine characters] as these physicians were, the best of them shared traits I admired and tried to emulate. They were excellent clinicians; they were sharply aware of advancements in

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PANHANDLE HEALTH

A Publication of the Potter-Randall County Medical Society

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medical science; they cheerfully made themselves available to talk to colleagues and patients; they were cool under pressure; they listened with respect to patients and anyone with information about a patient; they turned no patient down and they all had a sense of humor [optional, but really helpful in medical practice].

Sometimes observing other physicians has taught me what not to do. In my internship I remember a resident who was smart and capable but was so rude and unpleasant when he was on call at night for interns managing patients on his service that we avoided calling him when at all possible. This may have made us more self-reliant in the long run but could be detrimental to the best care of the patient as well as to the resident, who missed out on information regarding the patient he was responsible for. This attitude has similar effect with regard to nurses and other staff. Any doc should instinctively know that for a patient, in the hospital or out, "boots on the ground" people, those with the patient literally 24 hours a day, including nurses and family, know many things otherwise not apparent about the patient, and should be listened to carefully.

Some physicians are "naturals" at relating to patients and some gradually learn with experience. Seeing the patient as partner, particularly in the care of chronic disease, listening to his or her input and being sure that he or she completely understands the medical condition and the options for treatment is fundamental. The importance of the physician to the patient can't be overemphasized [I learned that by being a patient] For the Doctor the ten or fifteen minute appointment or contact is one of dozens in a busy day, but for the patient it is of major importance and has often been looked forward to for days or weeks. The physician's friendliness, competency and caring attitude light the fire of hope in the patient. The faith that the patient has in the Doctor and his or her treatment may be a powerful force in the healing. Medicine is both art and science. The science changes and explodes exponentially but the art of practice doesn't change. The first part of the art is the building of lasting trust and mutual respect with the patient. The second is the weaving of facts of the medical case into a credible narrative. This "story" takes into consideration every detail of history of the illness, every physical and laboratory and imaging finding, considers all possible causes and explanations for symptoms and findings and narrows the account to a diagnosis that covers all the bases. The building of this narrative may take five minutes in the case of an ingrown toenail or hours or days in a complex case; once formed it is shared in a clear way with the patient and family so that all involved, the professionals and the lay folks, are on board and committed to a plan of treatment.

In the early seventies Dr. Quintanilla and I and other private practice physicians, on voluntary or contract basis, began serving as preceptors for students from the newly formed medical school. For me and the other doctors this was extremely rewarding. The eagerness and enthusiasm of the students was stimulating and we were motivated to not only study and keep up with our specialty more intensely but also to develop clear and interesting teaching styles to try to be of help to the students. Establishing friendly respectful rapport with the student is crucial to a good learning experience. This is another place in which there is benefit in dealing with people smarter than you are—the student often opens new insights and ideas for the attending.

In the late eighties I joined the medical school faculty full time. I continued my inpatient and outpatient practice and my cooperation in the call schedule with private practice psychiatrists and was more heavily involved with supervising clinical work by medical students. I retired from the Medical School and full-time practice at age 65 in 1996.

From 1996 to 2015 I worked part time at the state prison outside Amarillo. As usual, I "fell into" that job and once there continued to learn a lot. The contact with inmate/patients showed me that the same illnesses and needs existed for them as for patients on the outside and that they were just as grateful for kindness and help. I apparently didn't do much to change their ethics. When an inmate found I didn't have a smart phone he said, "Don't worry Doc, when I get out I will steal you one."

I feel privileged to have practiced medicine. There is a lot to be said for a job which is never the same on any day, with new problems, new challenges and the chance to meet people who are always a little different from anyone you have ever met before. There are problems also: the possibility of not solving the problem, failing to be of help, missing a clue or an opportunity and then, in my case anyway, being left to worry or even have lasting regret. "Letting go" of unhappy times or adverse circumstances has been hard for me to do.

If I had it all to do over, I would plan ahead better, I would try to be more patient and open minded, I would study more, I would try to worry less and I would take more time to be with my wife and family.

I am 85 now [officially "old-old"] and recently quit practice. When I get one part of my body fixed these days another goes out. I see several physicians for myself and they are, without exception, highly competent, friendly, and caring, and in the face of demanding schedules, take time to talk. I think these are not exceptional attitudes but are the norm for most practicing physicians today and I am convinced that medicine is in good hands for what will be an interesting and maybe difficult future.

Provision of Compassionate Perinatal/Neonatal Palliative and End of Life Care

by Michael Hansen, MS; Kyle Richardson, MS; Mubariz Naqvi, MD

Reprint from Spring 2017

Abstract:

Each year in the United States 15,000 children are born who will not survive. Therefore, palliative care for the neonate is of increasing importance. The goal of palliative care is to relieve physical and other suffering of the neonate, family, and healthcare providers. Palliative care must take into consideration ethical, legal, emotional, spiritual, cultural, religious and physical aspects surrounding the death of the neonate. Respect, sensitivity, compassion, and communication play a prominent role in palliative care. Communication between hospital staff and the family of the dying neonate ought to take place in a quiet, calm, comfortable environment. Questions ought to be answered in plain terms to facilitate understanding. Encouragement should be offered without providing false hope. Every effort should be made to make the transition from life to death a meaningful one. Special consideration can be given to providing a Memory Box of personal items such as hand/foot prints/molds, locks of hair, ID bracelets, and baby blankets. The grieving process must be respected. After the patient's death, healthcare personnel should follow up with the grieving family several times in the coming weeks. Adherence to these principles and methods provides the most compassionate and effective care in a difficult situation for all involved.

What is Palliative Care for a Newborn?

Palliative care for a newborn is holistic and extensive care for an infant who is not going to get better. Palliative care is an entire milieu of care to prevent and relieve an infant's pain and suffering. The purpose is to improve the conditions of an infant's living and dying.

What is the Goal of Palliative Care?

The goal is to relieve the physical, psychological, social, emotional and spiritual suffering of the dying infant, the family, and the health care providers themselves. Planned interventions aim to show respect for the infant's time on Earth, as well as to support the family's experience with empathy, punctuated with cultural and religious sensitivity. Palliative care focuses on managing the symptoms of pain, difficulty breathing, and seizures.

What is Necessary for an Environment of Palliative Care?

Palliative care may be executed in the home or hospital as needed. It requires planning, training and commitment by healthcare staff. Staff must be familiar with palliative care, and be ready to implement such care for both the infant and the parents. Team members often involved include: neonatologist, nurses, hospice, social services, ethics committee, spiritual and/or religious support services, child life specialists, developmental experts and case managers.

How Can Effective Communication Occur Between Physicians & Parents?

The Munson Communication Tool Box is a method by which healthcare professionals may communicate with the family of a dying neonate in both an effective and compassionate way. Elements include: meet in a quiet and private place, refer to baby by name, convey empathy, speak directly, offer choices if possible, be honest, focus on questions, wait quietly, review the goals, guide parents through the process, and address spirituality and religion.

What Type of Training is Necessary for Palliative Care?

Palliative care training should include knowledge about the transition from life-extending care to palliative care. Healthcare professionals should know well the symptoms of death, skin care, mouth care, pain control, dyspnea control, light and sound management, and promotion of self-regulation such as sucking and grasping. Community-specific considerations ought to be considered: community resources, organ procurement services, and cultural and religious aspects. Ethics, grief stages, stress management, coping mechanisms, conflict resolution, and crisis intervention theory also are important aspects to consider.

How Does a Newborn Qualify for Palliative Care?

Several different categories or conditions meet the qualifications for palliative care. Neonates born at or below the threshold of viability—defined as <24 weeks gestation and/or <500 grams without growth restriction—qualify. Many genetic problems are incompatible with life, and palliative care is often necessary. Renal disorders (Potter syndrome, renal agenesis), CNS disorders (anencephaly, massive intraventricular hemorrhage, severe hypoxic ischemic encephalopathy), cardiac abnormalities (acardia, inoperable cardiac defects), and severe structural defects (giant anterior abdominal wall defects, congenial diaphragmatic hernia with hypoplastic lung) may likewise qualify for palliative care.

How Can Palliative Care be Introduced to Parents?

First and foremost, let the family know that they will not be abandoned. Continue to provide medical information to the family. Sit down with them in a quiet, private, comfortable place. Always have a third party present. Invite spiritual/religious support personnel to be present. Use simple layperson language. Avoid mentioning "withdrawal of treatment," and emphasize that care will be continuously given to both baby and family.

What Actions are Taken in Palliative Care?

Invasive care ceases. Medical machinery, artificial feeding, and frequent vital sign checks are minimalized. All medications are removed except those that provide immediate comfort. Skin care and hunger are managed. Oxygen and/or suction may be continued. Nursing staff continues observation and gentle assessment.

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Physicians document level of care and palliative care orders. Ventilators should be removed in a private, respectful manner. Family may or may not wish to be present. Pressors and antibiotics should be stopped. Maintain IV access for pain control.

How Should Sensitive Post-Death Topics Be Discussed?

A physician who has worked with the family should lead these discussions. Discussion may include the options for organ donation. Autopsy may be desirable for medical staff—especially for pictures for educational use—but the family must approve such actions. Always respect the family's wishes and religious beliefs. These conversations must be held in a comfortable, private environment. Show compassion. Walk with the parents as they depart from the hospital.

How Can the Healthcare Team Show Additional Compassion?

One way to show support and care to the family is the use of a Memory Box. Families are more likely to allow photos to be taken of their child if these photos are included in a Memory Box that is provided to the family. Other momentos can be included as appropriate, including a photo of the infant's care staff. Other items to be considered: locks of hair, hand & foot prints or molds, record of baby's weight and length, and ID bracelets.

How Can Continuity of Care be Maintained?

Follow up with the family of terminal neonates one week after death. Consider a 4 or 6 week follow up as well. Results of autopsy, lab reports, etc. may be discussed at either of these times, if not previously discussed.

How Does Palliative Care Affect Healthcare Staff?

Provision of palliative care is physically, intellectually, and emotionally demanding on all healthcare staff. It is appropriate to provide spiritual, religious, moral, emotional and behavioral health support for staff. They are overcoming a loss as well.

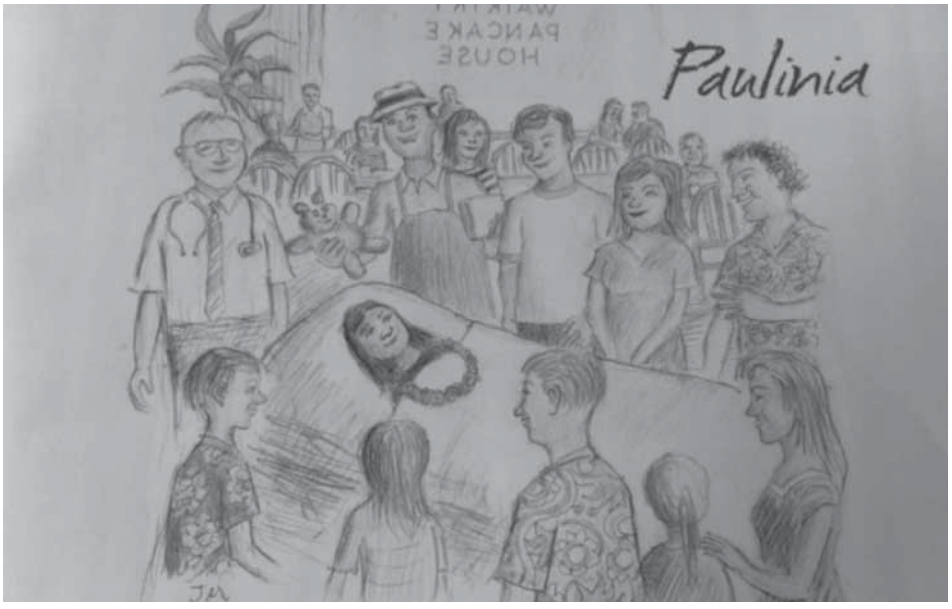
"Paulinia's Story", narrated by Dr. Clifford Straehley of University of Hawaii

"Paulinia was a beautiful and intelligent child. She was seven years old and very ill with a massive abdominal tumor. I had performed a laparotomy in the hope that the tumor would prove to be resectable, but it surrounded the aorta, all of its visceral branches, and the vena cava. All I had been able to do was biopsy the tumor, which proved to be a liposarcoma. Paulinia was unable to eat, although she could retain oral fluids.

"A few days after the biopsy, Paulinia asked me, 'Dr. Straehley, am I dying?'

"Many years ago, during medical school and my surgical residency, I was told that one informs the family, but protects the child from the knowledge of impending death. But I knew that if I lied to her she would lose faith in me. I answered, 'Yes, Paulinia, God has decided to take you to heaven with him.'

"Then she made an interesting request. 'Dr. Straehley, please take me to the Waikiki Pancake House one more time.'



"On the following Sunday, the chief nurse and I took Paulinia on a gurney in an ambulance to the Waikiki Pancake House. We had called the manager beforehand, and he had set up a table and alerted all of his employees. They came out to greet her as she was wheeled in. Paulinia smiled and laughed as several of the employees kissed her and wished her aloha. One of them brought her a lei.

"After we returned to the hospital, Paulinia asked me, 'Dr. Straehley, will you sit beside me and hold my hand when I die?'

"I left orders that when her vital signs began to fail, I should be called regardless of the time of day. Several nights later I received the expected call. As I sat at her bedside and held her hand, Paulinia said, 'You came.'

"Shortly thereafter she died. On her face there rested a beautiful smile. Paulinia had died in peace."[6]

When neonates or children are taken from the Earth, it always seems premature. A skillful, compassionate healthcare team can make the transition easier for the patient, family, and all others involved.

Key Words: Neonate, End of Life Care, Palliative Care, Perinatal Mortality

References

1. Catlin A, Carter B. Creation of neonatal end of life palliative care protocol. *Journal of Perinatology* 2002; 22: 184-195.
2. Carter B. Comfort care principles for the high risk newborn. *Neoreviews* 2004; 5: 484-490.
3. Harris L, Douma C. End of life care in NICU. *Neoreviews* 2010; 11: 194-199.
4. Stringer M, et al. Comfort care of neonates at the end of life. *Neonatal Network* 2004; 23: 41-46.
5. Munson D. Withdrawal of mechanical ventilation in pediatric and neonatal intensive care unit. Pediatr Clin N Am (2007); 54: 773-785.
6. Straehley C. Paulinia. *The Pharos of Alpha Omega Alpha Honor Medical Society*. Spring 2012. Page 13. Pdf.

City of Amarillo Department of Public Health

by Casie Stoughton, MPH, BSN, RN, CPH – Director
Reprint from Summer 2017

The City of Amarillo's Public Health department is responsible for promoting health and preventing disease in the citizens of Potter and Randall counties. Public Health serves as a safety net for many of the most vulnerable in our community and provides services and expertise in a wide range of specific services, from tuberculosis and immunizations to STDs and public health emergency preparedness.

The **Communicable Disease** program conducts disease surveillance and epidemiology, interfaces with hospitals and other providers, and provides community education. This team receives reports of Texas notifiable conditions, per Chapters 81 and 121 of the Texas Health and Safety Code. They follow up with each report to ensure the safety of both individual patients and the public, to ensure appropriate treatment of patients and contacts, and to identify and respond to outbreaks. The Perinatal Hepatitis B Prevention Program is another component of the program that offers case management for infants and contacts for mothers who have Hepatitis B. This team also collaborates with the Department of Animal Management and Welfare to assess the need for rabies post-exposure prophylaxis for animal bite victims and provides pre-exposure vaccine as needed to members of the community.

In an effort to reduce cases of vaccine preventable diseases, the **Immunization** program provides adult and childhood immunizations through the mobile clinic and at fixed locations. This team offers immunization outreach, community education and school/daycare compliance assessments. Vaccines are offered at low or no cost to both children and adults. Target areas for the mobile clinic include disadvantaged areas like shelters, low-income housing, community events and community centers. In 2015, this program gave 11,581 shots to 4,457 children and adults. Immunization clinic is available Monday thru Friday on a walk-in basis.

Amarillo is an international resettlement community for refugees. The **Refugee Health** team provides health screenings for primary refugees within 90 days of arrival. Screenings include TB skin testing, medical history, physical assessment and necessary referral for medical care. Follow-up immunizations for primary and secondary refugees, assistance with the medical portion of green card paperwork, and community education are important components of this program.

The **Tuberculosis Control** program provides TB testing for the public, treatment and contact investigation for active

| *continued on page 24*

cases, treatment of latent cases, and community education. In 2015, the TB team provided treatment for 15 active and 204 latent TB infections in Potter and Randall counties. TB skin tests are available to the public on weekdays, excluding Thursday.

The **STD/HIV Prevention and Treatment** program provides an STD clinic for identification and treatment of STDs, disease intervention, contact investigation, HIV outreach and community education. HIV/STD risk reduction counseling and referrals to services and care are also provided. In 2015, this team tested 1,300 people for HIV, performed 2,434 STD exams and treatment and distributed 85,000+ condoms. STD clinic is available Monday thru Friday, by appointment at 806-378-6300.

The **Public Health Preparedness** team conducts all hazards preparedness, collaborates with community partners in planning, response, and evaluation and also provides community education. This team provides Strategic National Stockpile coordination and is involved in planning and exercising mass vaccination/mass distribution of medications.

The **Public Health Promotions** program supports community efforts aimed at reducing childhood obesity and teen pregnancy as well as encouraging childhood safety. This team assists with the Community Health Assessment and Community Health Improvement Plan, and provides accreditation for the department through the Public Health Accreditation Board.

The City of Amarillo Department of Public Health is located at 1000 Martin Road. Thank you for partnering with public health to protect and serve our community.

Heal the City

by Mettie Taylor
Reprint from Summer 2017

HTC's mission is to provide free quality urgent care and referral services with compassion and dignity to the uninsured of our community. HTC seeks to provide those medical needs while connecting them to the existing health community and sharing Christ's love and hope with patients and volunteers alike. HTC's goal is to love the economically disadvantaged by providing quality medical care and education on health-related topics, while shifting the way our target group seeks medical care and empowering them to achieve and maintain a healthy lifestyle in order to prevent disease.

Dr. Alan Keister founded Heal the City after realizing that the desperate need for health care he witnessed on medical mission trips to Central America was equally pervasive in neighborhoods within Amarillo. The vision of opening a free medical clinic in Amarillo was born.

In September 2014, that dream was realized when HTC opened its doors. HTC has grown rapidly since its inception, treating over 5,400 patients, administering over 1,500 immunizations to children, and providing thousands of prescriptions in 2016 alone. The medical care is delivered by a phenomenal network of volunteers and providers who generously donate their time to serve HTC's patients.

Target Population
HTC's target populations are the uninsured in our communities who are economically disadvantaged and unable to receive quality medical care through traditional settings.

Services Provided

- Adult and pediatric medical care
- Dental care
- Physical therapy
- Mental health services through Texas Panhandle Centers
- Vision referrals
- Childhood immunizations
- Class A pharmacy on site
- Referrals to specialists when medically indicated
- Diagnostic services
- Women's health screenings on the 4th Tuesday of the month at 4:30 p.m.
- Connections to community resources
- Social work services
- CLIA waiver for lab services
- Spiritual support

Contact Information
609 S. Carolina • Amarillo, Texas 79106
(806) 231-0364
www.healthecityamarillo.com
Facebook: www.facebook.com/healthecityamarillo
Instagram: healthecity

Information on Obtaining Service
Patients need to be at HTC at 1:30 on Mondays, where they will either be assessed for possible care or given a number, depending on the type of services needed. Patients then return at 4:00 to begin the intake process.

Information on Volunteering at HTC
If you would like to volunteer at HTC, you can obtain a volunteer application at www.healthecityamarillo.com or call the clinic for more information.

Combat Related Posttraumatic Stress Disorder (PTSD):

Recovering from the War Within

by Kennan G. Carley, LCSW and Michael T. Lambert, MD
Reprint from Spring 2018

Introduction and Case Study

Jim, a 38 year-old Veteran, served two combat tours in Iraq. During service no one noticed anything different about him. However, within 6 months of leaving active duty, family and friends noticed Jim acting uncharacteristically. Jim avoided his family and rarely went out except to work. He was moody and easily startled or irritated, blowing up over minor problems. He seemed detached emotionally. Jim started drinking each night, saying it helped him sleep and dulled the nightmares. When he tried spending time with his family, he became angry and on guard for danger. Jim was diagnosed with combat related posttraumatic stress disorder (PTSD), and entered a Department of Veterans Affairs (VA) dual diagnosis treatment program that focused on PTSD and problem drinking. After several months of abstinence, psychotherapy, and medications, Jim improved significantly and could enjoy life with his family again. Jim is one of the over 442,000 active PTSD cases identified by VA (3).

This article provides a basic understanding of combat related PTSD. The symptoms of PTSD and associated issues frequently seen in PTSD will be outlined first, followed by a description of the most relevant treatments for PTSD.

Signs and Symptoms of Posttraumatic Stress Disorder (PTSD)

The *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (DSM 5) (1) is the defining authority in diagnosing mental health disorders. Symptoms fall within broad groupings of re-experiencing, avoidance, hyperarousal, and emotional numbing outlined in the DSM 5 criteria, which also define trauma exposure and requires significant distress or dysfunction for the diagnosis (table 1).

Table 1: DSM 5 Diagnostic Criteria for PTSD (1)

A.	*Exposure to a trauma as defined as experiencing an actual or threatened death, serious injury, or sexual violation.*
B.	*Criteria for trauma exposure:* • Directly experiencing the traumatic event; • Witnessing the traumatic event in person; • Learning about a traumatic event that occurred to a close family member or close friend; or • Experiencing first-hand repeated or extreme exposure to aversive details of a traumatic event (not through media, pictures, television, or movies unless work related)
C.	*The patient's reaction to the trauma causes clinically significant distress or impairment in the person's social life, ability to work, or other important areas of functioning.*
D.	*The patient exhibits behavioral symptoms generally classified under the* ***following four clusters of symptoms:*** 1) Re-experiencing of the trauma through one or more of the following: intrusive thoughts, recurrent dreams, or flashbacks (a sense of reexperiencing the trauma in subtle or extreme ways). 2) Avoidance behavior indicative of going to extremes to avoid distressing memories, thoughts, feelings, or external reminders of the event. 3) Heightened arousal symptomatic of one or more of the following: aggressiveness, reckless or self-destructive behavior, sleep disturbance, or hypervigilance. 4) Disturbance of mood and persistent negative cognitions including a distorted sense of blame of self or others, isolating from loved ones and society, or loss of interest in normally pleasurable activities, or emotional numbing.
E.	*The criteria must continue for more than a month to distinguish between acute and chronic phases of PTSD.*

When assessing response to treatment of PTSD, measurement-based care tools such as the PTSD Checklist (PCL), a self-rated checklist, or the PTSD Checklist-5 (a clinician-scored checklist of symptom severity) allow objective assessment of response to treatment. (4)

Special Features of Combat-Induced PTSD

Combat PTSD can be complex and severe due to unique factors associated with the trauma exposure, duration and repetitiveness of the exposure, and trauma associated with inflicting harm on or killing enemy combatants.

Unlike some civilian traumas, combat trauma typically has many episodes of reinforcing trauma. Combat tours in modern times are typically one year, but veterans of the Operation Enduring Freedom/Operation Iraqi Freedom (OEF/OIF) era often served extended 18 month tours and multiple tours. Symptoms go unrecognized initially as they enable the veteran to cope under constant combat duress (hyperarousal, hypervigilance, emotional numbing create a state called "combat mindset"). Exposure to alcohol is ubiquitous in military culture, and a high percentage of cases initially involve addressing problem drinking. PTSD symptoms are often not recognized until returning home and attempting to reintegrate into civilian society.

Comorbidity and Suicide Risk in Combat PTSD

Comorbid psychiatric disorders are extremely common in PTSD and must be addressed. Substance use disorders, especially alcohol abuse, are commonly seen as a form of self-management of the disorder. Depression, anxiety, and behavioral disturbances can accompany PTSD. Suicide risk is especially high in combat Veterans, who kill themselves at a rate six times the general population. Clinical care for PTSD must include careful screening for co-morbid disorders and suicide risk, and appropriate interventions to manage these issues (5).

Evidence-Based Treatment for PTSD

Currently no *cure* exists for PTSD. However, the recovery model used by VA promotes a hopeful prognosis and indeed many Veterans experience significant relief and return of function from PTSD through evidence-based psychotherapy and pharmacotherapy. Therapy models focus on avoidance behavior. Avoidance behavior appears to be key in maintaining heightened levels of PTSD overall. Though it seems natural to avoid trauma related triggers, avoidance only provides short-term relief. Avoidance behavior feeds the intensity of PTSD in the long term.

Avoidance manifests in intrapsychic and externally driven ways. Intrapsychic avoidance includes any attempts mentally to control trauma related memories, thoughts, and feelings, normally through distraction and suppression. External avoidance is behavior designed to not be near or experience trauma-related triggers such as crowds or certain people, places, or situations remindful of the trauma. Therapy models, in different ways, confront intrapsychic and externally driven avoidance so the victim is able to experience trauma related thoughts and reminders comfortably. Current evidence based psychotherapies (EBP) for recovery from PTSD include cognitive processing therapy (CPT), and prolonged exposure therapy (PE) (2).

Cognitive processing therapy (CPT) focuses on perceptions adopted that become automatic thoughts following exposure to a traumatic event. CPT focuses on extreme or exaggerated beliefs generated in reaction to a trauma. CPT argues that five base areas of cognition are disrupted from trauma exposure including self-esteem, safety, trust, intimacy, and power and control (the ability to manage one's own life). CPT trains the person with PTSD to identify the associated thoughts in each domain, challenge the thoughts in rational discourse, and then develop a more reasonable core belief based on the evidence. The result is better emotional modulation (2).

Prolonged exposure (PE) therapy challenges core dysfunctional beliefs in two ways. First, the PTSD survivor identifies various people, places, and situations in daily life that trigger PTSD related anxiety. The therapist exposes the patient to the triggers in a systematic way until anxiety dissipates. The second part of PE identifies the most disturbing trauma experiences and discusses the trauma account in detail during sessions. The survivor listens back to the account of the trauma memory daily in between sessions. This controlled re-experiencing of trauma material desensitizes reactions to the memory, just as watching a horror movie repeatedly removes the intense feelings experienced when first viewed. The survivor can then discuss and process the trauma experience, which allows cognitive re-tooling the trauma similar to what is accomplished in CPT (2).

Other promising therapies are being studied. However, there is not enough evidence now to support any of these approaches as being effective treatments for PTSD. The efficacy of psychotherapy for PTSD appears to be related to some level of exposure in one form or another.

Pharmacotherapy

Medications are also helpful, especially in conjunction with psychotherapy, based on the latest treatment guidelines published by the VA and Department of Defense (5). Recent guidelines emphasize the efficacy of psychotherapy above that of medications. However, pharmacotherapy for PTSD is important for many Veterans and is thought to augment the response to therapy. Additionally, some Veterans with PTSD cannot tolerate the rigors of exposure therapy without some relief from excessive hyperarousal and irritability. It is important for the therapist and the prescriber to work together well, to share insights and concerns, and to communicate with the Veteran in a manner that shows good coordination of effort.

Selective Serotonin Reuptake Inhibitors (SSRI's) are the backbone of PTSD medication management. Fluoxetine and sertraline are perhaps the most researched effective therapies; in addition to reducing hyperarousal, irritability and hyperalertness, they often help with mood. Other SSRI medications

| *continued on page 28*

used in PTSD include paroxetine, citalopram, and escitalopram. A good rule of thumb in selecting an SSRI medication is to explore prior history of response and first degree relative response to a particular SSRI. In general, fluoxetine is more activating than other SSRIs and may be useful for a Veteran with low levels of activation.

Second line antidepressant strategies include the venlafaxine, mirtazapine and trazodone. When used as monotherapy, trazodone often requires higher doses than the doses used to treat insomnia. Tricyclic antidepressants, due to side effects and overdose risk, are usually reserved for cases failing other medication trials.

Current research and guidelines advise against benzodiazepines in treating PTSD, because they inhibit recovery and response to exposure-based psychotherapies. Buspirone for anxiety is often helpful. For sleep disturbance, a second low-dose antidepressant such as mirtazapine or trazodone is sometimes helpful. Prazosin, an antihypertensive agent, shows promise as augmentation treatment for decreasing intrusive nightmares.

Mental Health Services for PTSD Offered by the VA

Mental Health staffing and resources for PTSD have increased significantly in the last 10 years. Most local VA Medical Centers offer evidence-based psychotherapy and medication management for PTSD, and many offer specialized care programs for dual diagnoses cases. Special residential care programs throughout the country focus on intense treatment of PTSD. VA has also expanded same-day mental health access and suicide prevention resources, including the national 24 hour Veterans Crisis Line (1-800-273-8255), answered by a mental health clinician, and on-line chat and text messaging support at https://www.veteranscrisisline.net/. Veterans Crisis Line, online chat, and text-messaging services are free to all Veterans, even those not registered with VA.

Conclusion

Though the fact that PTSD is not curable seems daunting for many veterans, recovery is attainable through evidence-based treatment. Recovery essentially means learning to accept the disorder and managing it better by confronting the thoughts and feelings rather than avoiding them. Through active confrontation, it is very possible for a veteran to return to having a rich, full and productive life.

REFERENCES

1. American Psychiatric Association: *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition.* Arlington, VA, American Psychiatric Association, 2013: 271-280.

2. Karlin BE, Ruzek JI, Chard KM, Afsoon E, Monson CM, Resick PA, and Foa EB. Dissemination of evidence-based psychological treatments for posttraumatic stress disorder in the Veterans Health Administration. Journal of Traumatic Stress. 2010; 23(6): 663-673.

3. Department of Veterans Affairs: A VA Clinician's guide to managing post-traumatic stress disorder, VA, 2014.

4. Department of Veterans Affairs: VA-DOD guidelines for the treatment of PTSD, 2017.

5. VA DOD Workgroup: Management of post-traumatic stress. Office of Performance and Veterans Affairs and Department of Defense Development Workgroup, Veterans Health Administration, 2017.

Disparities and Opportunities in the Primary Care of Transgender Patients

by Robert P. Kauffman, MD

Reprint from Summer 2018

Most primary care physicians are likely to encounter gay, lesbian, bisexual, and transgender (LGBT) patients on a daily basis, knowingly or unwittingly. Although psychological and medical needs of these different groups are often lumped into the LGBT banner (or the expanded LGBTQQIAP flag—lesbian, gay, bisexual, transgender, queer, questioning, intersex, asexual, pansexual), each population has its own unique health care requirements. With an increasingly open and accepting society, it is incumbent upon the practitioner to become aware of the evolving health care needs of these underserved populations. In 2014, the American Association of Medical Colleges (AAMC) declared that US medical and pharmacy schools were deficient in educating future physicians and pharmacists about LGBT populations. Medical schools were encouraged to incorporate 30 specific curricula addressing the needs of these patients (1). In this paper, specific primary care needs of the transgender population will be addressed. The psychological, endocrine, and surgical pathways to gender transformation will not be reviewed in this paper, as detailed treatises on these topics can be found elsewhere (2-4).

What defines transgenderism and how does this expression of personal identity differ from sexual orientation (heterosexuality, homosexuality, and bisexuality)? Table 1 summarizes the diversity found in human sexuality and expression. *Gender identity* is an inherent sense of being male or female regardless of genotype, phenotype, or biochemical sex. *Transgender* individuals are characterized by a disparity between their biological (natal or chromosomal) sex and their sense of gender identity. If the transgender person is committed to or has made changes in the body to be congruent with their gender identity, then the older term *transsexualism* may be applied. Male-to-female transgender persons usually identify themselves as *trans-women* while female-to-male prefer the term *trans-men*. In terms of sexual orientation, transgender individuals may have variable erotic interests, i.e. gynephilia, androphilia, bisexual, or analloerotic (not attracted to other people). Fluidity in sexual orientation among transgender persons is fairly common although more high quality research is needed to better understand this issue (5-6). The concept of "fluidity" (sexual orientation or identity can fluctuate and change throughout a lifetime), a phenomenon observed in both gender identity and sexual attraction, is beyond the scope of this paper (7-8). It is fair to say that our understanding of the human brain is incomplete!

Sexual orientation, in contrast, refers to how a person identifies physical or emotional attraction to others. Gay men identify themselves as male and lesbian women as female, but both are homophilic in attraction.

Approximately 700,000 Americans identify as transgender, gender-queer, or gender-questioning. In contrast, at least 9-10 million are estimated to be homosexual or bisexual (9). Transgenderism has been described in some shape or fashion in all cultures and throughout history (10). The incidence of transgenderism is debated, which should come as no surprise given societal and religious prejudices and marginalization. The American Psychiatric Association (APA) places the incidence at 1:10,000 natal males and 1:30,000 females. Perhaps because of changes in social acceptance and legal protection, other data suggests that it is far more common, perhaps occurring in 0.5-1% of the overall population (11). No matter what the incidence, competent care of the transgender person is an emerging issue for healthcare professionals (11-12).

The pathway to treatment for transgender people typically involves five steps (2):

- A qualified mental health practitioner confirms the diagnosis of transgenderism according to World Professional Association for Transgender Health (WPATH) or substantially similar standards.

- Psychotherapy addresses any existing psychiatric, psychological, or psychosocial conditions.

- The individual engages in real-life experience in the desired gender role for at least 12 months prior to hormone therapy.

- Hormonal therapy with periodic follow up is initiated by a physician with training and expertise in transgender endocrine care. Expectations and safety monitoring should be clearly outlined (At TTUHSC, we use an extensive, written informed consent process). Untoward side-effects and complications (which are uncommon) should be addressed at subsequent clinic encounters.

- After at least one year of hormone therapy, sexual reassignment surgery may be entertained after shared decision making between patient, treating physician, mental health professional, and surgeon. Not all transgender persons seek sexual reassignment surgery due to costs, morbidity, access to care, or personal preference.

Once the diagnosis of transgenderism is codified and the patient embarks upon the journey to gender congruity, a host of primary care issues (in addition to hormone therapy) remain. These will be addressed as a whole and then individually for trans-men and trans-women.

All Transgender Patients

Many transgender people are uncomfortable with their current primary care physicians, and undoubtedly many physicians may feel somewhat ill at ease with

| *continued on page 30*

transgender persons and their unique needs (hence, the need for comprehensive education in medical schools and in the continuing medical education process) (9,12). Similar to other patient populations, pediatric and adolescent patients will have their own set of concerns compared to reproductive age and older individuals. Although a pediatric or reproductive endocrinologist most likely will address inhibition of secondary isosexual development and gender dysphoria (4), the primary care physician and psychologist should be acutely aware of psychosocial issues (i.e. bullying, bathrooms, depression, etc.) with an eye to intervention. Among reproductive age groups, access and referral to infertility care may be an important issue. Physicians treating the geriatric population will experience the interface of chronic disease management and continued sex hormone treatment. Health care providers and the office staff often need specific education on topics as simple as how to address transgender patients, how to approach unique or embarrassing concerns, and billing/coding (12).

• Electronic medical records (EMR). Many EMR systems have adopted a 2-step gender identity intake. An example is illustrated in Table 2 (13-14).

• Names and pronouns. Although the current legal name (and name on the insurance card) should be entered into the medical record, the preferred name or nickname should always be used in addressing the patient and should be listed prominently on the chart or EMR. Trans-men should be addressed using masculine pronouns and trans-women with the feminine.

• Body parts. Pre-surgical transgender individuals, in general, may find discussing native portion of their bodies uncomfortable if not embarrassing. Hence, among trans-men, the breasts may be referred to as "top" (and mastectomies as "top surgery") and the vagina as "bottom" or "front hole". The anus, parenthetically, is the "rear hole" or something similar. Among trans-women, the male external genitalia should be called "genitals" and testes "gonads" or something seemingly more gender-neutral (2,15).

• Mental health. Although exploration of gender identity and dysphoria should be addressed prior to formal transition by a mental health professional trained in gender issues, a number of ongoing issues should be addressed by both medical and mental health providers. The "coming out" and social transition may be more challenging and complex than that facing gay, lesbian, and bisexual persons (12,16). After all, it is essentially impossible to "stay in the closet" when one transitions to the desired gender identity in name, dress, and behavior. Fortunately, there are peer groups throughout the country (including one at PASO House in Amarillo) to provides affirming support and practical guidance. A host of mental health concerns are more prevalent in transgender populations, including depression, anxiety, PTSD, substance abuse, and suicide (12). Homelessness and unemployment remain highly prevalent as well (2,12).

• Sexually transmitted infection (STI) screening. Transgender people are less likely to access preventative health services compared to cis-gender individuals (2,12,17). Trans-women, in particular, are also more likely to be victims of sexual assault (12). Interestingly, there are no specific evidence-based guidelines for STI screening in transgender persons, unlike sexually active teenagers and men who have sex with men (MSM) (17). The prevalence of HIV/AIDS is higher in the transgender population overall and particularly among trans-women of color (range 10-52%) (12). Pre- and post-exposure HIV prophylaxis (PrEP and PEP) should be offered to high risk individuals (12). Transgender persons should undergo HIV and STI screening similar to other high risk individuals on an annual basis (18). A more limited screening schedule is appropriate for those in long term monogamous relationships. Trans-men should undergo cervical/vaginal cultures for gonorrhea, chlamydia, and trichomonas if intra-vaginal intercourse has occurred in the recent past (12,18). Among trans-women who perform insertive intercourse, condom use can be challenging because of diminished penile tumescence which is commonplace on estrogen therapy (12). HPV vaccination should be offered to younger transgender people just as it is for the heterosexual, cis-gender majority (19). Hepatitis C is not a contraindication to hormone therapy in those with compensated disease (12).

• Smoking cessation. Despite a paucity of information on this topic, tobacco abuse among transgender individuals appears higher than the general population. Tobacco use has been reported between 20 and 83% of transgender people (12). Interventional strategies should be discussed.

• Substance use/abuse disorders. Although data is scarce, substance use disorders appear higher in the transgender community (12, 20). Interventional services should be recommended.

• Deep venous thrombosis (DVT). The incidence of DVT may be higher in transgender patients on hormone therapy. It is not appropriate to discontinue hormone therapy in transgender patients who develop DVT any more than one would recommend bilateral oophorectomy or orchiectomy in cis-gender patients with thrombosis. Anticoagulation should be initiated in addition to hormone therapy. The physician managing hormone transition should be made aware of any change in status. In trans-women, transdermal estrogen may have less thrombogenic risk compared to oral estrogens although this has not been verified in clinical practice (2, 21). Anticoagulated men must change administration of testosterone from intramuscular administration to transdermal forms to avoid hematoma formation.

• Fertility. Prior to sex hormone therapy, cryopreservation of semen or oocytes should be discussed with referral to a reproductive endocrinologist for those who wish to discuss or proceed with gamete preservation. Both the American Society of Reproductive Medicine (ASRM) and European Society of Human Reproduction and Embryology (ESHRE) have established guidelines for fertility care in transgender individuals and recommend the same access to donor semen, donor oocytes, and donor embryos as afforded to cis-gender, heterosexual couples (22).

• Legal documents. Most countries, including the USA, allow health professionals to write a letter of support requesting that the "sex" be changed on

driver's licenses, passports, social security cards, and other legal documents. At TTUHSC, we use a standard letter guided by WPATH and the National Center for Transgender Equality (2).

• Cancer screening. Any patient with a body part that would normally meet cancer screening guidelines should be screened accordingly (2, 9). More specific recommendations are detailed below.

Trans-men (F to M)

• Breast binding. Trans-men, understandably, do not want female breasts. Tight binding is often employed to hide breast development in trans-men prior to undergoing bilateral mastectomy and nipple reconstruction. Prior to plastic surgery, breasts should be unbound periodically for physician examination. Excessively tight binding can cause skin breakdown and traumatic fat necrosis of the breasts (23).

• Cervical cancer screening. Practitioners are often reluctant to perform PAP screening in trans-men, and trans-men are similarly disinclined to request pelvic examination (12). The vaginal speculum and bimanual examinations may be psychologically traumatic and distressing. Pre-procedural education is helpful, and in many cases, cervical cancer screening can be delayed until a subsequent visit. The website, *www.checkitoutguys.ca*, offers an excellent resource on the benefits of pelvic exam and cervical cancer screening in trans-men from a trans-male point of view. A supporter in the room may be helpful. Fortunately, cultures for gonorrhea, chlamydia, human papillomavirus (HPV), and common vaginitis infections can be procured by self-swab, diminishing anxiety when PAP screening is not due. Hysterectomy (in the absence of a history cervical dysplasia or cancer) ends the need for cervical cancer screening. Almost invariably, bilateral salpingo-oophorectomy is performed with hysterectomy, essentially abolishing the risk for ovarian cancer (24).

• Breast cancer screening. Until bilateral mastectomy is performed, mammographic screening should follow one of the many published guidelines. A specific breast screening guideline does not exist for the transgender patient. Androgen therapy does not alter the initiation or timing of mammography (24).

• Vaginal bleeding. Androgen treatment usually inhibits ovulation and promotes endometrial atrophy in biological females. Nevertheless, uterine bleeding may occur in the pre-hysterectomy patient. Bleeding in the trans-male typically creates distress and embarrassment. Addition of a progestin, aromatase inhibitor, or even the levonorgestrel IUD will usually arrest bleeding (2, 24).

• Polycythemia. Periodic CBC assessment is recommended by the Endocrine Society and WPATH since intramuscular testosterone (in contrast to transdermal T) tends to stimulate erythropoiesis to a greater degree. If present (hematocrit >50%), therapeutic phlebotomy can be accomplished by a blood bank. In the absence of the usual contraindications, blood banks will process the blood for subsequent donor transfusion (2, 3, 25).

• Dyslipidemia. Androgen therapy may promote an atherogenic lipid profile. Treatment is similar to other populations (diet, weight loss, statins, etc) (3).

Trans-women (M to F)

• Cancer screening. Although trans-women are usually proud of estrogen-facilitated breast enlargement (or breast implants), they become candidates for mammographic screening according to various established guidelines. If testicular enlargement or pain is encountered, genital examination is necessary (in pre-surgical trans-women). Testicular cancer usually presents in young biological men, often well before gender reassignment surgery would be pursued (24).

• Tucking. Displacement of the testes into the inguinal canal and taping or positioning the penis towards the rectum is often employed by trans-women to accomplish a feminine contour (Figure 1). The process may be facilitated by a tight garment commonly called a "gaff". Pain associated with this practice may be mechanical, neuropathic, or traumatic. In such cases, the physician should recommend less frequent and looser tucking if reassignment surgery is not imminent (2).

• Cosmetic issues. Antiandrogens (spironolactone, flutamide, finasteride, etc.) can diminish the velocity and coarseness of terminal hair growth but do not arrest or reverse it. LASER hair removal is most beneficial after estrogens and antiandrogens have been prescribed for several months. Voice modulation may require referral to a speech pathologist. Laryngeal enlargement, when bothersome, can be treated by laryngeal shaving. Facial reconstruction has been successful in giving a more feminine visage. Many trans-women are dissatisfied with estrogen-stimulated breast development and opt for implants (2, 26).

Summary

This paper summarizes major issues associated with primary care of the transgender patient but certainly not all of them. Institutions providing care to the transgender community should include a physician knowledgeable in hormone therapy and transgender treatment, a mental health expert, and ultimately a trained surgeon for those who elect to undergo reassignment surgery. The primary care physician, usually tasked with acute and long term care of issues not necessarily associated with hormone treatment, is the fourth member of the treatment team. Ultimately, communica-

| *continued on page 32*

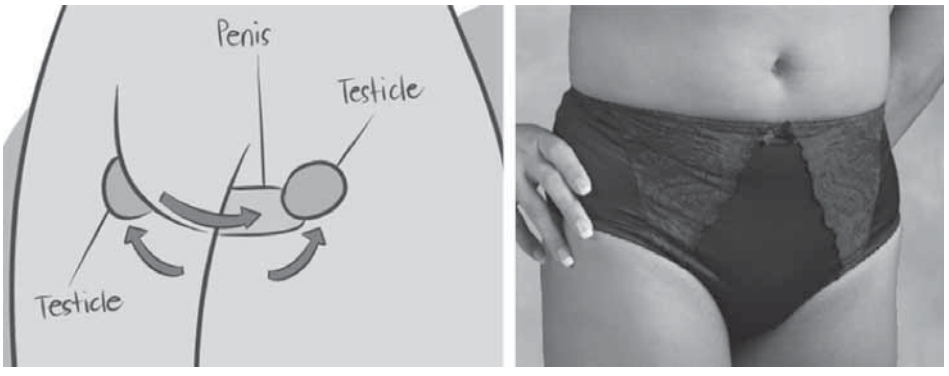


Figure 1.

tion between each member of the treatment team is paramount to assure proper care of this underserved but growing population.

References:

(1) Hollenbach A, Eckstrand K, Dreger A. Implementing curricular and institutional climate changes to improve health care for individuals who are LGBT, gender, nonconforming, or born with DSD: a recourse for medical education. 2014. Association of American Medical Colleges.

(2) World Professional Association for Transgender Health. Standards of Care for the Health of Transsexual, Transgender, and Gender Nonconforming People. 7 ed. 2012.

(3) Hembree WC, Cohen-Kettenis PT, Gooren L et al. Endocrine treatment of gender-dysphoric/gender-incongruent persons: an endocrine society clinical practice guideline. J Clin Endocrinol Metab 2017;102:3869-3903.

(4) Hembree WC. Guidelines for pubertal suspension and gender reassignment for transgender adolescents. Child Adolesc Psychiatr Clin N Am 2011;20:725-732.

(5) Auer MK, Fuss J, Hohne N, Stalla GK, Sievers C. Transgender transitioning and change of self-reported sexual orientation. PLoS One 2014;9:e110016.

(6) Katz-Wise SL, Williams DN, Keo-Meier CL, Budge SL, Pardo S, Sharp C. Longitudinal associations of sexual fluidity and health in transgender men and cisgender women and men. Psychol Sex Orientat Gend Divers. 2017;4:460-471.

(7) Kanazaza S. Possible evolutionary origins of human female sexual fluidity. Biol Rev Camb Philos Soc. 2017;92:1251-1274.

(8) Moleiro C, Pinto N. Sexual orientation and gender identity: review of concepts, controversies and their relation to psychopathology classification systems. Front Psychol. 2015;6:1511.

(9) McNamara MC, Ng H. Best practices in LGBT care: A guide for primary care physicians. Cleve Clin J Med. 2016;83:531-541.

(10) Bullough VL. A nineteenth-century transsexual. Arch Sex Behav.1987;16:81-84.

(11) Winter S, Settle E, Wylie K et al. Synergies in health and human rights: a call to action to improve transgender health. Lancet. 2016;388:318-321.

(12) Edmiston EK, Donald CA, Sattler AR, Peebles JK, Ehrenfeld JM, Eckstrand KL. Opportunities and gaps in primary care preventative health services for transgender patients: a systemic review. Transgend Health. 2016;1:216-230.

(13) Deutsch MB, Buchholz D. Electronic health records and transgender patients--practical

Table 1. Human Sexuality and Identity: Definitions.

Term	Definition
Sex	Physical genotype and phenotype without regard to sense of self, i.e. chromosomally or genetically assigned gender at birth (natal sex).
Gender identity	Inherent sense of being male or female regardless of genotype, phenotype, or chromosomal sex.
Transgender	Gender identity differs from chromosomal or natal sex
Transsexual	Clinical term referring to those committed to making their body congruent with their gender identity (social and somatic transformation).
Cis-gender	Congruence between biologic (natal) sex and identity
Sexual orientation	Sex that one is physically attracted to without regard to gender identity (includes homosexuality, heterosexuality, and bisexuality). An enduring pattern of emotional, romantic, and/or sexual attraction to men, women, or both sexes.
Cross-dressing (transvestitism)	One who derives pleasure or sexual excitement from dressing in clothes of the opposite sex. Gender identity is congruent with biologic sex.
Gender identity disorder	Older term covering transgenderism (not included in DSM-V)
Gender dysphoria	Distress accompanying incongruence between natal sex and expressed gender (DSM-V)
Gender incongruence	WHO ICD-11 term referring to transgenderism
Gender non-conforming (gender-queer)	Gender identity varies from natal sex but more complex or fluid than transgenderism.
Questioning	Those in process of discovery and exploration about sexual orientation, gender identity, and/or expression.
Fluidity	A change in sexual orientation or identity that may fluctuate over time or by situation. Opposite of "essentialism".
Disorders of sexual differentiation (DSD)	Conditions showing disagreement between chromosomal or gonadal sex and phenotypic expression (examples: virilizing congenital adrenal hyperplasia in genotypic female, androgen insensitivity syndromes, 46,XY gonadal dysgenesis, and 46,XX male syndrome).

Table 2. EMR gender identification format. (13-14).

1. What sex were you assigned at birth?	2. What is your gender identity?
_____ Male	_____ Male
_____ Female	_____ Female
_____ Declline to answer	_____ Transgender Man
	_____ Transgender Woman
	_____ Gender non-conforming (gender queer)
	_____ Other_____
	_____ Declline to answer

recommendations for the collection of gender identity data. J Gen Intern Med. 2015;30:843-847.

(14) Callahan EJ, Sitkin N, Ton H, Eidson-Ton WS, Weckstein J, Latimore D. Introducing sexual orientation and gender identity into the electronic health record: one academic health center's experience. Acad Med. 2015;90:154-160.

(15) Lee JG, Ylioja T, Lackey M. Identifying lesbian, gay, bisexual, and transgender search terminology: a systematic review of health systematic reviews. PLoS One. 2016;11:e0156210.

(16) Landers S, Kapadia F. The health of the transgender community: out, proud, and coming into their own. Am J Public Health. 2017;107:205-206.

(17) Cohen J, Lo YR, Caceres CF, Klausner JD. WHO guidelines for HIV/STI prevention and care among MSM and transgender people: implications for policy and practice. Sex Transm Infect. 2013;89:536-538.

(18) CDC launches prevention efforts focused on PrEP, high-risk groups. AIDS Policy Law. 2015;30:1, 4.

(19) Galea JT, Monsour E, Nurena CR, Blas MM, Brown B. HPV vaccine knowledge and acceptability among Peruvian men who have sex with men and transgender women: a pilot, qualitative study. PLoS One. 2017;12:e0172964.

(20) Flentje A, Bacca CL, Cochran BN. Missing data in substance abuse research? Researchers' reporting practices of sexual orientation and gender identity. Drug Alcohol Depend. 2015;147:280-284.

(21) Shatzel JJ, Connelly KJ, DeLoughery TG. Thrombotic issues in transgender medicine: a review. Am J Hematol. 2017;92:204-208.

(22) Martinez F. Update on fertility preservation from the Barcelona International Society for Fertility Preservation-ESHRE-ASRM 2015 expert meeting: indications, results and future perspectives. Fertil Steril. 2017;108:407-415.

(23) Peitzmeier S, Gardner I, Weinand J, Corbet A, Acevedo K. Health impact of chest binding among transgender adults: a community-engaged, cross-sectional study. Cult Health Sex. 2017;19:64-75.

(24) Weyers S, De SP, Hoebeke S et al. Gynaecological aspects of the treatment and follow-up of transsexual men and women. Facts Views Vis Obgyn. 2010;2:35-54.

(25) Ederveen EGT, van Hunsel FPAM, Wondergem MJ, van Puijenbroek EP. Severe secondary polycythemia in a female-to-male transgender patient while using lifelong hormonal therapy: a patient's perspective. Drug Saf Case Rep. 2018;5:6.

(26) Ginsberg BA, Calderon M, Seminara NM, Day D. A potential role for the dermatologist in the physical transformation of transgender people: a survey of attitudes and practices within the transgender community. J Am Acad Dermatol. 2016;74:303-308.

An Introduction to Medication-Assisted Treatment for Opioid Use Disorder

by Amy Stark, MD
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Imagine a deadly epidemic that does not discriminate by age, sex, ethnicity or socioeconomic status. This epidemic claims the lives of 90 Americans every day, and there is a life-saving treatment, but it is hard to access – what kind of outrage do you think this would inspire? As a physician or community advocate, to what lengths would you go to help your community? This isn't just a hypothetical situation. We are currently in the middle of one of the deadliest epidemics in American history: the opioid epidemic. In October 2017, President Trump declared the opioid crisis a public health emergency. Almost a year later to the very day, President Trump signed off on a bipartisan bill known as the Support for Patients and Communities Act. While this legislation aims to increase access to treatment, it will not be funding an expansion of addiction treatment for opioid use disorder (OUD) (6). The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, defines OUD as a chronic psychiatric disorder characterized by persistent use of opioids, tolerance, repeated withdrawal symptoms, and sustained behavioral changes (1).

There are a lot of different ways to approach treatment of OUD, but most importantly, all treatment decisions should be made collaboratively with the patient. Meeting a patient where they are and assessing their readiness for change is incredibly important. If a patient isn't quite ready to quit using opioids, take a harm reduction approach: focus on education and safety. Encourage the use of clean needles if they are injecting and make sure that they have a naloxone kit for overdose.

If a patient is ready to consider treatment, several options exist. First, an assessment to determine an appropriate level of care will ensure that the patient receives the proper treatment based on their acuity. Treatment options may include detoxification, abstinence based methods and medication-assisted treatment (MAT).

Detoxification is not a stand-alone treatment for OUD, but rather should be considered as a prelude to treatment. Patients who complete detoxification but do not engage in further treatment have astronomical relapse rates, with some studies quoting over 80%. Furthermore, relapse following detoxification is more likely to result in a lethal overdose given loss of physiological tolerance. Similar relapse rates are seen for patients who engage only in behavioral treatments (counselling, AA/NA, etc.) and pursue an abstinence-only model (without MAT).

The Substance Abuse and Mental Health Services Administration (SAMHSA) defines MAT as "the use of medications with counseling and behavioral therapies to treat substance use disorders and prevent opioid overdose" (3). In 1997, a consensus panel from the National Institutes of Health (NIH) published recommendations in support of MAT, stating "[opioid addiction] is a medical disorder that can be effectively treated with significant benefits for the patient and society" (4). Patients on MAT have consistently demonstrated better outcomes than those who are not. Once initiated and stabilized with MAT, many patients completely stop using illicit opioids. Others may continue to use, but less frequently and in smaller amounts, which greatly reduces risk of morbidity and death from overdose. The US Food and Drug Administration (FDA) has approved three medications for the treatment of OUD: methadone, buprenorphine and naltrexone.

Methadone is a long acting racemic mixture and was the first medication approved for the treatment of heroin addiction. Methadone's ability to relieve the withdrawal from opioids was noted as early as 1947. It is administered daily from special clinics called Opioid Treatment Programs (OTP) and is highly regulated by the government. Most often methadone is administered in a liquid form, but it does come in tablets, diskettes and powders. As a full opioid agonist, it binds completely to mu opioid receptors in the central nervous system. The goal of a therapeutic dose is to prevent any kind of withdrawal symptoms for the 24 hours between dosing, prevent craving for other opioids, and attenuate the euphoric effects of illicitly used opioids. Although proven to be generally safe and effective, there are a number of side effects, many drug-drug interactions and black box warnings for respiratory depression (especially when combined with other central nervous system depressants), QT interval prolongation and neonatal abstinence syndrome.

While most physicians are familiar with methadone, fewer have the same level of familiarity with buprenorphine. It is a partial agonist that acts at both the mu and kappa opioid receptors. As a partial and not a full agonist, it occupies the receptors without all the expected opioid effects. Those on buprenorphine are less likely than those on full agonists to have strong feelings of euphoria or significant respiratory depression. Buprenorphine also has a very strong affinity for the receptor and dissociates from the receptor very slowly, making it difficult to displace. Additionally, there is a ceiling effect at moderate doses, meaning that the opioid effects level off, even with further increases in dose. This lowers the risk of misuse, dependency and side effects.

The most commonly seen formulation is a combination of buprenorphine and naloxone (suboxone). The naloxone is added to deter inappropriate diversion of buprenorphine and injection for non-medical use. When taken appropriately, because of its poor oral bioavailability, the naloxone has no significant effects.

Buprenorphine used without the naloxone component, or the monoproduct, is seen less often – usually only in pregnant women or in those who have had severe adverse reactions to naloxone. Buprenorphine comes in many different formulations: buccal films, sublingual films, sublingual tablets, and transdermal patches. There is even an implantable device that provides steady continuous levels of buprenorphine for six months for those who are stabilized on a maintenance dose.

Unlike methadone, buprenorphine doesn't have to be dispensed from a special clinic and can be prescribed by all physicians, and in some states, by nurse practitioners and physicians assistants. However, to be licensed to prescribe buprenorphine, physicians must obtain a special waiver from the Drug Enforcement Agency (DEA). Prior to application for the waiver, physicians must complete additional training regarding MAT. There are limits on the number of active buprenorphine prescriptions a physician can write: 30 in the first year following obtaining a waiver, 100 in the second year, and 275 thereafter.

Naltrexone is an opioid antagonist, and its main indication for treating opioid use disorders is to help prevent relapse and opioid overdose and foster long-term recovery. Naltrexone helps with compulsions to use and cravings for opioids. Because naltrexone has no opioid effect, there is no risk of dependency or abuse potential. Similarly, there are no withdrawal symptoms if treatment is stopped abruptly. On the other hand, the lack of activity at the opioid receptor also results in higher rates of attrition and return to use. Naltrexone has a very high affinity for the opioid receptors – higher than heroin, morphine or methadone; it displaces those drugs and blocks their effects which can precipitate withdrawal symptoms. With that in mind, before starting naltrexone, a patient should be abstinent from short-acting opioids for a week and from long-acting opioids such as methadone for 10 days. There is also a depot formulation of naltrexone that can be given once per month which was approved for use by the FDA in 2006 for alcohol dependence and in 2010 for opioid dependence.

Lastly, while not approved for the treatment of OUD, I would be remiss if I didn't mention naloxone. Naloxone is a nonselective opioid antagonist with that competitively binds to mu opioid receptors and is used to treat opioid overdose. Like naltrexone, naloxone has no intrinsic opioid agonist activity. It has fairly poor oral bioavailability because of extensive first-pass metabolism in the liver. However, it has a rapid onset of action when administered intravenously, intramuscularly or with intranasal administration. Naloxone is so safe and effective in treating opioid overdose that even trained laypeople in the community can administer this life-saving medication in emergency situations. Patients with a history of OUD or those who are prescribed high doses of opioid medications should be educated about naloxone, its indications, and how to use it, and they should be offered a prescription. In addition to increasing access to treatment for OUD, the Support for Patients and Communities Act aims to increase the availability of naloxone – providing kits and training to more first responders like police officers, EMS professionals and firefighters.

In summary, we find ourselves in frightening times – 90 people die every day from an opioid overdose. We are truly a nation in crisis. But we are also in a unique position to help our patients. We have more tools and a better understanding of addiction medicine than ever before. Our goals moving forward should be to increase access to MAT for all patients, and to continue to educate our colleagues and the public about safe prescribing of opioids and the risks associated with misuse. Harm reduction strategies should be employed where possible, and we should work to continue to debunk the stigma around substance use disorders. The evidence manifestly shows that OUD patients do better when they are on a maintenance medication like methadone or buprenorphine. This enables them to engage more fully in the other facets of treatment and ultimately to reengage in what is most important to them.

References:

1. American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders (5th ed.). Arlington, VA: American Psychiatric Publishing.
2. American Psychiatric Association. (2015). The American Psychiatric Publishing Textbook of Substance Abuse Treatment (5th ed.). Arlington, VA: American Psychiatric Publishing.
3. Center for Substance Abuse Treatment. Medication-Assisted Treatment for Opioid Addiction in Opioid Treatment Programs. Treatment Improvement Protocol (TIP) Series 43. HHS Publication No. (SMA) 12-4214. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2005
4. Effective Medical Treatment of Opiate Addiction. NIH Consensus Statement Online 1997 Nov 17-19; [cited 2018, October, 30];15(6):1-38.
5. Sadock B. Kaplan & Sadock's comprehensive textbook of psychiatry. Philadelphia: Wolters Kluwer; 2017: 1353-1373.
6. Support for Patients and Communities Ac5t, Pub. L. No. 115-271, 132 Stat. 3894 (2018).

Amy Stark, M.D. is a board certified psychiatrist with specialty training in addiction psychiatry. Upon earning her medical degree from the Texas Tech University Health Sciences Center, Dr. Stark completed residency in general psychiatry at the Mayo Clinic in Rochester, Minnesota. Following residency, Dr. Stark completed a fellowship in addiction psychiatry at Yale University in New Haven, Connecticut.

Dr. Stark's areas of expertise and professional interests include opioid use disorder and medication assisted treatment; alcohol use disorder; stimulant use disorder; mood disorders; anxiety disorders; and psychiatry for specialty populations, including peripartum women and the LGBT community. She is certified to provide transcranial magnetic stimulation as a treatment option for those with treatment-resistant depression. She is currently an Associate Professor of Psychiatry at the Texas Tech University Health Sciences Center School of Medicine in Amarillo.

One Physician's Story

by Jesse Benitez, MD
Acting Chief of Medicine, Amarillo VAMC
Reprint from Spring 2019

Like most college students, I was very nervous during my medical school interviews, making it difficult to remember the discussion. However, I do recall one question to which I blurted out the answer instantaneously, similar to a brisk patellar reflex. The question was simple: "Why do you want to become a doctor?" The response was even simpler: "To help people, sir". That year was 1981.

After medical school and a residency program in Internal Medicine here with Texas Tech, I was blessed to deliver what I had stated to my medical school interviewer. Most of my thirty-plus year career has centered around practicing primary care. In order to maintain my urgent care clinical skills, I would occasionally work in the Amarillo VA Emergency Department and a couple of LTACs as well. I was lucky to meet the woman of my dreams during a rotation at High Plains Baptist Hospital. Judy was working as a Registered Nurse on the medical floor during my residency years. We got married in 1989 and together raised two wonderful young men. Life was good.

I suffered a catastrophic illness on March 20th, 2011. I had just returned to Amarillo after traveling with my family to the Texas Hill Country for spring break. March 19th was a fun day of tossing baseballs with my youngest son Joey, who was in Little League at North Randall County Baseball Association. The next morning I woke up with body aches and a fever of 104 F. Judy took me to an urgent care center where I was diagnosed with cholecystitis, with treatment consisting of IM Ceftriaxone and Phenergan, along with a prescription for a gallbladder ultrasound. I was no longer febrile and vital signs were stable. A CBC and Chem panel were unremarkable except for mild thrombocytopenia. After getting home I was so sleepy from the Phenergan injection that I took a nap, only to wake up six hours later with severe chills and very cold, painful hands and feet. Judy was concerned when she looked at me, and for a good reason: my face and neck had developed scattered purpuric lesions. A feeling of doom swept across me as Judy rushed me to the emergency room. I didn't know at that time that I'd never toss another baseball with my hands again.

My presenting illness consisted of severe sepsis with acute kidney injury and diffuse intravascular coagulation, which quickly decompensated into septic shock; however, there was no obvious source of infection. I received IV fluids, pressor agents, and antibiotics, along with plasmapheresis and hemodialysis. On two occasions I required mechanical ventilation. Due to ongoing bleeding I received over forty-five units of packed red blood cell transfusions and other blood products. Despite the aggressive therapies, I began to develop markedly decreased perfusion to my extremities, refractory to leech therapy and a sympathectomy.

My clinical course continued to deteriorate, and my four extremities worsened from cyanosis to frank gangrene, and a decision was made to amputate my right hand, which was the extremity which had initially suffered the most ischemia. This was almost one month into my hospital course, and I had been in a delirious state most of that time. I clearly remember waking up to see my right distal arm in a clean dressing, along with a black, necrotic left hand and feet.

Luckily my condition began to improve. My physicians explained what had transpired and that inevitably I would need amputations of my left hand and both lower legs, but the level of amputation would depend on the final demarcation between viable and dead tissue. Now that I was coherent, panic began to set in. What was I to do as a quadruple amputee on dialysis? How would I support my family? How would I ever practice medicine again? Why did this happen to me? My future seemed hopeless.

My family visited me during Easter. My young sons had not seen me due to my confusion and poor physical status. In order to not worry my children, my necrotic hand and feet were covered best as possible, but at one point the sheets shifted and my right leg was exposed to my oldest son, Javier. I'll never forget the horrified look on his face and the uncontrollable crying that took place. It was that incident, along with the thought of living hopelessly on social security disability, that changed my attitude from a "victimized", helpless person to a more positive, constructive one.

Over the course of a few weeks, the gangrene finally halted, and I had my left hand and both distal legs amputated. Along the way I had a laparoscopic cholecystectomy secondary to acalculous cholecystitis. Hemodialysis continued, and a renal nuclear scan gave my nephrologist no hope of any kidney recovery. Plans were made for peritoneal dialysis, and I

had a dialysis catheter inserted into my left lower abdomen prior to leaving the hospital. I was now a quadruple amputee with end stage renal disease. What a disaster! I focused on rehab; luckily, I had always been in decent physical shape, so I progressed rapidly. I had to maintain an anabolic state, but the chronic nausea and horrible renal diet made it difficult to eat. I met my future prosthetist, Chad Mason, of Amarillo Artificial Limb and Brace during my rehab stay. He used his amazing knowledge and skills to make my arms and legs functional again. Physical therapy for my legs was easy, but not the occupational therapy for my hands, as bilateral arm amputees were a rarity in this area at that time.

I was discharged after 103 days of hospitalization. I continued both physical and occupational therapy and eventually transitioned into peritoneal dialysis. My wife quickly learned how to use and to troubleshoot the dialysis exchanging machine, and my bedroom was converted into a dialysis ward. The parents and boys of Boy Scout Troop 1221 stepped up to the plate and constructed a concrete ramp so I could drive my electronic scooter into my home. For some reason I had an aversion to meat products; a large part of my caloric intake included eggs and beans, prepared Mexican style. After about a month, I developed a consistent routine and made a decision to return to work.

It was heartwarming returning to my office, despite the multiple times that I sat frustrated, staring at an electronic medical record or a large pile of medical charts to review. Adjustments were made so I could use my scooter in place of a chair, and the IT service provided me with a joystick to replace the computer mouse and a keyboard so large it appeared comical. My work was purely administrative due to my handicap. My wife would visit every day around noon, were she would administer a dialysis exchange to keep me as healthy as possible. I was so happy to be productive once again, as I had never in my life been a sedentary person.

After about two years of peritoneal dialysis, I received a phone call from Baylor All Saints Medical Center in Fort Worth, Texas: they had a kidney for me. It took awhile to find the best kidney since I had so many antibodies in my serum from multiple blood products during my illness, making a match difficult. Judy drove me to Fort Worth, and the pre-op work-up revealed hyperkalemia, so I was treated with IV insulin and dextrose, only to suffer a hypoglycemic reaction…wow, that was weird! On May 14th I was taken to the OR to receive my cadaveric kidney: a precious gift from an unknown donor. The surgery went well, and I awoke to find a scar on my lower right groin area (transplanted kidney) and the peritoneal dialysis catheter was gone. It was awesome to urinate again! Unfortunately, I began to develop abdominal distension, and three days post-op I perforated my cecum and developed peritonitis requiring emergent surgery. After two exploratory laparotomies and three days in the ICU (yes, sepsis and mechanical ventilation once again), my condition improved. It was horrible looking at the scar running vertically across my abdomen, along with an ileostomy bag in my right lower abdominal quadrant. I was confused, but mostly I felt so sad for my wife. I had put her through two horrible ordeals, and this time in a foreign place without friends or family to give support. I had to get better soon.

After six weeks of PT and multiple visits to the transplant clinic, I was strong enough to go home and so happy to be off dialysis. The ileostomy bag had to be emptied multiple times daily, and the maintenance required a lot of work. Once again, my wife to the rescue. I went back to work and wore scrubs so as to accommodate my abdominal "accessories". Judy would visit me three times a day. Luckily, we didn't live far from the clinic. After three months I had the ileostomy reversed, and quickly abandoned the "hospital scrub" look.

It was now time for some "normalcy" in our lives. I had handicap equipment installed in my truck. I took the mandatory training to apply for a new driver's license and passed. I studied for the Maintenance of Certification in Internal Medicine and eventually passed. I joined a gym and began weightlifting and bicycling, which required a lot of re-training. I kept breaking prosthetic parts, but my prosthetist, Chad, would quickly fix them and keep me going. I needed to show the Texas Medical Board (TMB) that I was physically and mentally sound to practice medicine again, which required evaluations from a multidisciplinary team of healthcare professionals, and then received a "thumbs up" from the TMB, along with ongoing evaluations from a worksite monitor.

I was eager to practice medicine again, as administrative work decreased interactions with patients. It's heart-warming to receive a smile and sincere "thank you" from patients and their families. I applied for basic medicine privileges and after receiving them began to treat patients in an ambulatory care setting. After several months I transferred from an outpatient to inpatient hospital setting and began supervising residents from the Texas Tech Internal Medicine program. After two and one-half years of hospital medicine I have relearned practices from many years ago, along with the changes that have occurred. I recently took a course in bedside ultrasound (POCUS: point of care ultrasound) and have a new tool that I can use with my prosthetic hooks.

I'm very lucky I didn't die on March 20, 2011. There are good days and bad days. Phantom pains are real, but the meds to treat them make me too groggy so I put up with the pain. Every day I think of the brave physicians, nurses, and ancillary staff that spent much of their time keeping me alive. They are my heroes and I respect every one of them. I feel that God kept me here for a reason: to help other people, despite my limitations. I've been able to see my sons grow into young men and to appreciate my wife more with each passing day . I live my life as if I'm driving an automobile, not staring at the rearview mirror (i.e. dwelling in the past), but rather concentrating on the road ahead: my future. I realize just how physicians, with their knowledge and skills, can help many people. Yes, our profession is very stressful with all the responsibilities and expectations that occur daily. But don't forget one thing: we save lives. We bring comfort to patients and their families. The caring and compassion that come from our hearts to help people are wonderful assets: assets that should make every physician proud of what they do. I'll continue to practice medicine and help people, and if by chance I stumble and fall, please pick me up, and together we'll do our best during our journey in this wonderful world.

Female Pelvic Medicine and Reconstructive Surgery

by Nika Vinson, MD
Reprint from Winter 2019

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 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 has a recurrence or complication, 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 www.voicesforpfd.org. 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: AUGS.org

2) Society for Urodynamics, Female Pelvic Medicine and Urogenital Reconstruction website: sufuorg.com

3) Society of Gynecologic Surgeons website: sgsonline.org

4) NRMP fellowship match information: www.nrmp.org

5) ERA 2020 Fellowship application timeline: students-residents.aamc.org/training-residency-fellowship/article/eras-fellowship-timeline/

UPCOMING EVENTS 2020-2021

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

TMA 2021 Winter Conference

Jan. 29-30
Hyatt Regency
Austin Area, TX

Vaccine Controversies

by Amanda Griffin, MD
Reprint from Summer 2019

As a pediatrician, I frequently have discussions about vaccine controversies. The public is continuously bombarded with information and misinformation regarding the risks of vaccines, while their primary care provider often serves as their only medically trained contact with whom to discuss these concerns. Below, several common questions are discussed.

Why do we need vaccines when we don't see these diseases?

As Benjamin Franklin said "An ounce of prevention is worth a pound of cure." It is better to prevent a disease than to treat it after it occurs. Vaccine preventable illness have decreased dramatically since vaccines were introduced, yet controversy still remains regarding their use. For example, prior to the availability of polio vaccines, polio caused more than 15,000 cases of paralysis each year in the United States. Polio has now been eliminated in the United States due to the success of vaccination. Smallpox was declared eradicated worldwide in 1980 after a global immunization campaign (1). According to the World Health Organization (WHO), vaccination currently prevents 2-3 million deaths a year and could avoid 1.5 million more if global coverage of vaccinations improved. Recently, falling immunization rates have been linked to resurgences of vaccine preventable diseases. For example, in 2010, California saw over 9000 cases of whooping cough, more than any year since the vaccine was introduced in the 1940s (2). The World Health Organization identified vaccine hesitancy as one of 10 major threats to global health in 2019 (3).

Is it dangerous to give so many vaccines at once? Are you going to overwhelm a baby's system?

Another controversy surrounding vaccination is whether too many vaccines are given too early. To address this, it is important to understand how vaccines work. A vaccine causes the body to produce a response to what is in the vaccine (the antigen), so that the body can respond to that particular virus or bacteria if it is exposed to it later. Our bodies are exposed to thousands of antigens daily, beginning for an infant as early as the passage through the birth canal. The number of antigens in vaccines has decreased over the past 3 decades, even though the number of diseases that children are vaccinated against has increased. By age two, children are now immunized against 14 different diseases, with each vaccine containing between 1 and 69 antigens. With these immunizations, they are exposed to up to 320 antigens in vaccines throughout those 2 years. This is actually fewer antigens than vaccines contained 30-40 years ago, by over 20 fold! For a comparison, an exposure to strep throat involves about 25-50 antigens (4, 5).

Immunizations are timed according to the vulnerability of the child, and vaccine recommendations are based on studies that examined how recipients responded to multiple vaccines given simultaneously. By delaying these vaccines, the infant may miss the critical time that they are most vulnerable to the disease. In addition to leaving children vulnerable for a longer amount of time, if immunizations are given on a "delayed schedule" or one at a time, this increases the child's risk of adverse reactions. There is no tested, approved, or recommended alternative or delayed immunization schedule.

Are the additives in the vaccines dangerous?

The additives in vaccines are necessary components. Some additives ensure that the vaccine does not become contaminated. Others, such as aluminum, actually make the vaccine more effective by providing an earlier and more potent response, so that fewer antigens are needed to provide protection against the disease. Infants are exposed to aluminum in their environment and in vaccines. A study in 2011 confirmed that the amount of aluminum an infant is exposed to through both diet and vaccination is extremely low risk (6). Thimerosal, historically added to multi-dose vaccine vials to prevent the growth of bacteria and fungi, has made the news with claims to be associated with the development of autism. A study done in Denmark of over 450,000 children vaccinated with a thimerosal-containing vaccine compared to those vaccinated with a thimerosal-free formulation of the same vaccine showed no significant difference in the risk of autism spectrum disorders between the two groups. Despite this, thimerosol was removed from childhood vaccines in the United States in 2001.

Do the vaccines cause autism?

The most well known vaccine controversy in the modern era is due to a paper published in 1998 in the prestigious journal, The Lancet. The primary author on this paper was Andrew Wakefield. In this article, he claims there is a link

between the measles, mumps, and rubella (MMR) vaccine and autism. The study was based on 12 patients and was found to have falsified data. Since its publication, The Lancet has retracted the article, and Andrew Wakefield has lost his medical license. Numerous studies have now proven there is no link between any vaccines, including the MMR vaccine, and autism. As recently as this year (March 2019), a decade-long study of over 650,000 children in Denmark "strongly supports that MMR vaccination does not trigger autism in susceptible children, and is not associated with clustering of autism cases after vaccination" (7).

The unfounded fear of the MMR vaccine causing autism has in part led to the resurgence of measles in the United States. As of May 31, 2019, the Centers for Disease Control and Prevention (CDC) reports 981 individual cases of measles in the U.S from 26 states, including Texas. This is the highest number of cases since 1992 and since measles was declared eliminated in 2000 (8). This number will have increased by the time of publication of this article, though as of the time of writing, no cases of measles have been reported in Potter or Randall County. This measles outbreak is linked to travelers who brought measles back from other countries where outbreaks are occurring. Measles spreads more quickly in the US in areas where the vaccination rate is lower, especially where there are pockets of unvaccinated people. It is important for the general public to have access to the information published in these well done studies, to calm the fears about immunizations and to curb the spread of this once eradicated disease.

Does my 11 year old need a vaccine that protects against an STD? Can't we wait until they are older?

The Human Papillomavirus (HPV) Vaccine is recommended for all children at ages 11-12 and protects against the virus that causes a large number of cancers of the mouth and throat, cervix, and genital organs. Controversy around the HPV vaccine has mainly related to concerns about teens increasing their sexual activity after receiving the vaccine and whether it should be given in children as young as ages 11 and 12. A 2012 study specifically looked at sexual activity after administration of the HPV vaccine and concluded that the vaccine given in the recommended ages was not associated with increased markers of sexual activity (pregnancy, STIs, or contraceptive counseling). A different study showed that antibody levels after the vaccine were 2-3 times higher in patients age 9-15 than those aged 16-26, which may lead to improved protection from the vaccine (9). Protecting patients before they are exposed to what they are being immunized for is the goal. By giving the vaccine at age 11, more patients are immunized before they are exposed (10).

Should doctors continue to see patients who refuse to be vaccinated?

Of all of the questions addressed today, this is the one with the least clear cut answer and the least amount of data to support each side of the controversy. Many providers feel that their trust with the patient is breached when the family has refused vaccinations. There is concern that, if they do not trust the physician's advice on vaccines, they may not trust their advice on other topics as well. Additionally, many providers are concerned about the safety of the other children who share the same waiting space as the unvaccinated children. Many of these other patients may be too young or are immunocompromised, preventing them from being immunized against these potentially lethal diseases to which they are more susceptible and from which they are more likely to have serious complications. Physicians on the other side of this debate feel that over time they may gain the family's trust and convince them of the safety and importance of the vaccines. Others believe that, by severing this relationship, we are punishing the child for the fault of the parents. Currently, the decision of whether to dismiss these patients from a practice is left up to individual providers or practices, as long as they follow the applicable state laws prohibiting abandonment of patients.

There is an abundant amount of information available to address the above topics further or others that are beyond the scope of this article. The CDC's website is a good place to find information, as is Healthychildren.org. If you have any further questions, please feel free to ask your health care provider.

References

1. "Smallpox." *World Health Organization*, World Health Organization, 2 May 2018, www.who.int/csr/disease/smallpox/en/.
2. "Vaccine Myths Debunked." *PublicHealth.org*, PublicHealth.org, www.publichealth.org/public-awareness/understanding-vaccines/vaccine-myths-debunked/.
3. "Ten Health Issues WHO Will Tackle This Year." *World Health Organization*, World Health Organization, www.who.int/emergencies/ten-threats-to-global-health-in-2019.
4. Offit PA, Quarels J, Gerber MA, et al. Addressing parents' concerns: Do multiple vaccines overwhelm or weaken the infant's immune system? Pediatrics. 2002; 109(1): 124-9.
5. "Multiple Vaccines and the Immune System | Concerns | Vaccine Safety | CDC." *Centers for Disease Control and Prevention*, Centers for Disease Control and Prevention, www.cdc.gov/vaccinesafety/concerns/multiple-vaccines-immunity.html.
6. Mitkus RJ, King DB, Hess MA, Forsheo RA, Walderhaug MO, et al.. Updated aluminum pharmacokinetics following infant exposures through diet and vaccination. Vaccine. 2011; 29(51): 9538-43.
7. Hviid A, Hansen JV, Frisch M, Melby M. Measles, Mumps, Rubella vaccination and autism. Annals of Internal Medicine. 2019; 170(8): 513.
8. "Measles | Cases and Outbreaks | CDC." *Centers for Disease Control and Prevention*, Centers for Disease Control and Prevention, 2019, www.cdc.gov/measles/cases-outbreaks.html.
9. Quadrivalent Human Papillomavirus Vaccine: Recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR.* 2007; 56(RR02);1-24.
10. Bednarczyk RA, Davis R, Ault K, Orenstein W, Omer SB. Sexual activity-related outcomes after human papillomavirus vaccination of 11- to 12-year-olds. Pediatrics. 2012; 130(5): 798-805.

"Some Deemed Them Wondrous, Wise and Some Believed Them Mad"
Anton Mesmer and Mesmerism

by Taylor Carlisle, MD
Reprint from Fall 2019

Mesmer and mesmerism

The practice of medicine has existed for as long as recorded history. Aesculapius, the Greek god of medicine and he of the "snake around the staff" symbol, dates back to 1000 BC or before, and Hippocrates, the Father of Medicine, existed during the Greek classical period. However, what we think of as the modern medicine era, or actual effective practice of same, dates back only to the mid 19th century and the discovery of microbes and their relationship to disease. Most of the truly effective medical practices date from mid to late 20th century times. Thus, medicine for most of its history was more or less based on magic, false science, religion, and quackery. For more than a thousand years after Pythagoras and later Galen, medicine was connected to "earth, air, fire and water" as the primary essence of life. These corresponded to the source of nearly all maladies: black bile, yellow bile, blood and phlegm, and medical practice was based on manipulations of these "humours" by vomiting, purging, or blood letting, among other dubious interventions. That this is patently ridiculous may be obvious, but these ideas ruled medical thought for almost 1500 years.

Alchemy also dates back to biblical times, some say to Moses, he of the Golden Calf, and much of recorded history until relatively recently focused on "the philosopher's stone", which purported to turn lead or other metallic substances to gold. This idea was popular from the time of classical Greece through early Islamic thinking, and many noted scholars and scientists devoted considerable time, or entire careers, attempting to prove or discover the philosopher's stone. Studies of metallurgy thrived during medieval times and the "alchemists", who were prominent from the 10th through the 16th centuries, were widely read and admired. The noted Thomas Aquinas searched (unsuccessfully) for the philosopher's stone and the elixir vitae. Similarly, Roger Bacon devoted years of study and scholarship to these pursuits in the mid 1200's. Later devotees included the "Rosicrucians", a secret cult with hints of devil worship, and Paracelsus, who was also an early supporter of using magnets to treat illnesses.

The earliest descriptions of magnets or "lodestones" date back to as early as 2500 years ago at the time of the Mesopotamians and Egyptians, and magnetism is well described in Pliny the Elder's Histories. Later, magnets were used in compasses for seafaring in the early medieval period. During the popular alchemy craze of those medieval times, many practitioners began theorizing about the medical benefits of magnets and their use in therapeutics. Certainly Paracelsus in the 16th century is one of the "fathers" of medical magnetism. He had travelled extensively in Persia and the middle east and became convinced he could "transmutate" diseases by use of small doses of metals, including initially small doses of mercury, antimony, and arsenic, among others, to "cure" diseases. He was also an early proponent of "weapon salve" to treat sword and other injuries by application of magnetic salves to the swords themselves before or after the injuries. He and his followers also believed that magnets could be applied directly to human patients to treat a variety of illnesses and injuries and to "transplant" diseases. Recipes included mixing a magnet with "mummies", powders derived from dead humans (or actual mummies), mixed with wine or rich earth, and applied directly to both weapons and to patients themselves. This use of magnets became very popular from the middle east to Europe. Paracelsus later resorted to "reading fortunes" and faith healing and died in poverty as interest in alchemy faded.

The waning influence of alchemy in the 17th century and the increasing popularity of medical magnetism, and later electricity, changed much of the focus of this reasoning. After Paracelsus, later followers believed that magnets could not only be applied to swords and other metallic objects for treatment of injuries but ingested directly as medicine. This use of magnets for medical use became increasingly popular, from Persia to Europe, and were later introduced to England in the mid 17th century by Sir Kenelm Digby, a widely travelled English pirate and science thinker, who popularized weapon salve and "mummies" in treating English nobility after knife and sword injuries as well as direct ingestion of iron filings followed by using magnets applied to various body parts. Direct ingestion of magnets themselves was also applied to "adjust the flux" of the human body.

At the University of Vienna in 1771 a Dr. Hell, professor of astronomy, invented certain steel plates which he applied to naked human bodies to cure various diseases by demagnetizing the afflicted patients, generally with a magnetized metal wand. He communicated this idea to a protege, Dr. Anton Mesmer, in 1774. The latter had taken his medical degree in 1766 and chose as his dissertation the influence of the planetary rotations to the human body. Mesmer theorized that "the sun, moon, and fixed stars affect each others' orbits" and also "cause and direct a flux and reflux in the sea, atmosphere, and all organized bodies" through a medium of "mobile fluids, which pervade the universe and associate all things together in mutual intercourse and harmony". The influence on the human nervous system produced states of "intention and remis-

sion" which accounted for the various maladies suffered by humans, with the physician's ability to change the flow via use of magnets. He adopted Dr Hell's use of metal plates, with initial encouraging successes, particularly in treating young females with convulsions or hysteria. He called his theory "animal magnetism".

Despite some initial success in Vienna, Mesmer left town for Paris after being ridiculed for failing to restore sight to a blind patient. By then he had expanded his theory of animal magnetism to apply to substances other than steel or metal, including wood, stones, glass, and then humans, reporting he "charged jars with magnetic matter in the same way as electricity". He opened a fashionable salon in Paris, well appointed with comfortable sofas, and welcomed "the lame, the blind, and the hysteric". Amazingly, he became wildly popular amongst the Parisian upper class of the late 1770's, and 1780's, applying his treatments initially individually, sitting across from the (usually female) patient, gazing into her eyes, placing his knees outside hers, and rubbing and massaging the spine and "hypochondrium" under the diaphragm, piano music playing in the background. This eventually resulted in "inflamed imaginations" or fits of sobbing or convulsions after application of the steel plates, followed by peaceful bliss. He became so popular that he changed to "group therapy". This involved placing a large open vessel four feet long, to which "magnetized water" was repeatedly added and metal filings thrown in. Through a number of holes around the perimeter of the "baquet", as the barrel or container was called, metal rods were inserted by associates. The patients seated around the vessel could then apply the metal rods to whatever body part ailed them. At the height of the experience, Dr. Mesmer would appear in a flowing cape and with a metal wand and "demagnetize" the parishioners, often dispensing with the rods and plates and applying the "animal magnetism" from his own hands "through the tips of my magnetized fingers". He was very successful, at least for several years and was much admired by the Queen and her court as well as fans such as Mozart. Europe, and especially Paris, was thus "mesmerized".

Society was actually divided, with a considerable number in the Paris scientific community feeling he was a fraud or charlatan. A royal commission from the Paris Faculty of Medicine was formed in 1784 to investigate. The august commission included the chemist Lavoisier (later guillotined in the revolution), Dr Joseph Guillotin (inventor of the previously mentioned device), the astronomer Bailly, and the American inventor and electricity expert, Benjamin Franklin. Their investigation lasted 5 months and involved a Mesmer assistant and supporter, M. D'Eslon, using his methods, as Mesmer himself did not appear. The conclusions were published with the claim that any results were from the "patient's imagination" rather than any actual effects from animal magnetism. Later, "blinded" studies used "painted wood plates" rather than metal rods, and these were equally or more effective at cure as magnetized rods.

The report ruined Mesmer's reputation in Paris. However, he managed to sell subscriptions to French supporters for 340,000 francs and retired to Switzerland. He practiced for a number of years and died a wealthy octogenarian in Germany. His ideas remained popular in Germany for a time, and M. D'Eslon continued to practice his version in France, even magnetizing a large tree to treat an entire village, with the people grasping dangling magnetized cords, with satisfaction from the crowd generally expressed.

What is the legacy of animal magnetism? It is difficult to even imagine scientific men such as Benjamin Franklin attempting to soberly evaluate "magnetizers" in a serious fashion, but history may be on the side of the magnetizers. I see many parallels with early 20th century psychiatry, particularly "analysis", but also modern faith healing, use of metal bracelets for arthritis (popular with golfers), spiritualism, UFO's, health food claims, various fad or popular diets, water cures (embraced even by the scientist Charles Darwin), ozone and oxygen therapy, and even the vast oversell of modern vitamins. Any routine analysis by flipping through cable TV channels should easily confirm the audience for these. The popularity of (roundly discredited) anti-vaxxers represents the apparent "negative" side of this, particularly as vaccines represent probably the greatest triumph of 20th century medicine. We must always remember that, in many studies of pain or difficult to measure symptoms, the placebo effect is as high as 30% in blinded studies. The human mind is a very susceptible organ and memory has been demonstrated to be frequently inaccurate. I suspect we may be subject to many more future Mesmers.

Sources:

Mettler, Cecilia: The History of Medicine, The Blakiston Company. Toronto;1947.

Mackay, Charles: Extraordinary Popular Delusions and the Madness of Crowds. 1841.

Fullminant Shock Secondary to a 10cm Cardiac Mass in a Young Male with Symptoms of Dyspepsia

by Nathuja Salagundla MD, Juan Pablo Garrido MD, Shayan Siddiqui MD, Asadullah Mirza MD

Reprint from Winter 2017

INTRODUCTION

Cardiac tumors, either benign and malignant, represent rare diseases, and data on both management and outcome are limited. It is suggested that benign tumors account for more than 75% of primary heart tumors. These tumors do not usually metastasize, but they can have catastrophic effects due to weakening of cardiac structure and function, including precipitation of arrhythmias, embolism and acute heart failure.

CASE

A 43-year-ols Hispanic male with no significant past medical history presented to ED complaining of shortness of breath, abdominal fullness described as dyspepsia, and intermittent chest fullness. He reported not being able to not lie on his right side because of fullness in chest and abdomen. In addition, he reported near syncopal episodes for the last 2 months with dizziness, lightheadedness and orthopnea without chest pain. The patient had no history of any cardiac issues.

Initial vitals were all normal. Physical examination revealed weak S1 and S2. In the second intercostal space along the left sternal border, a crescendo-decrescendo harsh systolic murmur was appreciated. Lung exam revealed decreased breath sound in the bases bilaterally, with no wheezes or crackles. Initial laboratory workup was unremarkable. CT abdomen and pelvis with contrast revealed a large intracardiac filling defect, anasarca with moderate pericardial effusion, moderate ascites and minimal left pleural effusion.

Patient was admitted to the ICU and cardiology was consulted immediately. Transesophageal echocardiography showed a mobile 10 cm x 4 cm mass that seemed to originate from the intra-atrial septum and to be adherent to the aorta with extension into the right ventricle. Initial impression was that the mass could be myxoma. Patient started to have difficulty breathing and became hemodynamically unstable. He was initially resuscitated with intravenous fluids but did not respond. He was intubated, and vasopressors and inotropes were started. Cardiothoracic surgery was consulted, but while arrangements for transferring to tertiary facility were being made, the patient passed away the next morning.

In short, a young patient with no PMH presented with vague symptoms of chest and abdominal fullness and developed fulminant cardiogenic shock within a short time due to a large intracardiac mass.

DISCUSSION

Cardiac neoplasms have the potential to remain clinically silent until they reach an advanced stage, limiting therapeutic options especially for those with malignant transformation. The majority of primary cardiac tumors are benign, with more than 80% being myxomas in various locations, and dyspnea being the most common reason for initial clinical consultation (as in this patient).

The signs and symptoms of cardiac tumors generally are determined by the location of the tumor and not by its histopathology. Cardiac tumors may cause symptoms through a variety of mechanisms: embolization (which is usually systemic but can be pulmonic), obstruction of the circulation through the heart or heart valves (which usually produces symptoms of heart failure), direct invasion of the myocardium (usually causing impaired contractility), arrhythmias, heart block, pericardial effusion with or without tamponade, and constitutional or systemic symptoms.

Tumors arising in the right atrium grow into the atrial lumen and obstruct blood flow, producing hemodynamic changes similar to those seen with tricuspid stenosis. Typical cardiovascular signs and symptoms are those of right heart failure (peripheral edema, fatigue, ascites, hepatomegaly, and prominent "a waves" in the jugular veins). Myxomas are the most common tumors of the right atrium; however, sarcomas (and in particular angiosarcomas) have been reported to arise from the right atrium.

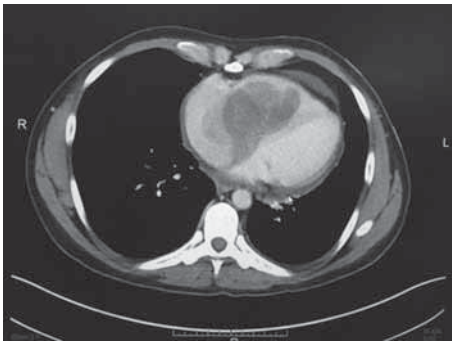
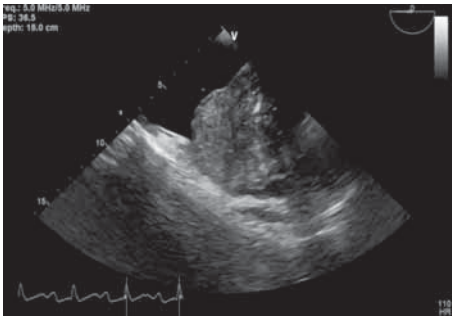
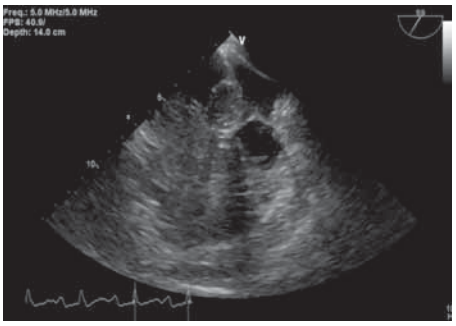


Figure 1 – CT with contrast

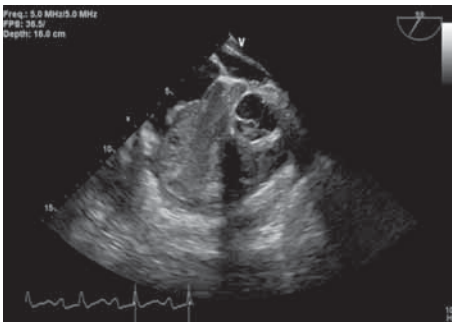
Figure 2 – CT with contrast



TEE 1 – Transesophageal echocardiogram



TEE 2 – Transesophageal echocardiogram



TEE 3 – Transesophageal echocardiogram

When a probable diagnosis of myxoma has been made, early resection is required because of the risk of embolization or cardiovascular complications, including sudden death. The results of surgical resection are usually very good, with most series reporting an operative mortality rate below 5 percent.

This patient developed cardiogenic shock secondary to right sided heart failure in the setting of a large right atrial mass, most likely a myxoma, causing multi organ failure due to poor stroke volume and cardiac output.

REFERENCES

1. Habertheuer A, Laufer G, Wiedemann D, Andreas M, Ehrlich M, Rath C and Kocher A. Primary cardiac tumors on the verge of oblivion: a European experience over 15 years. Journal of Cardiothoracic Surgery. 2015; 10:56.

2. Lam KY, Dickens P, Chan AC. Tumors of the heart: a 20-year experience with a review of 12,485 consecutive autopsies. Arch Pathol Lab Med. 1993; 117:1027.

3. Januzz J, Garasic J, Neilan TG, et al. Case 28-2007: A 68-year-old man with syncope. N Engl J Med. 2007; 357.11.

4. Vander Salm TJ. Unusual primary tumors of the heart. Semin Thorac Cardiovasc Surg. 2000; 12:89.

5. Elbardissi AW, Dearani JA, Daly RC, et al. Embolic potential of cardiac tumors and outcome after resection: a case-control study. Stroke. 2009; 40:156.

6. Sheu CC, Lin SF, Chiu CC, et al. Left atrial sarcoma mimicking obstructive pulmonary disease. J Clin Oncol. 2007; 25:1277.

7. Pucci A, Gagliardotto P, Zanini C, et al. Histopathologic and clinical characterization of cardiac myxoma: review of 53 cases from a single institution. Am Heart J. 2000; 140:134.

Cannabinoid Hyperemesis Syndrome in Pregnancy

by Hyunyoung G. Kim, MSIII; Jeremiah Moon, MSIII; Heather Dixon, DO; Paul Tullar, MD
Department of Obstetrics and Gynecology, Texas Tech University Health Sciences Center, Amarillo, TX
Reprint from Fall 2018

Abstract:

Cannabinoid hyperemesis syndrome is a condition characterized by chronic cannabis use and cyclic episodes of nausea, vomiting, and abdominal pain, relieved by compulsive bathing. The syndrome is likely to be underdiagnosed in pregnant women due to its similarity with hyperemesis gravidarum in presentation. We report a 20-year-old pregnant woman with multiple admissions for recurrent nausea and vomiting who was observed to be taking frequent hot showers. Without other identifiable causes, she was diagnosed with cannabinoid hyperemesis syndrome and managed with antiemetics and abstinence. Abstinence from cannabis use is highly recommended in pregnant women due to its potential harm in fetal development and stimulation of intractable nausea and vomiting. Recognizing the symptoms and proper history taking prompt early diagnosis, allowing timely and adequate treatment.

Key Words:

Cannabinoid hyperemesis syndrome, hyperemesis gravidarum, nausea, cannabis, marijuana, pregnancy, prenatal care.

Introduction:

Marijuana is the most commonly reported illicit drug used during pregnancy, with estimated prevalence of 2-5% and up to 15-28% in young, urban low socioeconomic women. With recent legalization of marijuana in several states in the U.S., the prevalence of marijuana use during pregnancy is expected to rise.

Chronic and heavy marijuana use can lead to a condition called cannabinoid hyperemesis syndrome (CHS). It presents with symptoms of recurrent nausea, vomiting, and abdominal pain that are temporarily relieved with hot bathing. While the syndrome can also arise during pregnancy, diagnosis of CHS is often delayed due to the nonspecific symptoms of nausea and vomiting, which also occur in early pregnancy and with hyperemesis gravidarum.

The combination of severe vomiting, nausea, and frequent hot showers can lead to serious complications such as volume depletion, weight loss, and esophageal rupture. Furthermore, frequent hot showers over long periods of time may increase risk of fetal neural tube defects, gastroschisis and omphalocele. Increased body temperature from these hot showers may be associated with preterm labor and epilepsy as well.

Case Report:

20-year-old G7 P0A6, at 14+3/7 weeks gestation by 8-week ultrasonography, with history of bipolar disorder and depression, presented with unremitting N/V for several weeks. She also reported intermittent hematemesis, epigastric pain, and mild diarrhea. Review of systems was otherwise normal. She had a two-year history of multiple emergency department visits for the same issue. She was diagnosed with hyperemesis gravidarum.

Intravenous (IV) hydration and antiemetics, including ondansetron, famotidine, and metoclopramide, were given. She had mild hypokalemia, which was replaced with IV and oral potassium. Her condition slowly improved, and she tolerated oral intake by hospital day (HOD) #6.

At 22+4/7 weeks gestation, she presented again with same complaint of N/V. Her providers noticed her repeatedly taking frequent hot showers; their suspicion for CHS were raised. Urine drug screening (UDS) was performed and was positive for cannabinoids. The patient was informed that this was possibly related to her cannabis exposure. She remained abstinent throughout the hospital stay and was continued on IV fluids and antiemetics.

On HOD #3, vast improvement was noted, and the patient tolerated regular diet. She was discharged home with promethazine, ondansetron, and doxylamine succinate-pyridoxine hydrochloride. Patient was counseled on completely discontinuing all exposure to cannabis and voiced understanding. UDS remained negative at subsequent prenatal visits.

At 40+1/7 weeks gestation, the patient delivered vaginally a live female infant (3.19 kg) with APGAR score of 8/9 without any complications. The mother and baby were discharged home on the second postpartum day.

Discussion:

While marijuana use in pregnancy is expected to rise due to increase in its liberalization and popularity, there has been lack of studies on its pharmacokinetic effect on pregnant women and their fetuses. Current preliminary data suggest that delta-9-tetrahydrocannabinol (THC), the main active ingredient in marijuana, crosses the placenta and that prenatal exposure to THC may negatively impact the child's future higher cognitive function as well as psychological development. Therefore, it is recommended that pregnant women refrain from marijuana use until further information is available.

Although cannabis is usually known for reducing nausea and vomiting, various theories have been proposed to explain the pathophysiology of CHS. While THC produces an antiemetic effect by activating the G-protein coupled cannabinoid 1 (CB1) receptors in the dorsal vagal complex, its greater effect on CB1 receptors in the enteric nervous system, which decreases peristalsis and gastric emptying, may induce emesis. There also is an evidence that synthetic marijuana may cause CHS by over-activating the CB1 receptors. In addition, THC's tendency to collect in fat tissue may explain why chronic, heavy users of marijuana are more prone to CHS. On the other hand, non-psychoactive components of marijuana, such as cannabidiol and cannabigerol, may contribute to vomiting. In their study, Parker et al. showed that cannabidiol acts as an antiemetic in low levels and pro-emetic in higher levels in shrews.

As seen with our patient, frequent hot bathing has been reported to relieve symptoms of nausea and vomiting in CHS. One theory posits that dilation of cutaneous vessels may decrease blood flow to the cannabinoid-vasodilated splanchnic vessels, which may reduce nausea and vomiting. Frequent hot bathing may exacerbate dehydration, leading to hypotension and increased risk of falls. Increased dehydration with heat exposure diverts blood flow to the skin, away from the maternal organs and fetus, and increases antidiuretic hormone and oxytocin release, inducing preterm labor. Moreover, consequent maternal weight loss further increases the risk of preterm labor and small gestation for age. Maternal use of hot tubs for over 30 minutes during the first trimester—which many patients with CHS greatly exceed—has also been associated with neural tube defects, esophageal atresia, omphalocele, and gastroschisis.

Dehydration is a common consequence of repetitive nausea and vomiting; therefore, fluid resuscitation is usually required in the CHS patients. In alleviating symptoms of CHS, traditional antiemetic medications (ondansetron, promethazine, metoclopramide) have been reported to be fairly ineffective. Benzodiazepines, haloperidol, and capsaicin have been shown to be effective in the management of acute CHS and tricyclic antidepressants in chronic CHS. While our patient was managed with antiemetics, earlier diagnosis of CHS and treatment with benzodiazepines or haloperidol might have led to faster resolution of symptoms. Further studies are needed to define optimal pharmacologic treatment.

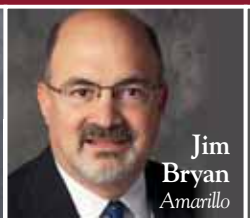
The best treatment, nevertheless, is cessation of marijuana use. Education and counseling are often necessary to prevent patients from treating their symptoms with more marijuana, which can exacerbate and prolong the episodes of emesis.

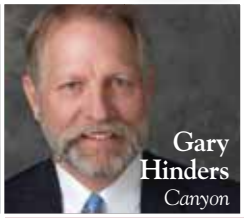
Conclusion:

Chronic or excessive marijuana use during pregnancy can induce CHS and can pose potential health risks for both the mother and fetus. The diagnosis CHS in pregnancy can be challenging, since it presents with repetitive nausea and vomiting, which overlap with symptoms of hyperemesis gravidarum in early pregnancy. Awareness and recognition of this syndrome will prompt early and appropriate management, avoidance of unnecessary workup and cost reduction, and lessening of provider frustration with inefficacious treatment.

References:

1. Iacopetti CL, Packer CD. Cannabinoid hyperemesis syndrome: a case report and review of pathophysiology. *Clinical Medicine & Research.* 2014; *12*(1-2): 65-67.
2. Grant KS, Petroff R, Isoherranen N, Stella N, Burbacher TM. Cannabis use during pregnancy: Pharmacokinetics and effects on child development. *Pharmacology & Therapeutics.* 2018; *182*: 133-151.
3. Alaniz VI, Liss J, Metz TD, Stickrath E. Cannabinoid hyperemesis syndrome. *Obstetrics & Gynecology.* 2015; *125*(6): 1484-1486.
4. Parker LA, Kwiatkowska M, Burton P, Mechoulam R. Effect of cannabinoids on lithium-induced vomiting in the Suncus murinus (house muskshrew). *Psychopharmacology.* 2004; *171*(2): 156-161. doi:10.1007/s00213-003-1571-2.





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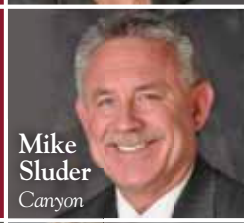

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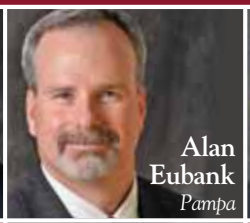

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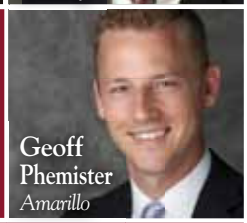

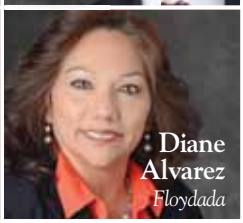

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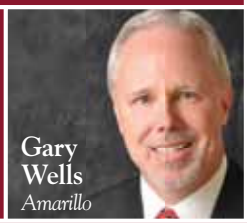

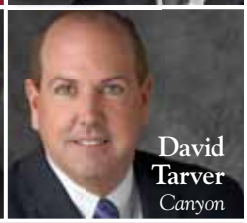

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The Essential Vital-Amines: Stories of the Discovery of Vitamins

by Rouzbeh K. Kordestani, MD, MPH
Reprint from Spring 2016

Introduction

In the early 19th century, diseases such as pellagra, beriberi and scurvy ravaged society. The underlying cause of these diseases was unfortunately not known. Many physicians and scientists of the times, from Germany, France, Holland and England, worked diligently describing the specifics of these disease processes. However, no causal pathogen was noted. The presentations were too random; the damage was too great. The initial thoughts were that many of these diseases were infectious in origin. But again, since the exact nature of these diseases could not be elucidated or replicated, there was no true answer.

As the hypothesis of an infectious cause of these processes was slowly ruled out, more scientists thought that these diseases were due to unknown chemicals. Vitamins were initially thought to be an undiscovered protein (Casimir Funk, biochemist), without which animals did not fare well. Since vitamins were equated to other essential proteins, they were wrongly categorized as –Amines. Because their absence in many cases proved lethal, they were further categorized as "Vital." Soon after the phenomenon was described, these Vital –Amines were grouped as Vitamines. In time, the –e was lost as it became known that these factors had nothing to do with proteins and the more traditional –Amines. From then on, the name for the grouping simply stuck: "Vitamins."

Vitamins and the Nobel Prize

Surprisingly, even when discoveries about Vital-Amines were made, very little acclaim or credit was given. In fact, as the list of Nobel accomplishments and awards attests, there were no prizes given to any of the scientists that worked on and/or discovered vitamins until 1928-29.

The Nobel Prize can be given in the area of Medicine/Physiology or Chemistry. Since Vitamins had to be first discovered, then isolated, refined, and produced, at each step the role of a scientist could be applauded or critiqued. This made the job of discovering Vitamins a bit harder. To try to isolate a factor that no one had ever seen was quite difficult. The early scientists simply saw patterns of malaise. Based on this pattern recognition, they reasoned that some form of chemical substance was missing. They then followed this pattern and made small adjustments. In time, the pattern was broken and the malaise healed. Unfortunately, all too often the data did not exist to be able to make a full scientific conclusion. Also, in many cases, the scientists themselves moved on or simply died off. This only further crippled the discovery process. The actual process is rather curious as some of the following stories will show. It seems that only after a group of scientists from different disciplines had come up with the same answer and had been able to differentially isolate the future vitamin, was there an actual discovery. This proved to be a frustrating process.

The award selection process for the Nobel has its own faults. Since so little was known about these "Vital-Amines", the Nobel Selection Committee simply chose to ignore the discoveries. Only several decades into the 20th century did they start to take note. The award selection process was made even more frustrating by two additional factors. In the early 20th century, Europe was plagued on two occasions with World Wars (I and II). The World Wars derailed much of the research done in the area of vitamins for years. Also, many of the scientists who helped to discover these chemicals were Jewish or German or both. There was an unwritten rule that no scientists or scientific team associated with the warring regimes was to be given a Nobel prize. Only scientists who survived and endured were finally recognized. Unfortunately, many of the Jewish scientists did not survive (The Nobel prize is not given posthumously). So even though some of these discoveries (and the scientists who made them) were applauded, they were never honored.

The Discovery of Vitamin B1

The story behind Vitamin B1 bears particular attention. The disease in question was beriberi. The British colonial physicians first described the phenomenon as early as 1803. Early on, beriberi was thought to be due to a "factor" missing in the diets of soldiers. Yet little progress was made. Early observations were lost as they were fragmented among different colonial territories. This changed with Christiaan Eijkman.

A Dutch group under Eijkman resumed research around 1890 in Java. Eijkman discovered that the disease beriberi was reproducible. He also observed that no medical professional handling these afflicted patients would contract the disease. For this reason, he correctly concluded that the process was not infectious in origin. He then proceeded to replicate diets of hospitalized soldiers. These diets were high in cleaned and washed white rice. Even in regular patients fed with a diet high in white rice, Eijkman would see the same symptoms—the characteristic muscle weaknesses and loss of sensation seen with beriberi. He then repeated the experiment in animals. He saw that he could replicate the findings by feeding chicks the same diet. When the rice was not dehusked but was kept in its natural form however, beriberi was not seen. Furthermore, when brown (unprocessed) rice was fed

| *continued on page 50*

to sick individuals and experimental animals, the disease could be slowly cured. So Eijkman reasoned that the cure was in the rice shavings. Unfortunately, Eijkman was forced to abandon his work prematurely due to personal illness. His experiments and his findings were then picked up by Dr. Grijins, a fellow Dutchman. Soon thereafter, Vitamin B1 was described. For his work, Eijkman was awarded the Nobel Prize in 1929. His work led to the cure of beriberi.

The Discovery of Vitamin A

The story of the award for Vitamin A is curious. Initially, it began with night blindness. In many parts of the world, night blindness posed a serious problem. However, the underlying etiology had not been discovered. At that same time, George Wald was a young graduate student studying physiology at Columbia University. He was given a grant to further his studies in a laboratory in Germany. There he was assigned to study the physiology of the eye. During his dissections of animal specimens, he obtained a purple compound from retinal tissue named rhodopsin. With further analysis, he was able to confirm that the compound was related to Vitamin A. (Initial structural work on Vitamin A had already been completed). Wald then continued his dissections in the laboratory of Dr. Karrer in Zurich and was able to extract enough material so that the vitamin could be produced in larger quantities. During his work with Karrer and afterwards, back in labs in the United States, Wald was able to further study rhodopsin. He showed that by stimulating rhodopsin with light, both opsin and a compound he named "retinene" could be obtained. Only later was he able to note that retinene and Vitamin A were the same. Vitamin A therefore was given the name "retinol." Because of this series of events, Wald deduced that Vitamin A had a direct relationship with night blindness, since without retinol, there would be a rhodopsin deficiency in the eye. For his discoveries, Wald was awarded the Nobel Prize in 1937 (Dr. Karrer shared the award in the same year).

The Discovery of Vitamin D

As with Vitamin A, the story of Vitamin D's discovery is curious. As the United States was growing and becoming an industrial nation, the country saw a surge in urbanization. Infantile rickets was a growing problem in the cities of the United States. As the problem grew, more children were affected. No specific cure was available. In fact, the underlying pathology causing infantile rickets was unknown. One of the early scientists in the area of vitamins was Elmer McCollum, an American. He was already noted for work that later led to the discovery of Vitamin A. McCollum had recently moved to the new institution at Baltimore, Johns Hopkins. There he had access to new labs and began to experiment with human diets. He was able to produce conditions similar to human rickets with a diet containing unbalanced proportions of calcium and phosphorus and lacking in certain animals fats. These diets were similar to those of workers in the urban cities. By adding and subtracting certain soluble fats, McCollum was able to correct the malady. This combination of sterols required activation by ultraviolet light and conversion from cholesterol. This sterol substance still had to be isolated. The task of isolation was given to a German structural chemist, Adolf Otto Windaus. Windaus was then a leading chemist working on structures of sterols. He soon isolated the chemical that was later named Vitamin D. The Nobel prize was given to Adolf Otto Reinhold Windaus in 1928 (Surprisingly, McCollum did not share in the award for the discovery).

Conclusion

The discovery of Vital-Amines has proven to have tremendous impact on the lives of modern man. Maladies such as scurvy, pellagra, and beriberi have gone from being death sentences to interesting and curious findings. The scientists who discovered these vitamins worked across multiple specialties such as biology, physiology, chemistry, engineering and biochemistry. Their work saved millions of lives by describing, categorizing, isolating, replicating and producing vitamins for the population at large. While initially their work was ignored, these scientists and their final contributions have led to the award of 19 individual Nobel prizes in scientific disciplines. In this way, these scientists have not only proven their worthiness, but they have also shown that the discovery process is alive and well.

Male Hypogonadism (Low-T)

by Steve Urban, MD

What is testosterone?

Testosterone is the main androgen (male sex hormone). It is produced by the testes; its synthesis and release are under control of the pituitary gland. Although other androgens are produced by the adrenal glands, they are unimportant in the male. Testosterone has major effects on male sexual drive and performance, sperm production, and secondary features such as body hair distribution, muscle mass, red blood cell production, and bone strength.

What are the symptoms of low-T?

The most characteristic symptoms relate to sexual desire/function: decrease in morning erections, decrease in sexual thoughts, and difficulty in achieving erections satisfactory for normal sexual function. Younger men with defined causes for hypogonadism (e.g. pituitary tumors) often notice weakness, fatigue, depression, and (occasionally) hot flushes. In the long run, anemia and osteoporosis can develop.

What are the causes of low-T?

Specific diseases of the pituitary gland and of the testes themselves can cause low-T. In the younger patient, pituitary disorders (especially tumors that produce the hormone prolactin) and testicular damage (trauma, mumps) should be considered. The genetic disorder Kleinfelter syndrome (XXY) is not uncommon and may escape detection until adulthood. Over 90% of hypogonadism in men above 60 years of age, however, is of unknown cause (idiopathic low-T).

Let's say, just speaking theoretically, that I'm a tired old guy whose sexual function appears to be petering out. Do I have low-T?

Probably not. Erectile dysfunction affects about 30% of 60-year olds (the number increases with age), but only 10-20% of these men have age-related low-T. Tiredness and diminished muscle strength often accompany aging. Decreased libido is more specific for low-T but can have other causes, too. To ascertain if you have low-T, you really have to know the testosterone level in your blood. The main cause of age-related ED is narrowing of the small arteries that supply blood to the penis during erection (not low-T). The best way to preserve sexual function is to take care of your blood vessels--i.e. control BP and cholesterol, exercise regularly, keep your weight under control, and, most importantly, DON'T SMOKE.

What evaluation should I have before starting treatment for low-T?

Again, since you can't tell for sure if your symptoms are due to old age or to low-T, the only way to know for sure is to get your testosterone level measured. Testosterone levels fluctuate during the day, so standard practice is to check the testosterone level at 8 in the morning. A level of below 300 ng/dL is abnormally low. In some cases, a repeat T level or measurement of other hormones (LH, FSH, prolactin, or free testosterone, for instance) will be recommended by your doctor.

What treatments are available?

Low testosterone levels can be associated with obesity or the use of certain drugs (especially opiates or marijuana). Your doctor may recommend weight loss or discontinuation of the offending drug in some cases. For most patients, however, testosterone replacement will be recommended. There are problems with oral testosterone, so either intramuscular injections or absorbable skin preparations are preferred. The injectable forms are cheaper but cause fluctuations in your testosterone level (often noticeable to your partner!) and are hard to self-administer. Cutaneous forms are handy to use but are expensive and can be absorbed through the skin of your partner—whose consequent beard growth has been reported to have a dampening effect on libido.

What improvements should I anticipate?

Improvements in libido and sexual function usually occur within days to months. Beneficial effects in energy level, muscle strength, and other quality of life measures, however, are unpredictable. Long-term effects, such as prevention of bone loss, are uncertain, although most physicians would treat a man who has both low-T and osteoporosis to prevent further bone loss.

What if I'm tired and less intrigued by Margot Robbie than I used to be, but my testosterone level is normal? Should I give testosterone treatment a try?

If your T level is borderline, the answer to this question is complex, and further testing may be needed. If your testosterone is clearly normal, however, the answer is "no". Testosterone is not a universal tonic for aging men. Plus, hormone treatment carries some risks: PSA levels rise, and the hemoglobin level can climb excessively, leading to increased risk of stroke. Although studies about the long-term risks for heart attacks, stroke, and prostate cancer are reassuring, we don't know for sure if bad consequences might show up with long-term observation.

I see advertisements on TV and the internet about "non-steroid" over-the-counter preparations for male enhancement. Should I give them a try?

No. All sex hormones have a steroid structure, and non-steroid products do not treat low-T. The products you see advertised on late night TV are herbal preparations whose ingredients, including fenugreek and horny goat weed extract, only sound like they ought to work. Their names are more arousing than their ingredients (my favorite: The Donginator). These products are, however, effective conduits leading directly from your wallet to their coffers, usually bypassing the penis.

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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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