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USPHS Combined Category Newsletter

The Combined US Public Health Service Professional Advisory Committees Newsletter

PAC Chairs' Corner

Hello fellow officers,

I am CDR Marisol Martinez, your PAC Chairs' Chair. Welcome to the Fall 2014 edition of your Combined Category Newsletter. I always look forward to reading what is happening with your categories in each issue. This publication highlights the positive efforts that our Corps contributes to the Public Health Mission.

In this issue we are sharing many relevant topics regarding your career, wellness, and growth as an officer. Did you ever wonder what a 'relevant' degree was in terms of promotion benchmarks? Make sure to read a career development article which talks about choosing an advanced degree to give you the opportunity to promote public health initiatives. How many of you are supervisors or are growing into supervisory positions? Don't miss the article on supervising where you will learn about steps to help train and reward your employees to promote their best work performance.

Many of our PHS colleagues are being recognized for new programs and professional excellence in their fields. Read how the Physicians PAC has adopted a new awards program to distinguish medical students that are making a commitment to a career in public health and preventative medicine. See also the officer biographies of the Junior and Senior Scientists of the year and Scientist Responder of the year. They are positively influencing the image of the Commissioned Corps!

Lastly, for those sitting at your desk in front of your computer all day, be sure to read about Upper Crossed Postural Syndrome. It's a condition that has the potential to have an adverse impact on your performance and well-being. See what you can do to prevent the undesirable effects of being stationary by learning about correct seating posture.

The PAC Chairs Group Combined Category Communication Committee hopes you enjoy the Fall issue. Remember to contribute articles that highlight your category and the Corps!

CDR Marisol Martinez

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Fitness Secrets of an Admiral

Photos by : CDR Kun Shen, assisted by LT Mandy Kwong

Interview by: CDR Juliette Touré

As Acting United States Surgeon General, and our "Nation's Doctor," RADM Boris Lushniak has been featured as keynote speaker countless times and regularly addresses national audiences. Anyone who has heard him speak to fellow Corps officers, indelibly walk away inspired by his stories that often include a glimpse of his upbringing by immigrant parents, personal lessons/anecdotes as an officer, and self-deprecating humor that leave you chuckling and more energized to carry forth our proud mission. While interviewing him for this highly-anticipated Combined Category publication, he shares his perspective on fitness and an invitation to join him in promoting our mission through fitness.

Why is fitness so important to you, personally?

Fitness is a life-long endeavor. As Commissioned Corps officers, we need to not just talk the talk, but also walk the walk. If it's part of your lifestyle – it becomes not work, but a part of *who* you are. For me, it's not just about physical health.

This job comes with a certain amount of stressors. Running eases me, so when times are tough, I go for a run on the Mall. From the Hubert Humphrey Building, I head toward the Lincoln Memorial, run up the stairs, take a break

to read the Second Inaugural Address and the Gettysburg Address, run back 1.5 miles, and come back a changed, reinvigorated person.

What's your workout routine or do you have one?

I kind of do and kind of don't. I enjoy variety, and the downside of a routine is that it can become mundane and cumbersome. I make fitness a priority, and the type and duration of exercise will depend on my schedule and other possible barriers, like weather. My general indoor routine is to fit in an early workout at the HHS gym, consisting of the elliptical trainer, sit-ups, push-ups, and, more recently, rowing and some upper body exercises. I like to get it done early, to remove the pressure of thinking about how to fit it in elsewhere. If the weather is nice, I take a run to visit Mr. Lincoln. I will exercise at home on the elliptical and use weights, when I don't have time during the day.

I like outdoor adventures. I'll join up with a group of PHS officers and do long bike rides. I also enjoy back-packing, hiking, walking, or running in the woods.

Last winter, after one of the snowstorms and before trucks plowed the roads, I simply snapped on my skis and went cross-country skiing in the woods next to my house. I have not had such wintertime happiness since I was a kid. It's absolutely magical to be out in this major metropolitan area during these times. Another day, I put on my skates, grabbed my hockey stick and puck and skated on the C&O Canal. It was glorious to be out skating with others on the Canal because it rarely freezes completely over. The route was about a mile-and-a-half. It was so much fun that I couldn't stop. Then, I took my stick and puck and stick-handled the mile-and-a-half strip. I was starting to feel tired, but then I thought how this opportunity will probably be gone in a few days and that I have to do it one more time. Then I skied for another 3-4 miles. During the summer, I enjoy playing tennis with my daughter who is a big-time tennis player. I like mixing it up and taking advantage of the environment. If I can get my body to move and breathe a little bit, then I've achieved my goal.

The bike riding you mentioned, is it open to all officers?

Yes – we've been doing these rides for the last 7-8 years. We love having people join us. Our riding season usually culminates in a big ride in the late summer or early fall. Last year, we invited the whole Corps to do an organized ride in the state of Michigan, from Lansing to St. Marie, by the Canadian border. We rode 400 miles in 5 days and trained locally [DC area] in the weeks leading up to that event. We've also ridden the C&O Canal Trail from Cumberland to Georgetown and the Allegany Passage Trail, from Pittsburgh to Cumberland or even beyond. It can be pretty hardcore and takes training. We've thrown in the additional challenge of carrying our gear and camping overnight.

How do you fit fitness into your busy schedule?

Make it a priority. There are certainly days that I can't fit in a workout, but I will get it in the next couple days.

How has your fitness regimen changed over time?

As the body ages, I don't feel less capable. Maybe I'm less fast as a runner. I've been lucky to be free of chronic injuries; however, I'm wary of the effects of repetition on my joints, e.g., long runs. My regimen hasn't changed remarkably. I do take the APFT seriously. As a younger officer, I used to think the APFT was a burden – worrying about when it's due, coordinating with another officer, timing it with COA. It is now part of my fitness routine; I do the APFT almost weekly. I'm no longer intimidated because I do it all the time.

How are you going to prepare for your next APFT?

I never wait until my anniversary and usually take the opportunity to get it done at one of the annual meetings, like COF Symposium. I also usually do another APFT mid-year. When I was in Cincinnati, the local COA branch would coordinate one or two APFTs during the year. I have also just simply asked another officer to come observe and sign-off at the local gym.

To fellow officers, you should do the APFT based on what you think you can achieve. Don't injure yourself in the process. One should never feel embarrassed by meeting the minimum requirements.

Have you ever "fallen off the wagon" in terms of fitness?

In reality, I "fall off the wagon" all the time. I'd like to say that I work out every day, but is that the truth? No. My schedule simply doesn't always allow it. There might be several days where I don't get in a workout, but it doesn't come with guilt. I simply fall back into my routine. If you haven't worked out in a while, the key is to just start moving the body again and don't over stretch your capabilities. I don't really view it as "falling off the wagon", rather just starting back up again.

What are your future fitness goals? Or events?

Maintain fitness. I've run 4 marathons, and I'm probably not going to do another. I worry about the injuries that may come with training. I'm dedicated to doing the Army 10-miler as an annual goal. I also stay in shape for the Fall bike trips. I also trained for and coordinated a team that climbed Mt. Rainier in 2012 and just returned from a very strenuous high-altitude backpacking trip in the Sierras. In a few weeks I'll bike the Seagull Century.

Anything you'd like to say to PHS officers on fitness?

The Office of the Surgeon General (OSG) asks America to begin walking again. We've become perhaps too high-strung with our workouts. The message that we want to communicate to America, and also to our officers, is that you don't need to have a fancy pair of workout shoes, don't need to pay to belong to expensive clubs, don't need to start out doing a marathon. You begin by walking, which doesn't require any special equipment. This simple act gets you outdoors, works your body, eases your mind, and enables you to begin that first step toward fitness.

I am also proud to announce the launch of a new group, USPHS Athletics (http://www.publichealthserviceathletics.org), led by CAPT Shelly Hoogstraten-Miller and CDR Evan Shukan, both veterinary officers at NIH. Its mission is "***To protect, promote, and advance the health of the American people through fitness."*** Officers can serve, much like in the USPHS Music Ensemble and the Honor Cadre, as members of the "Surgeon General's Own" fitness team to formally represent USPHS at fitness events. *More importantly*, officers can use this opportunity to encourage their own family, friends and community to get healthier, more active, while learning about the USPHS.

The OSG is calling on officers to participate and represent USPHS at fitness events around the country. Join one of the fitness events on the Event Calendar or email PublicHealthServiceAthletics@gmail.com to learn about how to organize an event as an Event Leader. If you are interested in joining one of the bike rides, monitor the PHS Athletics website and Facebook page. The signature race for this group is the Army Ten-Miler, scheduled for Sunday, October 12, 2014. Come join me and over 200 other officers to rally for a healthier Nation. At the last Army 10-miler, we shared the pride of carrying 10 USPHS flags. Whether it is 1, 2, or 10 officers, and whether you are carrying the USPHS flag in hand or in spirit, these events are great opportunities for people to learn about us and our mission. Every year, we get newcomers, people who didn't know they could complete such fitness challenges. The energy and spirit of fellow officers and the ambience will carry you!

Public Health Service Athletics

Want to get fit or stay fit and promote the health of the American people all at the same time? Then Public Health Service Athletics, the Surgeon General's Fitness Team wants you! Corps officer-led teams are forming for events all around the country in speed, strength, and endurance events, such as running, swimming, biking, weightlifting, and triathlon, in your communities. Join one or lead one! Contact PublicHealthServiceAthletics@gmail.com to become an Event Leader. Check out our website: www.PublicHealthServiceAthletics.org for the Events Calendar and information on Qualifying Events, and like us on Facebook to follow the latest news!

Health and Historic Smiles in Alaska

Contributed by Josh Niva, Dental PAC

2014 marks the 10th anniversary of the first group of Alaska Native students returning from training in New Zealand to become Alaska's first Dental Health Aide Therapists (DHATs). These DHATs were pioneers in providing much-needed access to mid-level dental care and prevention services for Alaska Native people living in rural communities across the state.

What is a Dental Health Aide Therapist (DHAT)?

A DHAT is a dental team member who works under the supervision of a licensed dentist providing a limited range of services. Those services include patient and community-based preventive dental care, basic restorations and uncomplicated extractions. DHAT education is two years in length, followed by at least three months of preceptorship with a supervising dentist. Successful completion of these requirements is needed prior to certification by the Alaska Community Health Aide Program Certification Board. A DHAT's education provides them with the skills to meet the majority of basic dental care needs in rural Alaska Native communities.

More than **50** countries use DHATs to improve access to dental care, but only the Alaska Tribal Health System and **two** U.S. states (Minnesota and Maine) allow mid-level dental practitioners. More than **20** states are considering mid-level dental practitioners.

How DHAT Training Has Changed

Much has changed for Alaska's DHATs in 10 years. Today, nearly 30 DHATs provide professional and culturally competent dental care and prevention services, fighting the decades-long epidemic of oral suffering and disease around rural Alaska and improving access to dental care for Alaska Native people. Future DHATs no longer have to travel across the world for training. Since 2007, the Alaska Native Tribal Health Consortium's DHAT Educational Program has prepared DHAT students through a two-year program housed in state-of-the-art facilities and led by award-winning staff in Anchorage and Bethel. The Educational Program is directed by Dr. Mary Williard, longtime U.S. Public Health Service Officer.

One of the biggest changes has been the perception of DHATs. Years ago, many in the dental profession fought against DHATs providing care. Today, Alaska's DHATs and ANTHC's Educational Program are recognized as the model of success for improving oral health and access to care for rural populations around the world. "Alaska shows us the way forward," said Dr. Louis W. Sullivan, former secretary of the U.S. Department of Health and Human Services. "Access means more than having an insurance card; it means having professionals available to provide care."

Why a DHAT's work is needed

Roughly **83 million Americans** face barriers to dental care and **50 million children** and adults live in areas without enough dentists. Alaska Native people in rural communities without access to regular dental care have suffered an epidemic of poor oral health for many years. DHATs represent a community led solution to provide dental care and prevention services.

59 percent of American Indian and Alaska Native adults had periodontal (gum) disease.

Alaska Native children suffer from tooth decay at **twice the national average**.

27 DHATs are currently practicing in **81 communities** – most in remote villages across Alaska. More than **40,000 rural Alaskans** now have regular access to dental care from a DHAT; most have never had this kind of access or continuity of care before.

88 percent of Alaska's DHATs are Alaska Native and **78 percent** of DHATs are working in their home region. This improves relationships, makes for a cultural connection, and builds comfort and trust for patients.

In 2008, a Centers for Disease Control and Prevention Arctic Investigations study reported that: **100 percent** of Alaska children between ages 4 and 5 living in communities without fluoride in the public water supply had at least one decayed or missing primary tooth.

67 percent of Alaska children between ages 4 and 5 living in communities with fluoridated water had at least one decayed or missing primary tooth.

How DHATs are improving the oral health of Alaska Native people

An Alaska DHAT sees an average of **800** individual patients over **1,200** visits annually. **700** of those visits are preventive work, helping improve oral health moving forward.

11 Alaska Native DHATs were educated in New Zealand from 2003-2006. **6** of those New Zealand-educated DHATs are still certified today. Typically, DHATs **bill $150,000-$250,000 per year** more than the cost to employ them and their assistant.

The avoided patient travel cost is more than **$40,000** per year per DHAT.

5 new DHATs are in the 2014 graduating class **6** DHAT students are entering their second and final year of training.

A recent pilot study by ANTHC and partners in The Centers for Disease Control and Prevention's Investigation team and the Yukon-Kuskokwim Health Corporation found that **50-60 percent** of 6-year-old children living in non-DHAT communities received dental care; while **100 percent** of 6-year-old children living in DHAT communities received care.

Image retrieved from Google Images

Scientist PAC Awards

2014 Derek Dunn Memorial Senior Scientist of the Year Award: CDR Jeffrey L. Goodie

CDR Jeffrey L. Goodie is an Associate Professor in the Department of Family Medicine at the Uniformed Services University (USU) and a board certified Clinical Health Psychologist. He is also currently serving as the Director of Clinical Training (Interim) in the Department of Medical and Clinical Psychology at USU. As an educator at USU, he taught a course about using evidence-based methods for targeting health behaviors to more than 1,300 uniformed services medical students, and was recognized with USU's Innovation in Teaching Award for the Clinical Sciences. CDR Goodie is an author of 45 publications, including several that are focused on behavioral health interventions in primary care settings. One of the books on which he is an author, *Integrated Behavioral Health in Primary Care: Step-by-Step Guidance for Assessment and Intervention*, has become a standard text across universities, psychology internships, and throughout the Department of Defense, and provides information about how to integrate behavioral health care and behavioral health providers into primary care settings. In addition, CDR Goodie is the lead author for a chapter about the USPHS in *The Encyclopedia of Clinical Psychology,* and is an editor of the book *Biopsychosocial Assessment in Clinical Health Psychology,* which is expected to be published in 2014.

CDR Goodie serves as an associate editor for the *Journal of Clinical Psychology in Medical Settings* and *Translational Behavioral Medicine: Practice, Policy and Research*. He has also served as an ad-hoc scientific reviewer for the National Institutes of Health, Risk, Prevention, and Health Behavior Integrated Review Group; Social Psychology, Personality, and Interpersonal Processes Study Section. CDR Goodie was the Program Chair of the 46th annual meeting of the largest behavioral and cognitive scientific national organization, the Association of Behavioral and Cognitive Therapies.

In his clinical work, CDR Goodie has provided thousands of hours of direct care and consultation to active duty members and their families. He serves as an examiner and board member for the Clinical Health Psychology, Division of the American Board of Professional Psychology, where he helps to evaluate and set the standards for board certifying other clinical health psychologists.

CDR Goodie is also active in the USPHS. Currently, he serves as a Deputy Squad Leader and is an active member of Mental Health Team-2 (MHT-2). He responded to a suicide cluster in a Native American community, Superstorm Sandy, the Sandy Hook Elementary School shootings, and the Boston Marathon bombings. In 2012, CDR Goodie served as the Chair of the Psychology Professional Advisory Group (PsyPAG) and actively participated in SciPAC's Policy Review and Rules and Membership Committees. He has mentored junior scientist officers and served as a SciPAC curriculum vita reviewer. In 2013, PsyPAG awarded CDR Goodie its *Senior Career Psychologist Achievement Award* for his "exceptional service" to the field of psychology and USPHS. In addition, his contributions have

led to his election to Fellow status in the Society of Behavioral Medicine and the American Psychological Association.

CDR Goodie earned his undergraduate degree at Dickinson College and his doctoral degree from West Virginia University. He joined the U. S. Air Force and completed his clinical psychology internship at Wilford Hall Medical Center (WHMC), and later completed a fellowship in Clinical Health Psychology at WHMC. CDR Goodie served nine years with the U. S. Air Force before joining the USPHS. He is grateful for the professional support and opportunities that have been afforded to him by his colleagues in the Division of At-Risk, Behavioral Health and Community Resilience in the Office of the Assistant Secretary of Preparedness and Response, the Defense Health Agency, and at USU.

2014 Junior Scientist of the Year Award: CDR Jennifer Adjemian

CDR Jennifer Adjemian is a lead epidemiologist in the Epidemiology Unit for the Laboratory of Clinical Infectious Diseases, National Institute of Allergy and Infectious Diseases (NIAID), National Institutes of Health (NIH). At NIH, CDR Adjemian leads a large and diverse research agenda focused on population-based studies related to infectious diseases, while also providing methodologic and analytic support for CDR Adjemian joined the USPHS upon the completion of her PhD in Epidemiology at the University of California, Davis, in 2007. She began her USPHS career by serving as an Epidemic Intelligence Service (EIS) Officer with the Rickettsial Zoonoses Branch at the Centers for Disease Control and Prevention (CDC), where she conducted research, surveillance, and led outbreak investigations on a variety of emerging infectious diseases, including Marburg hemorrhagic fever in Uganda, Rocky Mountain spotted fever in Arizona, and murine typhus in Texas. Following EIS, CDR Adjemian served as the lead infectious disease epidemiologist for the Federal Bureau of Prisons (BOP) in Washington, DC, until joining NIAID/NIH in 2010.

CDR Adjemian consistently demonstrates outstanding leadership and dedication in her efforts to improve knowledge about the epidemiology of rare infectious diseases. She is the principal investigator for several clinical research projects conducted within the Division of Intramural Research (DIR), NIAID. She is recognized internationally as an expert in nontuberculous mycobacterial (NTM) lung disease, a global and ubiquitous environmental bacterial pathogen that can lead to severe morbidity and mortality in affected individuals, and her groundbreaking studies have redefined our understanding of NTM epidemiology in the United States. She has been involved with critical NIH-led studies investigating the epidemiology of NTM and other rare diseases to identify risk factors and translate study findings into important public health recommendations. Her leadership as a scientist at NIH and the results of her work have enabled critical public health messages to be widely accessible to millions of individuals worldwide. Since joining NIH, she has conducted research that identified lifesaving measures to help protect cystic fibrosis patients from NTM infections; worked closely with global NTM leaders to communicate important research findings that have influenced patient care; led a study that established the first-ever US prevalence estimates of NTM disease; worked with the pharmaceutical industry to improve access to treatment for over 50,000 US NTM patients; and, most recently, completed a critical study that identified a lack of adherence to the practice of evidence-based medicine among US providers treating NTM disease. CDR Adjemian's exceptional scientific contributions are also demonstrated by her impressive list of dozens of publications and presentations.

In addition, CDR Adjemian has a well-established record of leadership within the USPHS, serving as a Scientist Professional Advisory Committee (SciPAC) voting member, subcommittee chair and co-chair, and an executive board

member. She is the recipient of numerous USPHS honor awards, including the Commendation Medal; CDC agency awards; as well as local community awards recognizing her contributions. CDR Adjemian serves as a Tier-2 responder on Applied Public Health Team-1 and has completed over 19 weeks of field deployments for CDC and BOP.

2014 Scientist Responder of the Year Award: CDR Anthony P. Tranchita

CDR Anthony P. Tranchita has completed more than a decade of uniformed service, serving four years as an Air Force officer, and the last six years in the United States Public Health Service. He is currently the commander for the Behavioral Health Flight of the 319th Medical Group, Grand Forks Air Force Base, North Dakota, where he has been stationed since December 2009. The 319th Medical Group serves a patient population of more than 1,800 active duty members and 5,500 beneficiaries in a 3-state area, and he leads a staff of 16. He is responsible for the mental health, substance abuse prevention and treatment, and family support and care necessary to maintain the combat readiness of all base personnel, as well as the mental health and well-being of their families. Under his leadership, the Behavioral Health Flight has completed inspections by both the Air Force Inspection Agency and the Accreditation Association for Ambulatory Health Care, both of which concluded with “perfect scores/no discrepancies” for the mental health elements of the inspections.

CDR Tranchita completed his graduate degree in clinical psychology at Utah State University. CDR Tranchita achieved conditional licensure as a prescribing psychologist after completing a postdoctoral master’s degree in psychopharmacology in 2011, and he recently developed a prescribing/medical psychology special interest group within the PHS Psychologists Professional Advisory Group (PsyPAG).

In addition, CDR Tranchita has served as Team Commander of PHS Mental Health Team-2 since April 2012. As a member of Mental Health Team-2, CDR Tranchita has served as the Behavioral Health Liaison to the New York IRCT after Hurricane Sandy; responded to suicide clusters on two Native American reservations; assisted victims of flooding following Hurricane Irene in Upstate New York in 2011; and assisted with standing up a Federal Medical Shelter after Hurricane Ike in 2008. Further, officers from Mental Health Team-2 deployed for four operations during fiscal year 2013: Hurricane Sandy; the Sandy Hook shootings; the Boston bombing; and, in response to a request from the FBI’s Victim Assistance Unit, to a Native American Community in South Dakota in September 2013.

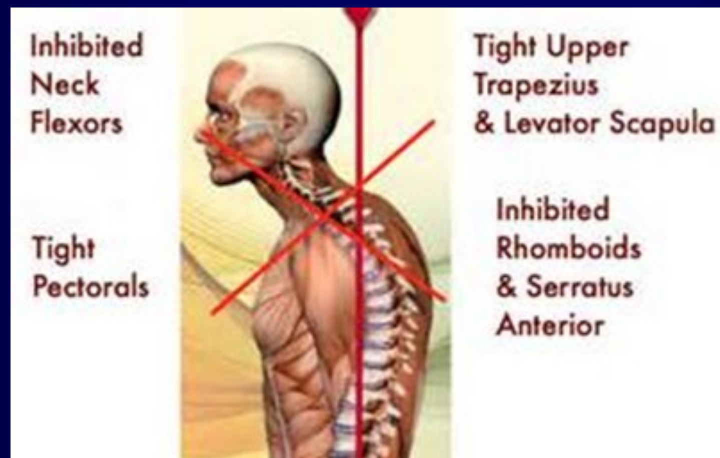
In this past year, CDR Tranchita and the Traumatic Stress Response Team provided much- needed community and individual support after two traumatic events that affected Grand Forks Air Force Base. Through consultation with leadership, the Team ensured they were present at group events, and provided psychological first aid and individual follow-up; post-event assistance was provided to more than 400 members of Team Grand Forks, minimizing the mental health impact of the traumatic events throughout the community.

The events that occurred on September 11, 2001, influenced his decision to pursue a life of uniformed service, first in the U.S. Air Force, and now in the U.S. Public Health Service. CDR Tranchita lives in North Dakota with his wife and two children, all of whom have enjoyed their opportunity to reside in a place that offers opportunities to experience a wide range of outdoor activities and that provides a true sense of community.

Upper Crossed Postural Syndrome

LCDR BJ Saunders, Therapist PAC

You are probably sitting at your computer desk right now reading this article without concentrating on proper sitting posture. A majority of us spend several hours a day in front of a computer whether we're documenting patient notes, attending an on-line meeting, communicating through e-mail, or browsing the internet. As a result, many have developed headaches, TMJ dysfunctions, neck pain, mid-back pain, and even shoulder pain. These are the symptoms of Upper Crossed Postural Syndrome (UCPS). UCPS is described as a muscle imbalance amongst the muscles of our neck, chest, and mid-thoracic spine. There is over activity of the upper trapezius, levator scapulae, sternocleidomastoid, and pectoralis muscles and reciprocal weakness of the deep cervical flexors, lower trapezius, rhomboids, and serratus anterior. The constant over stretching of muscles results in an ischemic response which causes pain, while the weakness in the deep cervical flexors leads to instability. If muscles stay over stretched for a period as short as 20 minutes, scar tissue may develop in the tendon and cause degeneration. The most common clinical signs of UCPS are someone with a protruded head, rounded shoulders, and an overly kyphotic thoracic spine.



So, what is the correct seating posture? When sitting upright, ones ears, shoulders, and hips should be in a straight line. In order for this to happen, one must sit up tall so there lumbar spine is in proper lordosis, the scapulae should be retracted so they pull the shoulders back into alignment with the hips, and a chin tuck properly places the ears in line with the shoulders. Correct posture can immediately reduce the severity of symptoms listed above. The problem is, most are either not consciously aware of their poor posture or do nothing to correct it.

Can one's poor posture be corrected? The quick and simple answer is yes. By strengthening the scapular stabilizers and deep cervical flexors while stretching the upper traps, levator scapulae, sternocleidomastoid, and pectoralis muscles, one can change their posture. While one should notice a decrease in their pain when assuming a proper sitting posture, it is unrealistic to think their posture will permanently be corrected without performing daily exercises.

Don't have time or fancy equipment to exercise daily? Fortunately, the exercises needed to correct one's posture can mostly be done while sitting in front of your computer and should take no more than 10 minutes to complete. See the table below for a list of the proper exercises and how to perform each. When stretching a muscle group, always hold for 30 seconds and perform it three times. It's also a good idea to stretch both sides and to perform all exercises a few times a day whether at work or home.

Exercises for Overly Active Muscle Groups

Muscle	Exercise Description
Upper Trapezius	Place right hand on top of your head while placing left arm behind your back. Pull your right ear toward your right shoulder and hold for 30”. After completing three times, perform on other side.
Levator Scapulae	Turn your head so you are looking at your right pant pocket. Place right arm on top of head while placing left arm behind your back. Pull your head down toward your right pant pocket and hold for 30”. After completing three times, perform on the other side.
Sternocleidomastoid	Place your hands overlapping on your breast bone. Next, move your right ear toward your right shoulder. Then tilt your head upwards to the left as if you are trying to look at the ceiling. Hold for 30”. After completing three times, perform on the other side.
Pectoralis Major and Minor	While standing in a doorway, place your arms up on the door jam and place one foot forward through the doorway. Next, lean forward until a stretch is felt along the front of your chest and/or shoulders. Your upper arms should be horizontal to the ground and forearms should lie up along the door frame. Hold for 30” and complete 3 times.

Exercises for Weakened Muscle Groups

Muscle Group	Exercise Description
Deep Cervical Flexors	While sitting upright, pull neck back until your ears are lined up with your shoulders (chin tuck). Place thumbs under chin and try to pull chin down toward chest. **Your thumbs should not allow your head to move down**. Hold for 20” and complete 5 times.
Scapular Stabilizers	Draw your shoulder blades back and down. Hold for 20” and complete 5 times.

Upper Crossed Postural Syndrome is a condition that has the potential to have a negative impact on your work performance and state of well-being. The exercises listed above will help restore normal musculoskeletal balance. However, if one does not make a conscious effort to correct their posture, it doesn’t matter how many exercises they do.

Something for Your Brain to Chew On

LCDR Jennifer Myles, Dietitian PAC

When we think of fitness, we typically consider our physical condition, but optimal brain health is also an important aspect of being fit for duty and for life. Furthermore, as officers with demanding careers and busy lives, we commonly experience psychosocial stress, which may impair cognitive function[1]. Therefore, it is important to be aware of how we can optimize brain function and selecting a nutritious diet is one way to do this.

Most research about the effect of nutrition on cognitive function has been performed using either animal models or cell cultures, thus more human studies are needed in this area. However, there are very compelling data and hypotheses about mechanisms that support a strong role of nutrition in optimizing brain health.

Antioxidants

Oxidative stress results from environmental exposures and routine metabolic activities in the body. Because the brain is highly metabolically active and because it is rich in lipids, which are susceptible to peroxidation, the brain is particularly at risk for oxidative damage[2]. Fortunately, the body has systems in place to protect against damage and to repair damage due to oxidation. This is done through the use of antioxidants[2].

Selenium, copper, manganese, and zinc serve as cofactors to enzymes with antioxidant functions[2]. These minerals are founds in meats, fish, oysters, nuts, seeds, beans, whole grains, and wheat germ[3]. Vitamins A and E help prevent peroxidation of lipids and vitamin C scavenges reactive oxygen species, which are unstable molecules that start a chain reaction of damage at the cellular level[2]. These vitamins are found in fruits, vegetables, nuts, seeds, and the oils of nuts and seeds[3].

Furthermore, there are thousands of phytochemicals, called phenols or polyphenols, which are widespread in plants, such as fruits, vegetables, legumes, grains, nuts, tea, red wine, olive oil, herbs and spices that serve as antioxidants[2]. Examples of these compounds include resveratrol in red grape skin, carotenoids, such as lycopene and lutein, curcumin (found in turmeric) and compounds in green tea[2]. These compounds primarily act as scavengers of reactive oxygen species, but there is some evidence that they may also have a role in decreasing inflammation in the brain[2].

Brain-Healthy Fats

Our serum cholesterol profile is not the only thing to consider when choosing the types of fats to consume. Docosahexaenoic acid (DHA) is an omega-3 fat that is highly concentrated in the brain and serves as one of the major structural components of the cell membranes of neurons[2]. DHA is converted in our body from alpha-linolenic acid (ALA). The typical U.S. diet contains inadequate ALA, which is found in flaxseeds, chia seeds, walnuts, the oils of these foods, and canola oil as well as processed foods that use these oils[3]. Furthermore, the efficiency of conversion from ALA to DHA in the body is thought to be poor[1,2]. In addition to being converted from ALA, DHA can be consumed directly in the form of fatty fish such as sardines, salmon, mackerel, herring, and tuna [3].

There are likely physiologic regulatory measures in place that dictate the amount of DHA that will be used by the brain independent of diet, but it is still important to meet the needs of the brain with dietary intake[2].

High concentrations of DHA in the neuron cell membrane increase the fluidity of the membrane, which can improve the function of enzymes and proteins in the cell membranes[1,2]. Furthermore, DHA may play an important role in the development of new neurons, increasing the number of neurons, creating synaptic proteins, and protecting against neuronal loss[2]. Choline (found at high levels in egg, poultry, pork, fish, beef, beans, and milk) and uridine are also important in some of these processes[2,3]. The long-chain omega-3 fats, such as DHA and eicosapentaenoic acid (EPA), may have an anti-inflammatory role and having insufficient levels may adversely affect neurotransmission[2]. Given these various important functions, it is not surprising that DHA intake was shown to improve cognitive function and to possibly prevent cognitive decline in people with mild cognitive impairment[2].

B Vitamins

Subclinical deficiencies of vitamins B6, B12, and folate can lead to high levels of homocysteine, which is not only a marker for cardiovascular risk, but may also adversely affect the microvasculature of the brain, potentially affecting memory and learning[2]. Homocysteine causes oxidative stress in the brain and may also be directly toxic to neurons, causing DNA damage and apoptosis[2]. Vitamin B6, B12, and folate act by lowering homocysteine levels, and thereby mitigate its potentially harmful effects[2]. Vitamin B12 and folate also are required for synthesis of neurotransmitters[2]. These B vitamins are founds in beans, fortified cereals and grains, seeds, nuts, green leafy vegetables, animal products, and wheat germ[3].

Eating a balanced and varied diet can provide the nutrients our brains need to thrive. Supplementation with some nutrients missing from the diet may be effective, but results from studies on dietary supplements have been far less impressive than for eating the nutrients in their natural form. However, it is important to keep in mind that nutrient roles in brain health are highly complex and still not fully understood. In some cases, the correct proportion of nutrients may be important. Supplementing with one nutrient could potentially upset a delicate proportion or lead to a deficiency in a non-supplemented nutrient. When nutrients are obtained in a varied and balanced diet, important nutrients are likely to be present in amounts that promote the right balance. Plus, diet is the best source of the numerous polyphenols that are widespread in a variety of foods. Overall, a diet rich in the nutrients discussed above may optimize cognitive function. When we choose a diversified, colorful diet that has a wide variety of whole foods, such as vegetables, fruits, legumes, nuts, seeds, whole grains, fatty fish, and lean meats, we are not only decreasing our risk of chronic disease, we are helping our brain to function at its best.

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Tips for Supervising

CAPT Maude Lyons, Nurse PAC

Many managers express frustration about the mistakes their employees make while completing projects. The result of staffing shortages is that many employees have taken on more responsibilities and haven't been fully trained.

Here are steps to help you train your employees and keep them engaged to do their best work:

1. Make sure the employee is trained properly to do the task. This is especially important if the employee has never performed the task before. Walk the employee through the process of completing the project. Explain what the employee will have at the end and describe what the task should accomplish. Give the names of the key players the employee should get in contact with during the various stages of the project to obtain specific pieces of information.
2. If the project is being conducted by a team, give one employee the authority over the other team members. Be cautious as to who you pick as the team leader. Make sure it's someone who is responsible and has demonstrated strong leadership skills. You don't want to cause employee conflict simply by choosing the wrong person.
3. Make your expectations clear and build your employees' confidence. Many employees will complain about getting more responsibilities at work. However, it is one of the best ways to keep employees engaged in their jobs. The last thing you want as a manager is to have an employee that has become stagnant in their position. They will soon drag their feet throughout your office with little motivation and almost zero aggressiveness.
4. Encourage your employees to conduct whatever research is necessary so the project information is up-to-date with current trends. Direct them as to how to gather relevant information for your industry.
5. Make all required materials the employee will need easily accessible and at their disposal.
6. If the employee will be required to purchase items for the project, provide him or her with a designated spending limit. This can prevent delays on the project because the employee will not have to keep coming back asking for approval.
7. Hold the employee accountable. This means during the process of the project set several dates for the employee to provide progress reports. This will allow you to correct situations where the employee has gotten off track. This will give you assurance that the project will be finished on time and accurately.
8. Ensure that your employee has fully accepted the project. The employee must own the project. This means they fully accept the responsibility. A verbal recognition from your employee that the success of the project is dependent on them is the best way to know they own it.
9. When the project is complete, evaluate the employee's work. Give constructive feedback, this includes giving any areas of improvement for the future. Be sensitive to the employee's feelings and understand that a good employee wants to do well at their job. In addition, don't forget to re-cap all the things the employee did correctly. Stress these positives in ways that will build the employee's willingness to do the same type of project again in the future.
10. The last important step of training your employees is to reward them. Many managers do not understand the importance of rewarding their staff. Rewards go a long way toward invigorating a team that has worked very hard before they start another difficult project. Many projects can go on for several months or even a couple of years. It's a good idea to schedule a few smaller rewards after an employee or team completes various stages of an exceptionally long project. When the project is complete give a much larger victory celebration.

References: Motivational Speaker – Angela Huffmonn

Originally published by: BOP Chief Nurse Newsletter, *Nursing Insider*, April 2014 in CAPT Michelle Dunwoody's "Michelle's Mentoring Moments" section.

Proud Presentations of the USPHS Excellence in Public Health Awards to Medical Students

CDR Sara Luckhaupt, Physician PAC

The Physicians Professional Advisory Committee (PPAC) USPHS Excellence in Public Health Award program was started in 2012 to recognize medical students throughout the country who have already made significant contributions to public health. This program was modelled after a similar PharmPAC program. We presented awards at 10 schools in 2012, with an expansion to 52 schools in 2014, covering almost every region of the country.

Medical School Deans from all Liaison Committee on Medical Education (LCME)-accredited U.S. medical schools and Commission on Osteopathic College Accreditation (COCA)-accredited U.S. osteopathic medical schools were invited to submit nominations, which were evaluated to determine the extent to which the student (or in rare cases team of students) demonstrated excellence and dedication to one or more of the following achievements while enrolled in medical school:

* Development and implementation of programs that advance the overarching goals and achieve the objectives of "Healthy People 2020".
* Development and implementation of programs that address the priorities of the "National Prevention Strategy[2]".
* Participation in programs that support the philosophy and/or goals of the U.S. Public Health Service as articulated in the specific objectives of "Healthy People 2020" and/or the "National Prevention Strategy".
* Accomplishments of a single outstanding act of significant benefit to a medically underserved community. Examples could be organizing an inner-city health fair or renovation of a health clinic in an underserved area.
* Contributions of time, talents, or energy without pay or other compensation in voluntary health related service by directly or indirectly helping individuals in need through work in civic, community, or humanitarian activities.
* Outstanding leadership and participation in recruitment, placement, or training activities that effectively foster the team approach in patient care.
* Completion of research that adds to the knowledge base needed to advance the goals of "Healthy People 2020" and/or the "National Prevention Strategy".

Nominations were also evaluated based on the level of leadership demonstrated (e.g., started a program vs. just a participant), the impact of the student's work (e.g., size of population affected, strength of health impact), and the student's commitment to a career in public health/preventive medicine (e.g., other public health-related activities). Members of the PPAC Medical Student Awards Strike Team reviewed all nominations, and school-level awards (certificates) were presented to all deserving nominees. In addition, the strongest overall nominee received national recognition with a special plaque.

We chose Neil Murthy from University of Texas Southwestern Medical School as the national-level awardee for 2014. The strike team was very impressed by both the breadth and depth of Neil's contributions to public health to-date, which include: participating in the CDC Student Worksite Experience Program and the CDC Epidemiology

Elective; international work with the Ministry of Public Health in El Salvador, Mother Teresa's Missionaries of Charity in Calcutta, the American Medical Association's Committee for Global and Public Health, and the World Health Organization; research in the areas of using health information technology to detect epidemics, mental health needs among North Korean refugees, and use of shared medical appointments at primary care clinics serving indigent populations; and working with faculty to analyze the efficacy of public health educational programs offered at UT Southwestern. After completing a residency in Emergency Medicine, Neil hopes to join the CDC Epidemic Intelligence Service (EIS) and the USPHS.

The expansion of this program could not have been possible without the generosity of many officers, from both within the medical category and from other categories, who volunteered their time and funded their own travel to present the awards. Even though the physical award only consists of a certificate, the in-person presentations from uniformed officers were immensely meaningful to both the students and the schools. Furthermore, this activity greatly raises the visibility of the USPHS Commissioned Corps among medical students, faculty, and the general public. Hopefully some of the awardees and/or their classmates will even join our ranks in the future.

Thank you to everyone who helped contact schools and present awards in 2014! If you would like to help with this activity in 2015, please contact CDR Sara Luckhaupt at sluckhaupt@cdc.gov.

Loyola – 2 APR 2014
Presenter: CAPT James Lando
Awardee: Emily Fisher

Texas A&M – 7 APR 2014
Presenter: CAPT Hernan Reyes
Awardee: Katherine Rendon

Univ. of Hawaii – 8 APR 2014
Presenter: CDR Tai-Ho Chen
Awardee: Brandyn Dunn

Illinois Univ. – 2 MAY 2014
Presenter: CDR Julie Chodacki
Awardee: Daniel Sadowski

George Wash. U. – 16 MAY 2014
Presenter: LCDR C. L. Perdue
Awardee: Nisha Narayanan

Rush U. Med. Col.– 20 MAY 2014
Presenter: LCDR Patrice Walker
Awardee: John Nixon

U. of Cincinnati– 25 MAY 2014
Presenter: LCDR Marie de Perio
Awardee: Neera Khattar

U. of Texas-Houston – 30 JUN 2014
Presenter: LT Mathoslah, LCDR Emery
Awardee: Steven Blake Baker

NATIONAL WINNER

Univ. of Texas Southwestern

29 APR 2014

Presenter:

US Surgeon General (Acting), RADM Lushniak

Awardee: Neil Murthy

Potable Water Challenges: Island Style

LTJG Kelly Hoeksema, Engineer PAC

Surrounded by the beautiful blues of the Caribbean Sea, the mountainous terrain of St. John, part of the U.S. Virgin Islands (USVI), is easily one of the most beautiful places in the world. But with the beauty comes the beast, in all manner of ways, hindering the production of potable water. This is witnessed through the obstacles associated with land area, source water, and operation costs.

View of Cruz Bay (the town) and Great Cruz Bay (the bay), on St. John, USVI.

St. John is first hindered by its limited landmass, tipping the scales at a mere 20 square miles, approximately 60% of which is owned by the Virgin Islands National Park. This leaves a meager 8 square miles for development. Much of this area is steep, rocky terrain, not suitable for development.

Stateside, potable water plants draw water from freshwater sources, like lakes and rivers. St. John has salt ponds and the salt water of the Caribbean Sea. Seawater is the primary source for the public water system's desalination plant. The plant produces a mere 155,000 gallons per day and serves businesses and government buildings in the immediate Cruz Bay area. To put this in perspective, there are approximately 4,200 residents of St. John, which averages to almost 37 gallons per person per day. This does not count the steady flow of tourists onto the island.

LTJG Kelly Hoeksema checks valve orientations on media filter tank at Trunk Bay's reverse osmosis plant, Virgin Islands National Park.

With the limited reach and capability of the public water system, the majority of residents and many businesses must rely on other water production means. The Virgin Islands National Park uses ground water wells for their water sources at Trunk Bay and Cinnamon Bay. The well water is processed through reverse osmosis plants and used in the immediate area. Both plants produce about 10,000 gallons per day of potable water.

The majority of islanders collect rainwater to meet their potable water needs. Rainwater is stored in cisterns and treated using a series of filters and chlorination. Ideally, filters are arranged from largest to smallest, each removing contaminants of a different size. Unfortunately, there are no water filters available for purchase on St. John. Two of the EPA recommended filter sizes are available on St. Thomas, the next island over. But it is the absolute rated filters, those that filter out cysts (such as cryptosporidium and giardia), which are not commercially available in the USVI.

Filters, along with the majority of technical replacement parts, have to be ordered from the mainland, which presents a number of challenges. It is often difficult to find a company that will ship to the island, and the companies that do tend to charge high shipping rates. It is also not uncommon for parts to take upwards of five weeks to be delivered, not counting fabrication time for the part.

After overcoming those obstacles, a potable water system is still not in the clear. Producing potable water, regardless of source, size, or location, comes at a cost. Time and money are lost while waiting for critical replacement parts to arrive. Then there is the direct cost from producing potable water, the electric bill. At 54¢/kWh, electricity costs over five times the national average (10¢/kWh, according to the US Energy Information Administration).

In summary, while the island is beautiful beyond compare, it faces some ugly challenges. There is little space, limited fresh water, insufficient parts, and high operating costs as the price of electricity continues to soar.

The New Face of Homelessness:

Female Veterans and the Association Between Homelessness and Traumatic Experiences

LCDR Stephanie Felder, Health Services PAC

The issue of homelessness is a growing concern for the United States, and the increase in homelessness among veterans is at the forefront of these concerns. Research indicates that veterans are at an increased risk for homelessness compared to the overall population. The National Alliance to End Homelessness reported that on any given night there are approximately 643,067 homeless people, and 12 percent (67,000) are United States Veterans. This risk is greater for those who served in the all-volunteer force, which was instituted after the Vietnam War in 1975 (Tsai et al. 2012; Gamache, Rosenheck, & Tessler, 2003). Nonetheless, the focus of this article will not be homeless male veterans, but the new face of homelessness---female veterans. Homelessness among female veterans is rising at a rapid rate, and according to the Department of Veterans Affairs, female veterans are the fastest-rising segment of the homeless population (Government Accountability Office, 2011).

Female veterans are four times more likely than their male counterparts to become homeless (Gamache et al., 2003). According to the Department of Veterans Affairs (2012), young African American female veterans and female veterans ages 18–29 are at the highest risk for becoming homeless. Homelessness was 3.6 times more likely for veterans than non-veterans in the general population, and 2 to 4 times greater for female veterans than for non-veterans (Tsai et al., 2012). In 2020, it is expected that women will comprise 10.7 percent of the total veteran population. Homelessness among female veterans is on the rise due to the return of more women than ever from recent theater operation such as Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF) (Tsai et al.; Gamache et al).

The literature points to four significant factors that affect female homeless veterans: (a) pre-military trauma, (b) traumatic experiences during military services, (c) post-military mental health, substance abuse, and medical issues, and (d) homecoming adjustment. Washington et al. (2010) found characteristics associated with female veteran homelessness include sexual assault during military service, being unemployed, being disabled, having worse overall health, and screening positive for an Anxiety Disorder or Post-Traumatic Stress Disorder (PTSD). Additionally, female veterans are more likely to have history of traumatic life experiences before joining the military, which includes exposure to physical violence (Zinzow et al., 2007).

As the number of female veterans continues to rise, the investigation of the association of traumatic experiences and homelessness is critical. There are indicators that the trend of homelessness could continue as our female veterans return home from war. Additionally, the Department of Defense is lifting their ban on allowing women to be in direct combat roles; this will have a direct effect on the number of women who may experience combat-related trauma. Due to the increase and the susceptibility of female veterans entering into homelessness, issues leading to homelessness and possible interventions for homeless female veterans must be identified and implemented.

Since the mission of the U.S. Public Health Service Commissioned Corps is to protect, promote, and advance the health and safety of our Nation, it is essential that USPHS officers are aware of this issue and work within their communities to support the eradication of ending homelessness among all veterans. In President Lincoln's Second Inaugural Address he affirmed the government's obligation to care for veterans and their families. President Abraham Lincoln concluded, "It is the nation's responsibility to care for him who shall have borne the battle and for his widow, and his orphan." As leaders of public health, it is our responsibility to advocate and assist efforts to provide quality care for our veterans and their families.

If you are interested in donating a pair of new shoes to homeless veterans please contact Stephanie Felder at Stephanie.Felder@samhsa.hhs.gov or 240.276.2911.

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Career Development:

Basket Weaving 101

LCDR Craig P Kiester (with input from the PharmPAC

Career Development Subcommittee), Pharmacy PAC

Anytime a group of USPHS officers are gathered and the discussion moves to promotion benchmark precepts, it is almost certain that some will ask the question, "What counts as a 'relevant' degree?" The answer leaves many options for the officer to choose from when deciding which advanced degree to pursue. There is no "master list" of accepted degrees, rather, it is preferable that you select a degree that adds value to either your Agency or the Commissioned Corps. This likewise leads to further discussion, what degrees "add value?" For those officers who are in a clinical role, such as with IHS or BOP, a Doctor of Pharmacy Degree (Pharm.D.) will certainly bring value to their daily job function. Officers serving in regulatory or non-clinical roles may not see equal value added by this same degree in their day to day job function. Obviously, there isn't much to debate when discussing a Pharm.D.'s value.

There are many degrees which can add value to an officer. One common complaint heard around promotion time is officers stating that they don't want to go back for a degree just to get promoted…and they shouldn't! Any advanced degree will require a significant amount of sacrifice from the officer. This is not only your personal/family time, but can also be financial. It is imperative that you select an area of study that interests you personally and professionally. Without this interest, the completion of said degree will be infinitely more difficult. Any advanced degree will require the officer to spend typically two years or more reading, studying, and writing about the topic. Another consideration could be your long term career goals. Are you planning to continue working after your PHS career has ended? Can the degree benefit you now, as well as propel you towards the next phase of your career? You should absolutely make sure that you will get more out of the degree than the ability to check off a box come promotion time.

Next, you will need to determine if you would like to enroll in either traditional learning or distance learning. In the last decade, distance learning has become a more common and accepted way for working adults to go back to school, as it provides the ability to work on an advanced degree as time allows. This type of education will still require the officer to spend a considerable amount of time on courses and to meet deadlines, but it gives them the ability to decide which time of the day works best for them. Another key feature is the cost, which is typically less for distance learning than the same degree earned in a traditional setting.

So the question remains, which degree adds value? Does an MPH add value? Certainly. Does an MS in Health Science, specializing in Disaster Management add value? Sure it does. Does a law degree or an MBA add value? Absolutely. Does that degree in basket-weaving add value? Maybe. If learning to weave a basket could ingratiate you into the local population and subsequently allow you the opportunity to promote public health initiatives, then yes. You should determine the usefulness of the degree based on your current functions and career goals and try to demonstrate its value in your CV/COER/OS when you are eligible for promotion.

"Perks and Pitfalls" of a Retired Officer

CAPT John Motter, USPHS (ret.), Nurse PAC

After two agencies, three geographical areas, five duty stations, and TDY in 26 states and two foreign countries, my 30 years of service came abruptly to an end on January 1, 2009. Lucky for me, the Centers for Medicare and Medicaid Services (CMS) agreed that I was too young to retire for good. I was selected to fill a vacancy as a civil servant without a break in service and remain with CMS to this day.

Continuing on with your current hiring agency after retirement is far from a given. Management must first value your abilities and have the approval to advertise a vacancy two to three months prior to the retirement of the officer. Even though the soon-to-be-retired officer may be fulfilling their current job duties, the agency may always select another qualified candidate from the panel. If you have an interest in a second career civil service position at the time of your retirement, be sure to talk to your supervisors and consult with your agency's human resource personnel at least a year ahead of your retirement date.

At the same time, it's always nice to have a backup plan. As retirement neared, I was a little slow appreciating this and found myself considering only one other position with a large HMO at the time of agreeing to a civil servant appointment. It would have been a good fit too, but in hindsight, I should have started seriously considering other avenues at least two years prior to my retirement date, made stronger efforts to get my name out there, and meet future potential employers and co-workers. Experiences during the recent recession emphasized what I have always thought: it is easier to get your next job while still being employed in your current one.

Other than that, there is life after retiring from a USPHS career. Within a couple of weeks, I found my right arm could do more than salute. I continue to mentor younger officers from time to time and I will never say anything negative about the retirement benefits. Even though I was never assigned to a duty station with approved optional wear of the old Captain Stubing Tropical Shorts and pith helmet uniform, it was truly a privilege to serve a full career in the U. S. Public Health Service. What do other retired officers think?

Pictured: CAPT Motter and Mother-in-Law

Healthy Cruise Ships

CDR Luis O. Rodriguez, Enviromental Health PAC

Environmental health officers (EHOs) from the Centers for Disease Control and Prevention (CDC) Vessel Sanitation Program (VSP) work behind the scenes to help ensure safe, healthy cruise ships. VSP inspectors are experienced U.S. Public Health Service officers based in Atlanta, Georgia, and Fort Lauderdale, Florida. VSP personnel prevent and control the introduction, transmission, and spread of acute gastroenteritis illnesses on cruise ships. Ships that carry 13 or more passengers and have a foreign itinerary with U.S. ports fall under the CDC VSP's jurisdiction.[1]

VSP staffers accomplish their mission to protect health on cruise ships by conducting unannounced operational inspections twice a year. While on board, they assess compliance with *VSP Operations Manual* requirements, including the following:

- acute gastroenteritis surveillance and reporting
- potable water
- recreational water
- food safety
- integrated pest management
- housekeeping (infection control)
- child activity center
- *Legionella* control

In addition to the inspections, VSP personnel provide ship construction consultation, response to active acute gastroenteritis outbreaks, and training seminars. VSP personnel have developed cooperative relationships with the cruise ship industry and work collaboratively with cruise lines and associated partners, including the shipyards that build and renovate cruise ships, to develop the standards for the *VSP Operations Manual* and *VSP Construction Guidelines*. The guidelines describe all of the sanitation requirements cruise ships must follow.

Program staffers also work closely with federal and international agencies, including the U.S. Coast Guard (USCG), the U.S. Food and Drug Administration, the World Health Organization, and port health agencies around the world.

Operational Inspections

Inspectors conduct more than 280 operational inspections each year in more than 140 U.S. ports, including those in the continental United States, Alaska, Hawaii, Guam, Saipan, Puerto Rico, and the U.S. Virgin Islands. Each inspection takes a day; the size of a ship inspection team depends on the size of the ship being inspected. Most ships require two inspectors, but a very large ship can require as many as four. Inspectors carry backpacks loaded

with inspection equipment—multiple types of thermometers, water test kits, flashlights, light meters, the current *VSP Operations Manual*, and laptops. With the ship's management team, VSP personnel inspect each of the areas listed in the *VSP Operations Manual*. The largest ships may have as many as 60 restaurants and bars and more than a dozen recreational water facilities.

In food areas, inspectors check the following:

- food temperatures
- logs to make sure food is being cooked and cooled properly
- dishwashing machine temperatures
- sanitizing solutions levels
- light levels
- food storage areas
- general cleanliness

They also assess the overall construction from a sanitation standpoint and make sure there are no pests.

In technical areas, inspectors check the following:

- medical procedures related to acute gastroenteritis
- chlorine and pH levels in the potable water and recreational water systems
- safety compliance for recreational water facilities
- ship's outbreak prevention and response plan
- sanitation procedures in housekeeping and the children's center
- cleanliness and construction of air handling ventilation units

Inspectors review logs for potable water, recreational water, ventilation, housekeeping, pest management, and acute gastroenteritis cases and also question crew members to make sure they are knowledgeable about sanitation.

After the inspection, VSP staff provide a detailed, printed draft inspection report to the ship's management and discuss the findings. Management also receives an inspection score and a final report that includes recommendations.[2]

Scoring

The inspection scoring system is based on inspection items with a total value of 100 points. Significant violations result in deductions; minor violations are noted on the inspection report and may not result in point deductions. Even though violations are often corrected on the spot, they are still included in the report. Critical violations—ones with a high public health risk—have to be corrected or mitigated while the team is aboard. A score of 86 or higher is a passing score. When a ship fails a routine inspection, inspectors conduct an unannounced re-

inspection within two months. Imminent health hazards can prevent a ship from sailing, such as:

- not enough disinfectant in the potable water distribution system
- inadequate facilities for maintaining safe food temperatures
- inadequate facilities for cleaning and sanitizing food equipment
- continuous problems with liquid and solid waste disposal
- infectious disease outbreak among passengers or crew
- any time it is suspected that continuing normal operations may subject newly arriving passengers to disease

The USCG assists when the CDC director issues a no-sail order to a ship that represents an imminent health hazard to passengers and crew members.

Training

The VSP epidemiologist and EHOs lead training for cruise line management personnel regarding the requirements in the *VSP Operations Manual*. The seminars are held five times a year in Miami, Fla., and once a year on the West Coast. They include lectures, interactive exercises, and practical hands-on sessions.

Ship Construction Consultation

At the request of the cruise industry, program personnel provide consultation during cruise ship construction and renovation. EHOs conduct plan reviews to analyze the ship's design to eliminate environmental health risks and to incorporate modifications that create healthy environments.

Surveillance and Outbreak Response

VSP also focuses on acute gastroenteritis syndromic (based on symptoms) surveillance and outbreak response. Cruise ships use VSP's electronic surveillance system to report the total number of cases (including zero cases) the medical staff has evaluated, before the ship arrives in a U.S. port from a foreign port.

Personnel also use the surveillance system to send automatic, real-time electronic notifications to stakeholders and partners when the illness count exceeds 2 percent of the total number of passengers or crew when the vessel is within 15 days of arrival at a U.S. port. Ship crew, cruise line representatives, and VSP staffers use this early alert to communicate and consult with one another, so they can reduce the further spread of illness. Ship personnel also send separate outbreak notifications when 3 percent or more of passengers or crew report acute gastroenteritis symptoms to the ship's medical staff and for other outbreaks of public health significance.

During an outbreak, a team of EHOs and a program epidemiologist are dispatched to the ship to investigate, recommend mitigation measures to minimize further spread during the voyage, prevent carry-over to future voyages, and develop program guidance to assist ships in avoiding similar occurrences. Outbreak updates are published online.[3]

Inspection Fees

VSP is entirely self-supporting. All program expenses—including personnel, travel, outbreak investigations, and direct training expenses—are covered by a fee, based on the ship's size, paid by the cruise ship owners. This fee also covers operational inspections, re-inspections, and on-site and final construction inspections. There is no fee for plan reviews or outbreak investigations.[4]

Planning a Cruise?

If you're planning to cruise, check out VSP's website at www.cdc.gov/nceh/vsp/ for inspection scores and reports for cruise ships you're considering and to find tips on how to stay healthy while aboard. VSP holds an annual public meeting for all stakeholders, including the cruising public, to provide a public forum for discussing all aspects of the program. See program details at www.cdc.gov/nceh/vsp/.

Endnotes:

1. The Public Health Service Act, Part G, Quarantine and Inspection (Public Health Service Act: Quarantine and Inspection Regulations, 42 U.S.C.§264) provides the program's inspection and surveillance authority. U.S. foreign quarantine regulations (42 CFR Part 71) also require ships to immediately report onboard deaths and certain communicable illnesses to CDC, but not to VSP. Those reports are sent to CDC's Division of Global Migration and Quarantine.

2. Program staffers post all final reports for public view on VSP's searchable inspection database [http://wwwn.cdc.gov/InspectionQueryTool/InspectionSearch.aspx]. The

Corrective Action Statement submitted by the cruise line for each of the inspection findings is also posted on the inspection results website.

3. See www.cdc.gov/nceh/vsp/surv/gilist.htm.

4. The fee schedule is published each year in the *Federal Register* and is also posted on the VSP website: www.cdc.gov/nceh/vsp/desc/about_inspections.htm.

Upcoming Events

- PAC Meetings:

Dentists——————————11/21/14 at 1300 EST

Dietitians——————————11/20/14 at 1200 EST

Engineers————————— 12/17/14 at 1400 EST

Environmental Health ——12/09/14 at 1300 EST

Health Services—————12/05/14 at 1300 EST

Nurses——————————— 11/17/14 at 1300 EST

Pharmacists————————12/04/14 at 1400 EST

Physicians_______________11/26/14 at 1300 EST

Scientists ————————— 11/04/14 at 1200 EST

Therapy ——————————12/19/14 at 1200 EST

Veterinarians_____________12/4/14 at 1400 EST

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