Nicotine Use Disorders: Addressing Nicotine Addiction Irrespective of Formulation Using Integrated Approaches

December 5, 2019
Presenters

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- LCDR Gayle Tuckett, PharmD, BCGP, NCPS, CDE, AE-C, USPHS
Disclosures

Presenters have no interest to disclose.

AMSUS and ACE/PESG staff have no interest to disclose.

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Learning Objectives

At the conclusion of this activity, the participant will be able to:

1. Describe the nature and impact of the biological, psychological, and socio-cultural factors that influence the use of nicotine products.

2. Discuss the aspects of the formulation of ENDS products that influence the health risks and inform rational approaches in the treatment of nicotine use disorders.

3. Discuss rational approaches to reducing nicotine use including prevention strategies, pharmacotherapeutic regimens, and behavioral interventions such as active social support, coping skills building, and relapse prevention strategies to enable patients to successfully quit the use of all nicotine containing products.
Biological, Psychological, and Socio-Cultural Factors Influencing Nicotine Use
INTRODUCTION

• Nicotine is an alkaloid derived from the plant *Nicotiana tabacum* an annual herb native to tropical and subtropical parts of the Americas. All parts of the plant contain nicotine except the seeds (INCHEM, n.d.).

• According to Mayer (2014), smoking a cigarette delivers up to 2 mg of nicotine, resulting in plasma concentrations of 0.03 mg/L. Nicotine is ~20% bioavailable, thus 60 mg orally ingested can result in plasma level of 0.18 mg/L. It is estimated that the lower lethal limit is 4 mg/L.

<table>
<thead>
<tr>
<th>Source of Nicotine</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Whole Cigarette</td>
<td>10-30 mg</td>
</tr>
<tr>
<td>1 Cigar</td>
<td>15-40 mg</td>
</tr>
<tr>
<td>1 Gram of Chewing Tobacco</td>
<td>6-8 mg</td>
</tr>
<tr>
<td>1 Vial (5ml) of E-juice</td>
<td>0-100 mg</td>
</tr>
</tbody>
</table>
FACTORS INFLUENCING NICOTINE USE

According to Christen (2001) there are three major factors influencing nicotine use:

• **Biological:** Consumption of nicotine products leads to tolerance, dependence, and physical withdrawal symptoms when use ceases.

• **Psychological:** Consumption of nicotine products is associated with emotions and behaviors that reinforce continued use.

• **Sociocultural:** Consumption of nicotine products can be learned (modeled), with continued use reinforced by conformity pressures and messaging.
FACTORS INFLUENCING NICOTINE USE

Biological

- Stimulation of nicotine receptors trigger release of neurotransmitters, leading to the activation of several systems including the reward system.
- Release of dopamine in the pleasure center (nucleus accumbens) reinforces use of nicotine.
- Native Americans may have increased risk for dependence on nicotine and alcohol due to the ALDH1A1*2 allele (Ehlers and Gizer, 2013).
- Single Nucleotide Polymorphisms of Nicotine Receptor Genes (Do and Maes, 2016):
  - rs16969968: Cigarettes per day, nicotine dependence, heavy smoking, decreased response to antagonists
  - rs1051730: Smoking quantity, susceptibility to lung cancer and vascular disease
- Specific Genes
  - TTC12-ANKK1-DRD2: Modulates dopamine mediated reward system
FACTORS INFLUENCING NICOTINE USE

Psychological

• 32% of adults with any mental illness reported use of tobacco versus 23.3% of those without in 2016 (CDC, 2019). Adults with mental illness or a substance use disorder consume 40% of all cigarettes smoked in the US (CDC, 2019).
• Nicotine use is linked to concurrent substance misuse. The majority of alcohol misusers smoke and those who smoke are more likely to abuse alcohol (Cross et al, 2017).
• Tobacco abuse occurs in 90% of those who abuse cocaine and methamphetamine (Cross et al, 2017).
• Perceived to reduce stress and anxiety because of the “feel good” neurotransmitters that are released.
• Tobacco use (nicotine consumption) is often associated with another behavior and/or sensory cue, reinforcing the habit (after eating, upon waking, drinking alcohol/coffee, smelling a cigarette).
FACTORS INFLUENCING NICOTINE USE

Socio-Cultural

• Shared environmental factors influence initiation and smoking behaviors (Do and Maes, 2016).
  • Lower motivation to quit, lower self-efficacy, higher stressors, and lower refusal skills.

• Social factors: Negative family environments, parental smoking, parental approval of smoking, peer smoking, neighborhood traumatic events, neighborhood cohesion, and self-related religiousness.

• Certain populations have higher rates. According to the CDC, 32% of Native Americans smoke versus 16% of the overall population (Maron, 2018).
  • There are regional variations in smoking amongst Native Americans (e.g. 60% of Native Americans in MN smoke) (Maron, 2018).
CONSIDERATIONS FOR UNIQUE POPULATIONS

• Example: What works in Native American communities?
  o According to the CDC, culturally informed strategies are recommended. They include engaging healers and elders, fostering respect for traditional tobacco use, addressing the social determinants of health, and creating partnerships within the community (Jamal et al, 2018).
  o Increase awareness of the differences and impacts of ceremonial tobacco use versus commercial tobacco use:
    ▪ NIH American Indian and Alaska Native Health
      • https://americanindianhealth.nlm.nih.gov/subtopic/3/People-Traditions/54/Traditional-Tobacco-Use/
    ▪ National Native Network “Keep it Sacred” Program
      • http://keepitsacred.itcmi.org/
2.2a Which of these have been used even once in the past 30 days? (Self Reported) [Pg. 10  LIF13a]

<table>
<thead>
<tr>
<th>Type of Tobacco</th>
<th>Used in Past 30 days?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bidis</td>
<td>99.9%</td>
</tr>
<tr>
<td>Chewing Tobacco</td>
<td>90.4%</td>
</tr>
<tr>
<td>Cigarettes</td>
<td>90.6%</td>
</tr>
<tr>
<td>Cigars</td>
<td>97.4%</td>
</tr>
<tr>
<td>Dissolvable Tobacco</td>
<td>99.7%</td>
</tr>
<tr>
<td>E-Cigarettes</td>
<td>93.8%</td>
</tr>
<tr>
<td>Hookahs</td>
<td>99.1%</td>
</tr>
<tr>
<td>Snus</td>
<td>99.5%</td>
</tr>
<tr>
<td>Tobacco Pipes</td>
<td>99.8%</td>
</tr>
<tr>
<td>Other</td>
<td>99.7%</td>
</tr>
<tr>
<td>None</td>
<td>24.8%</td>
</tr>
</tbody>
</table>

N = 1,695,669

% of Total Respondents
Military Service Members

- Tobacco use impacts readiness among Service members including association with higher dropout rates during basic training and performance effects on visual acuity, night vision, and delayed wound healing (Bondurant & Wedge, 2009).
- Service members face unique challenges and circumstances that may contribute to tobacco use including cultural norms, stress, boredom, and the need to remain alert.
- Many Service members initiate tobacco use after joining the military.
- Similar to the general population, dual use of tobacco products is not uncommon.
- Military service members are a transient population; challenges accessing tobacco cessation services may include work schedule/availability (working 24/7/365, world-wide), proximity to a base and/or, eligibility for services outside the base secondary to state residential requirements.
Addressing Tobacco Use Disorders
A Clinical Approach to Tobacco Use Disorder
Considerations for Electronic Tobacco Products

BRENNA VANFRANK, MD, MSPH | SENIOR MEDICAL OFFICER
AMSUS ANNUAL MEETING • DECEMBER 5, 2019
DSM-5 CRITERIA FOR TOBACCO USE DISORDER

≥2 criteria within 12-months:

- Larger amounts, longer time period than intended
- Persistent desire or effort to cut down
- Great deal of time obtaining substance
- Strong craving, desire, urge to use
- Interference with life (home, school, work)
- Continued use despite social or interpersonal problems
- Important social, occupational activities given up
- Use in situations where it’s hazardous (i.e., bed)
- Use despite knowledge of substance-associated problem (physical, psychological)
- Tolerance
- Withdrawal

Source: DSM-5
Clinical history elements that are important in thinking about a treatment plan:

1. Use status and duration of use
2. Product
3. Substance
4. Use frequency and intensity
EVER USE OF E-CIGARETTES AMONG CURRENT, FORMER, AND NEVER ADULT CIGARETTE SMOKERS — 2010-2018

Source: CDC licensed data fielded by Porter Novelli Services. Summer Styles Survey, 2010-2018
CURRENT E-CIGARETTE USE AMONG U.S. ADULTS, 2014-2018

Source: National Health Interview Survey, 2014-2018
A MAJORITY OF ADULTS WHO USE E-CIGARETTES ALSO USE CONVENTIONAL CIGARETTES

Clinical history elements that are important in thinking about a treatment plan:

1. Use status and duration of use
2. Product
3. Substance
4. Use frequency and intensity
THE TOBACCO PRODUCT LANDSCAPE CONTINUES TO EVOLVE
E-CIGARETTES ARE A DIVERSE PRODUCT CLASS
Clinical history elements that are important in thinking about a treatment plan:

1. Use status and duration of use
2. Product
3. Substance
4. Use frequency and intensity
Nicotine is highly addictive.

Nicotine can harm brain development, which continues until about age 25.
NICOTINE SALTS ALLOW HIGH LEVELS OF NICOTINE TO BE INHALED MORE EASILY
MOST ADULTS WHO USE E-CIGARETTES REPORT USING FLAVORED PRODUCTS

34.8%

YOUR GUT CAN HANDLE MORE THAN YOUR LUNGS

Some claim flavorings are safe because they meet the FDA definition of “Generally Recognized as Safe” (GRAS).

GRAS does not apply to products that are not food.

Source: Odani S et al., Nicotine & Tobacco Research, ntz092, https://doi.org/10.1093/ntr/ntz092
E-CIGARETTE AEROSOL IS NOT HARMLESS

- Volatile organic compounds
- Cancer-causing chemicals
- Ultrafine particles
- Heavy metals such as nickel, tin, and lead
- Flavoring such as diacetyl, a chemical linked to a serious lung disease

Nicotine
Clinical history elements that are important in thinking about a treatment plan:

1. Use status and duration of use
2. Product
3. Substance
4. Use frequency and intensity
FREQUENCY OF CURRENT E-CIGARETTE USE
U.S. ADULTS, 2012-2014

NOT YOUR FATHER’S FAGERSTROM SCALE

Multiple variables can impact use intensity

- substance concentration
- device elements
- device modification
- patient behavior
- patient knowledge
Cessation or use reduction results in \( \geq 4 \) symptoms which cause functional impairment or distress:

- Irritability, frustration, or anger
- Anxiety
- Difficulty concentrating
- Increased appetite
- Restlessness
- Depressed mood
- Insomnia

Source: DSM-5
Tobacco dependence is a chronic, relapsing condition driven by addiction to nicotine.
E-Cigarette, or Vaping, Product Use and Associated Lung Injury

- Lung injuries associated with E-cigarette, or vaping products, are presenting additional acute treatment challenges.

- EVALI: The name given to vaping-related illness is E-cigarette, or Vaping, product use Associated Lung Injury (EVALI).

- Characteristics of EVALI include respiratory symptoms such as cough, chest pain, and shortness of breath, and gastrointestinal symptoms including abdominal pain, nausea, vomiting, and diarrhea.
EVALI Among DoD Members

- Many patients nationally with confirmed lung-injury associated with EVALI reported obtaining tetrahydrocannabinol containing products
- THC positive rates for DoD per 100,000 unique Service members is 623.9 (includes all three components)
- THC represents 74.3% of our positive Service members and 95% of our positive applicants
- As of November 26th, lung-injury associated with Vaping (EVALI) –10 confirmed/probable cases in DoD (6-Army, 2-Navy, 1-AF, 1-USMC); Testing for THC should be a consideration
The Defense Health Agency is amplifying CDC’s key recommendations.

Recommend clinical providers evaluate patients with suspected EVALI according to previously published CDC recommendations.

- Active duty service members (ADSMs) have higher e-cigarette use rates than the general population
- Additional considerations for DoD include occupation, environmental exposure, and screening for THC use.

Ask patients with symptoms of respiratory or gastrointestinal illness, or other symptoms such as fever, chills or weight loss, about their use of e-cigarette, or vaping, products. Not all patients with a history of e-cigarette or vaping, product use who present for evaluation of respiratory, gastrointestinal, or other symptoms require hospitalization.

EVALI patients may be managed on an outpatient basis if they have normal levels of oxygen (>95%) in their blood, no respiratory distress, no other health conditions that might compromise lung capacity, reliable access to health care should their symptoms worsen, and strong social support systems.
Key Interim Guidance for Health Care Providers Cont.

- Influenza testing should be strongly considered, especially during flu season. Helps inform EVALI surveillance. If positive for influenza, health care providers should consider prescribing antiviral medications if clinically indicated.
- Corticosteroids can be considered for outpatients on a case-by-case basis, however, they should be used with caution in outpatients, because this treatment modality has not been well studied among outpatients, and corticosteroids could worsen respiratory infections.
- Treatment strategies such as behavioral counseling are recommended to help EVALI patients discontinue using e-cigarette, or vaping, products.
- Health care providers should emphasize the importance of annual flu vaccines for all patients 6 months of age or older, including patients at risk of EVALI.
Issues with Current Reportable Medical Event Reporting Processes

- There is contradictory guidance from DHA and the Services as it pertains to reportable medical events (RMEs) and policies have changed over time. RME reporting processes and mechanisms have historically varied between the Services. This has resulted in:
  - Variations in what personnel consider an RME
  - Variation in recognition of the variables required when reporting an RME
  - Incomplete and inconsistent data on communicable disease cases over time and between Services
  - Lack of standardization related to merging data such that reports vary even when the same data is used
  - Inability to provide DoD-level oversight of communicable disease outbreaks
  - Inability to develop or implement standardized training to improve reporting
  - Insufficient information to establish resources required to improve surveillance systems
Proposed DoD Reporting Process

• New cases of E-cigarette, or vaping, associated lung injury (EVALI) will be reported to the Disease Reporting System internet (DRSi) in accordance with the Defense Health Agency Procedural Instruction, an instruction developed with input from the Armed Forces Health Surveillance Division (AFHSD), US Air Force School of Aeronautical Medicine, Navy and Marine Corps Public Health Center, and Army Public Health Center.

• In order to standardize EVALI reporting, each Service Public Health Center shall:
  • Validate cases of EVALI in DRSi according to their Service guidance and determine the proper case classification status according to the most recent CDC EVALI case definition
  • Inform the AFHSD of the EVALI case and associated case classification

• AFHSD will maintain the DoD EVALI case list to include CDC case identification numbers as available for DoD-wide surveillance reports and be responsible for reporting of EVALI case counts
Approaches to Reducing Nicotine Use: E-Cigarette Case Example
A 42 year-old female patient who was referred to a pharmacist-based tobacco cessation outpatient clinic. A month ago, the patient was admitted for cough, congestion, pain to back, and upper ABD. Patient expressed she was worried because she vapes. Patient reports vaping about 2.5 years, using about 4 to 8 ml of 6mg/ml (0.6%); unknown brand.

PMH includes GAD, MDD, insomnia, GERD, vit D. deficiency, HTN, muscle weakness, and dermatitis.

Patient reports having used tobacco for 25 years, attempted to quit one time in past using nicotine patch plus gum, having success for two years. When patient restarted smoking, she tried e-cigarette to help her quit smoking.

Patient wishes to quit vaping.
ENDS CASE – ACTIVE MEDICATIONS LIST

• ALBUTEROL HFA INHALER
• CHOLECALCIFEROL (VIT D3) 50,000UNIT
• GUAIFENESIN 600MG SA
• IBUPROFEN 400MG TAB
• LISINOPRIL 10MG TAB

• SODIUM CHLORIDE NASAL SPRAY INSTILL 1
• NICOTINE POLACRILEX GUM 2 MG (PRN)
• NICOTINE [TRANSDERMAL] 14 MG/DAY
• MEDICAL MARIJUANA USE
### ENDS CASE: PATIENT’S NICOTINE INTAKE

<table>
<thead>
<tr>
<th>Nicotine Delivery System</th>
<th>Concentration</th>
<th>Amount of Nicotine Frequency/day</th>
<th>Total Daily Nicotine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient’s Vape</td>
<td>6mg/ml (0.6%)</td>
<td>Constant; 4ml-8ml</td>
<td>24mg – 48mg</td>
</tr>
<tr>
<td>Combustible CIGARETTE</td>
<td>Extra Strong</td>
<td>1 cig ~ 1mg nicotine</td>
<td>Depend on individual</td>
</tr>
<tr>
<td></td>
<td>Strong</td>
<td>1 pack = 20 cigs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Light</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
ENDS CASE: DSM-5 ASSESSMENT

• Assessed patient based on tobacco disorder or nicotine addiction
  • Physiological dependence
  • Social impairment
  • Habitual/consistent use without control

• Our patient’s response based on DSM-5 Dependence assessment.
  (“Yes” to all criteria):
  ✓ Larger amounts, longer time period than intended
  ✓ Persistent desire or efforts to cut down
  ✓ Great deal of time obtaining substance
  ✓ Strong craving, desire, urge to use
  ✓ Interference with life
  ✓ Continued use despite social or interpersonal problems
  ✓ Important social, occupational activities given up
  ✓ Use in situations where it’s hazardous (i.e., bed)
  ✓ Use despite knowledge of substance-associated problem (physical, psychological)
  ✓ Tolerance
  ✓ Withdrawal
1st Visit
Address nicotine addiction: Behavior + Pharmacotherapy.
Plan: Nicotine patch 21mg/day + nicotine gum 2mg prn for breakthrough cravings. Counseled on behavior/lifestyle modification.

2nd visit (2nd week f/u)
Patient had frequent cravings, has not vaped.
Plan: Increase nicotine patch dose 28mg/day + nicotine gum 2mg prn breakthrough cravings; behavior/lifestyle modification.

3rd visit (3rd week f/u)
Patient reports increased in dizziness/headaches, still has not vaped.
Plan: Decrease patch 21mg/day + nicotine gum 2mg prn; emphasize behavior/lifestyle modification.

4th visit (4th week f/u)
Patient reports doing well, has not vaped. No cravings at all.
Plan: Decrease patch 14mg/day + nicotine gum 2mg prn; emphasize behavior/lifestyle modification.
ENDS CASE: THERAPY APPROACH

• Patient has been successful on not vaping up to date.
• Address nicotine addiction based on PHS Clinical Practice Guideline.¹
  • Patient daily nicotine intake: 6mg/ml x (4 to 8ml per day) ~ total daily 24mg to 48mg
  • Pharmacotherapy approach treated patient based on nicotine intake amount
  • Combination nicotine replacement therapy
  • Behavior/lifestyle modification
• Follow-up weekly to encourage abstinence.
• Motivational interviewing counseling applied at every visit.
• Treatment approach: Physical-Psychological-Behavioral
Approaches to Reducing Nicotine Among Federal and TRICARE Beneficiaries
FEDERAL EMPLOYEES HEALTH BENEFITS (FEHB) PROGRAM

• OPM communicates program requirements and negotiates health insurance benefits
• Benefits are negotiated annually
• Over 80 health insurance Carriers for 2020
• Approximately 8.2 million enrollees
MODERNIZING THE FEHB TOBACCO CESSATION BENEFIT

- Adopts USPSTF guidelines for counseling sessions.
- Strong messaging that coverage applies to all tobacco products, including e-cigarettes.
- Emphasizes importance of barrier-free access.
- Helps youth tobacco users.
- Ensures coverage and access includes varenicline and combination NRT therapy.
SCREENING AND INTERVENTIONS

Screening
• All FEHB Carriers must cover United States Preventive Services Task Force Recommendations that carry an A or B rating. Tobacco use screening is an “A” recommendation for:
  o Adults
  o Pregnant women

Brief Interventions
• The modernized FEHB Tobacco Cessation Benefit adopts the USPSTF guidelines for counseling sessions.
  o Adults
  o Pregnant women
  o School-aged children and adolescents
Pharmacotherapy

• All FDA approved cessation medications (to include OTC) are 100% covered in FEHB plans.
• FEHB Carriers must ensure coverage and access includes varenicline and combination NRT therapy.

Grabbing the attention of Payors

• Plan Performance Assessment (PPA)
• Call Letter
• Legacy of service and long-term members
• All FEHB Carriers must cover United States Preventive Services Task Force Recommendations that carry an A or B rating.
  o **B Rating:** For school-aged children and adolescents, primary care clinicians provide interventions, including education or brief counseling, to prevent initiation of tobacco use among school-aged children and adolescents.
• Educational campaigns by Carriers and WorkLife Coordinators (flyers with QR codes, information about the FEHB benefit distributed through Fed agencies).
• Messaging efforts to decrease/eliminate nicotine use and prevent co-morbidities.
TREATMENT AND PREVENTION FOR TRICARE BENEFICIARIES

• DoD follows *Treating Tobacco Use and Dependence Clinical Practice Guidelines*.
• Tobacco cessation services are available for all TRICARE beneficiaries who are not eligible for Medicare.
• What is covered:
  o Tobacco cessation counseling from a TRICARE-authorized provider in the United States.
  o Prescription and over-the-counter tobacco cessation products at no cost including Chantix, bupropion, and nicotine replacement therapy to non-Medicare beneficiaries over age 18.
  o Coverage is also available for active duty Service members and their families stationed overseas.
• Additional cessation services available from TRICARE regions and on at the installation level.
To improve performance and military readiness among service members, YouCanQuit2, the DoD’s tobacco education campaign, aims to increase tobacco cessation among U.S. Service members. The campaign supports the DoD’s efforts to build and sustain a ready and resilient force by providing quit tobacco resources for Service members, as well as their family and friends and health professionals.

The campaign serves as an essential resource in support of tobacco cessation programs and initiatives among the military service branches. YouCanQuit2 features a range of tools and resources:

- **Digital tools:** Tobacco savings calculator, 24/7 Live Chat
- **Informational content:** Articles, infographics, fact sheets
- **Active social media presence:** Facebook, Instagram, Twitter
- **Resources for health professionals** to give directly to their Service members on military installations
Questions?
Appendix: Presenter Bios
CAPT David Lau, DPM, MBA/MPH
(USPHS)

CAPT David Lau, DPM, MBA/MPH is a Podiatrist, Health Administrator, Public Health Specialist in the United States Public Health Service (USPHS). He currently serves at the LAX Resident Post as a Supervisory Consumer Safety Officer (SCSO)/Investigator in the Investigations Branch, Division of Coast Imports (DWCI), Office of Enforcement and Import Operations (OEIO), Office of Regulatory Affairs (ORA), US Food and Drug Administration (FDA). Past assignments include serving as a Health Services Administrator (HSA) with the US Department of Homeland Security (DHS) and with the Indian Health Service (IHS) as a Regional Chief Clinical Consultant, surgeon, clinician and administrator. He has served as a Special Operations Clinical Trainer (SOCT) training US Army Special Forces Medical Sergeant (18D)/Special Operations Combat Medic (SOCM) students thru the Joint Special Operations Medical Training Center (JSOMTC). He is past Team Leader of the USPHS deployment team Service Access Team (SAT) #2. CAPT Lau is a graduate of the Interagency Institute for Federal Health Care Executives course at the Uniformed Services University of the Health Sciences (USUHS). He is trained by US AID in Interagency Humanitarian Assistance and Disaster Response/International Humanitarian Coordination. He is the USPHS Association of Military Surgeons of the United States (AMSUS) Senior Advisor. He serves as the Leadership Advisor for the USPHS Nicotine Cessation Services Access Workgroup (NCSAW). As a Basic Tobacco Intervention Skills Certified Specialist, Instructor Certified, he takes a special interest in working closely with HOSA – Future Health Professionals nationally in tobacco/Electronic Nicotine Delivery Systems (ENDS) e-cigarettes/vaping cessation education. As a clinician, he is fiercely passionate concerning amputation prevention, and continues to partner with numerous stakeholders in this initiative. He is also a Leadership Advisor for the USPHS Minority Officers Liaison Committee (MOLC). He lectures at local universities on USPHS and Public Health. CAPT Lau attended the University of California at San Diego (UCSD), the California College of Podiatric Medicine (CCPM), and residency trained at the Los Angeles County + University of Southern California Medical Center (LAC+USC). He earned his MBA/MPH at the University of California at Irvine (UCI)/University of California at Los Angeles (UCLA).
CAPT Kimberly Elenberg, DNP (USPHS)

Captain Kimberly Elenberg, DNP supports the Combatant Commands, as the Director, Total Force Fitness, Public Health Directorate, Defense Health Agency. Captain Elenberg advises the Department of Defense on a comprehensive strategy for optimizing the fitness and resilience of our Service members, their families and the Defense community. This effort directly supports the National Defense Strategy by reforming policy, financial resources, and business practices that impact our Service members’ nutritional, physical, environmental, medical/dental, social, behavioral, psychological, and spiritual fitness. Prior to this, Captain Elenberg served in the Office of the Assistant Secretary of Defense for Health Affairs as the Deputy Director of Population Health and Medical Management. She was responsible for guiding population health and disease management at 36 military treatment facilities that serve 9.7 million beneficiaries around the world. Captain Elenberg also served as the Director for Biosurveillance and Emergency response at the Department of Agriculture, where she orchestrated the design and development of nationwide electronic food safety and security systems in addition to assisting with the design of the Department of Homeland Security’s National Biosurveillance Information System. For her leadership during deployments in 2007 and 2009, Captain Elenberg received the Surgeon General’s Exemplary Service Medal. In 2009, she was selected as the United States Public Health Service Responder of the Year. In 2014, she received the Military Health System Senior Nurse Leadership Award. Captain Elenberg earned a bachelor’s degree in nursing at Temple University, Philadelphia, a master’s degree in informatics from the University of Maryland, and graduated summa cum laude with a doctorate in nursing practice from Johns Hopkins University, Baltimore.
Ms. Sheila Pinter, MS, MPH (OPM)

Sheila Pinter is a Management Analyst within Healthcare and Insurance at the U.S. Office of Personnel Management (OPM). She is a technical expert for developing and implementing the prevention/wellness strategy across the Federal Employees Health Benefits (FEHB) portfolio and is the primary liaison for health and wellness initiatives between FEHB and worksite health promotion programs. She is well versed in creating partnerships with external agencies and linking key stakeholders to help achieve shared goals and support quality initiatives in the FEHB Program. Sheila brings a broad background in population health and wellness to the table, with years of experience as a Program Analyst for the Department of the Army and as an Exercise Physiologist in hospital-based Cardiac and Pulmonary Rehabilitation programs.
Dr. Brenna VanFrank, MD, MSPH is the senior medical officer in the Office on Smoking and Health (OSH) at the Centers for Disease Control and Prevention (CDC). She is responsible for providing input on the medical aspects of OSH’s scientific research and serves as a scientific and medical consultant for OSH programs and projects. Dr. VanFrank joined CDC in 2014 as an Epidemic Intelligence Service (EIS) officer and has worked in nutrition, obesity, emergency preparedness, tobacco, and the integration of healthcare and public health. Dr. VanFrank is board certified in pediatrics and preventive medicine and is a member of the national Delta Omega Honorary Society in public health.
CDR Michael Verdugo, PharmD, MS, ADC-II, APP, BCPS, CPHQ, LASAC, (USPHS)

Commander Verdugo is the Deputy Director, Division of Commissioned Personnel Support of the Indian Health Service (IHS) at headquarters in Rockville MD. The Division provides military human resources support to over 1,700 USPHS officers assigned to the IHS. Commander Verdugo has held clinical and supervisory pharmacist positions within the IHS. He has also performed duties as a consultant for healthcare quality initiatives and clinical informatics at the facility and regional level. He has assisted tribal and urban Native American health centers open new pharmacies. His most recent assignment was as Acting Purchased/Referred Care Officer, providing consultative guidance to Area leadership and 34 Tribal programs on regulations related to the payment for private sector healthcare. Commander Verdugo has been training healthcare professionals to deliver evidence based nicotine cessation interventions since 2001 and maintained an active practice in the Tobacco Cessation clinic while serving at the Cass Lake USPHS Indian Hospital. He earned a Doctor of Pharmacy degree from the University of the Pacific in Stockton, CA, completed pharmacy residency training at the VA Medical Center in Huntington WV, and a master’s degree in Addiction Counseling from Grand Canyon University. He holds licensure as an advanced practice pharmacist as well as an associate substance abuse counselor. A graduate of the Interagency Institute for Federal Healthcare Executives, he maintains certification in Pharmacotherapy, as a Professional in Healthcare Quality and as a Level II Contracting Officers Representative.
CDR Jing Li, PharmD, BCPS (USPHS)

CDR Jing Li is the Specialty Pharmacy Manager and Clinical Oncology Pharmacist at the Phoenix Indian Medical Center (PIMC), Indian Health Service. CDR Li graduated with Doctor of Pharmacy from Massachusetts College of Pharmacy in 2005 and Bachelor’s in Science in Mathematics from University of California, Los Angeles. She joined the United States Public Health Service (PHS) as a pharmacy student with the Commissioned Officer Student Externship Program (COSTEP) in 2003. CDR Li started her PHS and pharmacist career with the Bureau of Prisons at FCI Terminal Island, California. She later joined the Indian Health Service (IHS) in 2006 and has been advancing/improving professionally and clinically at PIMC since. She is Board Certified in Pharmacotherapy Specialty (BCPS) since 2012 and trained in multiple levels in tobacco cessation certifications (Basic Skills to Treatment Specialist) and certified as an Instructor in all levels of tobacco cessation certifications.

In 2009, CDR Li became the PIMC Tobacco Cessation Clinic Co-Director and she plays an active role in assisting the Surgeon General’s priority initiative in tobacco cessation. She is recognized as a subject matter expert in tobacco cessation within IHS. She is currently the Co-Chair of USPHS Nicotine Cessation Services Access Workgroup assist in implementation and providing tobacco cessation resources. CDR Li has always been very proud of her choice in joining the Commissioned Corp as a pharmacist officer and it shows through her active recruitment work at various schools of pharmacy and her mentorship to students.
LCDR Gayle Tuckett, PharmD, BCGP, NCPS, CDE, AE-C (USPHS)

Lieutenant Commander (LCDR) Tuckett commissioned in the United States Public Health Service in December of 2013, earning a Bachelor of Science degree in Biology from Old Dominion University and a Doctor of Pharmacy degree from Virginia Commonwealth University. She has experience in the areas of: pain management (as a previous clinic co-creator and coordinator), diabetes (as a previous Diabetes Education Accreditation Program Coordinator and clinic provider), asthma (as a previous clinic creator and provider), and heavily in the area of tobacco cessation (as a previous clinic co-creator, coordinator, and provider). Currently, her role in nicotine dependence involves providing training resources and delivering training for tobacco cessation interventions and equipping future health care professionals with these tools. She has been training individuals and establishing tobacco cessation clinics since 2012.

LCDR Tuckett served two years at Commissioned Corps Headquarters in Rockville, MD where she served as a Policy Analyst and led the update of the Corps’ Substance Use policy in support of ~6,500 officers. Currently, she works as a Program Management Officer with the Counter-Terrorism Emergency Coordination Staff at the Food and Drug Administration in a liaison capacity to DoD to manage drug products related to counter-terrorism and warfighter protection.
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