



2016

HEALTH OF THE FORCE

Create a **healthier force** for tomorrow.

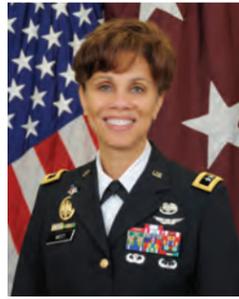
— U.S. Army Public Health Center —



CONTENTS

1	Introduction
5	Environmental Health
15	System for Health
17	Performance Triad
33	Installation Health Index
40	Medical Readiness
54	Health Outcomes
76	Health Factors
100	Healthcare Delivery
107	Installation Profile Summaries
146	Appendices

READINESS and HEALTH



Army Medicine's primary mission is supporting the Warfighter's readiness and health, and taking care of our Army Civilians, Retirees and Families. By supporting the Warfighter, we uphold the solemn commitment our Nation's Army has made to our Soldiers when sending them in harm's way. As an organization, we strive to be agile, adaptive, flexible and responsive to Warfighter requirements and we must remain ready, relevant and reliable. Our readiness to deploy healthy individuals and organizations in support of the world's premier combat force must be without question. Readiness is our top priority.

Therefore, I am pleased to release the second *Health of the Force Report*. The *Health of the Force Report* is a review of Soldier health at the installation level. Senior Army leaders are using this tool to further understand the health of their communities, by installation, and to improve the environment, infrastructure and nutrition offerings on our installations. This effort highlights health reporting in a manner that incentivizes health promotion and prevention, and provides meaningful data for use by Senior Army leaders to create cultural change in support of the total Army's overall readiness and health.

Ultimately, Army Medicine is exploring and illuminating emerging and best practices through the objective data, and continues to lead an unwavering effort that sustains the readiness and health of the total Army.

Army Medicine's fundamental tasks are promoting, improving, conserving or restoring the behavioral and physical well-being of those entrusted to our care. From the battlefield to the garrison environment, we support operational requirements of Combatant Commanders while also ensuring the delivery of quality healthcare to our beneficiaries. The *Health of the Force Report* is a concerted effort that highlights the Army's current population health successes that ultimately we, as an Army, can leverage across our camps, posts and stations, in support of the Army's number one priority, readiness. Our Army and our Nation deserve nothing less.

"One Team, One Purpose...Conserving the Fighting Strength!"

Lt. Gen. Nadja Y. West
44th U.S. Army Surgeon General
and Commander, U.S. Army Medical Command

Why Measure Health of the Force?



Good health is essential for combat readiness. I am proud to lead the Army Public Health Center team that has compiled the second edition of the *Health of the Force Report*. We received critical feedback from Senior Army leaders regarding the inaugural report published in November 2015, and this commentary helped to refine the existing measures and indices of this version. We desire to create countless meaningful conversations among leaders and Army communities through this data-rich report that is equally visually stunning.

The 44th Army Surgeon General's priority to take care of Soldiers, Army Civilians, Retirees and Families Always, is reflective in this population-level report. The *2016 Health of the Force Report* is advancing Army Medicine's System for Health transformation. The System for Health includes the Army's Performance Triad, Delivery of Health and Healthy Environments. To this end, we are changing

the conversation and culture from a "find it and fix it" approach to a "predict and personalize" approach that is person-centered, holistic and experience-centric to help move the total Army to better health and readiness.

In support of total Army readiness, the U.S. Army Public Health Center continues to provide meaningful data and information through rigorous research and analyses. We are committed to supporting the Army's number one priority, readiness. We are public health professionals committed to protecting and improving the health of Soldiers, Army Civilians, Families and communities where they live, work, play and shop.

"One Team, One Purpose...Conserving the Fighting Strength!"

Mr. John J. Resta
Director, U.S. Army Public Health Center
and Acting Deputy Chief of Staff for Public Health

Welcome to the 2016 Health of the Force Report

OVERVIEW

Welcome to the *2016 Health of the Force*! As with the previous edition, this year's publication reports installation-level population health metrics for Active Component Soldiers based on national leading health indicators and military-relevant measures of health readiness. The report represents a cross-sectional assessment of population health status for the preceding calendar year based on information from existing medical surveillance and health-related data systems. A goal of medical surveillance is to improve Soldier health and readiness by informing programs to reduce and, ultimately, prevent illness and injury. *Health of the Force* highlights programs and initiatives with vignette and spotlight sections to provide context for the current surveillance data and showcase the diverse ways in which the Army is enhancing its health readiness. The 2016 report includes several changes to expand its content and improve the quality of the information provided. Expanded topics cover additional aspects of health readiness and include environmental factors that impact well-being. Methods were adjusted to improve consistency with other Army health surveillance products. Report spotlights now include both Army and local initiatives. Information on Family member obesity is included in this edition, as is the impact of parental deployment on child behavioral health. To leverage best practices across the Army, a "Top 5" list for each indicator identifies the highest performing installations.

NEW CONTENT

A new section on environmental health includes potential short- and long-term negative health outcomes for Army populations exposed to poor air quality and contaminated water. Although air quality cannot be controlled at the installation or unit level, decisions about the timing of training activities relative to local air quality can impact near-term and cumulative health risk. The medical readiness section now includes data on dental readiness and permanent profiles. Changes made to medical readiness categories in 2016 did not affect the data reporting for this edition of *Health of the Force*, which represents calendar year 2015 data. The impacts of eye injuries and noise-induced hearing injuries on readiness are included in new sections that highlight the success of Army programs to decrease Soldiers' risk for hearing loss and blindness. Additional indicators of quality of care are also provided, including hearing testing, chlamydia screening, and compliance with an array of healthcare performance indicators.

OCONUS

In addition to reporting on installations within the United States, this year's report provides Performance Triad and Health Index data for European and Pacific locations. Data for specific installations outside the continental United States (OCONUS) are included, along with a region-specific reference value. OCONUS installations were evaluated separately due to differences in medical standards for overseas assignments and in healthcare delivery systems.

DATA UPDATES

Those familiar with the 2015 *Health of the Force* may notice slight changes in reported obesity, chronic disease, and behavioral health disorder estimates in the 2016 edition. These changes are an artifact of methodology enhancements implemented with the update. For the obesity evaluation, reporting accuracy improved as new weight classifications were added and records with missing data were excluded. For chronic disease and behavioral health disorders, case definitions were refined to better reflect the outcome of interest. Data sources were streamlined to use the Defense Health Agency (DHA) Armed Forces Health Surveillance Branch (AFHSB) Defense Medical Surveillance System (DMSS) as the central source for all health outcome measures. Because these differences produced visible changes from the values reported in the 2015 edition, the 2016 update includes historical trends reflecting the new data.

IN CONCLUSION

Achieving optimal health and readiness does not occur in a vacuum. This edition of *Health of the Force* describes ongoing efforts by the Army Installation Management Command (IMCOM) and the Army Medical Command (MEDCOM) to improve the health of Army communities through system-level changes. These include infrastructure designs that promote healthy lifestyle choices, and paradigm shifts to transform healthcare delivery from a problem-focused system to one that empowers individuals to improve, restore, and maintain their own health and readiness. Local installation-level initiatives are also highlighted. These perspectives, in addition to the new features of this year's report and the volume of metrics updated from the 2015 edition, combine to create a valuable tool for leaders at all levels. It is our goal that the *2016 Health of the Force* will facilitate informed decisions that ultimately improve the readiness, health and well-being of our Soldiers, Civilians, and Families.

REPORT HIGHLIGHTS

ENVIRONMENTAL HEALTH

14 of the 32 U.S. Army installations in the *Health of the Force* portfolio are located in areas where air quality fails to meet either ozone or particulate matter air quality standards.

PERFORMANCE TRIAD (P3)

SLEEP

The overall installation score for optimal sleep levels among Active Component (AC) Soldiers was 68 out of 100. Scores ranged from 62 to 74 across installations. Approximately 23% of AC Soldiers met the recommended P3 sleep goals and standards (range: 16 to 35% across installations).

ACTIVITY

The overall installation score for optimal physical activity was 81 out of 100. Scores ranged from 78 to 85 across installations. Approximately 54% of AC Soldiers met the recommended P3 activity goals and standards (range: 47 to 65% across installations).

NUTRITION

The overall installation score for optimal nutritional intake among AC Soldiers was 70 out of 100. Scores ranged from 67 to 75 across installations. Approximately 25% of AC Soldiers met the recommended P3 nutrition goals and standards (range: 20 to 34% across installations).

INSTALLATION P3 INDEX (IPI)

Taken collectively the P3 metrics were similar across installations. One installation (Presidio of Monterey) had an IPI that was significantly higher than the Army average, indicating more positive P3 behaviors among the installation's survey respondents.

MEDICAL READINESS

Medical readiness within 72 hours was not achieved by 17% of AC Soldiers (range: 12 to 24% across installations). Soldiers with overdue dental or medical exams comprised just over one-third of those not medically ready.

DENTAL READINESS

Overall, 5% of Soldiers were medically not ready due to dental deficiencies (range: 2 to 8% across installations).

PROFILES

Approximately 5% of Soldiers had permanent profiles (range: 2 to 8% across installations).

INJURIES

Approximately 50% of Soldiers were injured in 2015; some individuals experienced multiple injuries during that period. There were 1,361 new injuries per 1,000 AC person-years in 2015 (range: 1,112 to 1,782 per 1,000 AC person-years).

HEARING INJURIES

Approximately 40 new hearing injuries were diagnosed per 1,000 AC person-years, (range: 8 to 72 injuries per 1,000 AC person-years). Among Soldiers receiving audiometry testing, 4% experienced a new Significant Threshold Shift in 2015.

EYE INJURIES

Approximately 12 new eye injuries were diagnosed per 1,000 AC person-years (range: 6 to 18 injuries per 1,000 AC person-years across installations).

REPORT HIGHLIGHTS

BEHAVIORAL HEALTH

Roughly 20% of AC Soldiers had a diagnosed behavioral health disorder (range: 13 to 28% across installations). Among behavioral health diagnoses, adjustment disorder, mood disorders and anxiety disorders were most common.

CHRONIC DISEASE

Among the AC Soldiers evaluated, approximately 13% had one or more diagnosed chronic conditions (range: 11 to 20% across installations.) Cardiovascular conditions were the most common condition assessed, followed by arthritis, asthma and chronic obstructive pulmonary disease (COPD).

OBESITY

Obesity remains a concern for military readiness as 17% of Soldiers were classified as obese. Prevalence ranged from 12 to 21% across installations.

TOBACCO

Approximately 28% of AC Soldiers reported tobacco use (smoke or smokeless), with use ranging from 11 to 37% across installations.

SLEEP DISORDERS

Approximately 11% of AC Soldiers had a diagnosed sleep disorder (range across installations: 6 to 16%).

SUBSTANCE ABUSE

Approximately 4% of AC Soldiers had a diagnosed substance abuse disorder (range across installations: 1 to 7%).

CHLAMYDIA

Approximately 19 new chlamydia infections were reported per 1,000 AC person-years (range across installations: 9 to 31 infections per 1,000 AC person-years).

CHLAMYDIA SCREENING

Compliance with screening recommended for female AC Soldiers under 25 was 81% (range across installations: 69 to 95%).

HOSPITAL ADMISSIONS

Preventable hospital admissions were estimated to be 2% among AC personnel (range across installations: 1 to 4%).

HEDIS COMPOSITE SCORE

The Healthcare Effectiveness Data and Information Set (HEDIS) Composite Score consolidates 9 HEDIS performance indicators for enrolled Army beneficiaries (e.g., compliance with recommended diabetes testing, and selected cancer screening). In 2015, the average score for Army MTFs was 77%; scores ranged from 57% to 92% across installations.

INSTALLATION HEALTH INDEX (IHI)

Installation scores did not differ significantly from the Army average, indicating that installations were similar to each other across evaluated health measures.

VIGNETTES

In addition to reporting and visualizing surveillance data, the 2016 *Health of the Force* report provides more than 20 spotlight, "Did you know?", and emerging health issues pieces to inform commanders and readers of emergent issues as well as enterprise-wide and local actions being taken to improve Soldier health.





ENVIRONMENTAL HEALTH

OVERVIEW

Health of the Environment

Soldier readiness depends on optimal physical and mental health. However, health is strongly influenced by the air we breathe, the water we drink, and the places we live, work and play. The health of the environment is the essential foundation for all life on earth.

In this edition of *Health of the Force*, we begin to explore the role of environmental health in achieving and maintaining Soldier readiness and performance. The Army strives to preserve the health of the environment by ensuring that mission activities comply with laws designed to protect air, water and land. But preserving environmental health on a community and global scale requires the collective effort of all who have the potential to influence the resulting exposures and outcomes.

Over the last 50 years, the United States has made tremendous progress in efforts to diminish the presence of toxic contaminants that impair the quality of our air, water and land. This progress has been achieved through education about our individual and collective impact on environmental health; investing the necessary resources to control toxic chemical releases; and through the vigilance of environmental sampling to keep us informed on the status of these precious commodities.

The following pages examine a few of the ways that air and water quality are evaluated in the interest of preserving public health, and how the status of these environmental media can affect the health of the Army community.

"For the United States to become the "healthiest" nation, we must understand how essential a healthy environment is to good health and quality of life. We know that globally, nearly 25 percent of all deaths and the total disease burden can be attributed to environmental factors. So as health systems and individuals we must focus on increasing awareness about environmental health as well as eliminating environmental health threats."

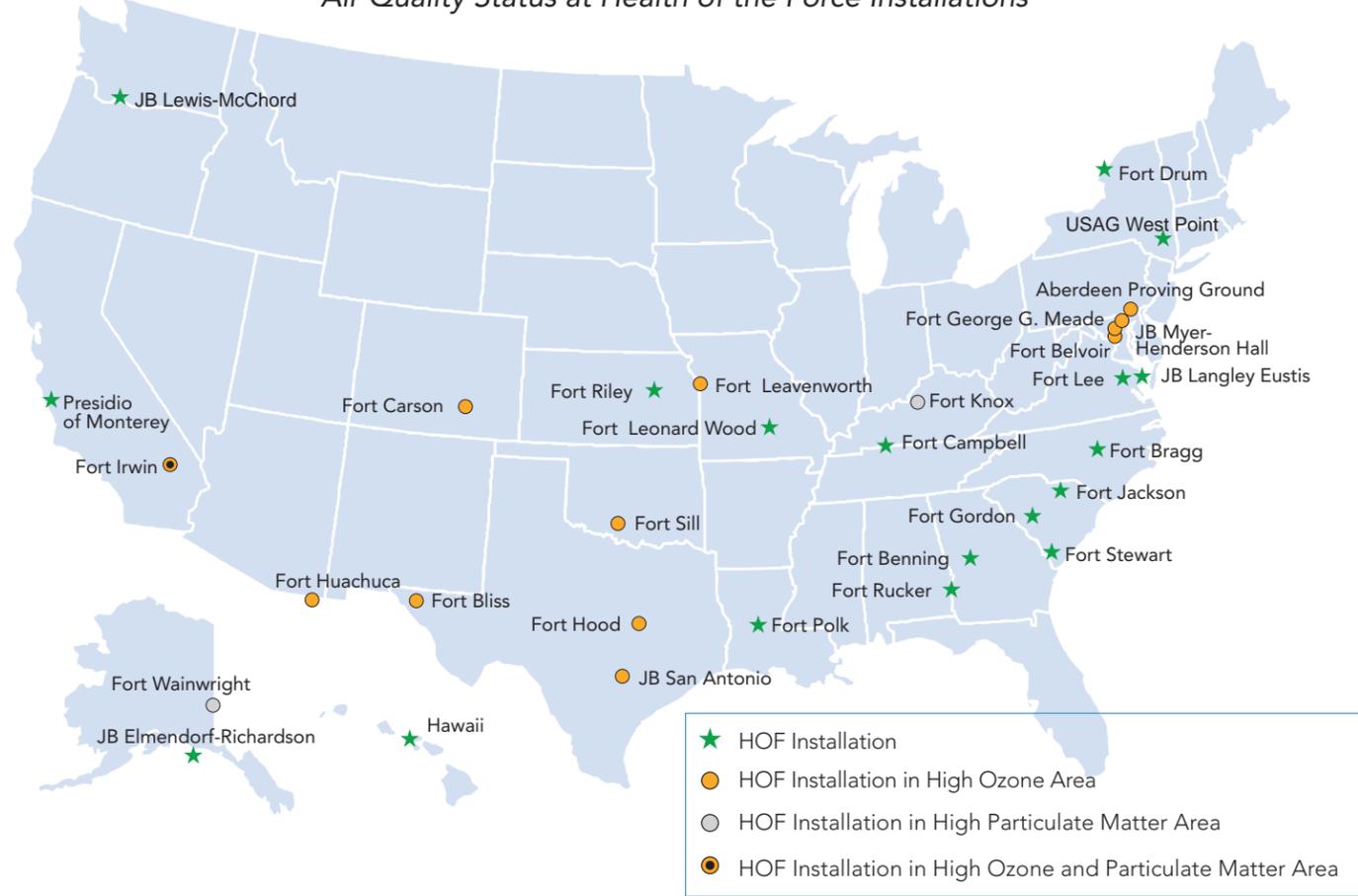
—Dr. Pat Breyse, PhD

National Center for Environmental Health/Agency for Toxic Substances and Disease Registry

Air Quality

Despite over 45 years of control imposed by the Clean Air Act, more than half of the United States population—166 million Americans—live in a locale where air quality fails to meet federal standards designed to protect public health.¹ As of 2015, 14 of the 32 U.S. Army installations in the *Health of the Force* portfolio are located in areas where air quality fails to meet either ozone or particulate matter air quality standards.

Air Quality Status at Health of the Force Installations



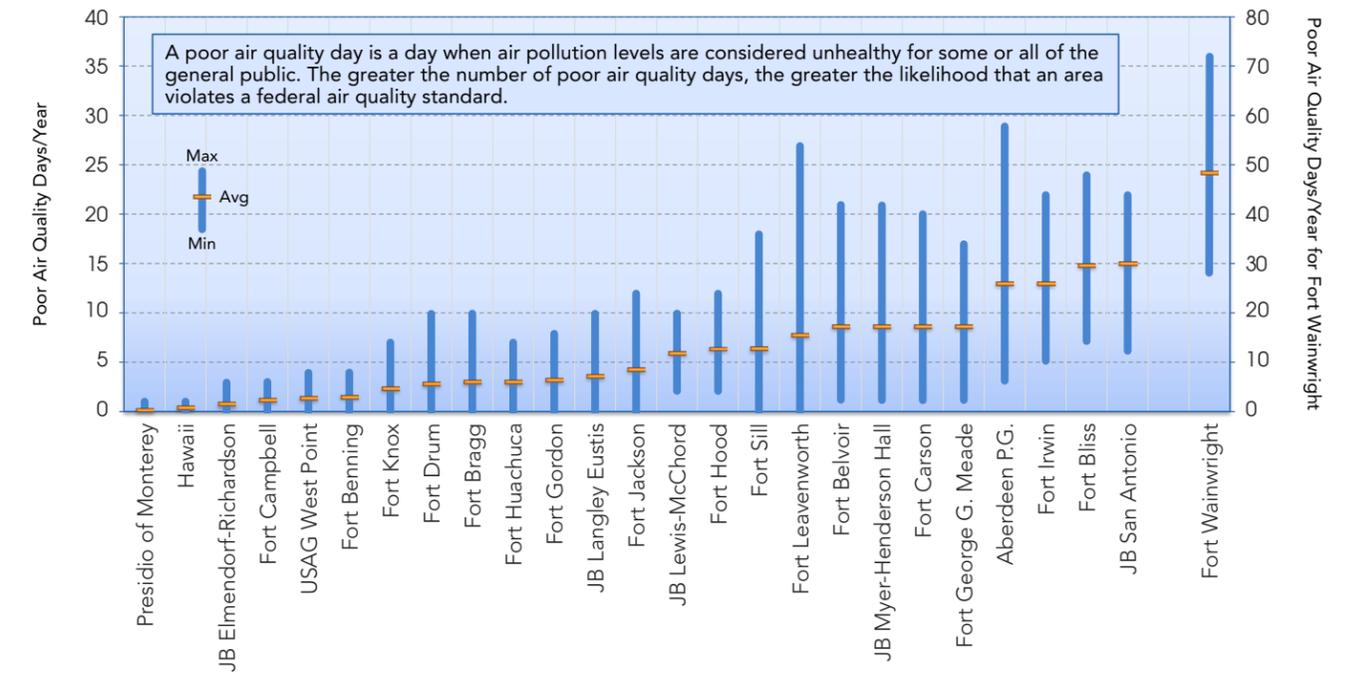
What is Ozone?

Ground-level ozone forms in an atmospheric chemical reaction involving nitrogen oxides (NO_x), volatile organic compounds (VOCs), oxygen and sunlight. It is not emitted directly from smokestacks or tailpipes. Vehicles, generators, power plants and all types of combustion produce NO_x. Products such as paints, solvents and liquid fuels emit VOCs. Visible smog or haze in outdoor air is often an indicator of high ozone levels.

What is Fine Particulate Matter?

Fine particulate matter (PM_{2.5}) is present in smoke emitted from factories, vehicles, diesel engines, power plants, forest fires and any kind of burning material. These particles are formed during combustion and chemical reactions, and are 10–100 times smaller than windblown dust, dirt, sand, or pollen. Studies show that black carbon particles, like those present in diesel exhaust, are likely to pose the greatest health risk.

Maximum, Minimum, and Average Poor Air Quality Days/Year 2011–2015*



*No data were available for Forts Lee, Leonard Wood, Polk, Riley, Rucker, and Stewart.

Who's at risk from ozone?

Children, older adults, and people with respiratory conditions, such as asthma, are most at risk from ozone. However, healthy adults are also at risk when exercising or working outdoors on days when ozone levels are high. Exposure to ozone can harm the respiratory system, aggravate asthma and other lung diseases, and is linked to premature death from respiratory causes. Evidence indicates ozone is also likely to be one of the many causes of asthma. Both short-term (hours to days) and long-term (months to years) ozone exposures have been linked to harmful health effects.²

Who's at risk from PM_{2.5}?

Children, older adults, and people with pre-existing heart or lung disease are most at risk from PM_{2.5}. Recent research indicates pregnant women and newborns may also be at increased risk from fine particles. Short-term exposure to PM_{2.5} is linked to respiratory problems like asthma attacks, wheezing and shortness of breath; and has been causally related to heart attack, stroke and premature death due to heart-related conditions.³ Evidence indicates that long-term exposure is associated with new-onset type 2 diabetes.⁴ In addition, diesel exhaust and PM_{2.5} in outdoor air have been classified as human carcinogens.^{5,6}



Exposure to ground-level ozone and fine particulate matter is a risk factor for 5 of the 6 chronic diseases designated by the Institute of Medicine as key indicators of the health of the nation: diabetes, cardiovascular disease, COPD, asthma, and cancer.

Tracking Daily Air Quality

The U.S. Environmental Protection Agency (EPA) has a tool to communicate the status of local air quality to the public—the Air Quality Index (AQI). The AQI is derived from real-time air pollution measurements conducted at monitoring stations throughout the United States. It is published daily for four air pollutants regulated by the Clean Air Act: ground-level ozone, particulate matter, carbon monoxide, and sulfur dioxide.



An AQI score greater than 100 means that it's a bad air quality day—air pollution levels are considered unhealthy for some or all of the general public. The AQI color describes the air quality status with a health advisory targeted to the affected population. Daily AQI's are location- and pollutant-specific, and reflect the local pollutant with the worst deviation from the federal air quality standards.

What to Do on Bad Air Quality Days

Bad air quality days are usually predicted a day in advance. This provides planning time to adjust exposure—mostly through behavior management. Small changes in daily routine can reduce exposure and conduct that make pollution levels worse.

On bad ozone days:

- Shift outdoor activities to the early morning since ozone levels are usually highest in the late afternoon and evening
- Limit the duration and intensity of outdoor physical activity
- Curtail lawn mowing, idling in drive-thru lines and discretionary auto travel

On bad PM_{2.5} days:

- Move activities indoors, or postpone outdoor activities until air quality improves
- Limit the duration and intensity of outdoor physical activity
- Curtail use of fireplaces and wood-burning stoves

Even on good air quality days... **Avoid working or exercising near**



High Traffic Area



Idling Vehicles



Active Diesel Generators



Forest Fires



Burning Waste

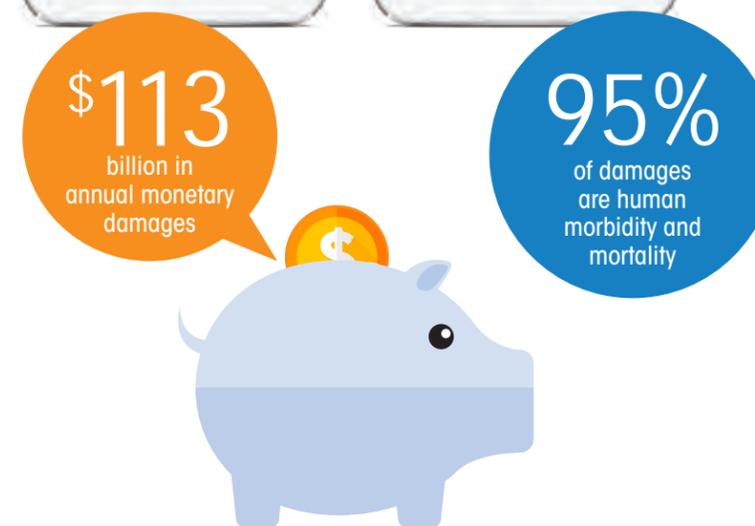
Particulate matter produced by these types of combustion has been linked to the most serious health outcomes.

AIRNOW is an EPA web site that aggregates real-time air quality data and publishes an AQI for over 450 cities in the U.S. **AIRNOW** shares its data on many platforms: social media, a subscription service that e-mails a daily air quality forecast (**EnviroFlash**), and a smartphone application that provides a point-of-use AQI, next day air quality forecasts and health advisories.



Screenshots of the AIRNOW smartphone application.

Due to growing awareness of the health implications of outdoor air pollution, many countries have some form of the AQI which is derived from local air quality measurements and indexed to host nation air quality standards. **AIRNOW** provides links to many of the web sites carrying these international air quality indices.



Annual monetary damages associated with air pollution exposure in the U.S. were valued at **\$113 billion** in 2011.

The majority of these damages (**95%**) were related to human morbidity and mortality.⁶

References:

- 1 American Lung Association, *State of the Air*, 2016.
- 2 EPA/600/R-10/076F, *Integrated Science Assessment for Ozone and Related Photochemical Oxidants*, February 2013.
- 3 EPA/600/R-08/139F, *Integrated Assessment for Particulate Matter*, December 2009.
- 4 Wang, B. *Effect of Long-term Exposure to Air Pollution on Type 2 Diabetes Mellitus Risk: A Systemic Review and Meta-Analysis of Cohort Studies*, *European Journal of Endocrinology*, 2014;171(5):R173-82.
- 5 IARC Monographs, Volume 105, *Diesel and Gasoline Engine Exhausts and Some Nitroarenes*, 2013
- 6 IARC Monographs, Volume 109, *Outdoor Air Pollution*, 2015
- 7 Jaramillo, P., and Muller, N.Z. *Air Pollution Emissions and Damages from Energy Production in the US: 2002–2011*, 2016;90(3):202-211.

DID YOU KNOW?

The Army is committed to testing for lead in drinking water in our schools, child development centers, and youth centers.

It is well known that lead can cause adverse health effects, especially in children age 6 and younger. The Department of Health and Human Services has determined that there are no safe blood lead levels for children. Lead in children's blood can affect both mental and physical development.¹ While there are several sources of lead exposures in the environment, including old lead-based paint and lead-contaminated soil, lead in drinking water can also contribute to a child's lead exposure.

How does lead get into drinking water?

Lead typically finds its way into drinking water via contact with plumbing components, such as pipes and valves that contain lead, through a process called leaching. Lead leaches into water through corrosion—a dissolving or wearing-away of metal caused by a chemical reaction between water and plumbing that contains lead. Lead can leach into water from pipes, lead solder, brass fixtures and faucets, and fittings that contain lead. The amount of lead that leaches into water also depends on factors such as the types and amounts of minerals in the water, the length of time the water remains in the pipes, the amount of wear of the pipes, and the water's acidity and temperature. Lead can also get into water as very tiny particles dislodged from lead pipes.

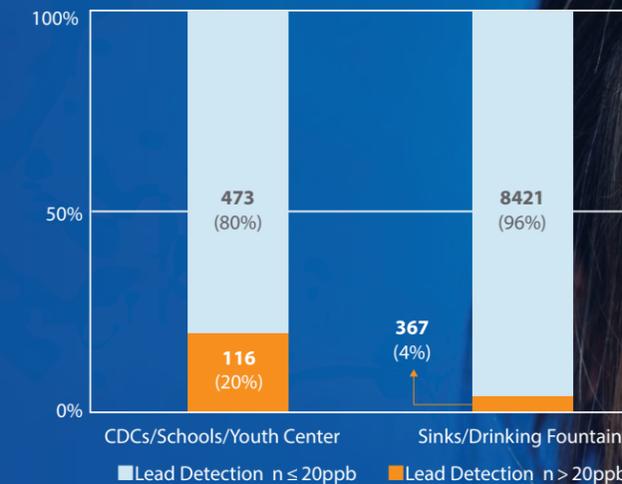
What is the Army doing about it?

Since the early 1990s, the Army has taken several measures to reduce the amount of lead in drinking water, and it's very important that we continue to find ways to further reduce or eliminate it. One area of focus is the drinking water in Army child development centers (CDCs), elementary schools, and youth centers. In the U.S., testing for lead in the drinking water of these facilities is currently neither required by law nor typically conducted. Since children can be at these facilities for many hours a day, several days a week, many of them undoubtedly drink the tap water or beverages made with it.

Recognizing the potential for lead exposure and the lack of any required testing in these facilities, the Army initiated a campaign in 2013 to test the water in all of its CDCs, elementary schools, and youth centers worldwide. The goals of the campaign were to characterize lead levels in drinking-fountain water and water from sinks used for cooking or beverage preparation, and to take actions to reduce or eliminate lead concentrations in the water from any sinks or fountains where elevated levels were found.

The U.S. Army Public Health Center (APHC) and regional Public Health Command (PHC) laboratories analyzed water samples collected from about 9,000 faucets and drinking fountains in almost 600 CDCs, elementary schools, and youth centers worldwide. Drinking water samples from 367, or about 4%, of the sinks and fountains tested had lead levels greater than the U.S. Environmental Protection Agency's (EPA) recommended action level of 20 parts per billion (ppb). One or more of such sinks or fountains were identified in 116 (about 20 percent) of the facilities where testing was performed. Installation personnel immediately took action at these sinks and fountains to reduce or eliminate the children's exposures, including discontinuing the use of or replacing plumbing components that contained lead, such as older faucets and shut-off valves; installing lead-removing filters; and implementing routine flushing practices.

Figure. Lead levels detected in drinking water collected during the 2013 sampling campaign



Building on their contributing efforts from 2013, the Installation Management Command (IMCOM) launched a second campaign in 2016 to test for lead in drinking water at newly constructed CDCs, schools, and youth centers; kitchen sinks in Army-owned family housing areas; and the same facilities tested in the 2013 campaign. This second round of sampling will be completed by the end of 2020.

How do I find out about the test results from the CDCs, elementary schools, or youth centers at my installation?

Test results are available from several sources at your installation. You can contact staff at the facility, your installation's environmental office or your installation's preventive medicine office.

¹ U.S. Dept. of Health and Human Services, Toxicological Profile for Lead, August 2007.

SPOTLIGHT

HEALTHY ARMY COMMUNITIES

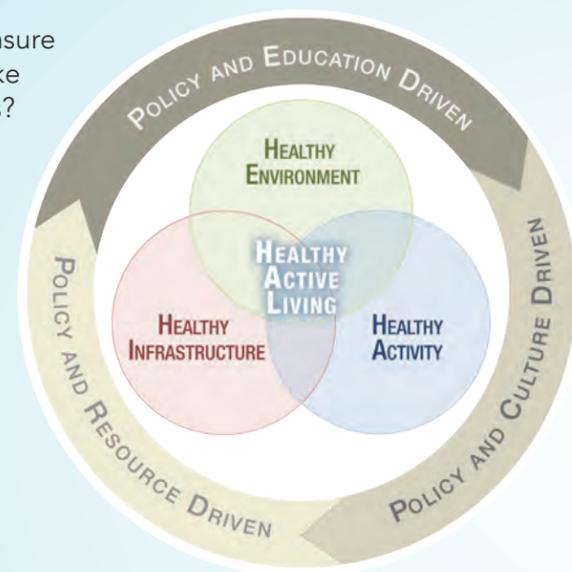
How does the Army provide a Healthy Environment?

Healthy Army Communities, an Installation Management Command (IMCOM) initiative, looks to integrate the important concepts of illness prevention and health promotion into a comprehensive, holistic program that ensures Soldiers, Family members, Retirees, and Civilians have the best environments to achieve optimal physical activity, nutrition, and sleep health.

Healthy Active Living

When we encourage physical activity, it is important to ensure there is infrastructure to support the activity. Are there bike trails, walking paths, fitness centers, or exercise programs? It is also important to ensure that the environment where the infrastructure exists is safe. For example, if someone wants to run to be active, they should know if it is an ozone action day. If it is, running may actually be doing more physical harm than good.

Healthy Army Communities is working closely with garrisons to ensure that Soldiers, Family members, Retirees, and Civilians are provided the fitness infrastructure to facilitate physical activity and the information to understand which activities are the most appropriate given potential environmental hazards.



Healthy Eating

Healthy eating can be difficult on an Army installation if a variety of options is not available. So, how does the Army ensure that the healthy choice is the easiest choice?

Healthy Army Communities is spearheading a Healthy Food Transformation Demonstration Project at select garrisons. The demonstration project will work with on- and off-garrison partners to ensure healthy food is available, accessible, and promoted at all food venues. The group will also implement a standardized labeling system at all garrison food outlets to help customers easily identify healthy food choices.

Healthy Sleep

Optimal sleep is critical to mission readiness. Therefore, it is important we ensure that Soldiers have a healthy environment to achieve sleep. Unfortunately, due to the nature of the mission, Army garrisons can be very noisy. So, how does the Army ensure sleep is attainable?

Healthy Army Communities is coordinating with master planning to develop policies that will minimize noise and light impacts on sleep. Initiatives involving construction of barracks using noise abatement materials and barrack placement away from loud industrial activities will provide Soldiers the best opportunities to achieve healthy sleep.

A Culture of Health and Quality of Life

Building environments that support and encourage healthy activities (sleep, exercising, and eating) in healthy ways is the cornerstone of Healthy Army Communities. Coordination between Healthy Army Communities and the Army medical community provides the opportunity to implement change throughout the Army to increase and sustain Soldier readiness and promote a culture of health for everyone who lives, learns, works, plays, and shops on and around Army garrisons.

For more information on Healthy Army Communities, please email:

usarmy.jbsa.imcom-hq.mbx.healthy-army-communities@mail.mil



SYSTEM *for* HEALTH

Army Medicine

One Team...One Purpose!
Conserving the Fighting Strength since 1775

Army Medicine's primary mission is supporting the Warfighter through its priorities: Readiness and Health, Healthcare Delivery, Force Development, Take Care of Ourselves, Retirees, DA Civilians, and Families. We are proud to serve, care for, and support the personal readiness, health, and resilience of all Service Members, Civilians, Families, and Retirees while delivering safe, quality health care.

Army Medicine's System for Health encompasses Performance Triad, Delivery of Health, and Healthy Environments. There are active partnerships and program evaluations with FORSCOM, TRADOC, and IMCOM to continue to influence infrastructure recommendations and changes, leading practice implementation efforts, and continued research and development in support of the holistic health and fitness of the Army.

In the last 12+ years, more than 450 patent applications for inventions were generated by a combination of Army entities, including the U.S. Army Public Health Center, Medical Research and Materiel Command, labs, and medical treatment facilities. These efforts continue and are critical to understanding how we best support and optimize Soldier readiness, performance, and overall health in garrison and operational environments.

Army Medicine believes health happens where we live, work, play, and shop—in the space outside of clinics and hospitals. An essential component of readiness is a proactively focusing on well-being and health outcomes, and expecting the Total Army Family to improve, restore and maintain its personal health. **Small changes to one's habits can make a big difference in one's own health, and therefore the collective health of the community.**



Performance Triad

Engaged leadership is the most important factor in supporting healthy behaviors of Soldiers and their units. The Performance Triad, which promotes healthy Sleep, Activity, and Nutrition, is about readiness and optimal performance, and not about “thou shalt not.” Army Medicine has packaged the best sports science in materials that are accessible through digital means (applications), video, and print to meet people with information where they want to be met. Inherent to the design is the “teach, coach, and mentor” approach, which encourages health behaviors through leadership, goal setting, and small changes to daily sleep, activity and nutrition practices that can make a big difference long-term.

The Performance Triad is a key enabler in the Army's holistic health and fitness effort to optimize readiness and human performance and offers tools to empower leaders, Soldiers, Families, DA Civilians, and Retirees in their personal readiness and health. The information, when applied and regularly practiced, is based in the science of improved sleep, activity, and nutrition behaviors. Adapting the tenets of the Performance Triad is a way toward better health and represents the primary way we can empower beneficiaries to take more personal responsibility for their health.

Delivery of Health

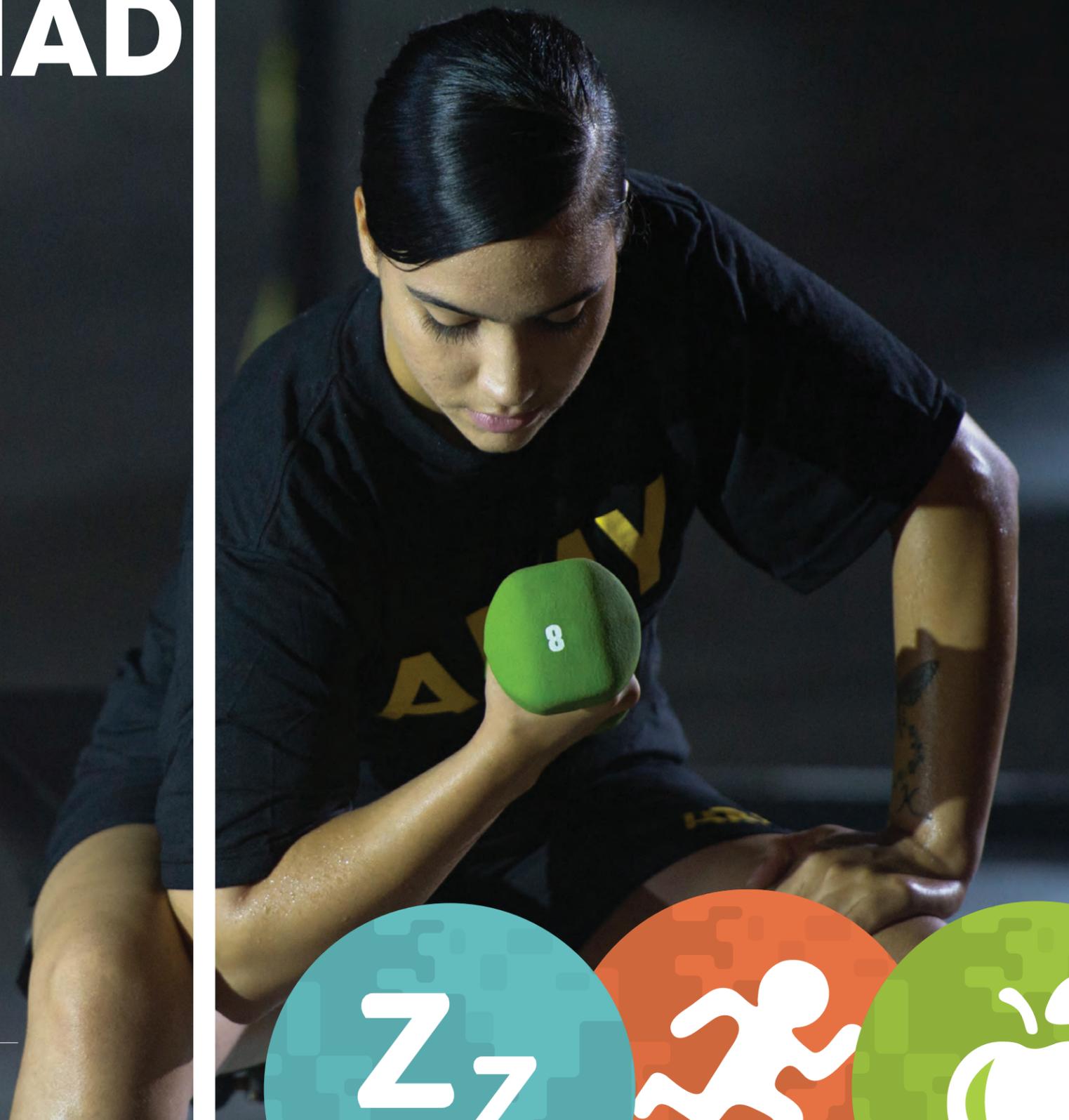
The Delivery of Health includes Army Medicine's Move to Health program and the Army Wellness Centers. The Move to Health curriculum supports a different kind of conversation and is a paradigm shift from a “find it and fix it” approach to medicine, to a “predict and personalize” approach to well-being and is person-centered, holistic, and experience-centric to help move people to better health and readiness. The Move to Health (M2H) initiative is an innovative, game-changing approach enabling and improving conversations between clinicians and patients and providing the best care experience, all while addressing the rising rates of healthcare team burnout.

Army Wellness Centers (AWC) provide standardized, primary prevention programs and services designed to build and sustain good health and improve the overall healthy lifestyles of Soldiers, Family Members, Retirees, and DA Civilians. Participants are empowered to set their own health goals and receive support to achieve them. Army Wellness Centers help with lifestyle change in areas that affect both short- and long-term health, by engaging people in the spaces where their health happens—where they live, work, play and shop.

Healthy Environments

Army Medicine, through the U.S. Army Public Health Center, has always been a leader in public health and in the creating of understanding the environment. A major contribution of the System for Health is the Army Healthy Community initiative currently being implemented by IMCOM. The foundational work is underway to have a “whole of Army” approach where everything from physical layouts, installation services, and command policies at camps, posts, and stations support this focus on readiness and health. The goal is to make the healthy choice the easy choice for Soldiers, DA Civilians, Families, and Retirees. As an Army community we are integrating environmental, occupational, and public health programs that promote healthy lifestyles and activities which will reduce the likelihood of illness and injury, and promote readiness and health.

PERFORMANCE TRIAD



OVERVIEW

Performance Triad (P3)

Sleep, activity and nutrition (SAN) are critical for achieving optimal physical, mental, and emotional health and wellbeing. They are integral in maximizing Soldier performance and are the cornerstones of the U.S. Army Office of the Surgeon General's (OTSG) Performance Triad (P3) Campaign. P3 integrates the best available SAN sports science to improve squad overmatch and Soldier performance in tactical environments. It includes messaging, curriculum and training, policy development, technology, leader development, and changes within the built installation environment to make the healthy choice the easy choice. P3 strives to improve and sustain healthy SAN knowledge, attitudes, behaviors, and associated outcomes among Soldiers and Army beneficiaries.

The Global Assessment Tool (GAT) is a survey tool designed to assess an individual's behaviors with regard to these triad components and other key elements which can impact emotional and spiritual well-being. In 2015, approximately 300,000 AC Soldiers from the U.S. based installations evaluated in this report completed the survey, amounting to nearly 80% of the AC Soldier population at these installations. Response rates were slightly higher, 90%, for the reviewed installations located outside the continental United States (OCONUS).

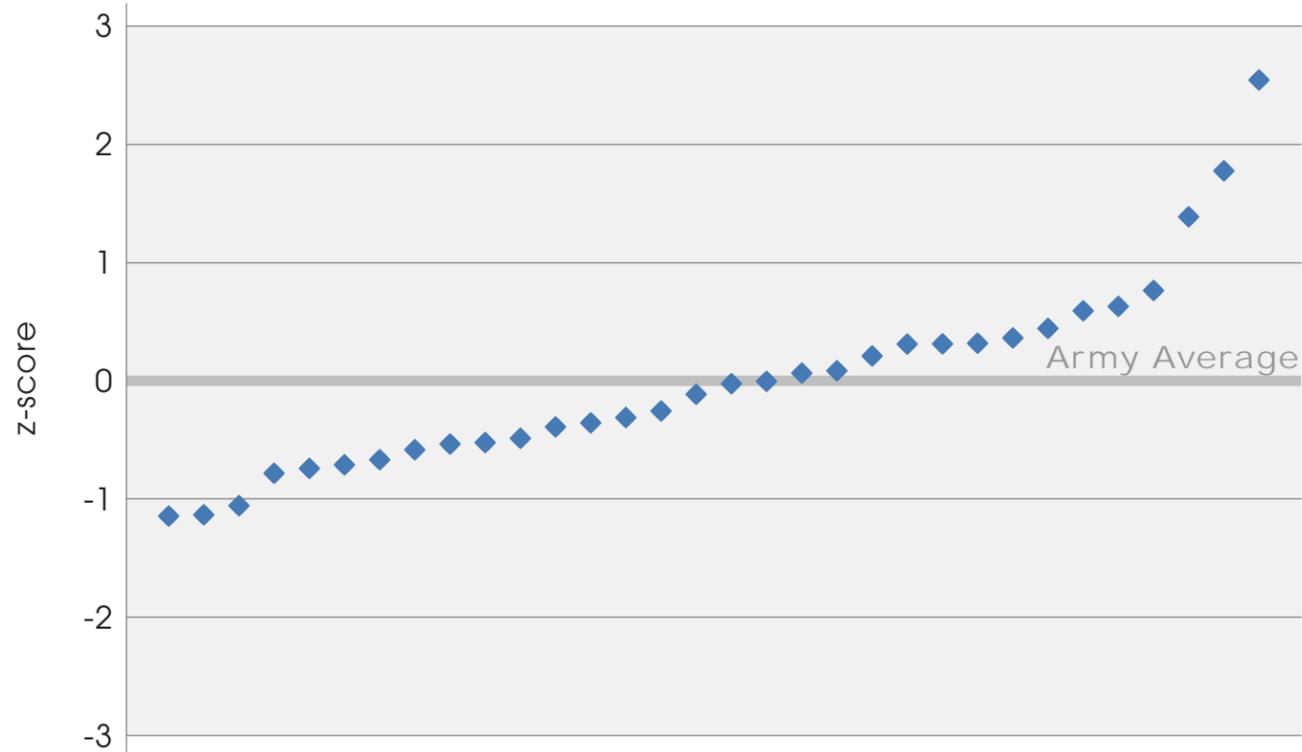
GAT-derived SAN summary scores for each installation were compiled with measures of the percentage of Soldiers at each installation meeting SAN targets specified by OTSG to generate an overall installation P3 index (IPI). The IPI reflects the overall deviation from the Army average for the collective measures. This assessment revealed that the vast majority of Army installations were similar with respect to overall P3 measures with only one installation reporting significantly higher levels of positive P3 behaviors.

Average SAN scores were similar by gender, with the largest point differential being a 3-point spread for physical activity (84 for women compared to 81 for men). More notable differences were observed in terms of the percentage meeting OTSG targets with approximately 62% of women meeting the targeted score of 85 or more as compared to 53% of men when it comes to activity. The percentage meeting activity targets decreased with increasing age. Men generally reported more positive sleep and nutrition behaviors, but the differences between men and women were negligible.

Installation P3 Index (IPI) Summary

Each installation was assessed against the average for the U.S.-based Army installations evaluated to determine standard deviations, or Z-scores, compared to the Army average. These scores were used to assess potentially significant differences. Overall, the installations were relatively comparable, with only one installation (Presidio of Monterey) reporting statistically significant positive P3 healthy behaviors. Two additional installations reported elevated positive behaviors (Fort Rucker and USAG West Point), however, these deviations weren't statistically significant.

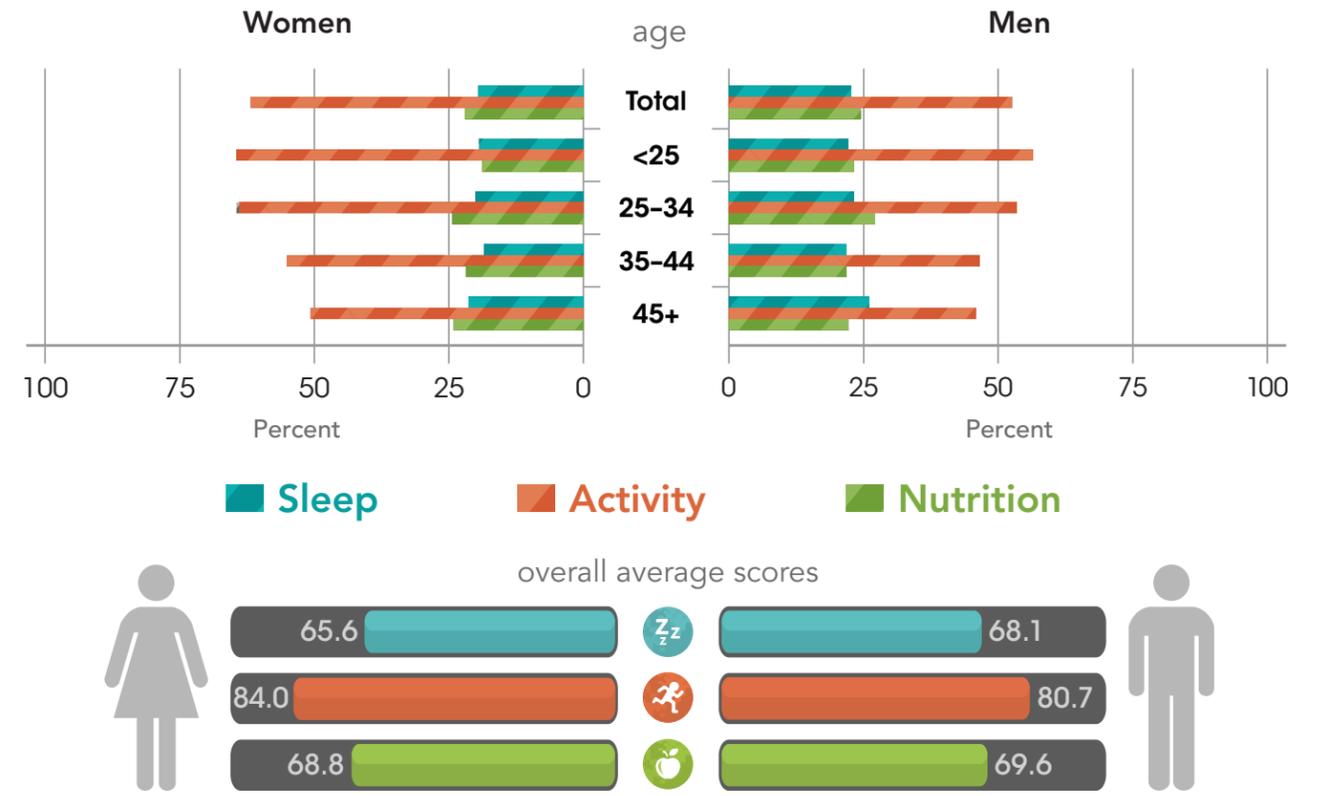
IPI Scores*



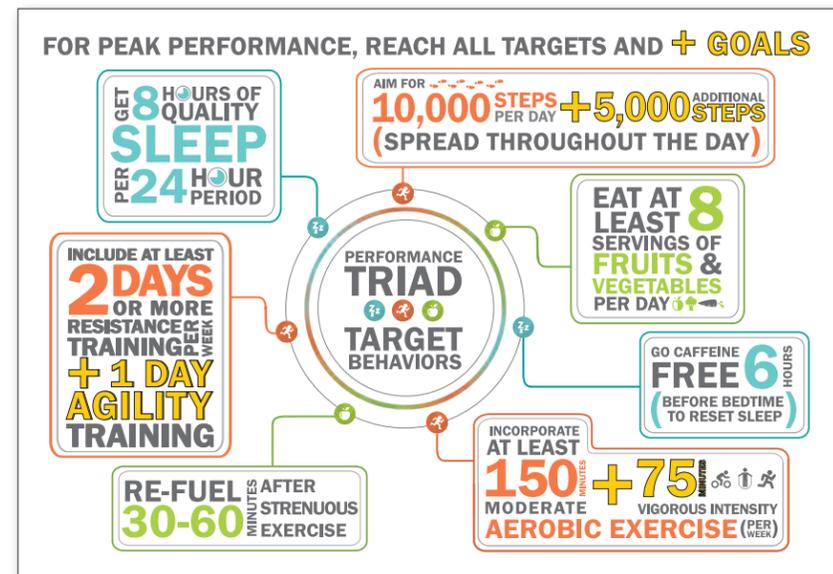
Variation by Installation

* Positive IPI scores indicate higher collective sleep, activity and nutrition behaviors; scores < -2 or > 2 represent statistically significant differences from the Army average (0).

Percent meeting P3 target scores, AC Soldiers, 2015



P3 Target Card





SLEEP

Optimal sleep is critical to mission success. In training and on the battlefield, inadequate sleep impairs essential abilities such as reaction times, the ability to detect and engage the enemy, and squad tactic coordination. When interviewed about the connections between sleep and mission readiness, Soldiers and military leaders consistently associated lack of sleep with accidents, poor morale, and impaired judgment. However, despite mission degradation resulting from sleepiness, a culture of sub-optimal sleep and a perception that lack of sleep is “the Army way” prevails in the force.

The P3 curriculum and its targets focus on improving performance while addressing root causes of poor sleep and fatigue. The P3 curriculum incorporates goals from the clinical practice guidelines for insomnia established by the American Academy of Sleep Medicine and leverages technology to allow Soldiers and leaders to effectively monitor and improve sleep. P3 also provides tactical sleep techniques and specific information on how to use caffeine/energy drinks to improve performance while minimizing their impact on sleep. In conjunction with these strategies, the P3 team is striving to empower leaders to make policy and environmental changes to enable their Soldiers to obtain adequate sleep each night in garrison and plan for sleep while on field missions.

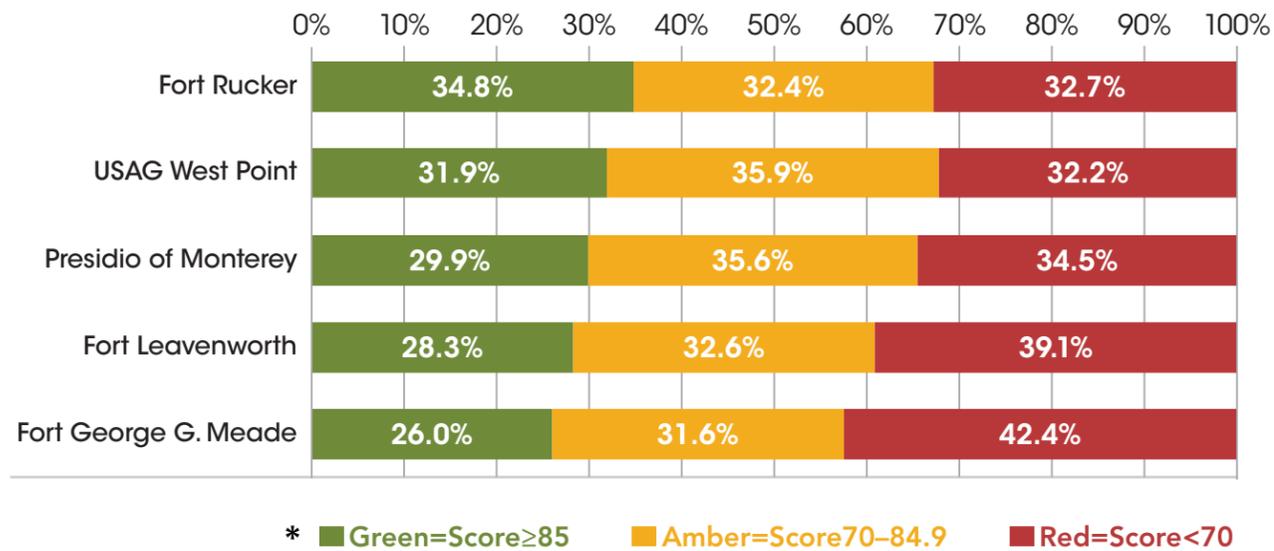
Overall, installations had an average sleep score of 68 out of 100 based on Soldier responses to GAT questions assessing sleep duration, sleep satisfaction, and being bothered by poor sleep.



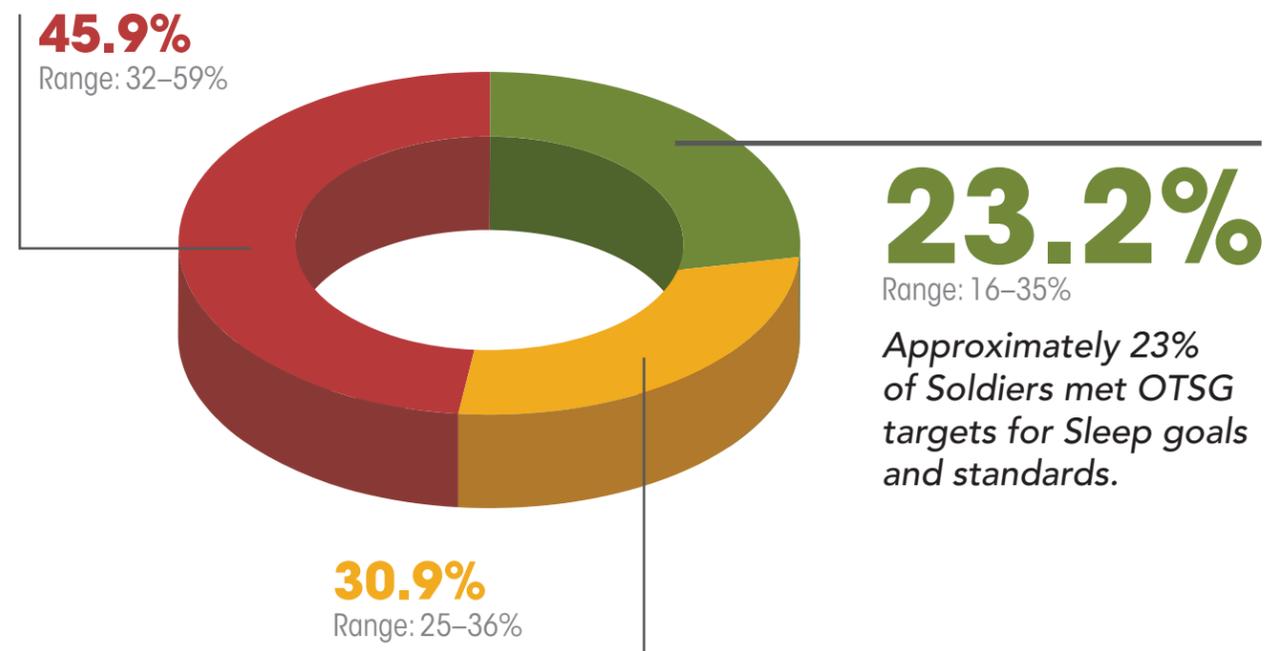
Scores ranged from 62 to 74 across installations.



Percent of AC Soldiers Meeting P3 Goals and Standards for Sleep, 2015* (Top Five Ranking Installations)



Army Average, 2015



“IT IS ESTIMATED THAT 50 TO 70 MILLION AMERICANS CHRONICALLY SUFFER FROM A DISORDER OF SLEEP AND WAKEFULNESS, HINDERING DAILY FUNCTIONING AND ADVERSELY AFFECTING HEALTH AND LONGEVITY.”

— SLEEP DISORDERS AND SLEEP DEPRIVATION
INSTITUTE OF MEDICINE OF THE NATIONAL ACADEMIES



ACTIVITY

Physical fitness and activity are crucial to ensuring Soldiers are able to perform the duties and responsibilities of their jobs. Practicing principles of safe and effective training enables Soldiers to maintain physical readiness and health. Soldiers and leaders across the Army agree that activity and fitness are essential to being a strong warfighter. Although Soldiers are generally more physically active than civilians, they are frequently at risk for overtraining and resulting injuries. Profiles and Army Physical Fitness Test failures are both associated with medical non-deployability. Despite obtaining some activity through structured unit physical readiness training, many Soldiers are sedentary over the course of the day, which can lead to adverse health outcomes over time.

Based on the unique physical requirements and demands of today's Soldier athletes, P3 provides information and strategies to ensure our force obtains optimal, balanced activity. The curriculum and its targets inform Soldiers and leaders on safe running practices, proper resistance training techniques, overtraining prevention, and methods to increase daily physical activity. By leveraging principles of functional fitness, balanced training approaches, targeted athletic development, and movement throughout the day, P3 promotes the best available evidence to support Soldiers in meeting the physical and mental demands of their missions.

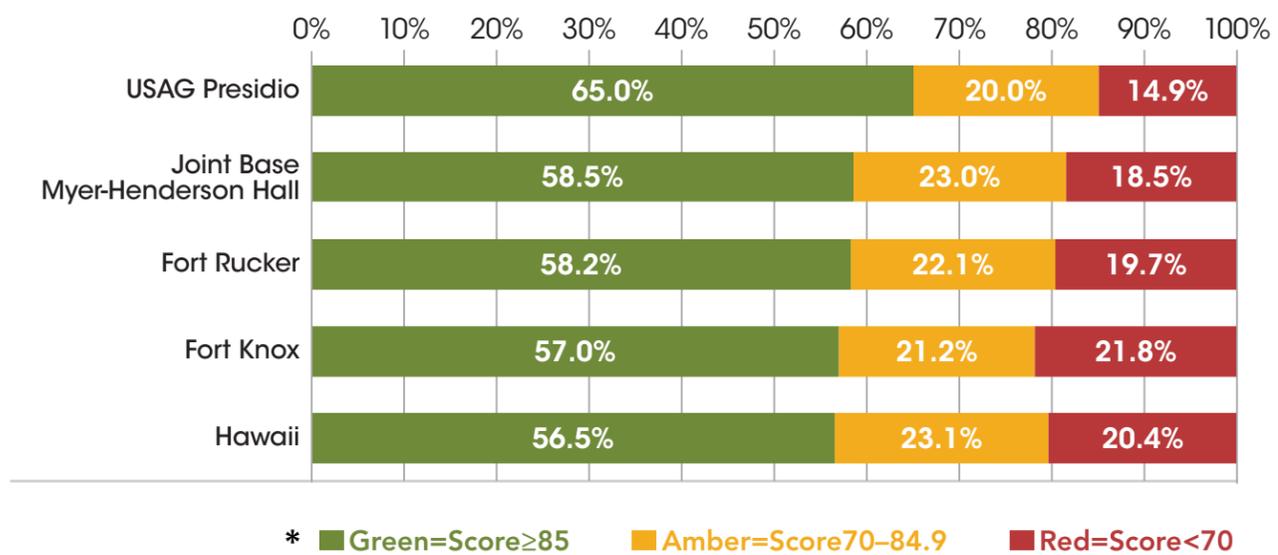
Overall, installations had an average activity score of 81 out of 100 based on Soldier responses to GAT questions assessing exercise frequency, exercise intensity, resistance training and BMI.



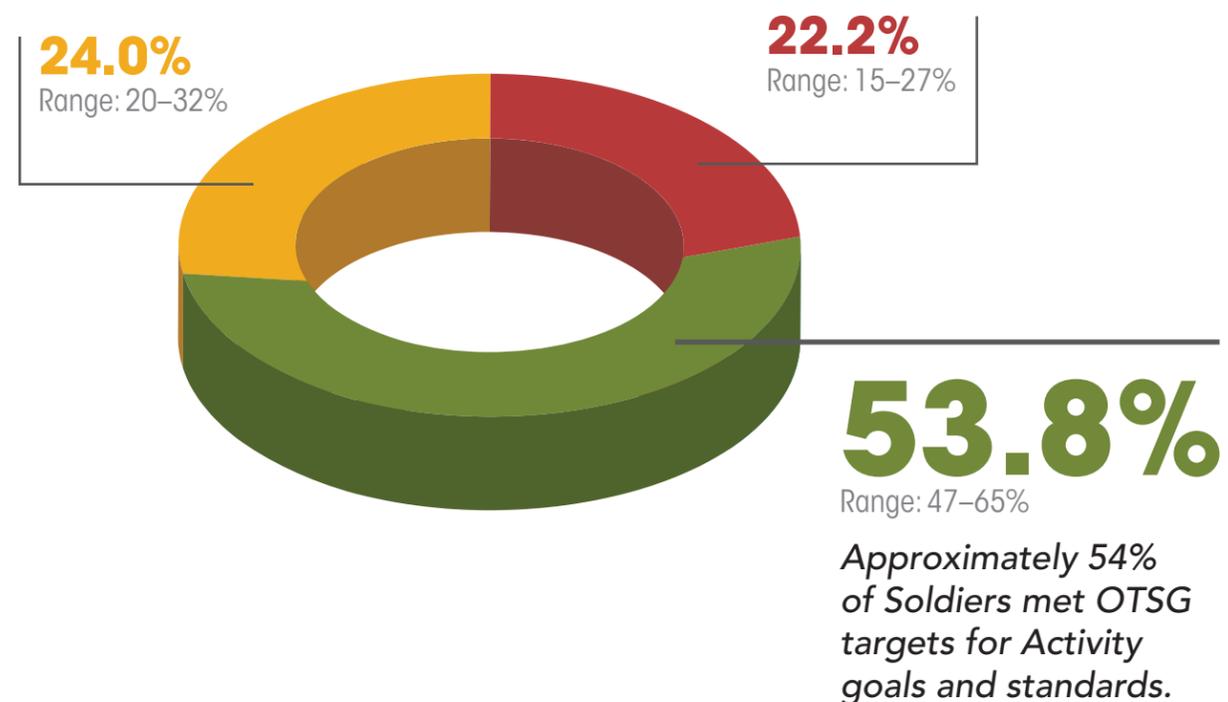
Scores ranged from 78 to 85 across installations.



Percent of AC Soldiers Meeting P3 Goals and Standards for Activity, 2015* (Top Five Ranking Installations)



Army Average, 2015



NEARLY 1 IN 4 YOUNG ADULTS ARE TOO HEAVY TO SERVE IN OUR MILITARY.

“LONG-TERM MILITARY READINESS IS AT RISK UNLESS A LARGE-SCALE CHANGE IN PHYSICAL ACTIVITY AND NUTRITION TAKES PLACE IN AMERICA.”

— *MISSION: READINESS MILITARY LEADERS FOR KIDS*
CENTERS FOR DISEASE CONTROL AND PREVENTION



NUTRITION

Eating or fueling for performance enables Soldier training, increases energy and endurance, shortens recovery time between activities, improves focus and concentration, and helps leaders and Soldiers look and feel better. Although Soldiers and leaders frequently understand the connections between nutrition and mission readiness, they also cite numerous barriers to obtaining optimal nutrition. These barriers include lack of access to healthy foods, time constraints arising from working through meals or working late, monetary constraints, and low motivation to make healthy choices. Specifically, when interviewed on what affects their nutrition, many Soldiers cited military dining facility hours, cost, location, and limited healthy options as barriers to making the healthy choice. Others indicated the prevalence of unhealthy on-base fast food options detracted from their ability and motivation to make optimal food selections.

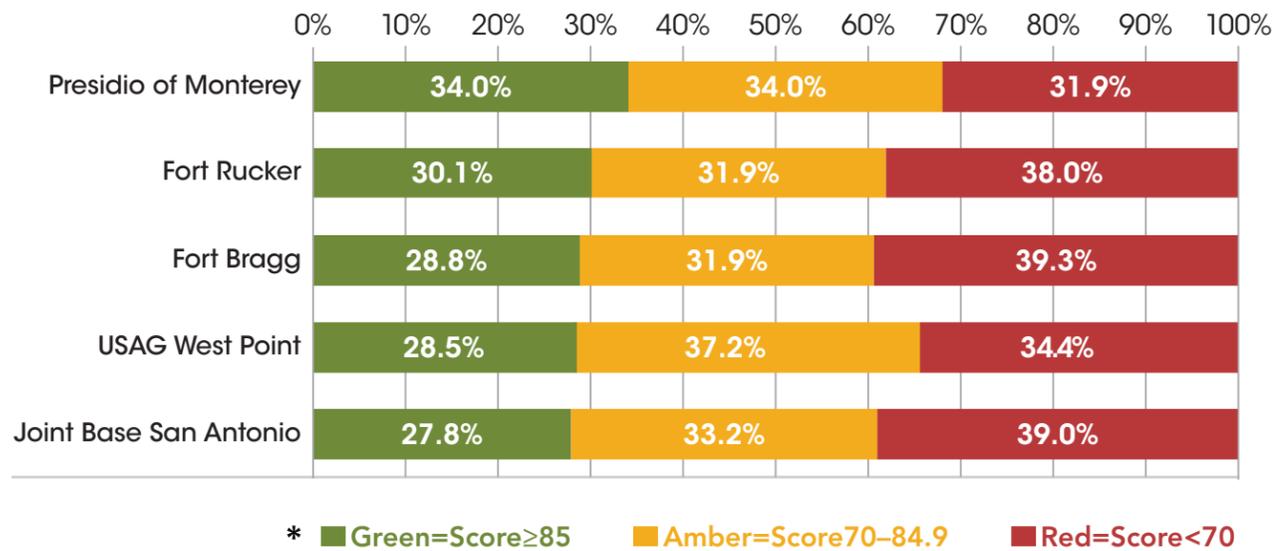
Through the P3 campaign, the OTSG System for Health is working hard to facilitate changes within the nutrition environment on Army installations via policy changes and facility improvements. The intent of making the healthy, performance-oriented choice the easy choice is to reduce identified barriers to optimal nutrition. In conjunction with modifying the Army nutrition environment, P3 nutrition curriculum teaches Soldiers about nutrients needed to complete mission tasks, describes refueling techniques, and details strategies for creating a nutrition plan. Specific areas of focus include hydration, nutrient timing, dietary supplements, field nutrition, and healthy weight maintenance.

Overall, installations had an average nutrition score of 70 out of 100 based on Soldier responses to GAT questions assessing healthy eating, breakfast, recovery snacks and water consumption.

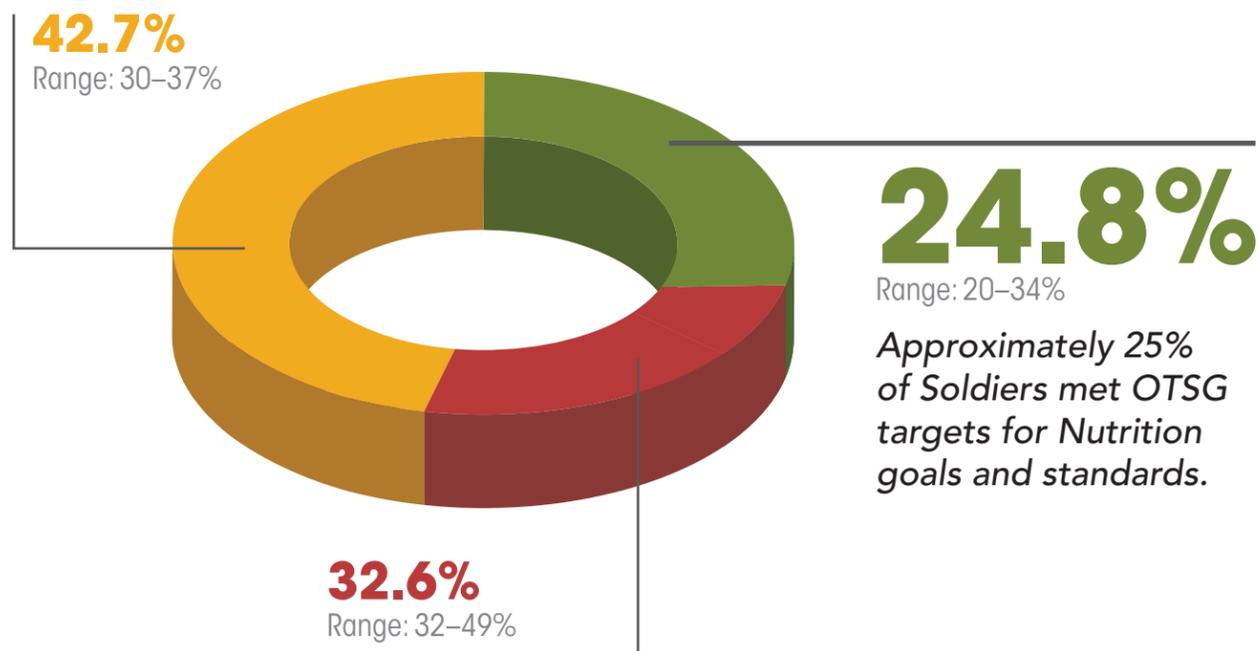
Scores ranged from 67 to 75 across installations.



Percent of AC Soldiers Meeting P3 Goals and Standards for Nutrition, 2015* (Top Five Ranking Installations)



Army Average, 2015



“FUELING YOUR BODY WITH HEALTHY CHOICES CONSISTENTLY DURING THE DAY PROVIDES YOU WITH THE RIGHT NUTRIENTS AND PLENTY OF ENERGY. THIS HELPS YOU HAVE A BETTER OUTLOOK, REDUCES MOOD SWINGS, AND KEEPS YOU FOCUSED!”

— THE PERFORMANCE TRIAD CHALLENGE GUIDE

INSTALLATION HEALTH INDEX

- *Overview*
- *Medical Readiness*
- *Health Outcomes*
- *Health Factors*
- *Healthcare Delivery*

Installation Health Index (IHI)

Health indices are widely used to gauge the health of populations. They offer an evidence-based tool for making comparisons of a broad range of leading health indicators (LHIs) across communities and inform community health needs assessments. Indices are also useful for ranking, which has proven effective in stimulating community interests and driving health improvement.

The 11 core measures included in this report were prioritized as LHIs for the AD Soldier population based on the prevalence of the condition or factor, the potential health or readiness impact, the validity of the data, supporting evidence, and the importance to Army leadership. Data availability ultimately limited what measures could be included and which installations could be evaluated. The LHI list may expand with future reports as more data become available.

Each measure was individually assessed by installation against the Army average for the U.S.-based installations evaluated, and then collated into an overall installation health index (IHI). As was done with the P3 index, deviations from the Army reference value expressed as Z-scores were generated and pooled for the index. Positive indices were

indicative of higher overall rankings or lower levels of adverse health and readiness outcomes and behaviors, while lower indices indicated lower overall rankings or higher levels of adverse health and readiness outcomes and behaviors.

The assessment revealed a rather homogeneous AD Force in terms of health, with the vast majority of installations scoring within one standard deviation of peer groups. Only two installations surpassed this cut-point, reflecting lower overall health; however, the difference was not statistically significant.

While health indices such as this provide a comprehensive measure of health which may help identify populations that could potentially benefit from enhanced public health prevention measures, it may hide some of the driving factors. A review of the individual measures from which the index is derived is necessary to identify and effectively target key outcomes or behaviors that are the most significant health and readiness detractors for each installation.

See Installation Profile Summary Pages for IHI scores and Appendix I for additional details regarding methodology.

MEDICAL READINESS

- ♦ Medically Non-ready
 - Dental Readiness
 - Permanent Profiles

HEALTH FACTORS

- ♦ Obesity
- ♦ Substance Abuse
- ♦ Sleep Disorders
- ♦ Chlamydia
- ♦ Tobacco Use

HEALTH OUTCOMES

- ♦ Chronic Disease
- ♦ Injury
- ♦ Behavioral Health

HEALTHCARE DELIVERY

- ♦ Preventable Admissions
- ♦ HEDIS Composite Score

Medical Readiness

Medically Non-Ready*

Percent of Soldiers not medically ready within 72 hours based on the following medical readiness classifications: MRC3A (deficiencies resolvable >72 hours, <31 days), MRC3B (deficiencies resolvable >30 days), and MRC4 (unknown status due to overdue dental/medical exams)

Data Source: Medical Operational Data System (MODS)

Installation readiness measures were adjusted by age.

Health Outcomes

Injury Incidence*

Number of new injuries diagnosed per 1,000 person-years

Data Source: Defense Medical Surveillance System (DMSS), accessed via Public Health 360 (PH360)

Behavioral Health Disorders

Percent of Soldiers with one or more of 7 diagnosed behavioral health conditions: mood disorders, adjustment disorders, anxiety, personality disorders, substance disorders, Post-Traumatic Stress Disorder (PTSD), and psychoses

Data Source: DMSS, accessed via PH360

Chronic Disease

Percent of Soldiers with one or more of 6 diagnosed chronic conditions: cardiovascular disease, cancer, arthritis, asthma, Chronic Obstructive Pulmonary Disease (COPD), and diabetes

Data Source: DMSS, accessed via PH360

Installation health outcome measures were adjusted by gender and age.

**Relevant measures that are determinants or sub-components of the IHI measure are included in the respective section of the report and defined in Appendix I (Methods)*

Health Factors

Obesity

Percent of Soldiers with a height and weight measurement available with a body mass index (BMI) ≥ 30 ; BMI was determined by height and weight measurements recorded during the Army Physical Fitness Test (APFT); medical records were used when APFT measures were unavailable

Data Source: Medical Readiness Assessment Tool (MRAT)

Tobacco

Percent of Soldiers reporting tobacco use (smoking or smokeless tobacco products) during dental exams

Data Source: Corporate Dental System (CDS)

Sleep Disorders

Percent of Soldiers with a diagnosed sleep disorder

Data Source: MRAT

Substance Abuse Disorders

Percent of Soldiers with a diagnosed substance abuse disorder

Data Source: DMSS, accessed via PH360

Chlamydia Incidence*

Number of new infections reported per 1,000 person-years

Data Source: Disease Reporting System internet (DRSi), accessed via PH360

Installation health factor measures were adjusted by gender and age.

Healthcare Delivery

Preventable Hospital Admissions

Percentage of preventable hospital admissions among enrolled Soldiers per Agency for Healthcare Research and Quality (AHRQ) guidelines

Data Source: Command Management System (CMS)

HEDIS Composite Score

An index score that consolidates 9 Healthcare Effectiveness Data and Information Set (HEDIS) performance indicators for beneficiaries enrolled to the installation MTF: Asthma control, Diabetes A1c screening, Diabetes A1c <9, Diabetes LDL <100, Cervical cancer screening, breast cancer screening, colon cancer screening, chlamydia screening and well child visits

Data Source: Command Management System (CMS)

SPOTLIGHT

Local Actions

COMMUNITY HEALTH PROMOTION COUNCILS UTILIZE *HEALTH OF THE FORCE* DATA TO DRIVE CHANGE ON THEIR INSTALLATIONS

THE ARMY'S FUTURE OPERATIONAL ENVIRONMENT requires the total Army to be resilient and sustain personal readiness. The Army Public Health Center developed a coalition-building model of integration through the Community Health Promotion Council (CHPC) to meet the challenges of future environments. CHPCs are chaired by Senior Commanders and are directed by AR 600-63, AR 600-20, and Ready and Resilient (R2). The Senior Commander's CHPC is a Strategic Platform to elevate public health priorities and to address the health promotion, readiness, and resiliency of the Force. To date in FY 2016, 47 installations have

been resourced with an APHC Health Promotion Officer to facilitate the CHPC coalition process. CHPCs across the Army have implemented over 250 public health initiatives in FY16 by integrating various programs like Performance Triad and Army Wellness Centers in support of U.S. Army Medical Command's (MEDCOM) System for Health. CHPCs reported using data from the first *HoF* report to drive action at the local level and continue to use *HoF* report information to highlight public health concerns and prioritize prevention focused activities in their communities.

◆ ◆ ◆

“The Health of the Force report highlighted the increase in injuries and growing problem of lack of medical readiness, which contributed to the non-deployability of Soldiers. HoF provided information that fueled a Command-driven focus on increasing deployability of Soldiers through the development of the Functional Fitness and Readiness Academy. The goal of the initiative was to develop a comprehensive, holistic fitness approach to educate and train Aviation leaders in order to build Soldier strength and increase unit readiness. MG Lundy directed the Directorate of Training and Doctrine to develop a fitness concept that achieves the goal of lowering the amount of non-deployable Soldiers in Aviation. Education feeds into effective physical training in Physical Readiness Training, Functional Fitness, and Modern Army Combatives. These core competencies, when combined, will build Soldier strength and increase unit readiness. As a result, a professional warfighting culture develops throughout Army Aviation.”

— Fort Rucker Deputy Chief of Staff



“The Fort Leonard Wood Health Promotion Team utilized *HoF* as a springboard to further understanding of obesity prevalence on the installation. Ultimately, it provided a tool to narrow [the] focus on areas of opportunity tailored to the Fort Leonard Wood Active Duty population.”

—Fort Leonard Wood Health Promotion Officer

“[The] Fort Polk Health Promotion team presented HoF to [the] Community Health Promotion Council to allow Major Subordinate Commands to truly see themselves in a comparative, quantitative and unbiased manner. [The] Fort Polk Physical Fitness and Wellness Working Group generate[d] action based on Tobacco Use, Obesity Rates, and Behavioral Health Diagnosis rates to reshape and refocus the priorities.”

—Fort Polk Health Promotion Officer

“Fort Benning used the *HoF* report to help bring light to the identified health challenges on the Installation. [We] supported Tobacco Use Cessation efforts and Injuries in the CHPC as priority areas for Health Promotion and Health Education. Work Groups have used the data to develop sub-working groups to develop interventions and metrics to improve the health and wellness of our Community.”

—Fort Benning Health Promotion Officer

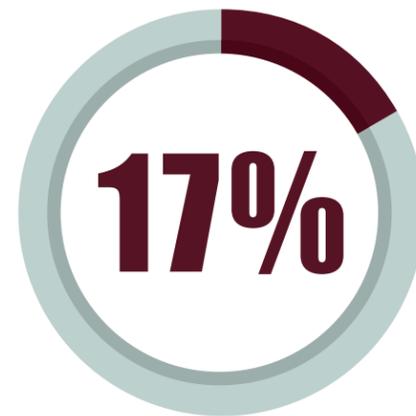
Installation Health Index:

MEDICAL READINESS



Medical Readiness

Medical readiness is a priority for the U.S. Army. It can have a significant impact on mission completion. Soldiers with medical deficiencies that are not resolvable within 72 hours are a greater cause for concern, and are assigned a medical readiness classification (MRC) of 3 or 4. Approximately 17% of AC Soldiers were considered not medically ready within 72 hours in 2015; this remained stable from month to month, ranging from 15% to 18%. The proportion not medically ready varied by installation, ranging from 12% to 24% across installations.

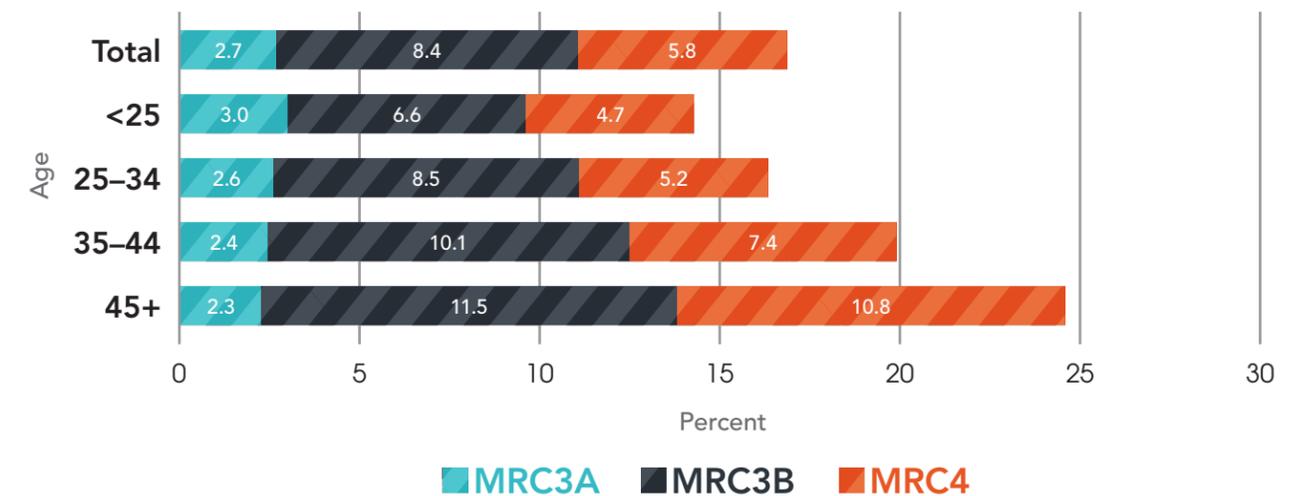


Overall, 17% of Soldiers were classified as not medically ready.
Rates ranged from 12% to 24% across installations.

Roughly half of Soldiers not medically ready were classified as MRC3B which is indicative of deficiencies requiring more than 30 days to resolve, while just over a third were classified as MRC4 due to overdue dental and medical exams. The proportion not ready was correlated with age, ranging from roughly 14% for Soldiers under 25 years to 25% for Soldiers 45 years and older.



Percent Not Medically Ready by Medical Readiness Classification (MRC) and Age, AC Soldiers, 2015

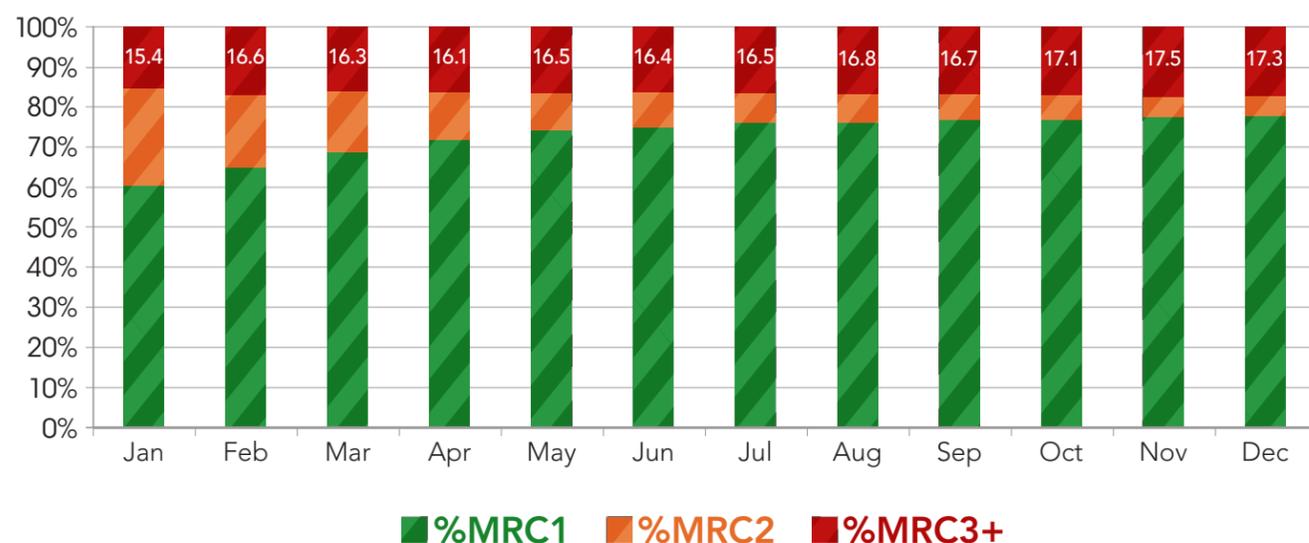


MRC3A: Correctable within 30 Days.
MRC3B: Correctable in more than 30 days.
MRC4: Status is unknown.

BEST RANKING INSTALLATIONS

1	FORT RILEY	11.8%	4	FORT CAMPBELL	13.8%
2	FORT IRWIN	12.1%	5	JOINT BASE LEWIS-McCHORD	14.4%
3	FORT CARSON	13.7%			

Percent in Medical Readiness Classification by Month, Army AC Soldiers, 2015



“The art of war teaches us to rely not on the likelihood of the enemy’s not coming, but on our own readiness to receive him; not on the chance of his not attacking, but rather on the fact that we have made our position unassailable.”

—Sun Tzu
The Art of War

SPOTLIGHT

MEDICAL READINESS ASSESSMENT TOOL (MRAT) UPDATES

The Medical Readiness Assessment Tool (MRAT) is the 2015 Military Health System Innovation Award-winning MEDCOM application that identifies Soldiers at significant future risk of permanent medical non-deployability. MEDCOM introduced the MRAT to the wider Army in 2016 as part of the commander-centric Medical Readiness Transformation initiative. MRAT contains three applications: the Leader Tool, 24-Month Trend Tool (24-MTT), and Screening Tool.

The MRAT Leader Tool provides commanders with medical readiness risk factor trends, and the MRAT 24-Month Trend Tool (24-MTT) provides powerful prognostication support to clinicians. The 24-MTT enables clinicians to provide commanders with timely information about return-to-duty timeframes and fit-for-duty assessments via the new secure messaging application in the Commander’s Portal.

The MRAT Screening Tool incorporates screening in the assessment of in-processing Soldiers. Such screening enables units to focus their recovery and re-conditioning resources on specific cohorts of Soldiers. Using the MRAT Screening Tool in the Soldier Readiness Process allows units to identify and fill gaps associated with medically non-deployable Soldiers prior to deployment.

MRAT training and registration, which are linked to Medical Readiness Transformation training, can be completed in person or online. MRAT-specific registration approvers are present on most installations. MRAT use is role-based; Commanders and their designees can access trends in the MRAT Leader Tool only, while clinicians and approved support staff can access all three MRAT applications. The MRAT can be accessed via the Commander’s Portal, the Clinician’s Portal (available October 2016), the AHLTA link, the Periodic Health Assessment link, and the MEDCOM Command Management System Web site.

For more information about MRAT, contact the Innovative Clinical Analytics Group at the Office of the Surgeon General, Falls Church, Virginia, at 703-681-4563 or at usarmy.ncr.hqda-otsg.mesg.innovative-clinical-analytics@mail.mil.

Medical Readiness Dental Readiness

Dental readiness is an important component of medical readiness. Soldiers with a dental readiness classification (DRC) of 3 or 4 have a higher likelihood of not being medically ready since they may have treatment or exam needs that can cause more

significant delays. Approximately 5% of AC Soldiers were classified in these categories in 2015; the proportion ranged from 2% to 8% across installations. Nearly 80% of this group was classified as DRC 4, a classification that increased with age.



Overall, 5% of Soldiers were not medically ready due to dental deficiencies (dental non-readiness). Rates ranged from 2% to 8% across installations.

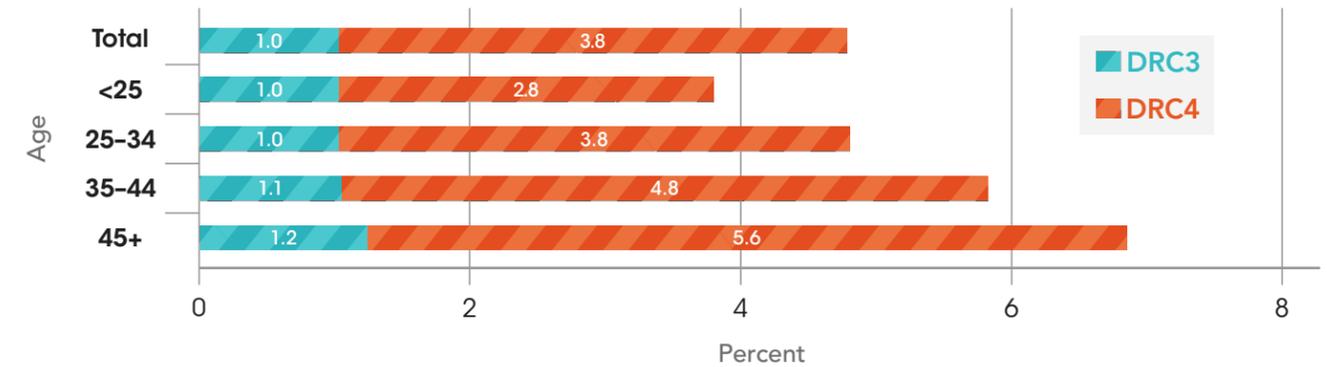
BEST RANKING INSTALLATIONS

1	FORT POLK	1.9%	4	FORT STEWART	2.7%
2	FORT SILL	2.1%	5	FORT IRWIN	2.8%
3	FORT LEE	2.4%			

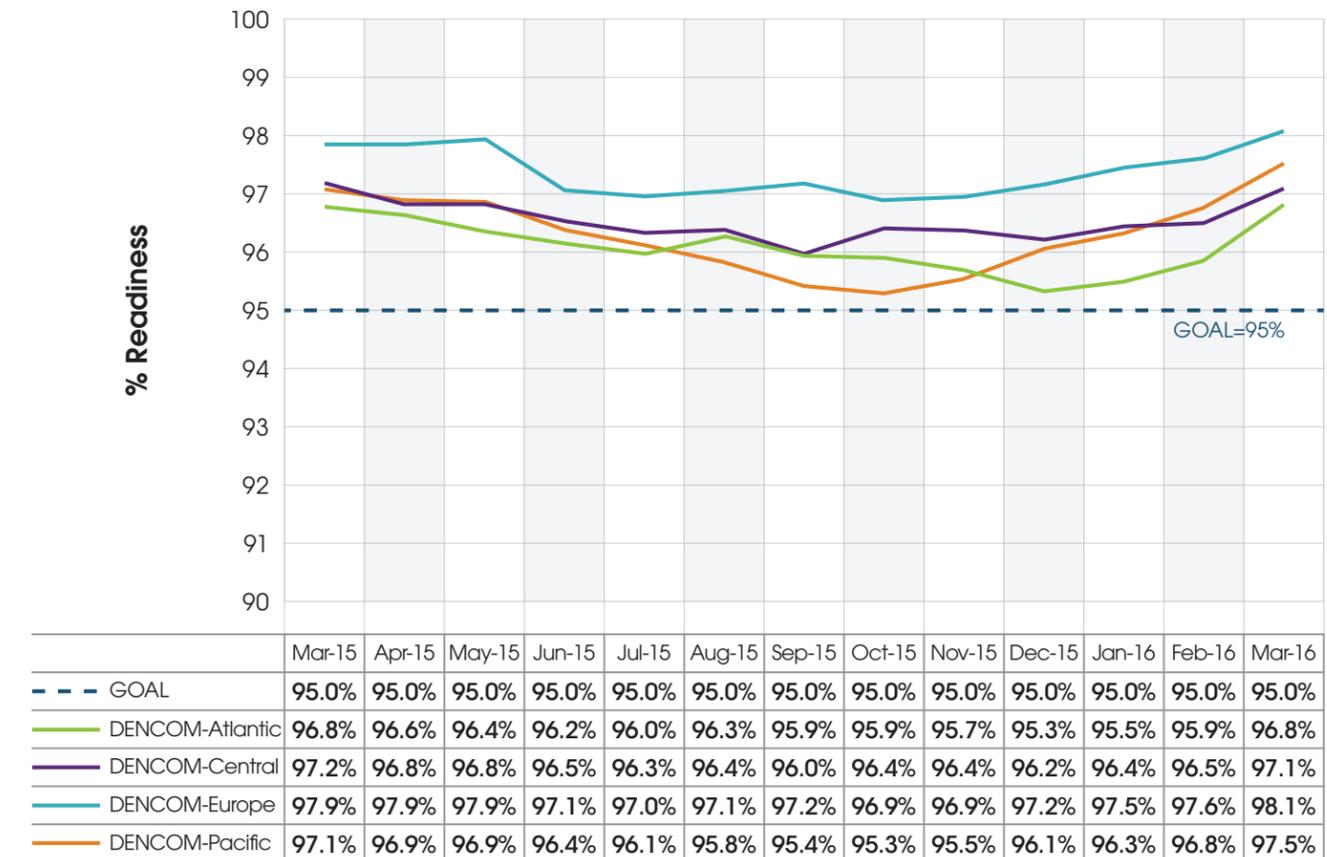
“As oral health improves, sick days decrease. Workload models predict up to 1.25 million hours of time will be returned to unit Commanders Army-wide as a result of the [Go First Class] initiative.”

—Go First Class press release

Percent Not Medically Ready by Dental Readiness Classification (DRC) and Age, AC Soldiers, 2015



Percent Medically Ready by Dental Readiness Classification (DRC), AC Soldiers, 2015



SPOTLIGHT

ARMY GO FIRST CLASS



Go First Class (GFC) is an Army initiative that provides an annual exam, a dental cleaning (prophylaxis), and simple fillings in a single appointment. GFC is a proactive approach designed to achieve Dental Wellness

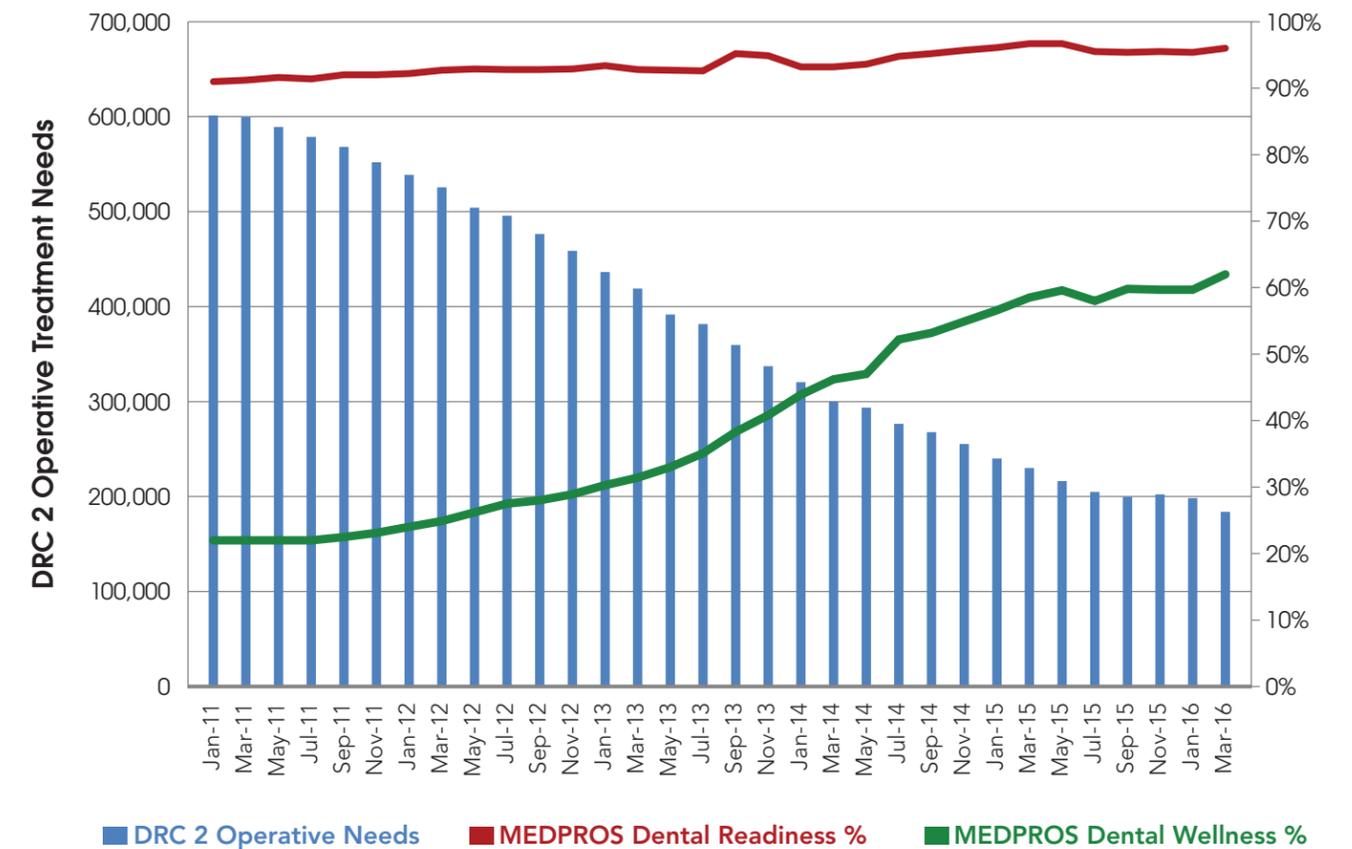
(Dental Readiness Classification [DRC] 1). Under this initiative, 50% of Soldiers achieve DRC 1 in a single appointment. From January 2011 to March 2016, Dental Readiness (DRC 1 and 2) have increased from 89% to above 96%, and Dental Wellness (DRC 1) has increased from 22% to 62% (figure). DRC 2 Operative Needs (cavities) decreased from over 600,000 to below 184,000. In addition, GFC has resulted in a 30% reduction in "Sick Call" appointments across the enterprise.



Benefits of GFC:

- 50% of Soldiers achieve Wellness (DRC 1) in a single appointment.
- DRC 1 Soldiers are five times less likely to experience dental emergencies than DRC 3 Soldiers.¹
- GFC reduces Soldiers' time spent in a dental treatment facility and away from the unit by approximately 50% annually. This equates to 1.25 million hours.*
 - ⇒ 1.25 million hours = 143 years of time returned to Army annually.*
 - ⇒ 1.25 million hours in E4 pay/benefits = ~\$31,250,000 annually.**

Five Years of Army Dentistry



For more information on Go First Class, visit:
<http://www.armyafc.info/>

References:
 1. Colthirst P, DeNicolo P, Will R, Simecek J. Use of Dental Disease Nonbattle Injury Encounter Module to Assess the Emergency Rate on an Army Military Installation within the United States. Mil Med. 2012;177(9):1100.

*Based on end strength of 500,000 Active Component Soldiers
 **Based on \$25/hour for pay + benefits

Medical Readiness Profiles

Permanent profiles significantly limit medical readiness. Approximately 5% of AC Soldiers had permanent profiles in 2015; prevalence ranged from 2% to 8% across installations. The proportion on profile

(P3 and P4 categories) was higher among women (6.5%) than men (5%). Profiles increased substantially with age, rising roughly three-fold when comparing Soldiers under 25 with Soldiers 45 and older.



Overall, 5% of Soldiers had permanent profiles. Rates ranged from 2% to 8% across installations.

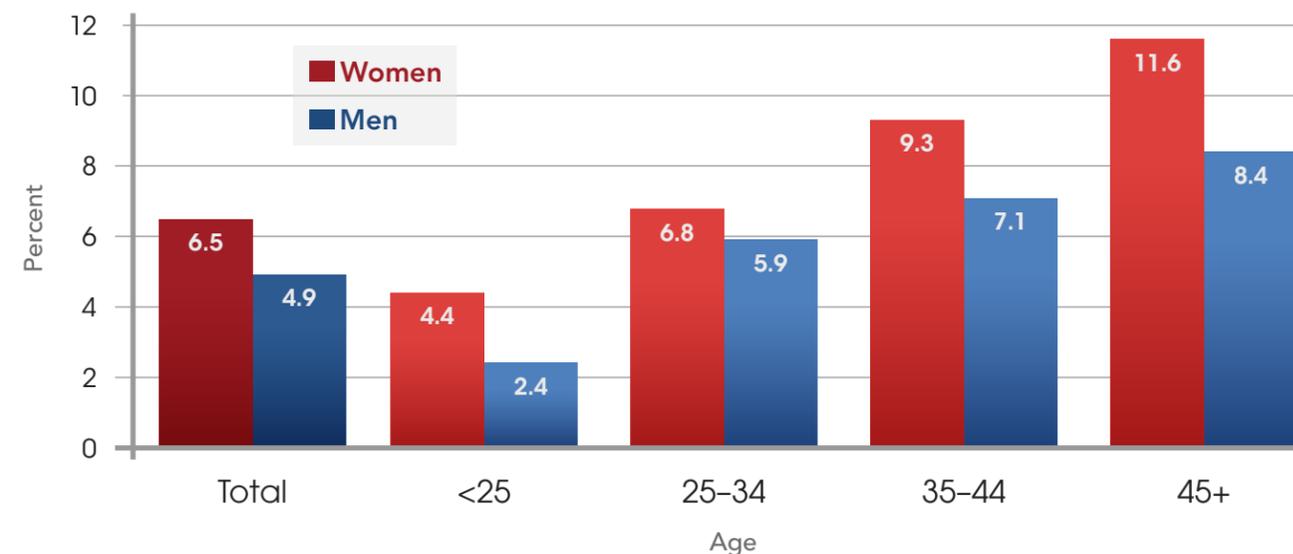
BEST RANKING INSTALLATIONS

1	WEST POINT	2.3%	3	FORT JACKSON	2.8%
2	FORT RUCKER	2.7%	5	FORT LEE	2.9%
3	ABERDEEN P.G.	2.8%			

“The number of non-deployable Soldiers is having a direct impact on readiness...the situation is unsustainable in today’s complex operational environment.”

–Sgt. Maj. Daniel A. Dailey

Percent On Permanent Profile by Gender and Age, AC Soldiers, 2015



DID YOU KNOW?

TAKING A CLOSER LOOK AT PRE- AND POST-PARTUM PROFILES

- Pregnancy results in a substantial number of temporary profiles (MRC3B)
- In Fiscal Year 2015, 5,706 AC Soldiers delivered a baby.¹ This means those Soldiers were medically non-deployable while pregnant and for 6 months after delivery.
- 650 enlisted Soldiers separated strictly due to pregnancy in FY15.²
- Female Soldiers must pass fitness and body composition standards at 180 days after delivering a child. This is why it is important for a woman to stay physically and mentally ready and resilient, especially as the combat roles and opportunities for women in the military continue to be expanded.
- Exercise by a healthy Soldier, both during pregnancy and postpartum, benefits the Army, the Soldier, and her baby.

References:

¹ Hospitalizations Among Members of the Active Component, U.S. Armed Forces, 2015. Medical Surveillance Monthly Report. 2016; 23(4):8-16.

² Headquarters Department of the Army, Deputy Chief of Staff, G1. Enlisted Career Systems Division, Distribution and Readiness Branch. Personal communication, 4 August 2016.

SPOTLIGHT

PREGNANCY POSTPARTUM PHYSICAL TRAINING (P3T)

The Army supports pregnant and postpartum Soldiers through its Pregnancy Postpartum Physical Training (P3T), an Army-unique, standardized, multi-centric physical training and educational program developed at the Army Public Health Center. Army P3T provides a safe, standardized 15-month program to help Soldiers maintain fitness for a healthy pregnancy and increase their postpartum fitness. The program also improves Soldier morale and retention through higher Army Physical Fitness Test (APFT) pass rates and increased compliance with AR 600-9 (*The Army Body Composition Program*) body composition standards. According to AR 350-1, *Army Training and Leader Development*, P3T execution is a coordinated effort among the senior Commander, installation management, MTF staff, and units to provide implementation, facilities, medical

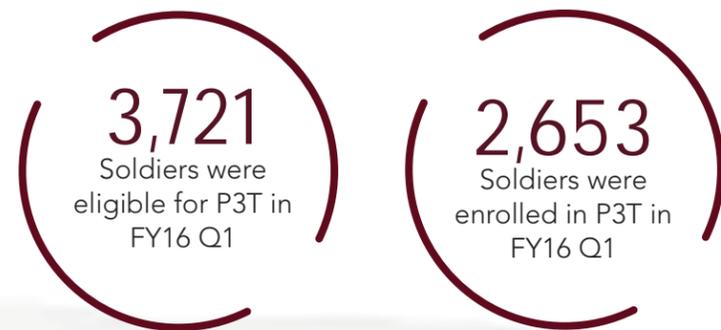
consultation, physical training and education. AR 40-501, *Standards of Medical Fitness*, states that all pregnant and postpartum Soldiers are to enroll in Army P3T; however, daily participation may vary due to mission requirements.

Army P3T supports American College of Obstetricians and Gynecologists Committee Opinion 650 (December 2015) guidance for women with uncomplicated pregnancies to engage in physical activities before, during, and after pregnancy. The program also assists Soldiers in their efforts to succeed in their Army careers.

For more information on Army P3T implementation tools and leader training, visit: <https://www.us.army.mil/suite/page/693153>.

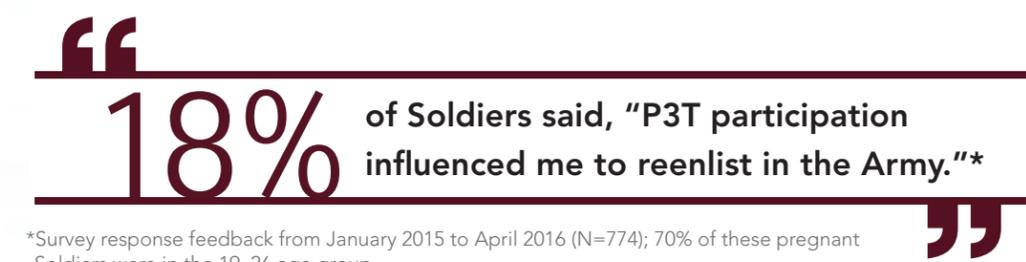
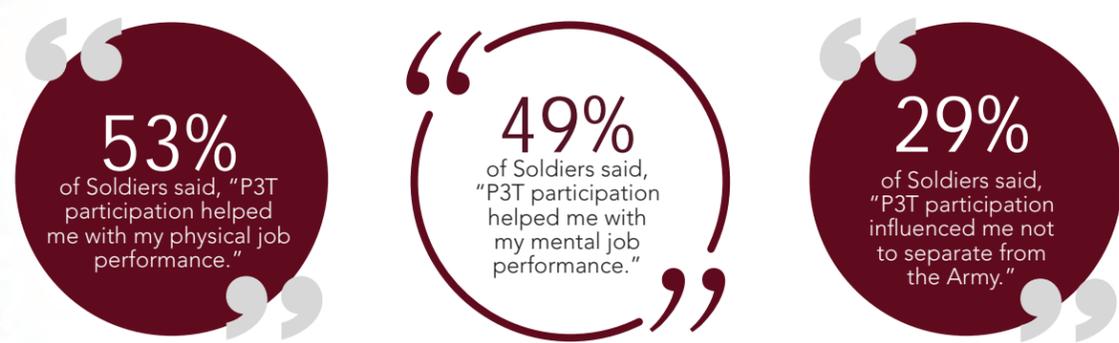
Who is coming to P3T? During FY16 Q1 (October–December 2015)

- P3T was implemented at **46 CONUS** and **OCONUS** locations
- A convenience sample recently taken indicated that **92% of FY16 Q1 P3T enrollees were enlisted personnel** and **83% were E1–E5**

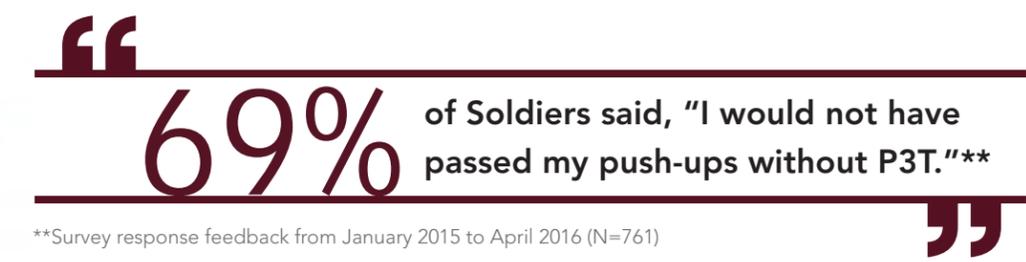
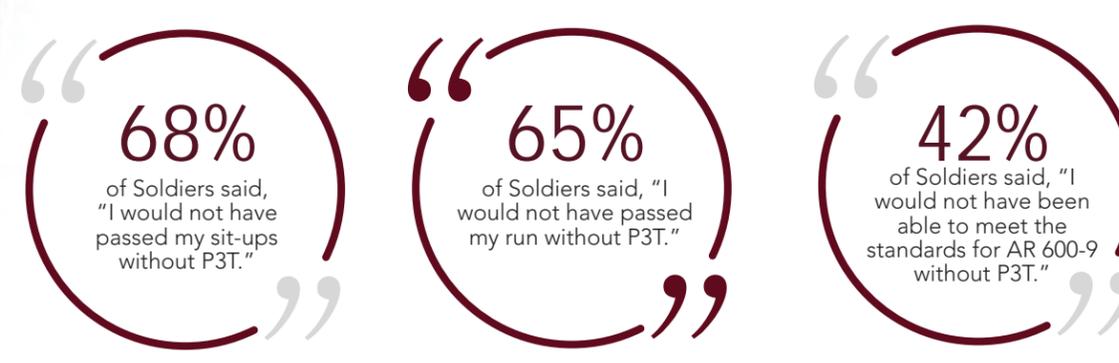


- **1,335 pregnant Soldiers** attended regularly
- **875 postpartum Soldiers** attended regularly

What do pregnant Soldiers who participated in Army P3T say about it?



What do postpartum Soldiers who participated in Army P3T say about it?





SPOTLIGHT

Local Action

COMPREHENSIVE SOLDIER & FAMILY FITNESS (CSF2) COLLABORATES WITH PREGNANCY POSTPARTUM PHYSICAL TRAINING (P3T) TO ENHANCE TRAINING AT FORT SILL, OKLAHOMA

Master Resilience Trainer-Performance Experts (MRT-PEs) at the Fort Sill CSF2 Training Center have piloted the addition of mental skills to their P3T Exercise Leader Training with the goal of enabling postpartum Soldiers participating in P3T to increase their performance.

The MRT-PEs teach the P3T Exercise Leaders new techniques with which to reinforce P3T participants' physical training efforts, helping postpartum Soldiers gain the mental edge on their Army Physical Fitness Tests following maternity leave. This pilot training, which focuses on motivation, attention control, building confidence, and energy management, includes a lecture followed by a challenge

course that applies the skills taught. The challenge course incorporates an array of physical challenges as well as demanding attentional tasks. Soldiers are instructed to control their energy and take a deliberate breath before each task begins. A facilitated discussion of how these mental skills can be applied during the postpartum period concludes the training.

The way ahead is to replicate the use of this mental skills training within the P3T education curriculum at locations where MRT-PEs are available.

For more information on CSF2, please visit:
<http://csf2.army.mil>

Installation Health Index:

HEALTH OUTCOMES

Chronic Disease

Chronic disease exacts a toll on one's quality of life, requiring sustained clinical management to avoid severe health outcomes or complications. The six chronic conditions assessed (cardiovascular conditions, cancer, asthma, arthritis, COPD, and diabetes) were collectively ranked as one of the top 20 leading indicators of health by the Institute of Medicine (IOM).

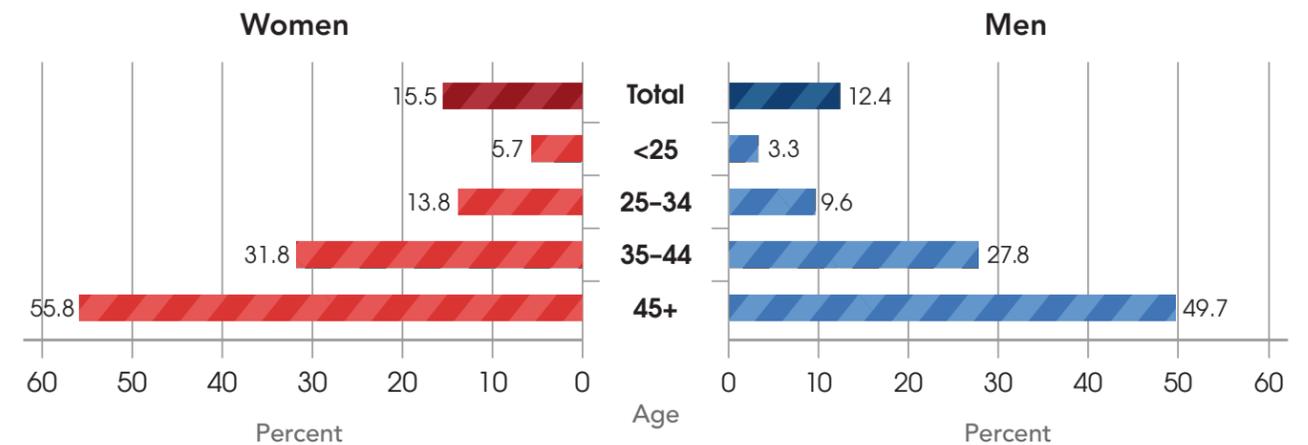
Among AC Soldiers, chronic medical conditions can also impact medical readiness, since they may decrease Soldiers' abilities to support more physically demanding mission requirements or to deploy to remote locations where healthcare resources may be more limited. Approximately 13% of AC Soldiers were diagnosed with one or more of these conditions in 2015. The proportion affected ranged from 11% to 20% across installations. Rates have declined slightly from a peak of nearly 15% in 2012. Cardiovascular conditions comprised the majority of diagnoses, followed by arthritis, asthma, and COPD. A little over half (56%) of cardiovascular conditions included hypertension. Chronic disease strongly correlated with age, with roughly 51% of Soldiers 45 years and older being diagnosed. Female Soldiers also experienced higher rates (approximately 16% overall as compared to 12% of men) of chronic disease than male Soldiers.



Overall, 13% of Soldiers were diagnosed with a chronic condition.
Rates ranged from 11% to 20% across installations.



Percent Diagnosed with Selected Chronic Diseases by Gender and Age, AC Soldiers, 2015



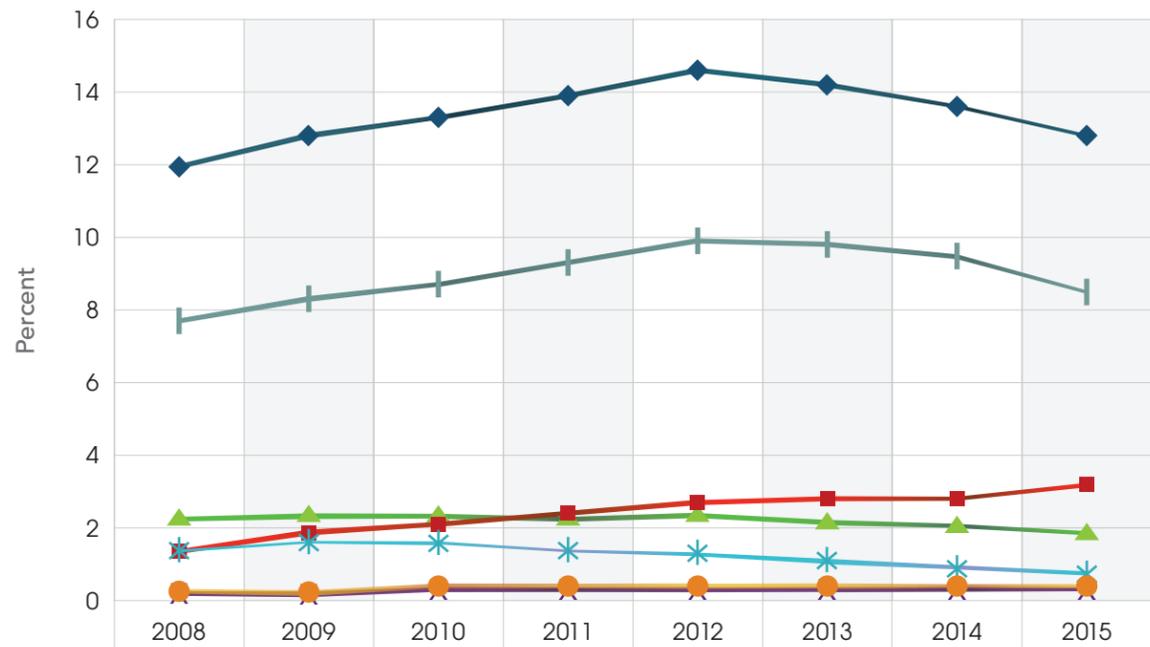
Percent of Cardiovascular Patients with Hypertension, AC Soldiers, 2015



BEST RANKING INSTALLATIONS

1 FORT BRAGG	10.5%	4 JOINT BASE LEWIS-McCHORD	11.7%
2 FORT CAMPBELL	11.0%	5 FORT CARSON	11.7%
3 JOINT BASE MYER-HENDERSON HALL	11.6%		

Percent Diagnosed with Chronic Disease by Diagnosis Category, AC Soldiers, 2015



In 2010, over half (52%) of all Americans had at least one chronic condition, accounting for 86% of total healthcare spending.

— *Multiple Chronic Conditions Chartbook*
 AGENCY FOR HEALTHCARE RESEARCH AND QUALITY

SPOTLIGHT
 Local Action

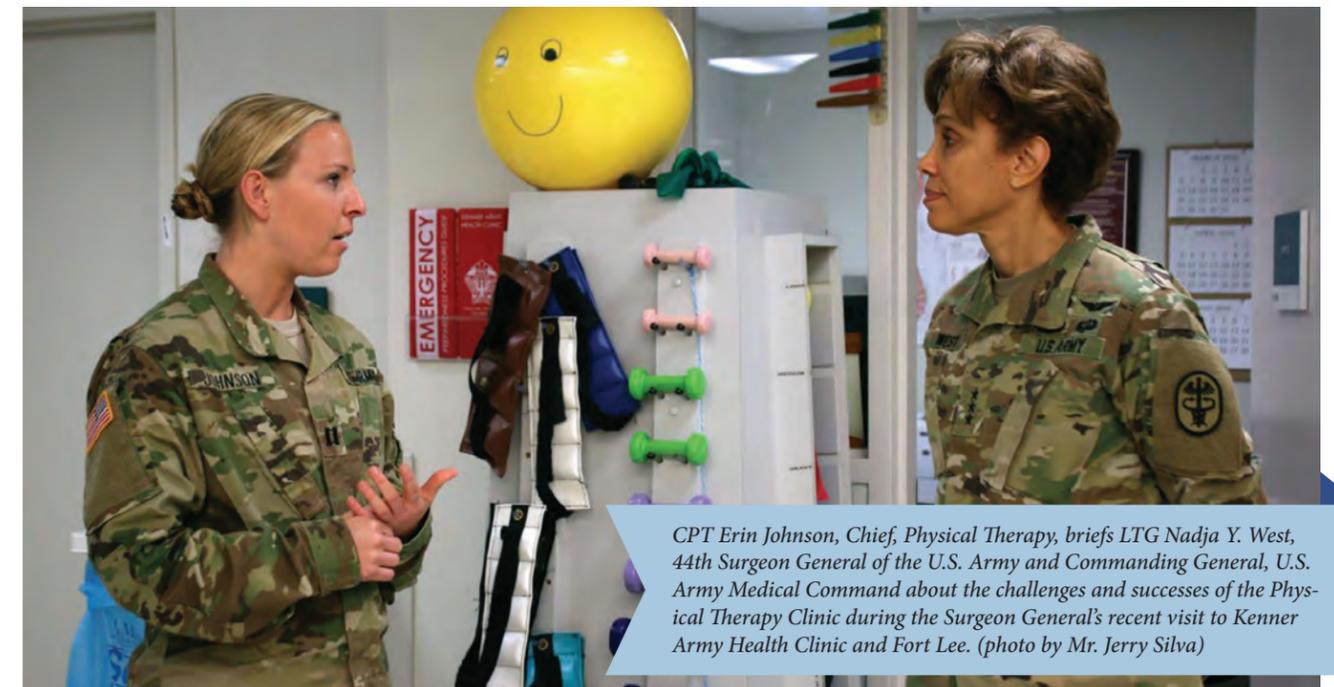


FORT LEE FOCUSES ON CHRONIC DISEASE PREVENTION

The 2015 *HoF* report highlighted Fort Lee’s poor Performance Triad nutrition scores and high rate of chronic disease in the AC population. Further analysis by the Kenner Army Health Clinic (KAHC) Disease Management Department indicated the local retirement-heavy population that receives services through KAHC also suffers from a high rate of chronic disease. The retiree population is predisposed to higher rates of obesity, cardiac-related issues, diabetes, and other conditions. This challenge, coupled with the lower-than average Performance Triad nutrition score, re-emphasizes the relevance of the installation’s Community Health Promotion goal of addressing nutrition and

physical wellness across the entire Fort Lee community. Fort Lee is addressing chronic disease through educational events and outreach programs. Retirees can utilize specialty departments at Kenner and are able to optimize healthcare concerns and improve personnel health and fitness via the Army Wellness Center. The Disease Management Clinic underscores KAHC’s commitment to delivering the necessary tools to promote health and wellness for the community.

—Fort Lee Health Promotion Officer



CPT Erin Johnson, Chief, Physical Therapy, briefs LTG Nadja Y. West, 44th Surgeon General of the U.S. Army and Commanding General, U.S. Army Medical Command about the challenges and successes of the Physical Therapy Clinic during the Surgeon General’s recent visit to Kenner Army Health Clinic and Fort Lee. (photo by Mr. Jerry Silva)

Injury

Injury is a significant contributor to the Army's healthcare burden, impacting medical readiness and Soldier health. Over one million medical encounters and roughly 10 million days of limited duty occur annually as a result of injuries and injury related musculoskeletal conditions, affecting about 50% of Soldiers each year.

Among the AC Soldiers evaluated, injuries were common with approximately 1,361 new injuries diagnosed per 1,000 person-years in 2015, comparable to the 2014 rate. Age- and sex-adjusted rates ranged from 1,112 to 1,782 per 1,000 person-years across installations. More than one-half of all injuries were lower extremity injuries commonly attributed to training. The high rate reflects multiple injuries among affected Soldiers. Injuries were more frequent among women than men (59% of women had a diagnosed injury, compared to 49% of men). Injuries increased with age, affecting 65% of Soldiers 45 and older compared to 45% of Soldiers under 25. Leading causes of injury as defined in medical records were overexertion (25%), falls (18%), and being struck by or against an object or person (17%).



Overall, 50% of Soldiers were diagnosed with an injury. Roughly 1,361 new injuries were diagnosed per 1,000 person-years.

Rates ranged from 1,112 to 1,782 across installations.

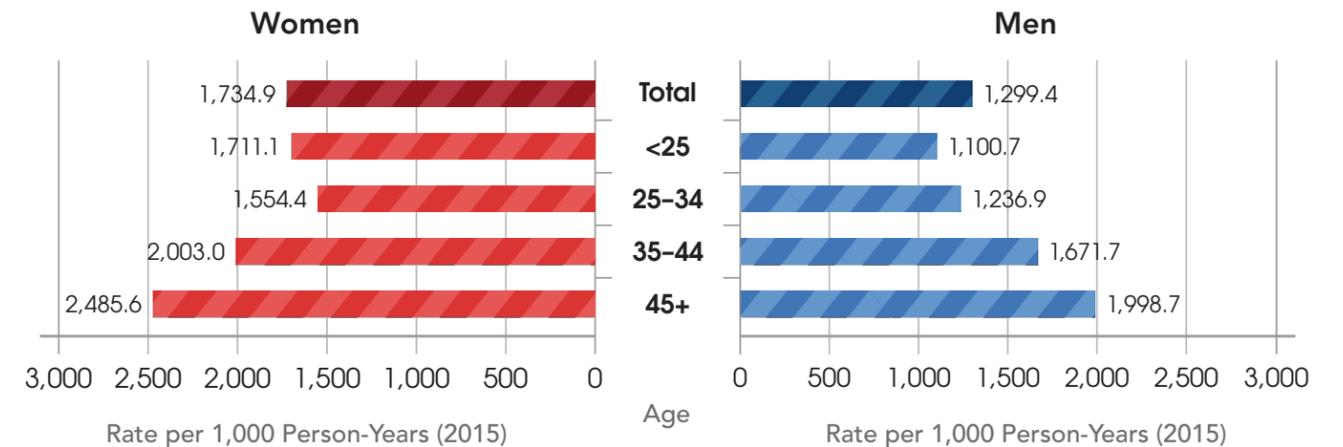
BEST RANKING INSTALLATIONS

- 1** FORT BRAGG 1,111.9 per 1,000 person-years
- 2** PRESIDIO OF MONTEREY 1,166.5 per 1,000 person-years
- 3** FORT CARSON 1,187.1 per 1,000 person-years

- 4** JOINT BASE MYER-HENDERSON HALL 1,199.9 per 1,000 person-years
- 5** FORT STEWART 1,237.3 per 1,000 person-years



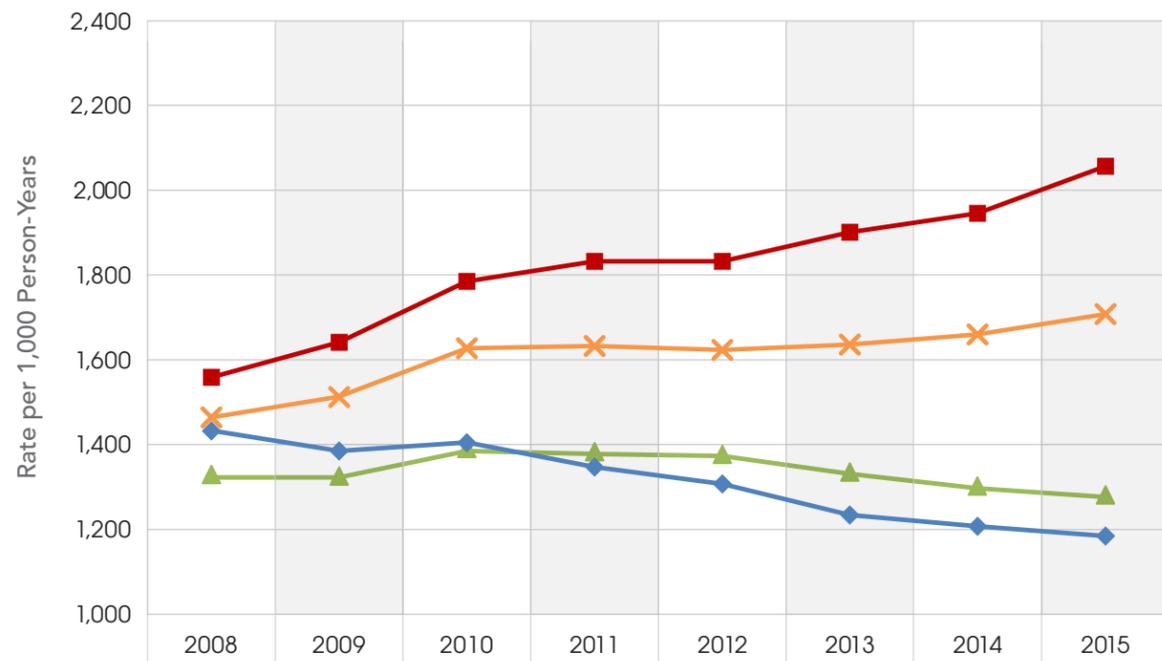
Rate of Injuries by Gender and Age, AC Soldiers, 2015



Percent of Soldiers Injured by Gender and Age, AC Soldiers, 2015



Annual Injury Rates by Age, AC Soldiers, 2008-2015

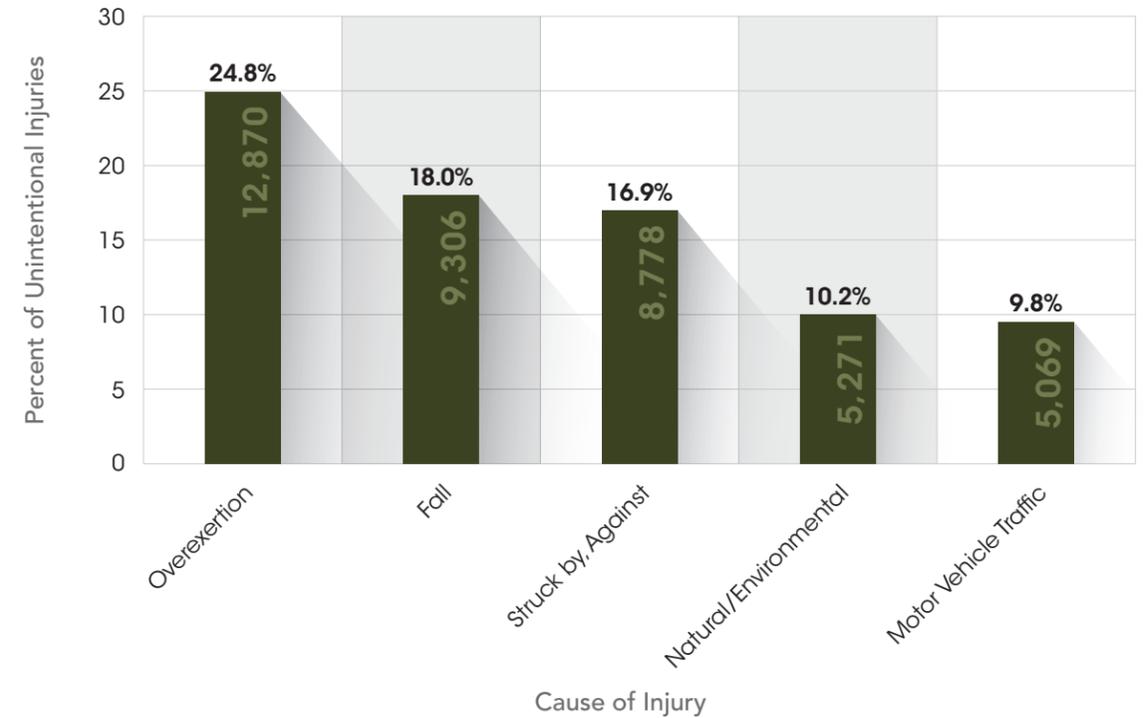


◆ <25	1,441.5	1,402.2	1,421.2	1,356.0	1,316.6	1,241.1	1,214.2	1,188.1
▲ 25-34	1,335.9	1,339.6	1,401.1	1,390.1	1,382.9	1,337.5	1,304.5	1,283.3
× 35-44	1,476.3	1,528.4	1,640.1	1,643.1	1,634.0	1,647.0	1,670.5	1,718.4
■ 45+	1,569.9	1,656.2	1,798.0	1,842.7	1,847.6	1,914.6	1,961.0	2,068.5

“...continued control and reductions in injury rates depend on institutionalizing existing processes and establishing additional links between medical providers, public health and safety officials, and Commanders.”

—LTG Eric B. Schoomaker

Top 5 Causes of Unintentional Injury, AC Soldiers, 2015



Percentages based on cause coded outpatient records

Annual Injury Rates, AC Soldiers, 2008-2015



Injury Incidence

Sensory Injuries

Visual and auditory acuity are essential readiness elements. Heightened awareness and response are crucial on the battlefield. Operational exposures, in turn, can compromise these senses. Both hearing and eye injuries are commonly reported during deployment, and hearing injury is a leading cause of disability among veterans.

Hearing Injury

In 2015, approximately 40 new hearing injuries were diagnosed per 1,000 person-years according to medical records data. Diagnosis rates declined from a high of 57 injuries per 1,000 in 2008 until 2010 when they reached a low of 34 injuries per 1,000. They have since begun to increase. Hearing injury was more common among men, whose rates are approximately 1.6 times higher than those among women (43 per 1,000 versus 26 per 1,000). Rates increase with age; Soldiers 45 and older experience rates that are more than twice that of their youngest counterparts under 25.

Hearing injury diagnoses in the medical data are not a full reflection of the burden of hearing issues in the Army. The Defense Occupational and Environmental Health Readiness System-Hearing Conservation (DOEHRS-HC), designed to track hearing readiness and occupational hearing injuries, reports the incidence of Significant Threshold Shift (STS) detected by monitoring audiometry. Significant Threshold Shifts in hearing caused by noise exposure may require further investigation of a potential diagnosable condition. The annual percentage of Active Component Soldiers with STS has decreased from 11% in 2008 to 4% in 2015. Significant Threshold Shift incidence data provide insight into the magnitude of noise-related hearing injury requiring further clinical assessment. Future reports will include more detailed analysis of DOEHRS-HC data.

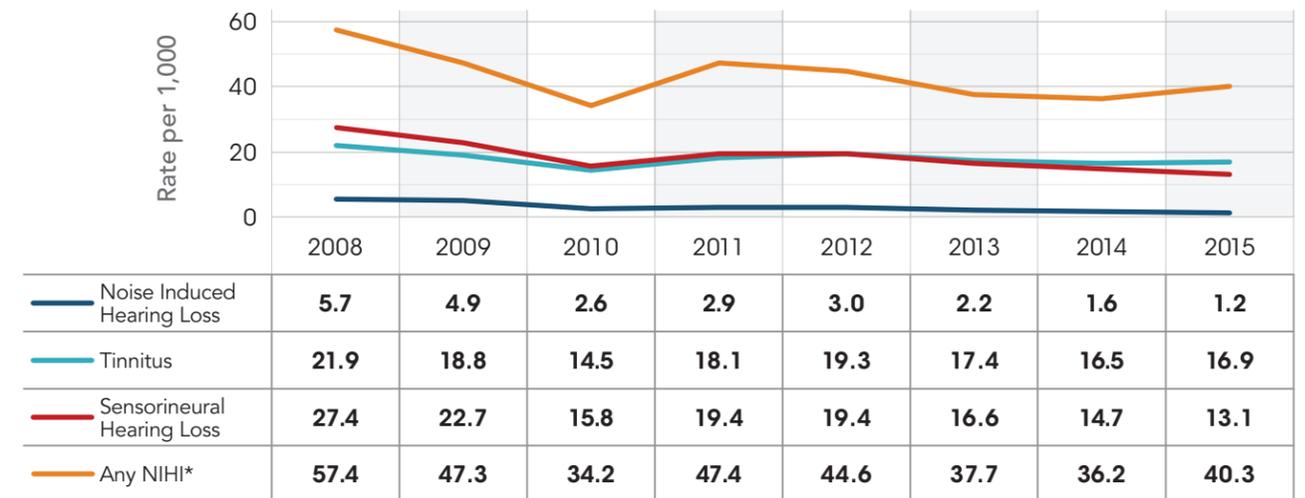
Eye Injury

In 2015, approximately 12 new eye injuries were diagnosed per 1,000 person-years. Across installations, eye injury rates ranged from 6 to 18 injuries per 1,000. Rates have steadily declined since 2008 when the rate was 18 per 1,000. There was no notable difference in eye injury rates between men and women or by age groups.

≥ 50% of combat injuries in OIF and OEF result from blast exposure.

—Hearing Technician Certification Course
ARMY PUBLIC HEALTH CENTER

Rate of Soldiers diagnosed with Noise Induced Hearing Injury (NIHI) by NIHI category, AC Soldiers, 2008–2015



* Includes significant threshold shifts diagnosed by an audiologist. Data not shown.

Percent of Soldiers with New Significant Threshold Shifts, AC Soldiers, 2008–2015



Eye Injury Rates by Year, AC Soldiers, 2008–2015



PREVENTION TIP

WEAR MOUTHGUARDS TO PREVENT INJURIES

The nature of military training activities and sports leads to many injuries, one of which is not often considered: tooth loss or damage. Mouthguards prevent significant injuries such as tooth loss, chips, or fractures as well as cuts and bruises to the lips, mouth, and tongue. Such injuries can result in pain, lost time from work for treatment, and facial disfigurement.

Army Regulation 600-63, *Army Health Promotion* (2015), requires mouthguard use for specific military training activities such as obstacle and confidence courses, hand-to-hand combat, rifle/bayonet training, and pugil stick training. At Fort Leonard Wood, Missouri, a 74% decrease in dental injuries among Soldiers resulted after mouthguards were provided during military combat training activities.

In addition, scientific data indicate that risk of injury is 60–90% greater when a mouthguard is not worn during sports activities. The American Dental Association and the International Academy of Sports Dentistry recommend mouthguard use during 29 sports/exercise activities, including football, basketball, martial arts, wrestling, soccer, skiing, extreme sports, volleyball, racquetball, softball, skateboarding, lacrosse, and rugby.

*For additional information, see the fact sheet, **Mouthguards Can Prevent Injuries**, available at: <https://phc.amedd.army.mil/topics/healthsurv/ip/Pages/ResourceMaterials.aspx>.*



“...risk of injury is 60–90% greater when a mouthguard is not worn during sports activities.”

References:

- 1 delacruz, G.G., Knapik, J.J., and M.G. Birk. 2008. Evaluation of mouthguards for the prevention of orofacial injuries during United States Army basic military training. *Dental Traumatology*; 24: 86–90.
- 2 Knapik, J.J., Marshall, S.W., Lee, R.B., et al. 2007. Mouthguards in sport activities: History, Physical Properties, and Injury Prevention Effectiveness. *Sports Medicine*; 37(2): 117–144.
- 3 American Dental Association. 2001. Do you need a mouthguard? *The Journal of the American Dental Association*; 132(7): 1066.
- 4 ADA Council on Access, Prevention and Interprofessional Relations and ADA Council on Scientific Affairs. 2006. *The Journal of the American Dental Association*; 137(12): 1712–1720.

DID YOU KNOW?

SOLDIERS' MANDATORY ANNUAL HEARING TESTS SUPPORT THEIR HEARING READINESS AND AUDITORY FITNESS FOR DUTY

Recent data from the Armed Forces Health Surveillance Branch shows the average number of new cases of hearing loss in AC Soldiers in the Combat Arms per year was 5,257 for the years 2007 through 2015. The average number of new diagnoses of hearing loss per year varied from a high of 6,168 in 2011 to a low of 4,182 in 2014.

Over a Brigade's worth of combat power has been impacted each year for nine consecutive years. More than 47,000 Combat Arms Soldiers were affected by hearing loss from 2007 to 2015.

Hazardous noise exposure is a fact of life for Soldiers. Noise-Induced Hearing Injury (NIHI) can develop so gradually that its resulting hearing loss goes unnoticed by individual Soldiers. The Army's purpose for conducting mandatory periodic hearing tests is to discover those Soldiers who may be in the early stages of NIHI but aren't aware of their hearing loss. Taking corrective action in early-stage NIHI helps prevent such hearing loss from progressing to the point of affecting the Soldier's ability to maintain his or her current job or remain on active duty.

Along with individual hearing readiness, leaders are accountable for their unit's hearing readiness. Soldiers' annual hearing test results are processed through the Army's Medical Protection System (MEDPROS), which informs Soldiers and unit commanders of individual and unit hearing readiness status, respectively. Results are categorized into four hearing readiness classification (HRC) levels: HRC 1 and HRC 2 indicate deployable status; HRC 3 and HRC 4 indicate non-deployable status.

Monitoring NIHI statistics through the Noise-Induced Hearing Injury surveillance reports and the HOF reports provides decision-aiding information to leaders at multiple levels and assists them in developing intervention strategies to reduce NIHI. Early detection of Soldiers' NIHI helps leaders and Preventive Medicine personnel intervene at the onset to mitigate the risk of further hearing loss. Monitoring the rates of NIHI also provides leaders with valuable feedback on the effectiveness of their NIHI risk reduction strategies.

To learn more about Noise Induced Hearing Injuries among Soldiers, visit: <http://phc.amedd.army.mil/whatsnew/Pages/PublicationDetails.aspx?type=Active%20Duty%20Noise%20Induced%20Hearing%20Injury%20Summary>.

References:

- Armed Forces Health Surveillance Center. *Noise-Induced Hearing Injuries, Active Component, U.S. Armed Forces, 2007-2010*. Medical Surveillance Monthly Report (MSMR). 2011 June; 18(6): 7–10.
- Department of the Army Pamphlet 40-501, *Army Hearing Program*, 8 January 2015.
- Humes LE, Jollenbeck LM, Durch JS: *Noise and military service: Implications for hearing loss and tinnitus*. Washington, DC: National Academy Press, 2006.
- U.S. Army Public Health Command. 2013. Surveillance Summary. *Active Duty - U.S. Army Noise Induced Hearing Injury Surveillance, Calendar Years 2007-2011*. Defense Technical Information Center, Accession Number ADA616428, available at <http://www.dtic.mil/get-tr-doc/pdf?AD=ADA616428> (Prepared by Helfer T, Canham-Chervak M, Kropp L, Deaver K, Hall S, Jones B, et al.)

SPOTLIGHT

MILITARY COMBAT EYE PROTECTION: A FORCE PROTECTION SUCCESS STORY

The U.S. Army re-tooled the Military Combat Eye Protection (MCEP) program in 2004 and replaced bulky, uncomfortable and ugly goggles and spectacles with stylish commercial products that met or exceeded military ballistic impact standards. These commercial products comprised the Army's first Authorized Protective Eyewear List (APEL). Current APEL spectacles provide five times greater impact protection than civilian standards require, and APEL goggles provide six times more protection.

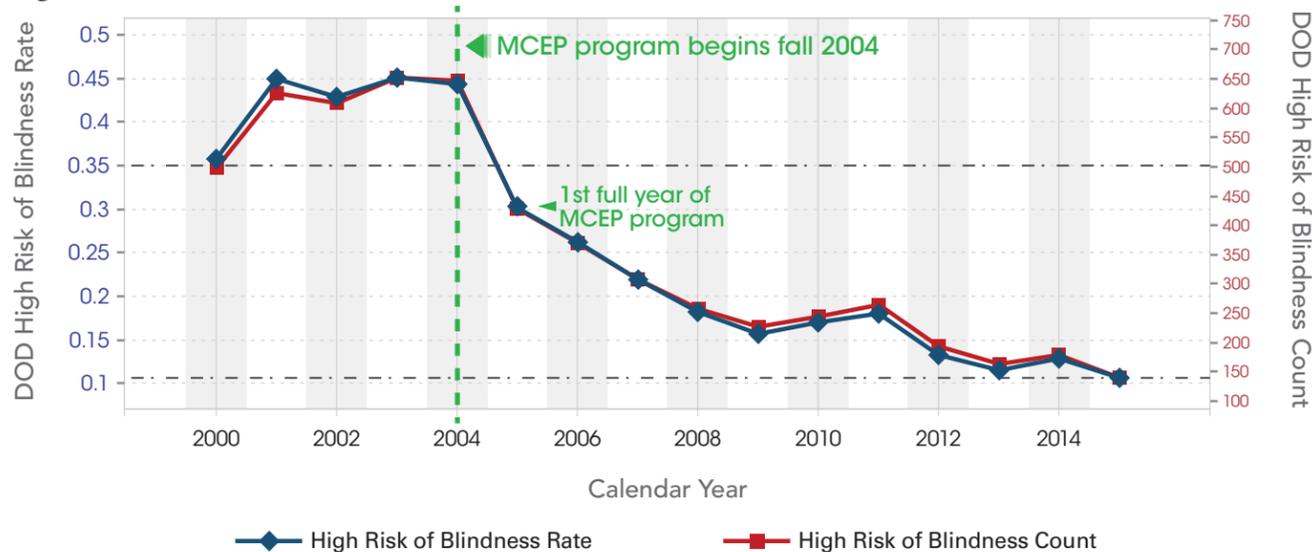
The improved MCEP program quickly reversed decades of substandard wear compliance stretching back to World War II. Surveys performed by the Tri-Service Vision Conservation and Readiness Program showed wear compliance reached 85% in 2010 and 95% in 2011. The U.S. Army Aeromedical

Research Laboratory analyzed photos of deployed Soldiers outside forward operating bases from 2002 through 2010 and determined the random observable combat eye protection wear increased from 20% to 95% during that period (unpublished data). Increased wear compliance yielded immediate force protection benefits, and the Army was not the only Service to benefit from the MCEP program. Beginning in 2004, the entire Department of Defense (DOD) experienced a decrease in the incidence of eye injuries, particularly those injuries with a high risk of blindness (Figure 1).

The rate of overall eye injury continued downward, and in 2011, it dropped below pre-Operation Enduring Freedom (OEF) levels. Eye injuries reached a near-term low in 2013, likely due to a

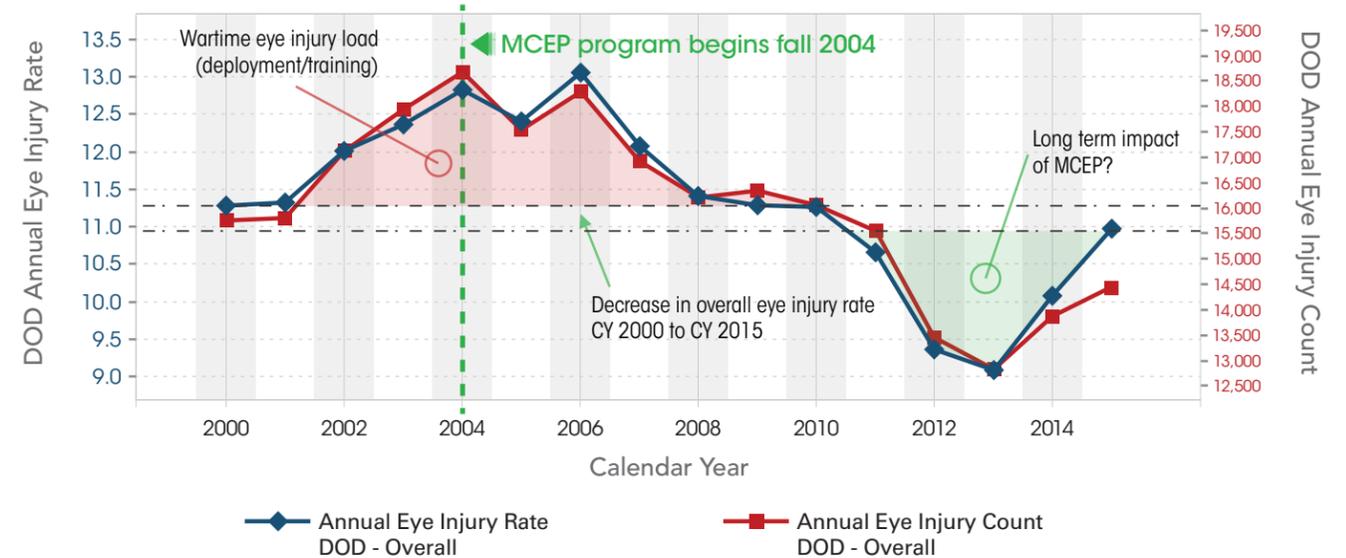
DOD Overall Risk of Blindness Injury Trend, CY 2000-CY 2015

Figure 1.



DOD Overall Eye Injury Trend, CY 2000-CY 2015

Figure 2.



sequestration-related drop in training tempo, and are now creeping back up to pre-OEF levels (Figure 2). Commanders and leaders must emphasize Soldier MCEP use not only during training but also while in the presence of eye hazards during off-duty hours. Vigilance drives eye injuries down; complacency may be responsible for the upward trend in eye injuries since the 2013 low.

The most remarkable impact of MCEP occurred between 2006 and 2007. During that time, eye injuries across the DOD decreased despite a dramatic increase in the frequency of attacks in Iraq.

Army leaders tend to associate eye injury risk with deployments; however, most eye injuries occur during training, maintenance activity, or off-duty hours. Deployment-related eye injuries, which tend to be less frequent but more severe, reached a near-term high in 2008, comprising 16.5% of total Army eye injuries. By the end of 2014, deployment-related eye injuries comprised only 4.5% of the Army total.

Eye injuries during training are also highly correlated with Military Occupational Specialty requirements. Soldiers assigned to Infantry One-Station Unit Training (OSUT) experience five to ten times more eye injuries than Soldiers assigned to Engineer, Military Police, Armor or Cavalry OSUT programs.

Program Executive Office – Soldier published the most recent APEL in March 2015; it includes 30 options consisting of 16 spectacles and 14 goggles. Of these options, seven spectacles and ten goggles support the Universal Prescription Lens Carrier that corrects a Service Member's vision.

The MCEP program now strives to enhance Soldier capability while increasing Soldier protection. Automatic electronic tints and heated shields are already available on a limited basis. Future products may integrate directed energy protection, indirect viewing, zoom capability and scratch-mitigating sacrificial films. We may ultimately see MCEP equipped with self-healing shields and electronic displays made with new materials that increase the level of fragmentation and blast protection.

For the current APEL, visit: <http://www.peosoldier.army.mil/equipment/eyewear>

Behavioral Health

The stressors of military life can have a profound impact on the psychological well-being of Soldiers and families. Behavioral health disorders such as depression, PTSD, and substance use are risk factors for a number of negative outcomes for Soldiers, including lack of medical readiness, early discharge from the Army, and suicidal behavior. Behavioral health disorders also result in a substantial healthcare burden. Roughly 80,000 Soldiers seek care for behavioral health conditions each year, resulting in over one million outpatient encounters and 80,000 hospital bed days.

An examination of behavioral health diagnoses for mood disorders, PTSD or other anxiety disorders, adjustment disorders, substance use disorders, personality disorders, and psychosis indicated that approximately 20% of AC Soldiers had one or more condition diagnosed in 2015, with the proportion ranging from 13% to 28% across installations. The most common diagnosis was adjustment disorder, present in 12% of Soldiers. Generally, diagnoses were more prevalent among female Soldiers (29%) compared to male Soldiers (19%). Older Soldiers were more likely to have diagnoses than younger Soldiers.



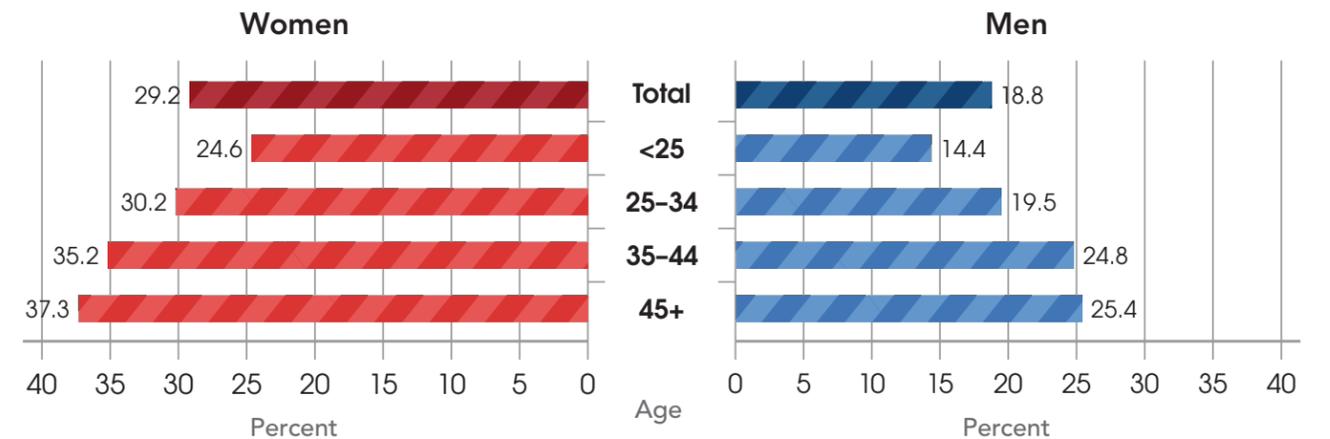
Overall, 20% of Soldiers were diagnosed with a behavioral health disorder. Rates ranged from 13% to 28% across installations.

BEST RANKING INSTALLATIONS

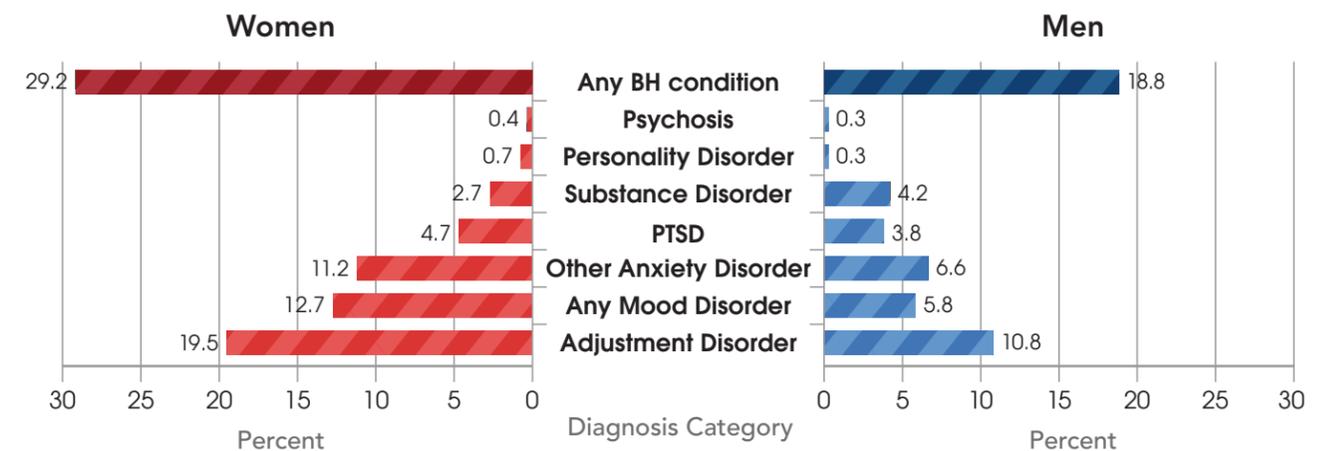
The top five installations are not reported for behavioral health disorders because higher percentages of Soldiers with established diagnoses may, in fact, reflect lower levels of stigma and greater access to care. Identifying concerns early and encouraging Soldiers to seek treatment is a primary goal of Army Medicine and leads to better clinical outcomes. Soldiers with behavioral health conditions who do not receive timely treatment are at risk for negative outcomes and decreased readiness.



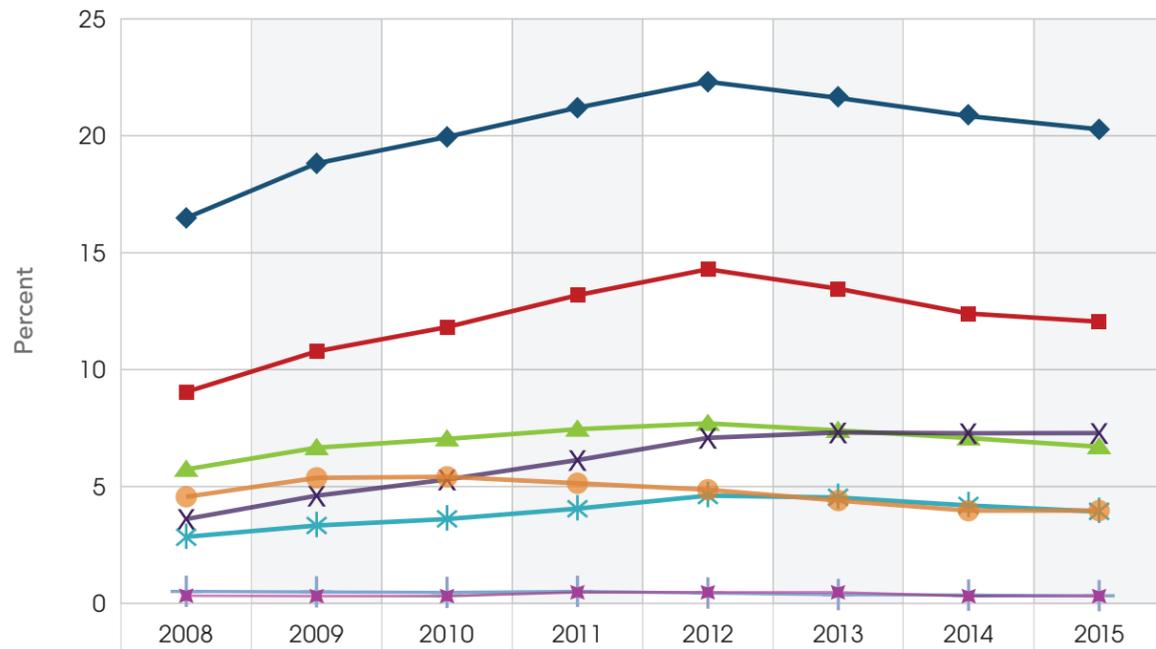
Percent Diagnosed with Selected Behavioral Health Disorders by Gender and Age, AC Soldiers, 2015



Percent Diagnosed with Behavioral Health Disorders by Gender and Diagnosis Category, AC Soldiers, 2015



Percent Diagnosed with Behavioral Health Disorders by Diagnosis Category, AC Soldiers, 2008-2015



	2008	2009	2010	2011	2012	2013	2014	2015
Any BH Disorder	16.5	18.8	20.0	21.2	22.3	21.7	20.9	20.3
Adjustment Disorder	9.0	10.8	11.8	13.2	14.3	13.5	12.4	12.0
Mood Disorder	5.9	6.8	7.2	7.6	7.9	7.6	7.2	6.8
Other Anxiety Disorder	3.6	4.6	5.3	6.1	7.1	7.3	7.3	7.3
PTSD	2.8	3.3	3.6	4.1	4.6	4.5	4.2	3.9
Substance Disorder	4.6	5.4	5.4	5.1	4.9	4.4	4.0	4.0
Personality Disorder	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.3
Psychosis	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3

DID YOU KNOW?

- Military children of all ages who have experienced a parental deployment are at increased risk for social/emotional/behavioral problems.¹
- School-aged children and teens evidence a decrease in academic performance related to deployment.²
- Rates of self-reported depression, suicidal ideation, drug/alcohol use, and physical aggression increase for military-connected youth who have experienced a parental deployment.³⁻⁵
- Mental health diagnoses occur at a higher rate for children and wives of deployed Soldiers.^{6,7}
- Rates of positive screenings for depression, both during pregnancy and at post-partum, are higher for women whose spouse is deployed.⁸⁻¹⁰
- Nationally, the lifetime prevalence of behavioral health problems in children and teens is 15-20%, but only 30% of youth receive care for their mental health problems.^{10,11}



SPOTLIGHT

CHILD AND FAMILY BEHAVIORAL HEALTH SYSTEM:

The Army's Response to Increase Access to Behavioral Health Care for Family Members!

For well over a decade of continuous conflict, hundreds of thousands of U.S. Service Members and their Families have made tremendous sacrifices. Many have endured the consequences of physical and/or psychological injury.

The Way Forward—Child and Family Behavioral Health System for our Soldiers' Families

The need for behavioral health (BH) services for Family Members is great. Literature supports maximizing the role of the Primary Care Manager (PCM) to address this need¹² and demonstrates that children and families often prefer to receive treatment for BH needs as a component of their primary care.¹³ By increasing the role of the PCM in the treatment of common BH disorders, access to and capacity for BH care are expanded, and stigma is reduced.

In March 2014, the U.S. Army Medical Command published Operations Order 14-44 mandating implementation of the Child and Family Behavioral Health System (CAFBHS) as a consultative and collaborative care model in support of Army Medical Homes (AMHs). The CAFBHS, which includes the School Behavioral Health (SBH) program, implements best practices in the delivery of evidence-based BH care, reduces barriers to care, decreases stigma, and supports resilience and well-being in Army Families and Children.

(continued on next page)

(continued from previous page)

The CAFBHS model consists of three interrelated components that work in conjunction to deliver high-quality BH care at military treatment facilities (MTFs):

- 1) Multidisciplinary staff members provide BH consultation to the PCMs in AMHs, as well as time-limited, evidence-based specialty BH care. Such providers currently serve 34 MTFs Army-wide.
- 2) The SBH program embeds BH providers in on-post schools to provide comprehensive BH services ranging from prevention to evidence-based treatment. Care is delivered in the child's natural setting, thus improving access, enhancing resiliency, reducing stigma and minimizing parents' time away from work. From its current level of 51 schools on 12 Army installations, the SBH program will expand to serve 100 schools on 18 installations.
- 3) At 12 of the largest Army installations, a full-time CAFBHS Outreach Coordinator partners with on-post and community organizations to integrate Family Member services. The goal of such outreach is to coordinate and leverage community resources in support of Soldiers' Families both on- and off-post.

Regional tele-consultation, a new initiative within the CAFBHS model, will provide direct child psychiatry, child psychology, and social work support to the PCMs and BH providers who deliver BH care within AMHs.

The CAFBHS model delivers standardized training in evidenced-based/informed practices to PCMs and BH providers. The CAFBHS PCM training includes standardized education and coaching curriculum in screening, evaluation, and treatment of common pediatric BH disorders. Child and adolescent BH providers receive education and practice in a state-of-the-art, evidence-based psychosocial assessment and intervention program.

The CAFBHS model has adopted and adapted the best civilian and military practices to bring the highest quality BH care to Army Families and Children.

For more information on the CAFBHS, visit:
<http://armymedicine.mil/Pages/CAFBHS.aspx>

References:

1. Chandra A, Lara-Cinisomo S, Jaycox LH, et al. Children on the homefront: the experience of children from military families. *Pediatrics*. 2010;125:16–25.
2. Richardson A, Chandra A, Martin LT, et al. Effects of Soldiers' Deployment on Children's Academic Performance and Behavioral Health. Santa Monica, CA: RAND Corporation; 2011. MG-1095-A.
3. Acion L, Ramirez MR, Jorge RE, et al. Increased risk of alcohol and drug use among children from deployed military families. *Addiction*. 2013;108:1418–1425.
4. Cederbaum JA, Gilreath TD, Benbenishty R, et al. Well-being and suicidal ideation of secondary school students from military families. *J Adolesc Health*. 2014;54:672–677.
5. Reed SC, Bell JF, Edwards TC. Weapon Carrying, Physical Fighting and Gang Membership Among Youth in Washington State Military Families. *Matern Child Health J*. 2014;18(8):1863–72.
6. Mansfield AJ, Kaufman JS, Engel CC, et al. Deployment and mental health diagnoses among children of US Army personnel. *Arch Pediatr Adolesc Med*. 2011;165:999–1005.
7. Mansfield AJ, Kaufman JS, Marshall SW, et al. Deployment and the use of mental health services among U.S. Army wives. *N Engl J Med*. 2010;362:101–109.
8. Smith DC, Munroe ML, Foglia LM. Effects of deployment on depression screening scores in pregnancy at an army military treatment facility. *Obstet Gynecol*. 2010;116:679–684.
9. Spooner S, Rastle M, Elmore K. Maternal depression screening during prenatal and postpartum care at a Navy and Marine Corps military treatment facility. *Mil Med*. 2012;177:1208–1211.
10. Merikangas, KR, He, J, Burstein, M, et al. Lifetime prevalence of mental disorders in US adolescents: Results from the National Comorbidity Study-Adolescent Supplement (NCS-A). *J Am Acad Child Adolesc Psychiatry*. 2010;49(10):980–989.
11. Merikangas, KR, He, J, Burstein, ME, et al. Service utilization for lifetime mental disorders in US adolescents: Results of the National Comorbidity Survey Adolescent Supplement (NCS-A). *J Am Acad Child Adolesc Psychiatry*. 2011;50(1):32–45.
12. Collins C, Hewson DL, Munger R, et al. Evolving Models of Behavioral Health Integration in Primary Care. New York, NY: Milbank Memorial Fund; 2010.
13. Kolko DJ, Campo J, Kilbourne A M, et al. Collaborative care outcomes for pediatric behavioral health problems: a cluster randomized trial. *Pediatrics*. 2014;133:e981–992.

SPOTLIGHT

Local Action

RIFLE MARKSMANSHIP INSTRUCTOR COURSE:

Improving Readiness through Mental Skills Training in the 10th Mountain Division

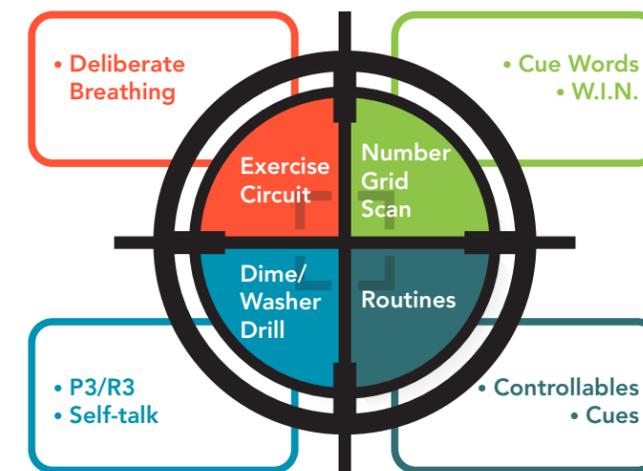
Every year, the 10th Mountain Division hosts Light Fighter schools at Fort Drum, New York. The Fort Drum Comprehensive Soldier and Family Fitness (CSF2) Training Center has been heavily involved in the 2-week-long Rifle Marksmanship Instructor Course (RMIC). To continue the training during the winter months, the Light Fighter schools rotate to Fort Polk, Louisiana. The Fort Polk CSF2 Training Center, newly established in 2015, was unable to support the winter RMIC training until January 2016 because the Center was in the process of becoming fully staffed.

A Senior Marksmanship instructor noted this lack of continuing support when he reported a drop in various measures of course performance, along with Soldiers' inability to "maintain the proper mindset to complete the course," over a period from December 2014 to November 2015.

By January 2016, the Fort Polk CSF2 Training Center was fully staffed and able to assist in facilitating the marksmanship course by means of instruction, application, and observation.

On Day 1 of the course, CSF2 Master Resilience Trainer-Performance Experts (MRT-PEs) instructed the Soldiers on mindset, confidence, and energy management—mental skills that are vital to a shooter's composure. On Day 2, the MRT-PEs presented instruction on attention control, followed by four mental skills stations (see figure). The trainers also observed and implemented various other skills throughout the course, including a cadre-facilitated stress-shoot during the second week.

4 MENTAL SKILLS STATIONS



W.I.N. = What's Important Now

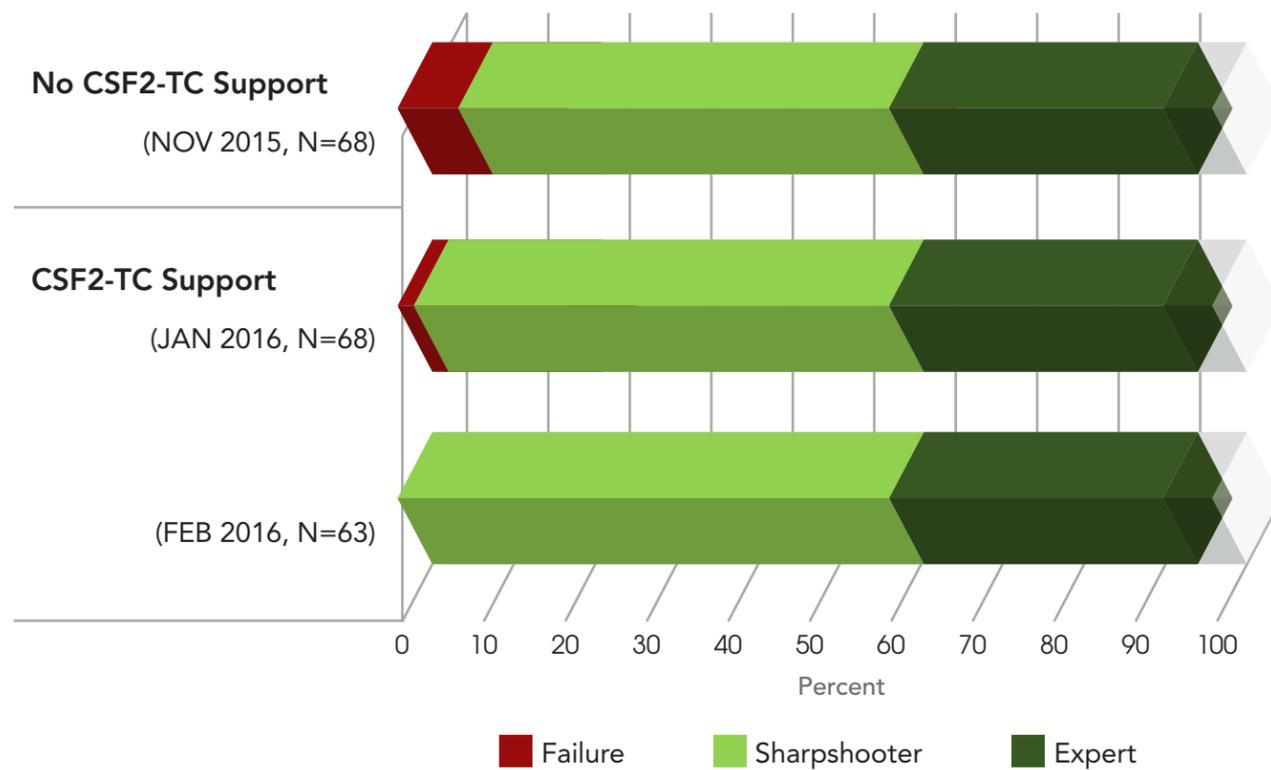
P3/R3 = Purposeful, Productive, Possibility/
 Reactive, Random, Restrictive

With approximately 5 hours of CSF2 instructional training and 1 to 2 hours of additional hip-pocket training, Soldiers' qualification scores improved noticeably from November 2015 through February 2016 (see figure), and the number of failures decreased.

(continued on next page)

(continued from previous page)

**RMIC Course Performance with and without CSF2-TC Support
(% of students per month)**



Soldiers, Army Civilians and Family members can leverage the resilience and performance expertise of the staff at CSF2 Training Centers across the Army. To find a CSF2 Training Center near you, visit:
<http://csf2.army.mil/training-centers.html>.

“The team of performance experts help the shooter understand the importance of a routine and that it’s okay to miss a target. They help the shooter understand [that] even though missing one target isn’t optimal, it also isn’t catastrophic, helping the shooter to shake off one mistake and still perform at a high level by staying in the moment.”

–Senior Marksmanship Instructor

Installation Health Index:

HEALTH FACTORS

Obesity

Obesity has a great impact on health, contributing to heart disease, type 2 diabetes, cancer, stroke, and hypertension, to name a few. It is also a leading factor in preventable death. It has become increasingly prevalent in the U.S., with estimates more than doubling since 1990 to affect approximately 30% of adults in 2015. Because the Army has strict physical fitness requirements for Soldiers, obesity is less common than it is in the general U.S. population.

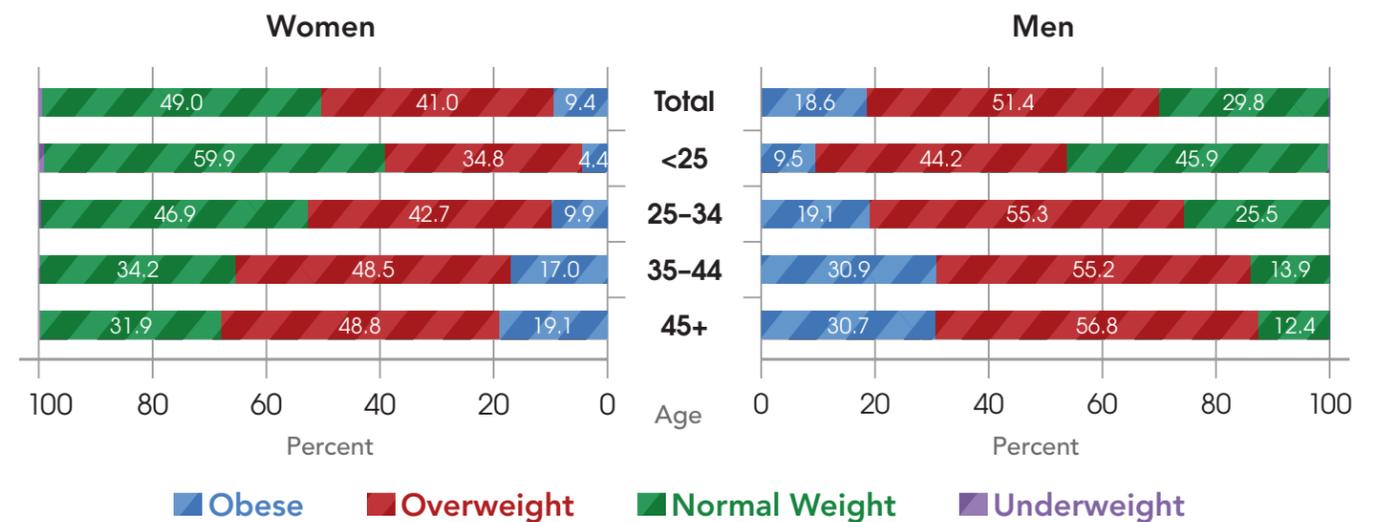
Prevalence of obesity was determined by the body mass index (BMI) which was calculated using height and weight measurements available from a Soldier's physical fitness test or medical encounters. Despite Army Body Composition Standards, roughly 17% of Active Component Soldiers were obese in 2015. The proportion classified as obese ranged from 12 to 21% across installations. Obesity rates were higher among men (19%) compared to women (9%). Age strongly influenced rates of obesity, with higher levels observed with increasing age. Similar demographic differences were observed among overweight Soldiers, with 51% of men classified as overweight compared to 41% of women, and the likelihood of being overweight increased with age.



Overall, 17% of Soldiers were classified as obese. Rates ranged from 12% to 21% across installations.



Percent Classified as Obese by Gender and Age, AC Soldiers, 2015



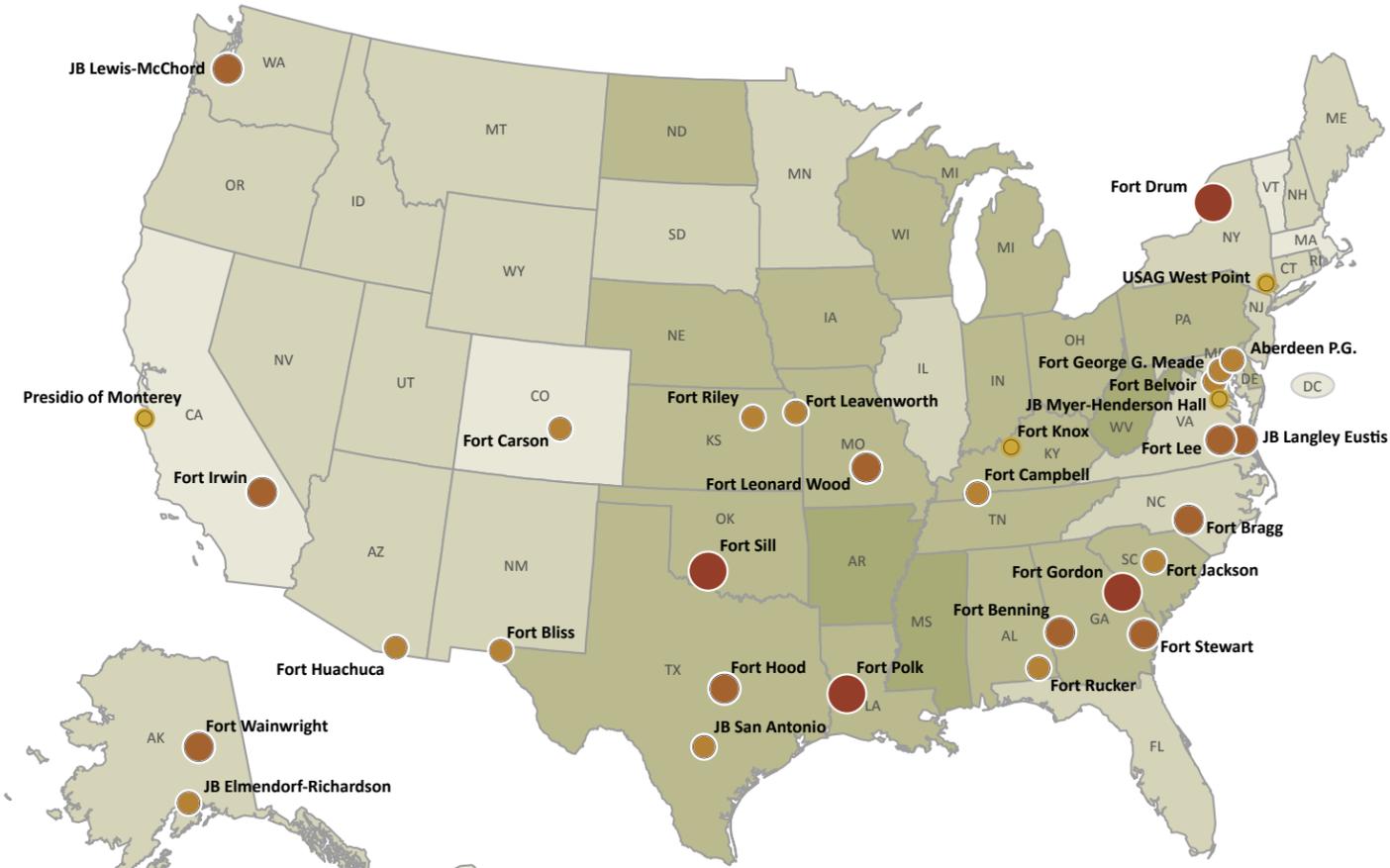
BEST RANKING INSTALLATIONS

1	PRESIDIO OF MONTEREY	11.9%	4	FORT RUCKER	13.0%
2	FORT HUACHUCA	12.3%	5	USAG WEST POINT	13.3%
3	JOINT BASE MYER-HENDERSON HALL	12.6%			

“Physical fitness is not only one of the most important keys to a healthy body, it is the basis of dynamic and creative intellectual activity.”

—John F. Kennedy

Geographic Comparison of Obesity: Army Installation and U.S. State Rates, 2015*



% of U.S. adults classified as obese

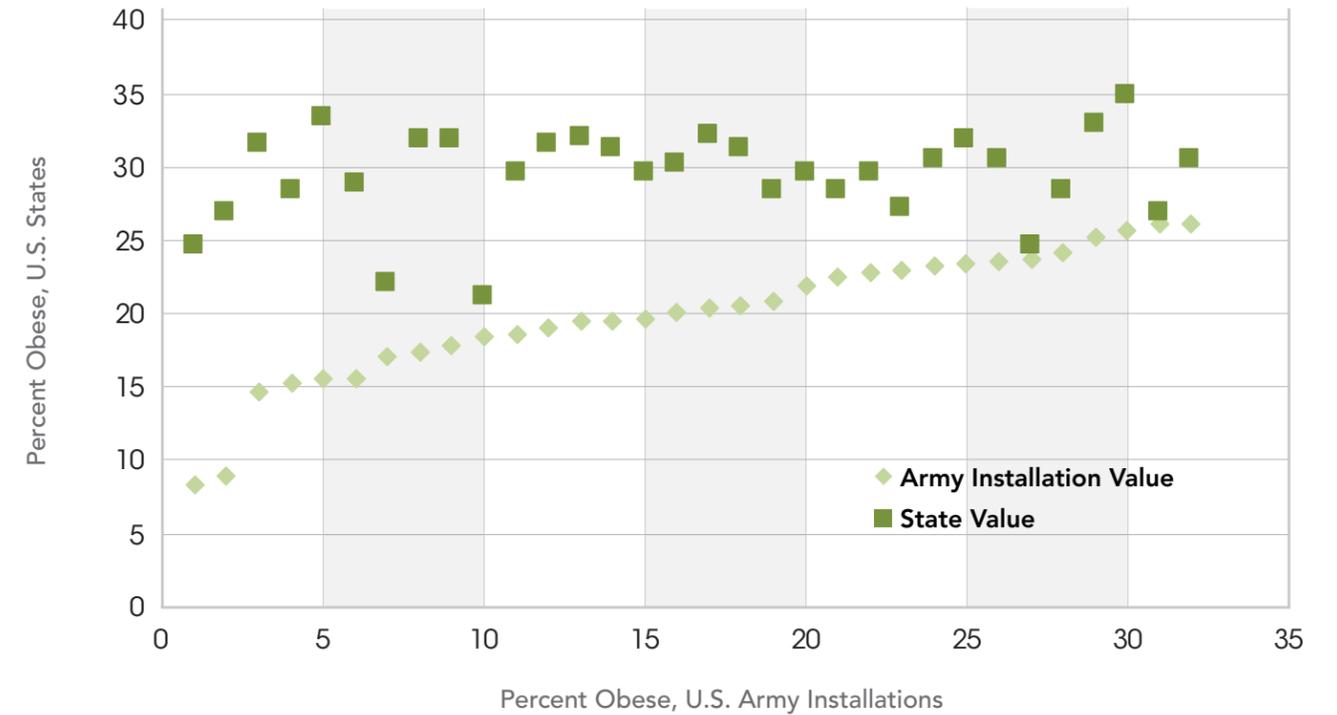
- <25.0%
- 25–29.9%
- 30.0–34.9%
- ≥35.0%

% of Active Component Soldiers classified as obese
(% standardized to U.S. population)

- <15.0%
- 15.0–19.9%
- 20.0–24.9%
- ≥25.0%

After standardizing Army rates for comparison with rates reported in the U.S. adult population which has a much higher proportion of older adults, the Army had substantially lower rates (21% compared to 30%). Standardized Army rates ranged from 8 to 26% across installations, while those reported nationally ranged from 22 to 36% across states. No significant correlation between installation and state rates was observed.

Installation Obesity Levels Relative to Affiliated States, 2015*



*Installation rates were standardized to the U.S. adult population by age and gender; a weak but not statistically significant correlation was observed

**“The battle, sir, is not to the strong alone;
it is to the vigilant, the active, the brave.”**

—Patrick Henry
St. John’s Church, Richmond Virginia
March 23, 1775

SPOTLIGHT

ARMY LAUNCHES *FIT FOR PERFORMANCE* PROGRAM TO LIGHTEN THE LOAD

The Army is the largest branch of the military in size...but not in a good way.

According to the most recent Department of Defense Health Survey, nearly 16% of all AC Soldiers are classified as obese (Body Mass Index ≥ 30).

Being obese or overweight negatively impacts a Soldier's physical performance and poses a direct threat to the United States' ability to defend itself. Soldiers with excess body fat are less capable of maintaining medical readiness and engaging in the prolonged physical activity required to carry out combat missions. Overweight Soldiers are 1.5 times more likely to be injured as their fitter counterparts, according to a study conducted in a light-infantry brigade. In an effort to win its present-day "battle of the bulge," the Army replaced its former standardized weight management program (*Army MOVE!*) with *Fit for Performance* in February 2016. Installations are collecting data to assess the new program's effectiveness both during and after Soldiers' participation.

Fit for Performance is designed to empower Soldiers to make sustainable lifestyle changes to win the weight loss battle once and for all. Quick fixes like overly restrictive diets and "PT binging" can backfire and lead to rebound weight gain as well as increase the likelihood of injury.

Spearheaded by registered dietitians, *Fit for Performance* takes a holistic approach to helping Soldiers reduce their body fat, improve their physical and mental performance, and reduce their risk of obesity-related diseases. According to the National Weight Control Registry, 89% of all successful weight loss maintainers incorporate diet, exercise, and behavior change.

Soldiers enrolled into the Army Body Composition Program, or any Soldiers, eligible Army beneficiaries, or DA Civilians who are interested in reducing their weight and/or body fat, may register for *Fit for Performance* by contacting their installation's Registered Dietitian.

Aligning with the Army's Performance Triad, Fit for Performance focuses on four pillars of weight loss:

01 SLEEP

02 ACTIVITY

03 NUTRITION

04 MINDFULNESS



References:

- 1 TRICARE Management Activity, Defense Health Cost Assessment and Program Evaluation (DHCAPE), and the United States Coast Guard, "2011 Health Related Behaviors Survey of Active Duty Military Personnel," February 2013, <http://oai.dtic.mil/oai/oai?verb=getRecord&metadataPrefix=html&identifier=ADA582287> (accessed May 27, 2016).
- 2 Anderson, MK, Grier, T, Canham Chervak, M, Bushman, TT & Jones, BH, Army Institute of Public Health. Association of health behaviors and risk factors for injury: A study of military personnel," October 6, 2013. https://iphc.amedd.army.mil/sites/259RE/ProfessionalDocuments/APHA2013OralPresentation_Oct162013.pptx (accessed May 27, 2016).

EMERGING HEALTH ISSUE

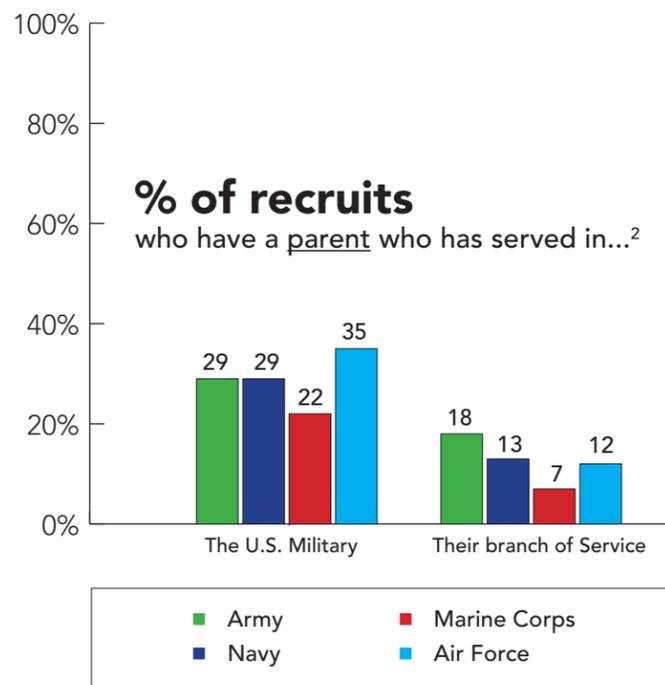
IS THE MILITARY FAMILY “FIT TO FIGHT” ?

Did you know that obesity among U.S. Military Family members adversely impacts force readiness? The percentage of obese children in the U.S. is growing at an alarming rate: one in three children is now considered overweight or obese. Rates of obesity in Army youth are comparable to the American public with 10% obese (BMI ≥ 95th percentile) and an additional 14% overweight (BMI 85th–95th percentile).¹ Children whose parent or family members have served in the military are likely to join the military as adults.² Because today’s youth are the Soldiers of the future, youth obesity and overweight pose a serious threat to our Force readiness.

% of recruits who have a family member who has served in: ²	Army	Navy	Marine Corps	Air Force
The U.S. Military	79%	82%	77%	86%
Their branch of Service	59%	51%	37%	46%

Rates of overweight and obesity among adult beneficiaries similarly mirror the civilian estimates. Approximately 59% of adult beneficiaries of Army Active Component personnel (60% of men, 59% of women) are overweight or obese.¹

Multiple factors contribute to these trends of increasing overweight and obesity within the Army Family:



From fast food to electronics, “quick and easy” is the reality for many military Families. Twenty-five percent of military children from age 12 to 17 and 15% of those from age 6 to 11 eat fast food 3 times a week or more.³ Most Army Families are “too busy,” and their hectic schedules lead them to eat fast food rather than healthier choices. Military spouses report lack of time (44%), not wanting to cook in the evenings (21%) and the convenience of fast food (21%) as three key barriers to eating healthier food.⁴

More than 40% of children from ages 6 to 17 have 3 or more hours of screen time a day. Use of technology and internet-access media such as computers, digital media, and various mobile devices contribute to this screen time.³

Like many American families, the Army Family is sedentary. Seven in ten military children don’t get the minimum 60 minutes a day of physical activity.³

SPOTLIGHT

ARMY CHILD, YOUTH, AND SCHOOL SERVICES (CYSS) PROMOTES FITNESS AND HEALTHY NUTRITION FOR MILITARY YOUTH

Army CYSS focuses on promoting healthy lifestyles through the expansion of lifelong fitness activities that emphasize the importance of daily physical fitness for Army children, youth and Families. As part of this focus on fitness, CYSS has increased its offerings of specialized youth programs, including weight training, sports conditioning, functional fitness and numerous other fitness-specific classes that increase movement and reduce the risk of injury. Army CYSS has also developed a staff functional fitness certification whose purpose is two-fold: to ensure CYSS program personnel implement fitness activities safely, and to provide CYSS staff with the knowledge, curriculum and training to implement appropriate daily fitness activities for all children, ages 3–18, who are enrolled in CYSS programs.

Army CYSS is also in the process of overhauling its food service program, which provides breakfast, lunch and snacks to more than 70,000 children each day, Army-wide. Four U.S. Army garrisons will beta test healthy menus and programs that CYSS is developing in partnership with Kansas State University. The goal is to roll out a new set of standardized menus—complete with nutrition, recipe and ordering calculators—to all 72 garrisons. The menus, which will run in eight-week cycles, are geared toward warm months, cold months and temperate climates.⁵

For more information on these initiatives, visit or contact your installation’s CYSS office.



U.S. Army Child, Youth & School Services

References:

- Healthy Analytics Center of Excellence, Military Health System Population Health Portal. Population Health Dynamic Reports. 2015. Overweight Obesity [Data set]. Accessed 1 August 2016.
- Thompson, M. *Here’s Why the U.S. Military Is a Family Business* [Internet]. TIME, 10 March 2016; <http://time.com/4254696/military-family-business> (accessed 1 August 2016).
- Tricare Management Activity (TMA). *Overweight Children in the Military Health System* [Internet]. HCSDB Issue Brief; http://www.tricare.mil/survey/hcsurvey/BMI_0127.pdf (accessed 18 July 2016).
- Tenconi, D. 2011. *Obesity and U.S. military spouses: An examination of risk perception and health behavior* [Internet]; <http://krex.k-state.edu/dspace/handle/2097/13138> (accessed 15 July 2016).
- DeChellis, J. 2016. *The Army’s new mission: Creating healthy food for kids* [Internet]. *Food Management*, 1 June 2016; <http://food-management.com/more-segments/army-s-new-mission-creating-healthy-food-kids> (accessed 29 July 2016).

Sleep Disorders

Sleep is critical in achieving optimal physical, mental, and emotional health, however, the demands of one's job often make it difficult to get sufficient sleep. In training and on the battlefield, inadequate sleep impairs essential mission abilities, including detecting and appropriately determining threat levels and coordinating squad tactics. Getting optimal sleep starts with learning and practicing healthy sleep habits. There are many ways in which Leaders and Soldiers can eliminate sleep distractors and practice proper sleep hygiene to ensure that optimal, healthy sleep is achieved.

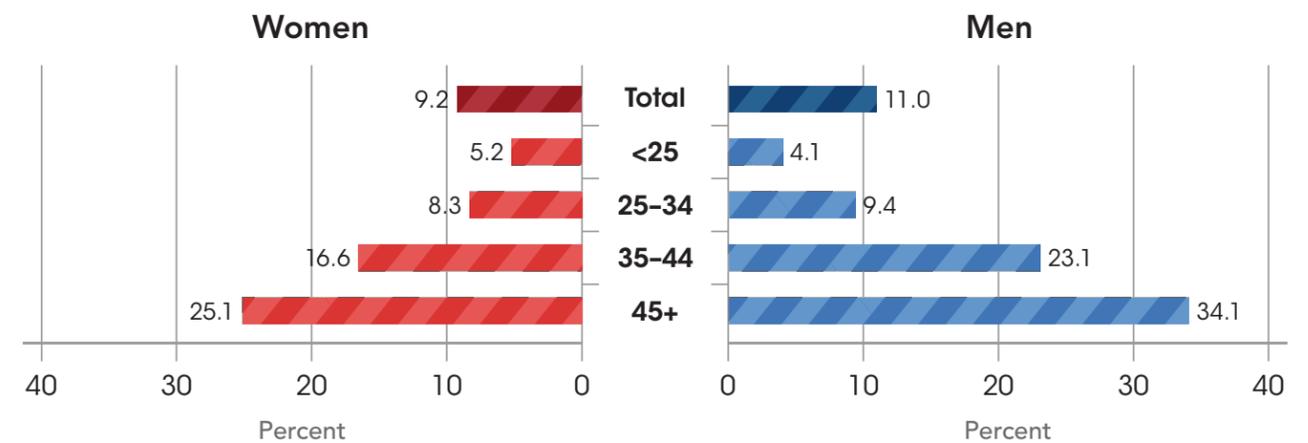
Approximately 11% of AC Soldiers had a diagnosed sleep disorder (organic sleep disorders or sleep disturbances) in 2015. The proportion affected ranged from 6% to 16% across installations. Rates were higher among men (11%) as compared to women (9%) and rose for both genders with increasing age. For example, rates were nearly 5 times higher for women 45 and older than for women under 25; likewise, rates were more than 8 times higher for men 45 and older compared to men under 25.



Overall, 11% of Soldiers were diagnosed with a sleep disorder.
Rates ranged from 6% to 16% across installations.



Percent Diagnosed with a Sleep Disorder by Gender and Age, All AC Soldiers, 2015



BEST RANKING INSTALLATIONS

1	USAG WEST POINT	5.6%	4	PRESIDIO OF MONTEREY	8.8%
2	FORT BRAGG	7.8%	5	JOINT BASE MYER-HENDERSON HALL	8.9%
3	FORT JACKSON	8.4%			

Inadequate sleep impairs essential mission abilities, including detecting and appropriately determining threat levels and coordinating squad tactics.

SPOTLIGHT

*Local Action***BRIGADE LEVEL CHANGES IN STAFF DUTY AND PHYSICAL TRAINING POLICIES PROMOTE POSITIVE SLEEP PRACTICES AMONG WARFIGHTERS**

Most staff duty officer (SDO) and charge of quarters (CQ) shifts require 24-hour periods (or longer) of sustained wakefulness. After serving in these capacities, many Soldiers must drive home and will have less than 24 hours of off-duty time. Officers are typically expected to continue to work and then drive home. This particular practice is cause for concern because of the number of Americans who are killed as a result of drowsy driving. The performance of someone who is continuously awake for more than 20 hours is similar to, if not worse than, that of an individual who is legally drunk. Soldiers are not allowed to report for work drunk (a "drunk on duty" charge would result); however, leaders tacitly support behaviors that are similar to drowsy or drunk driving by allowing Soldiers to drive or work after 24 or more hours of sustained wakefulness.

One Brigade participating in the Performance Triad FY15 pilot program altered its staff duty policy by changing its staff duty shifts from 24-hour periods to 12-hour periods and moving the change-over time from 0900 to 1100/2300. The individual working the 1100-to-2300 shift was not required to attend 0600 physical training or the accountability formation and was allowed to report to work at 0800. The individual working the 2300-to-1100 shift was required to have 8 hours of sleep prior to returning to work and thus had the rest of the day off following completion of the shift.

This particular Brigade also instituted afternoon PT ("reverse PT") during the winter months. The positive outcomes included reports of Soldiers feeling less stressed, in a better mood, and more motivated as a result of this change.

Leaders reported having the most difficulty with the change because of late meetings. Platoon leadership teams and section NCOs reported changes in their Soldiers' demeanor when the reverse PT ended at the beginning of summer: personnel were more sluggish, moody, tired and less motivated.

Revised staff duty scheduling and reverse PT scheduling are innovative solutions to address ongoing sleep concerns among Soldiers. For more information on promising strategies to support Soldiers' sleep, contact usarmy.performancetriad.mil@mail.mil.

Tobacco Use

Tobacco use can greatly diminish health, causing organ damage and leading to adverse conditions such as respiratory disease, heart disease, stroke, cancer, and premature death. Smokers have also been shown to have an increased risk for injuries and smoking inhibits wound healing. U.S. prevention campaigns have had some success in lowering smoking rates over the years, with a 38% decrease in national rates since 1990. National rates of tobacco use reached a low of 17% in 2014. The Army too has taken a strong stance to reduce tobacco use with health promotion efforts such as the recent launch of tobacco free campus campaigns.

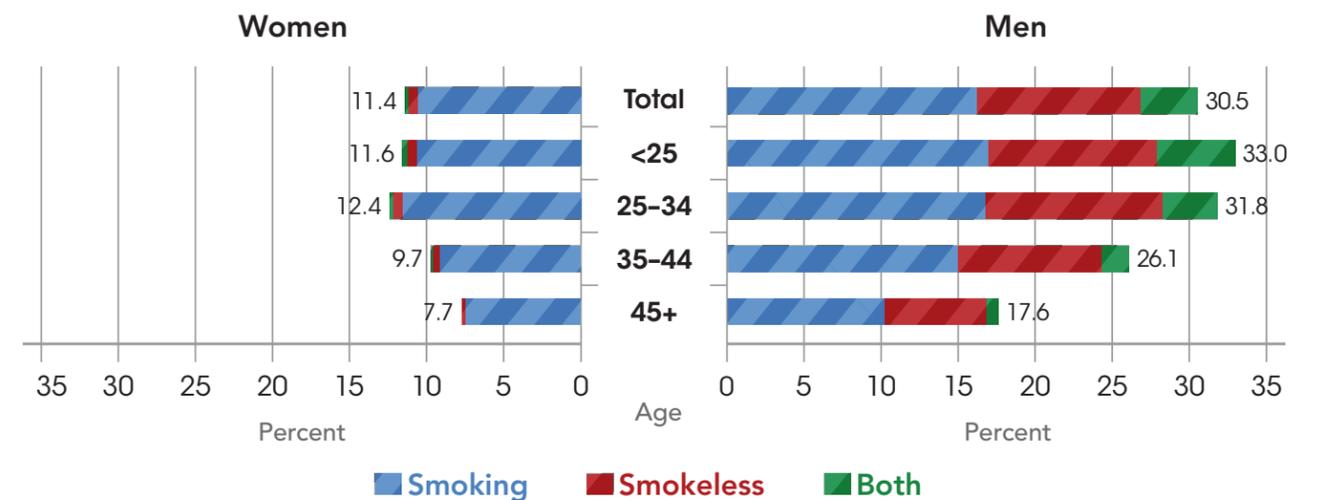
Smoking rates as determined from Soldier dental exams revealed that 19% of AC Soldiers smoked exclusively, 12% used smokeless tobacco exclusively, and 3% used both, bringing the total tobacco usage to roughly 28%. Tobacco use ranged from 11% to 37% across installations. Usage by men was more than two-fold that of women (31% compared to 11%) and men were much more likely to use smokeless tobacco. Usage was higher for Soldiers under 35.



Overall, 28% of Soldiers reported tobacco use.
Rates ranged from 11% to 37% across installations.



Percent Reporting Tobacco Use by Gender and Age, All AC Soldiers, 2015



BEST RANKING INSTALLATIONS*

1	USAG WEST POINT	10.7%	4	FORT RUCKER	15.3%
2	JOINT BASE SAN ANTONIO	11.1%	5	PRESIDIO OF MONTEREY	15.9%
3	FORT GEORGE G. MEADE	14.8%			

*Percentages are based off all tobacco use

3%
USING BOTH



12%
SMOKELESS TOBACCO USERS

19%
SMOKING TOBACCO USERS

Percentages of all tobacco use based on smoking and/or smokeless tobacco use; because some Soldiers use both, the individual percentages do not add to the total.

EMERGING HEALTH ISSUE

ELECTRONIC CIGARETTES & VAPING***E-Cigarette use is climbing among Soldiers.***

Electronic cigarettes (or e-cigarettes) are battery-powered products that convert a liquid solution of chemicals into a vapor a user inhales. E-cigarettes are made to look like traditional cigarettes, cigars, pipes, as well as colorful pens, all of which may be disposable or rechargeable. These products, also known as Electronic Nicotine Delivery Systems (ENDS), contain various amounts of nicotine, food flavorings, and chemicals. Smoking an e-cigarette is commonly known as vaping. The components of a typical e-cigarette are shown on the following page.

E-Cigarette tobacco use among Service Members is growing.

The percentage of AC personnel across the DOD who use electronic tobacco products nearly tripled from 2011 (5%) to 2014 (14%). In the same 4-year span, the population of cigarette smokers declined by 8%, while rates of smokeless tobacco users held constant at 13%. These trends are not unique to the military. Among the civilian population, youth, young adults (18–24 years old), and current smokers are more likely to become users of electronic tobacco products.

Between 2011 and 2014, advertising spending for ENDS products increased from \$6.4 to \$115 million. Some ENDS are marketed to smokers as an aid to curb or eliminate their nicotine cravings. However, the evidence is unclear as to the effectiveness of ENDS as a smoking cessation strategy. E-cigarette marketing to non-smokers is largely targeted to children and young adults. The Centers for Disease Control and Prevention (CDC) estimates that more than 3 million middle and high school students use e-cigarettes. These trends have serious implications for the Army as its future Soldiers may be putting their long-term health at risk by using these products.

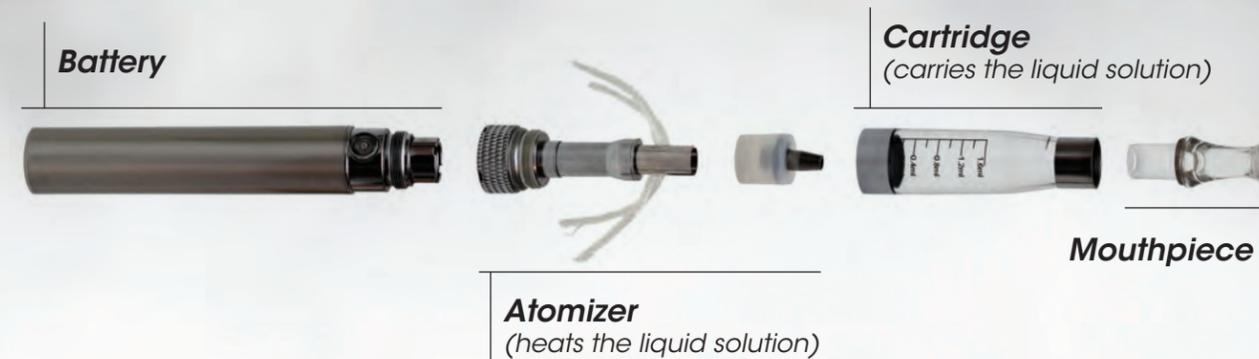
Long-term health effects of electronic tobacco products are unknown.

ENDS may be considered “safer” alternatives to traditional tobacco or smokeless products (like dip or chew). Although ENDS don’t burn tobacco or produce tobacco smoke, they do contain toxic chemicals that are released during vaporization. Exposures to chemicals like propylene glycol, formaldehyde, heavy metals, and other cancer-causing toxins are typically lower than such exposures from cigarettes. However, nicotine remains a major concern regarding both product types because it’s highly addictive and can also lead to addiction to other substances. The long-term effects of e-cigarettes are unknown, but short-term effects ranging from minor throat irritation to serious injuries caused by battery explosions have been reported.

***Federal Government and Military Policies.***

In 2016, the U.S. Food and Drug Administration (FDA) extended its regulatory power over tobacco products to include e-cigarettes and other ENDS. The new policies prohibit the sale of electronic tobacco products to minors, either online or in stores, and also establish new requirements for ENDS manufacturers and retailers. All packaging and advertising for electronic products containing nicotine must now display a warning label.

Tobacco use of any kind compromises Soldiers’ health and readiness. The DOD recently updated its tobacco policy to reflect best practices for reducing the negative effects of tobacco through environmental actions like creating “tobacco-free zones” in areas where children are present. Army Regulation 600-63 limits tobacco use (including e-cigarettes) on all installations and supports cessation programs for Soldiers and beneficiaries who want to stop using tobacco and nicotine products.

***Become an advocate for tobacco-free living.***

Soldiers should model and encourage a tobacco-free lifestyle among their peers and Family members. To increase the likelihood of their long-term success, those seeking to quit tobacco or fight nicotine addiction should investigate proven cessation methods. The DOD offers several programs that provide Service members with the practical support they need to become and remain tobacco-free.

Resources:***Quit Tobacco—UcanQuit2.org******Smokefree.gov******Tricare—Tobacco Cessation******References:***

1. National Institutes of Health, National Institute on Drug Abuse. Drug facts: e-cigarettes. 2016. <https://www.drugabuse.gov/publications/drugfacts/electronic-cigarettes-e-cigarettes> (accessed May 2016).
2. Marshall-Aiyelawo, K., Frazier, K., Godby, S., Koeppl, P., and D. Kogut. “2014. Health Related Behaviors Survey of Active Duty Personnel.” Presentation, March 2016 (accessed April 2016).
3. Schoenborn, C.A., and R.M. Gindi. 2015. Electronic cigarette use among adults: United States, 2014. NCHS Data Brief 217: 1-8.
4. U.S. Food and Drug Administration (FDA). 2016. Vaporizers, e-cigarettes, and other electronic nicotine delivery systems (ENDS). <http://www.fda.gov/TobaccoProducts/Labeling/ProductsIngredientsComponents/ucm456610.htm#warning> (accessed May 2016).
5. FDA. Clarification of when products made or derived from tobacco are regulated as drugs, devices, or combination products; amendments to regulations regarding “intended uses.” 2015. Federal Register. 80(186): 57756-57765.
6. Centers for Disease Control and Prevention (CDC). E-cigarette ads and youth. 2016. <http://www.cdc.gov/vitalsigns/ecigarette-ads/index.html> (accessed March 2016).
7. CDC. Tobacco use among middle and high school students. United States, 2011-2015. 2016. Morbidity and Mortality Weekly Report. 65(14): 361-367.
8. Franck, C., Budlovsky, T., Windle, S.B., Filion, K.B., and M.J. Eisenberg. 2014. Electronic cigarettes in North America. History, use, and implications for smoking cessation. *Circulation* 129: 1945-1952.
9. Memorandum, Office of the Secretary of the Department of Defense, April 8, 2016, subject: Policy Memorandum 16-001, Department of Defense Tobacco Policy.
10. Department of the Army. 2015. Regulation 600-63, Army Health Promotion.

Substance Abuse

The misuse and abuse of alcohol, prescription medication, and other drugs detracts from individual health and unit readiness, and negatively impact the lives of Army families and the community at large. The accidental or intentional overdose of alcohol or drugs is a major cause of morbidity and mortality; it is the most common method of suicide attempt among Soldiers. In addition, substance use disorders are associated with domestic violence and sexual harassment/assault which are threats to public health and safety.

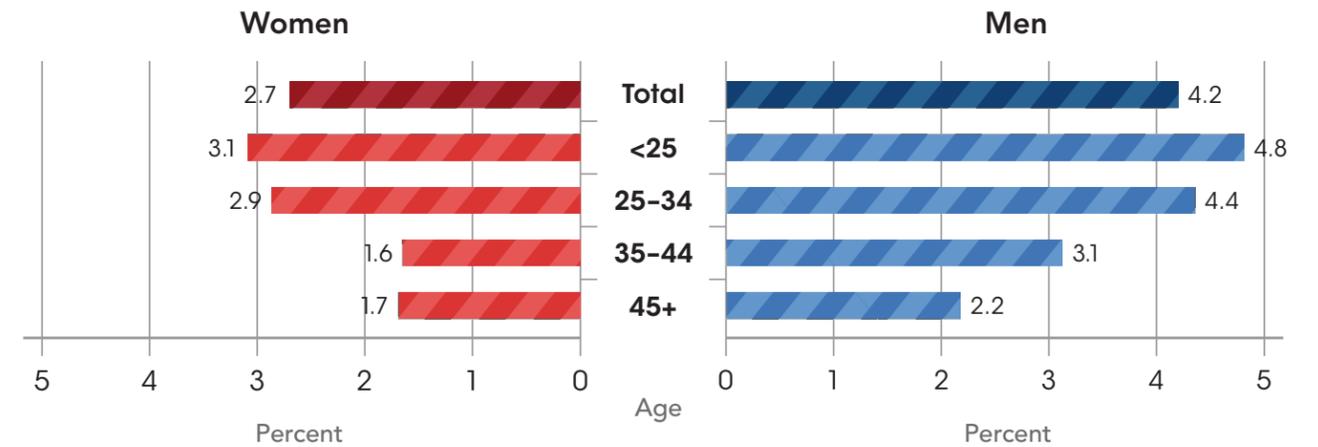
Approximately 4% of AC Soldiers had a diagnosed substance abuse disorder in 2015. The proportion affected ranged from 1% to 7% across installations and prevalence was highest among Soldiers under 35 years of age.



Overall, 4% of Soldiers were diagnosed with a substance abuse disorder. Rates ranged from 1% to 7% across installations.



Percent Diagnosed with a Substance Abuse Disorder by Gender and Age, All AC Soldiers, 2015



BEST RANKING INSTALLATIONS

1	FORT RUCKER	1.1%	4	USAG WEST POINT	2.0%
2	JOINT BASE SAN ANTONIO	1.7%	5	FORT HUACHUCA	2.1%
3	FORT LEONARD WOOD	1.9%			

“Alcohol and other drug use in the armed forces remain unacceptably high, constitute a public health crisis, and both are detrimental to force readiness and psychological fitness.”

— SLEEP DISORDERS AND SLEEP DEPRIVATION
INSTITUTE OF MEDICINE OF THE NATIONAL ACADEMIES

SPOTLIGHT
Local Action

REDUCING THE HOURS OF ALCOHOL SALES LEADS TO HARM REDUCTION IN SOLDIERS

The Community Health Promotion Council (CHPC) at one Midwestern U.S. Army installation identified excessive alcohol consumption and its negative effects (e.g., driving under the influence (DUI), domestic violence, accidents, etc.) as a public health priority. In exploring community- and evidence-based alcohol interventions to reduce this problem, the CHPC suggested that a restriction on alcohol sales hours might reduce negative outcomes for Soldiers, their Families, and the greater installation community. At the time, alcohol was sold on the installation 24 hours per day, 7 days a week. In June 2014, the installation implemented a policy restricting alcohol sales between 11:01 pm and 6:59 a.m., in closer alignment with the state's hours of sales. Following this community-based intervention, various evaluation activities were conducted to explore the impact of the policy on the Army community.

An evaluation of the policy outcomes found significant health improvements and decreased crime on the installation along with small reductions in alcohol sales revenue. Emergency Room visits on the installation dropped by 10%, and overall hospital admissions dropped by 15% in the 1-year period following the implementation as compared to the year prior. Overall DUI/driving while intoxicated (DWI) convictions decreased by 21%. Similarly, Serious Incident Reports (SIRs) decreased by 27% in that same time period. Total alcohol revenue on the installation dropped by just over \$18,000: from \$5,272,504 in July 2013–May 2014 to \$5,254,135 in July 2014–May 2015.

The personnel involved in policy development and implementation played a significant role in the policy's success. The Health Promotion Officer worked closely with the installation's Command Team to develop a policy that the leadership fully supported, resulting in consistent and enduring compliance. Other installations that permit 24-hour alcohol sales may want to consider similar revisions to their policies to model the success of this community-based intervention.



REDUCTION OF HOURS = REDUCTION IN SOLDIER HARM



Chlamydia

Chlamydia is the most commonly reported sexually transmitted infection (STI) both in the United States and in the Army. Infection rates provide a measure of risk behavior and help to identify vulnerable populations that can benefit from targeted prevention and treatment. It can also have an impact on medical readiness and Soldier well-being. Most people infected with chlamydia are unaware because they have no symptoms. If left untreated, severe health complications may occur, particularly among women, who may experience pelvic inflammatory disease, ectopic pregnancy, and infertility. Therefore, it is recommended that pregnant women, sexually active women under 25 years old, and older women with risk factors get screened annually for chlamydia.

Approximately 19 new chlamydia infections per 1,000 Soldiers were reported in 2015. Rates ranged from 9 to 31 infections per 1,000 person-years across ranked installations. Rates were over three-fold higher among women, particularly women under 25 years of age, where 44 infections per 1,000 person-years were reported. This may be partially due to increased screening among this demographic. Higher reported rates as well as higher screening compliance have been documented among Soldiers as compared to similar demographic cohorts in the U.S. population.

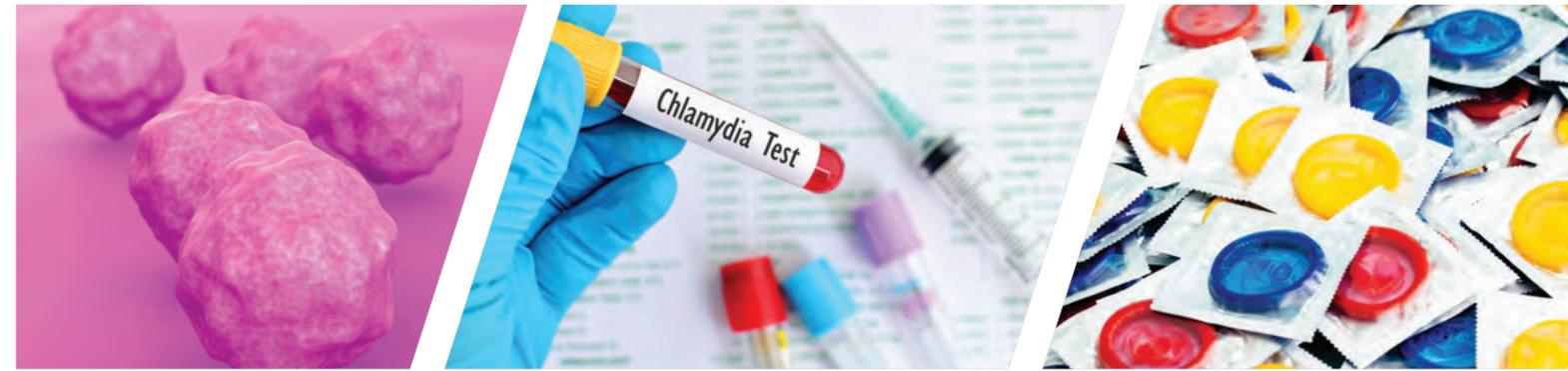


Overall, 19 new chlamydia infections were reported per 1,000 person-years. Rates ranged from 9 to 31 per 1,000 person-years across installations.

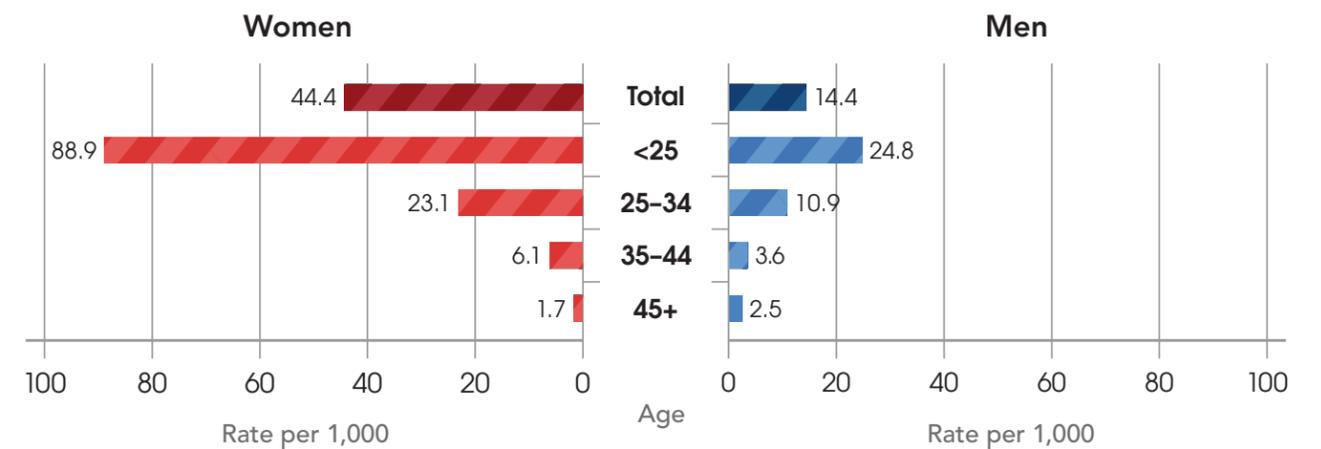
BEST RANKING INSTALLATIONS

- 1** FORT GEORGE G. MEADE **9.4 per 1,000**
- 2** FORT HUACHUCA **9.7 per 1,000**
- 3** FORT JACKSON **10.7 per 1,000**

- 4** FORT LEE **11.2 per 1,000**
- 5** FORT RUCKER **12.1 per 1,000**



Rate of Chlamydia Reported by Gender and Age, All AC Soldiers, 2015



Proportions of AC Army Females Less than 25 Years Old Who were Screened, by Year, 2011-2015



Army installations that were significantly lagging have substantially increased their testing rates among the key population of women under 25 years old. Testing young women for chlamydia allows for prompt treatment with antibiotics, preventing the more expensive possible effects of chronic infection such as pelvic inflammatory disease. Continued efforts are needed to further close the gap and bring all installations into compliance with high screening standards.



SPOTLIGHT

Local Action

PRESIDIO OF MONTEREY ADDRESSES SEXUAL RESPONSIBILITY AND SEXUALLY TRANSMITTED INFECTION PREVENTION

"The 2015 *Health of the Force* report identified Sexually Transmitted Infections (STI) as a health risk for the Army community. These data confirmed trends identified locally by the California Medical Detachment (CALMED) Preventive Medicine (PM) in the Community Health Promotion Council (CHPC) Physical Working Group at the Presidio of Monterey. In analyzing the data, STI testing gaps were identified for males with only male partners and those engaging in anal or oral sexual contact. Service members should discuss their sexual practices as appropriate with healthcare providers and must specifically request contact site testing, especially males. Once there is exposure to STIs, notifying at risk partners is also a known difficulty due to service members declining to identify sexual partners or having limited contact information available.

To address the STI problem areas, the Community Health Promotion Council brought installation-wide leadership to the table and empowered commanders with the information on the STI risk. Commanders and community partners were provided a marketing style handout for distribution in their units as a way to facilitate discussion on the health risk from STIs. The handout explained STI testing protocol, who is at risk for STIs, including the need for location specific testing, and provided several third-party websites for facilitating notification of STI exposure to sexual partners. The websites recommended allow for anonymous notification of exposure using a variety of contact information including email, cell phone or social media IDs and included safety protocols for those receiving

the notification to prevent harassment. Community support organizations such as the Installation Sexual Harassment/Assault Response & Prevention (SHARP) teams, Chaplains and Military Family Life Counselors (MFLC) were also provided information regarding the need for contact site based testing and the identified STI risk areas. The increased awareness has resulted in the CALMED reviewing testing policies and procedures to ensure the identified risk areas are adequately addressed. For Installation SHARP programs, testing referral processes now include education on the need for site based testing when appropriate. Chaplains and MFLCs are encouraging Service members to practice responsible sexual behaviors and communicate more openly with their doctor about their sexual exposure.

The CHPC goal is to reduce the chlamydia rates for AC Service members and to increase testing for those not regularly tested or requiring site based testing. The big picture data provided by the *Health of the Force* and Army Public Health Center reports, combined with commander support and Preventive Medicine efforts, are creating positive changes on the policy and operational side to ensure healthy and deployable service members at the Defense Language Institute Foreign Language Center."

—Presidio of Monterey Health Promotion Officer

Installation Health Index:

HEALTHCARE DELIVERY

EMERGENCY

Preventable Admissions

Preventable admissions include admissions for acute illness such as dehydration or urinary infections and exacerbated chronic conditions such as diabetes where hospitalization could have been avoided with appropriate outpatient care. They reflect an avoidable and costly healthcare burden and suggest sub-optimal quality of outpatient care or overuse of hospitals as a primary source of care.

MEDCOM tracks these rates monthly for AC Army enrollees. Rates are reported via the Command Management System (CMS) along with the MEDCOM target which is set at 3.5%. The U.S.-based Army installations evaluated fell well below this target at 2.2%; however, there is room for improvement given that two installations exceeded this target, with rates approaching 4.5%.



Overall, 2% of Soldier hospital admissions were classified as preventable.

Rates ranged from 1% to over 4% across installations.



“Reducing potentially preventable hospitalizations is important for increasing quality of care and containing hospital costs.”

—Agency for Healthcare Research and Quality

BEST RANKING INSTALLATIONS

1	PRESIDIO OF MONTEREY	0.7%	4	FORT LEE	1.2%
2	FORT DRUM	1.1%	4	FORT LEONARD WOOD	1.2%
2	FORT WAINWRIGHT	1.1%			

SPOTLIGHT

MOVE TO HEALTH

Powered by the Performance Triad

Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.

—World Health Organization



In partnership with the Veterans Health Administration, Army Medicine has produced Move to Health—Powered by the Performance Triad, an innovative approach to improving health readiness, population health, patient involvement, and

the patient care experience, while simultaneously addressing the rising rates of healthcare team burnout. Move to Health helps change the conversation among Army clinicians and healthcare team members from a “find-it and fix-it” approach to a “predict and personalize” approach—one that is truly person-centered to help move a patient to health. The eight elements of holistic self-care included in Move to Health help the healthcare team support a patient’s own self-healing mechanisms.

Move to Health synchronizes the key Military Health System and Army Medicine efforts of patient integration, healthcare delivery, high reliability organization, and value-based care. The holistic health

approach to care helps clinicians learn how to get to the root cause of a patient’s illness, as well as inspires and motivates patients to take charge of their own health. Move to Health also teaches clinicians how to incorporate holistic approaches to treat high-cost, chronic diseases such as low back pain, diabetes, obesity, and heart disease. The program also reflects the current trend in private healthcare: a turn toward more progressive, holistic care that patients are seeking and demanding.

To date, more than 600 Army clinicians and healthcare team members have received Move to Health training since its introduction in Fiscal Year 2015. Initial evaluation results have shown significant and sustained improvements (that is, more than two months after course completion) in providers’ self-efficacy towards, perceived benefits of, and intentions to engage in holistic health approaches. Evaluation results have also shown significant changes in participating providers’ preparedness to discuss and implement holistic approaches to pain, cardiovascular disease, and gastrointestinal disease with their patients. Qualitative data from Move to Health pilot sites have shown improvements in provider satisfaction, providers’ perceptions of their patients’ satisfaction, and early identification of patients’ true health goals, leading to appropriate health interventions.

Comments from Move to Health participants:

“I am integrating the Move to Health wheel into my initial counseling with staff members to encourage them to seek holistic health as providers to help prevent burnout. ‘Health is not only to be well, but to use well every power we have.’ – Florence Nightingale”

—Registered Nurse

“Prevention has been my tool after the course. I am focused more on using diet, exercise, activity as a catalyst interlaced with mental health as the “drug” of choice instead of looking for the old use of treatment by resorting to medication after messing up my health.”

—Medic

“I focus more on the ‘lifestyle treatments’ as I call it, and not just prescribing pills. I tell my patients that most common cause of death nowadays are chronic preventable diseases, and treatment are the proactive self care elements in the wheel of health.”

—Physician

“Applying the concepts of exercise, rest and diet. Have lost 17 lbs and had highest score on my last PT test in 6 yrs.”

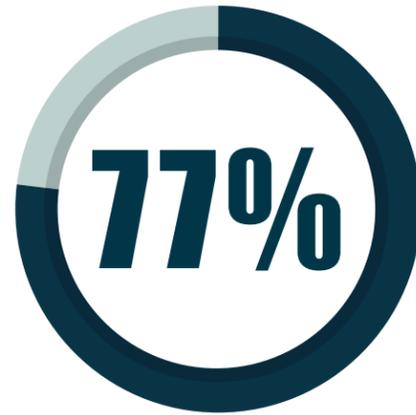
—Nurse Practitioner

To learn more about the Move to Health initiative, contact usarmy.performancetriad@mail.mil

HEDIS Composite Score

The Healthcare Effectiveness Data and Information Set (HEDIS) Composite Score is an index score that consolidates nine HEDIS performance indicators, including: Asthma control, diabetes A1c screening, diabetes A1c<9, diabetes LDL<100, cervical cancer screening, breast cancer screening, colon cancer screening, chlamydia screening and well child visits. HEDIS measures are routinely tracked both nationally and within the military to assess healthcare performance. The composite score expressed as a percentage provides a comprehensive healthcare delivery measure. Unlike the other measures assessed in this report, this measure covers all enrolled Army beneficiaries as such standards of care should be universal regardless of beneficiary type.

As with any composite or index measure, it is important not to overlook the contribution of each individual HEDIS measure which can provide more actionable indicators of MTF work performance. The nine subsets may be reviewed independently and on a monthly basis through the CMS. For 2015, Army MTFs had an average score of 77%; scores ranged from 57% to 92% across installations.



The average HEDIS Composite Score for Army MTFs was 77%.
Scores ranged from 57% to 92% across installations.

BEST RANKING INSTALLATIONS

1	FORT LEAVENWORTH	92.1%	4	JOINT BASE LANGLEY EUSTIS	89.7%
2	FORT CAMPBELL	91.0%	5	FORT RILEY	86.8%
3	FORT SILL	90.4%			

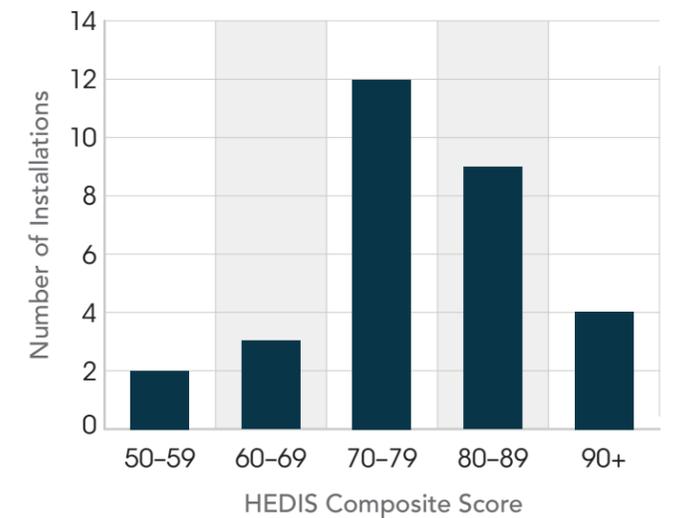


SPOTLIGHT

HEDIS ACROSS THE MHS

The MHS has identified several important recommendations to boost HEDIS scores and improve access, quality, and patient safety. Among these recommendations, the MHS suggests that leadership must immediately identify MTFs with exceptionally poor performance on any measure so that corrective action plans can be implemented to bring those MTFs into compliance. The MHS also emphasizes the importance of pairing well-defined enterprise performance goals with transparent, widely accessible standardized metrics in order to increase accountability and improve quality of care. Leveraging common standards and proven processes across the entire MHS will help to lift the quality of care at decreased cost, thus providing better value for our health investments. Identifying leaders and laggards across the MHS and across the Army is the first step to improving HEDIS scores across the board.

Distribution of HEDIS Composite Scores across Army Installations



“Overall, MHS performance mirrors what we see in the private sector, a good deal of mediocrity, pockets of excellence, and some serious gaps.”

—Janet M. Corrigan, Ph.D.

Distinguished Fellow

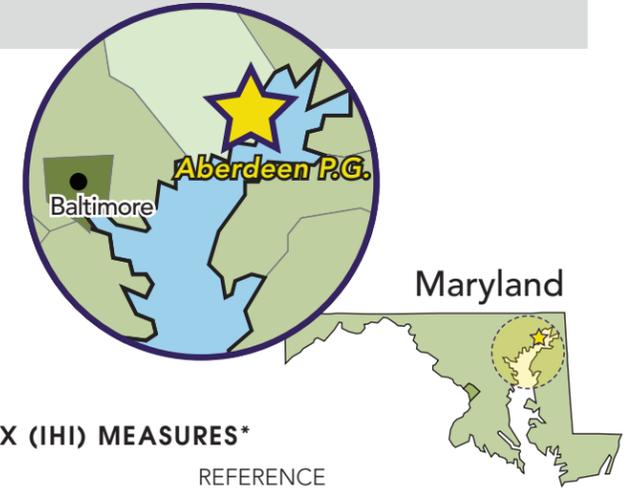
The Dartmouth Institute for Health Policy and Clinical Practice

INSTALLATION HEALTH INDEX

INSTALLATION PROFILE SUMMARIES*

* Installation profile summaries are provided in alphabetical order

► Aberdeen Proving Ground



Installation Profile (2015):‡

Population: Approximately 1,350 AC Soldiers:
47% under 35 years old, 20% female
Main Healthcare Facility: Kirk Army Health Clinic
Affiliated County: Harford

INSTALLATION HEALTH INDEX (IHI) MEASURES*

MEASURE	VALUE	REFERENCE ARMY VALUE	VALUE RANGE
Medical Readiness			
Medical readiness classification (% not ready)	NA	16.9	11.8–24.3
Health Factors			
Obesity (%)	16.4	16.9	11.9–20.9
Sleep disorder diagnoses (%)	13.1	10.7	5.6–16.4
Tobacco use (%)	22.6	27.8	10.7–36.6
Substance abuse diagnoses (%)	4.0	4.0	1.1–7.2
Chlamydia infection incidence (rate per 1,000)	NA	18.7	9.4–31.3
Health Outcomes			
Chronic disease diagnoses (%)	20.3	12.9	10.5–20.3
Injury incidence (rate per 1,000)	1,627.6	1,361.2	1,111.9–1,659.1
Behavioral health diagnoses (%)	24.8	20.3	12.7–27.9
Healthcare Delivery			
Preventable hospital admissions (%)	1.6	2.2	0.7–4.4
HEDIS composite score	84.8	77.0	57.3–92.1
IHI Score**	-0.87	0	-1.28–0.94

* See Appendix I for details regarding measure computations.

** The IHI Score reflects standard deviations from the Army average for the collective health measures. Positive values indicate better overall health status. Scores ≤-2 or ≥2 reflect statistically significant differences.

PERFORMANCE TRIAD SCORES



Score: 69.5
Army average: 68.3
Army range: 62–74



Score: 79.9
Army average: 80.9
Army range: 78–85



Score: 69.4
Army average: 69.9
Army range: 67–75

POOR AIR QUALITY DAYS/YEAR

13.0
Army average: 7.7
Army range: 0–55

STRENGTHS:

- Lower rate of tobacco use.
- Higher HEDIS Composite Score.

CHALLENGES:

- Higher rates of chronic disease, injury, sleep disorders, and behavioral health disorders.

Community Health

Maryland ranked 18th in overall health out of 50 states in 2015. The state reported an obesity rate of 30%, and smoking prevalence was estimated at 15%.

Compared to the state, Harford, the county in which APG is located, had similar levels of obesity (28%) and smoking (15%).

Obesity levels (19%) among APG's Active Component Soldiers were substantially lower than U.S. levels (30%) after standardizing with the U.S. adult population by age and gender. Smoking rates reported at APG averaged 18%.

REFERENCES: America's Health Rankings, Robert Wood Johnson Foundation County Health Rankings, Public Health 360

‡ For details regarding the installations' population statistic, reference the methods section in Appendix I.

Fort Belvoir

Installation Profile (2015):[‡]

Population: Approximately 3,500 AC Soldiers:
46% under 35 years old, 22% female

Main Healthcare Facility: Fort Belvoir Community Hospital

Affiliated County: Fairfax



INSTALLATION HEALTH INDEX (IHI) MEASURES*

MEASURE	VALUE	REFERENCE ARMY VALUE	VALUE RANGE
Medical Readiness			
Medical readiness classification (% not ready)	24.3 [†]	16.9	11.8–24.3
Health Factors			
Obesity (%)	19.9	16.9	11.9–20.9
Sleep disorder diagnoses (%)	14.1	10.7	5.6–16.4
Tobacco use (%)	19.8	27.8	10.7–36.6
Substance abuse diagnoses (%)	5.8	4.0	1.1–7.2
Chlamydia infection incidence (rate per 1,000)	26.4	18.7	9.4–31.3
Health Outcomes			
Chronic disease diagnoses (%)	15.7	12.9	10.5–20.3
Injury incidence (rate per 1,000)	1,386.8	1,361.2	1,111.9–1,659.1
Behavioral health diagnoses (%)	27.9	20.3	12.7–27.9
Healthcare Delivery			
Preventable hospital admissions (%)	NA	2.2	0.7–4.4
HEDIS composite score	NA	77.0	57.3–92.1
IHI Score**	-1.23	0	-1.28–0.94

* See Appendix I for details regarding measure computations.

[†] This estimate is a combined estimate which includes Joint Base Myer-Henderson Hall.

** The IHI Score reflects standard deviations from the Army average for the collective health measures. Positive values indicate better overall health status. Scores ≤-2 or ≥2 reflect statistically significant differences.

PERFORMANCE TRIAD SCORES



Score: 68.4
Army average: 68.3
Army range: 62–74



Score: 77.8
Army average: 80.9
Army range: 78–85



Score: 70.0
Army average: 69.9
Army range: 67–75

POOR AIR QUALITY DAYS/YEAR

8.6

Army average: 7.7
Army range: 0–55

STRENGTHS:

- Lower rate of tobacco use.

CHALLENGES:

- Higher proportion not medically ready.
- Higher rates of obesity, chronic disease, sleep disorders, behavioral health disorders, and substance abuse.
- Lower percentage meeting P3 activity targets.

Community Health

Virginia ranked 21st in overall health out of 50 states in 2015. The state reported an obesity rate of 29%, and smoking prevalence was estimated at 20%.

Compared to the state, Fairfax, the county in which Fort Belvoir is located, had lower levels of obesity (20%) and smoking (12%).

Obesity levels (21%) among Fort Belvoir's Active Component Soldiers were substantially lower than U.S. levels (30%) after standardizing with the U.S. adult population by age and gender. Smoking rates reported at Fort Belvoir averaged 13%.

REFERENCES: America's Health Rankings, Robert Wood Johnson Foundation County Health Rankings, Public Health 360

[‡] For details regarding the installations' population statistic, reference the methods section in Appendix I.

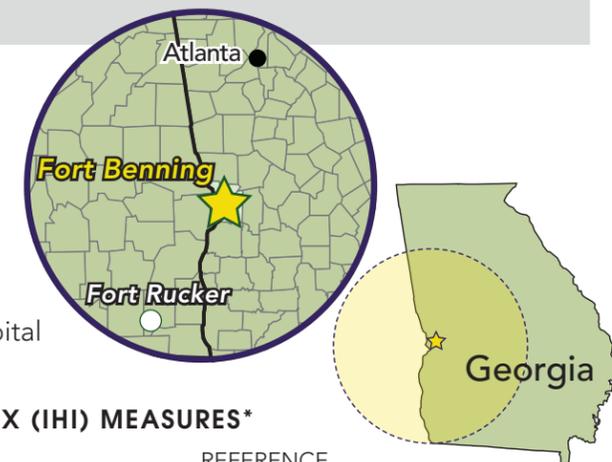
Fort Benning

Installation Profile (2015):[‡]

Population: Approximately 20,700 AC Soldiers:
84% under 35 years old, 6% female

Main Healthcare Facility: Martin Army Community Hospital

Affiliated Counties: Chattahoochee and Muscogee, GA



INSTALLATION HEALTH INDEX (IHI) MEASURES*

MEASURE	VALUE	REFERENCE ARMY VALUE	VALUE RANGE
Medical Readiness			
Medical readiness classification (% not ready)	14.9	16.9	11.8–24.3
Health Factors			
Obesity (%)	16.9	16.9	11.9–20.9
Sleep disorder diagnoses (%)	11.9	10.7	5.6–16.4
Tobacco use (%)	30.2	27.8	10.7–36.6
Substance abuse diagnoses (%)	2.7	4.0	1.1–7.2
Chlamydia infection incidence (rate per 1,000)	10.0 ^φ	18.7	9.4–31.3
Health Outcomes			
Chronic disease diagnoses (%)	14.6	12.9	10.5–20.3
Injury incidence (rate per 1,000)	1,485.6	1,361.2	1,111.9–1,659.1
Behavioral health diagnoses (%)	20.2	20.3	12.7–27.9
Healthcare Delivery			
Preventable hospital admissions (%)	2.5	2.2	0.7–4.4
HEDIS composite score	69.9	77.0	57.3–92.1
IHI Score**	-0.11	0	-1.28–0.94

* See Appendix I for details regarding measure computations.

^φ Value should be interpreted with caution as preliminary case-finding estimates were <50%.

** The IHI Score reflects standard deviations from the Army average for the collective health measures. Positive values indicate better overall health status. Scores ≤-2 or ≥2 reflect statistically significant differences.

PERFORMANCE TRIAD SCORES



Score: 66.4
Army average: 68.3
Army range: 62–74



Score: 80.7
Army average: 80.9
Army range: 78–85



Score: 71.3
Army average: 69.9
Army range: 67–75

POOR AIR QUALITY DAYS/YEAR

1.5

Army average: 7.7
Army range: 0–55

STRENGTHS:

- Lower rates of substance abuse.
- Higher percentage meeting P3 nutrition target.

CHALLENGES:

- Higher rates of chronic disease and injury.
- Lower percentage meeting P3 sleep target.
- Low confidence in reported chlamydia infections.

Community Health

Georgia ranked 40th in overall health out of 50 states in 2015. The state reported an obesity rate of 31%, and smoking prevalence was estimated at 17%.

Compared to the state, Chattahoochee, the county in which Fort Benning is predominantly located, had lower levels of obesity (28%) with smoking estimated at 18%. Neighboring Muscogee County had higher levels of obesity (32%) with smoking estimated at 19%.

Obesity levels (23%) among Fort Benning's Active Component Soldiers were substantially lower than U.S. levels (30%) after standardizing with the U.S. adult population by age and gender. Smoking rates reported at Fort Benning averaged 18%.

REFERENCES: America's Health Rankings, Robert Wood Johnson Foundation County Health Rankings, Public Health 360

[‡] Population statistics provide approximations of AC Soldiers (permanent party and trainees, excluding cadets) based on time spent at the installation; refer to Appendix I for details.

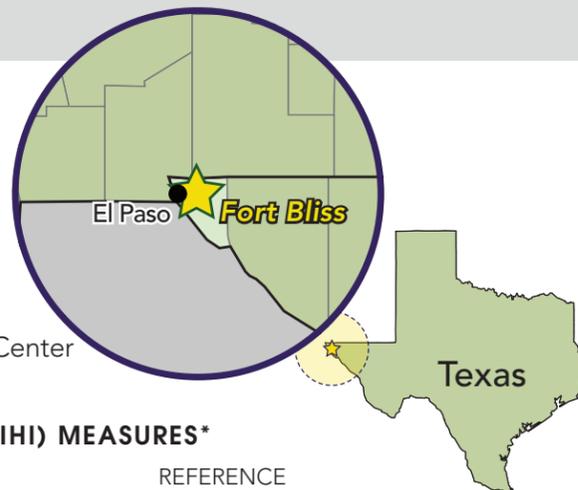
Fort Bliss

Installation Profile (2015):‡

Population: Approximately 26,000 AC Soldiers:
78% under 35 years old, 14% female

Main Healthcare Facility: William Beaumont Army Medical Center

Affiliated County: El Paso



INSTALLATION HEALTH INDEX (IHI) MEASURES*

MEASURE	VALUE	REFERENCE ARMY VALUE	VALUE RANGE
Medical Readiness			
Medical readiness classification (% not ready)	18.2	16.9	11.8–24.3
Health Factors			
Obesity (%)	16.5	16.9	11.9–20.9
Sleep disorder diagnoses (%)	13.5	10.7	5.6–16.4
Tobacco use (%)	30.8	27.8	10.7–36.6
Substance abuse diagnoses (%)	5.3	4.0	1.1–7.2
Chlamydia infection incidence (rate per 1,000)	24.3	18.7	9.4–31.3
Health Outcomes			
Chronic disease diagnoses (%)	12.8	12.9	10.5–20.3
Injury incidence (rate per 1,000)	1,306.4	1,361.2	1,111.9–1,659.1
Behavioral health diagnoses (%)	22.8	20.3	12.7–27.9
Healthcare Delivery			
Preventable hospital admissions (%)	1.8	2.2	0.7–4.4
HEDIS composite score	73.4	77.0	57.3–92.1
IHI Score**	-0.36	0	-1.28–0.94

* See Appendix I for details regarding measure computations.

** The IHI Score reflects standard deviations from the Army average for the collective health measures. Positive values indicate better overall health status. Scores ≤-2 or ≥2 reflect statistically significant differences.

PERFORMANCE TRIAD SCORES



Score: 66.7
Army average: 68.3
Army range: 62–74



Score: 81.2
Army average: 80.9
Army range: 78–85



Score: 68.1
Army average: 69.9
Army range: 67–75

POOR AIR QUALITY DAYS/YEAR

14.8
Army average: 7.7
Army range: 0–55

STRENGTHS:

- Lower injury rate.

CHALLENGES:

- Higher rates of sleep disorders.
- Lower percentage meeting P3 nutrition target.

Community Health

Texas ranked 34th in overall health out of 50 states in 2015. The state reported an obesity rate of 32%, and smoking prevalence was estimated at 15%.

Compared to the state, El Paso, the county in which Fort Bliss is located, had a lower rate of obesity (27%) and similar rate of smoking (16%).

Obesity levels (18%) among Active Component Soldiers at Fort Bliss were substantially lower than U.S. levels (30%) after standardizing with the U.S. adult population by age and gender. Smoking rates reported at Fort Bliss averaged 23%.

REFERENCES: America's Health Rankings, Robert Wood Johnson Foundation County Health Rankings, Public Health 360

‡ For details regarding the installations' population statistic, reference the methods section in Appendix I.

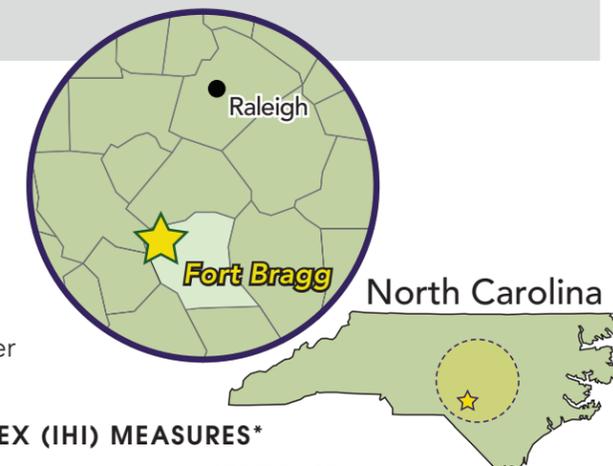
Fort Bragg

Installation Profile (2015):‡

Population: Approximately 45,300 AC Soldiers:
77% under 35 years old, 12% female

Main Healthcare Facility: Womack Army Medical Center

Affiliated County: Cumberland



INSTALLATION HEALTH INDEX (IHI) MEASURES*

MEASURE	VALUE	REFERENCE ARMY VALUE	VALUE RANGE
Medical Readiness			
Medical readiness classification (% not ready)	18.6	16.9	11.8–24.3
Health Factors			
Obesity (%)	16.1	16.9	11.9–20.9
Sleep disorder diagnoses (%)	7.8	10.7	5.6–16.4
Tobacco use (%)	27.3	27.8	10.7–36.6
Substance abuse diagnoses (%)	4.6	4.0	1.1–7.2
Chlamydia infection incidence (rate per 1,000)	18.0	18.7	9.4–31.3
Health Outcomes			
Chronic disease diagnoses (%)	10.5	12.9	10.5–20.3
Injury incidence (rate per 1,000)	1,111.9	1,361.2	1,111.9–1,659.1
Behavioral health diagnoses (%)	15.2	20.3	12.7–27.9
Healthcare Delivery			
Preventable hospital admissions (%)	2.3	2.2	0.7–4.4
HEDIS composite score	69.7	77.0	57.3–92.1
IHI Score**	0.47	0	-1.28–0.94

* See Appendix I for details regarding measure computations.

** The IHI Score reflects standard deviations from the Army average for the collective health measures. Positive values indicate better overall health status. Scores ≤-2 or ≥2 reflect statistically significant differences.

PERFORMANCE TRIAD SCORES



Score: 69.2
Army average: 68.3
Army range: 62–74



Score: 81.6
Army average: 80.9
Army range: 78–85



Score: 71.6
Army average: 69.9
Army range: 67–75

POOR AIR QUALITY DAYS/YEAR

3.0
Army average: 7.7
Army range: 0–55

STRENGTHS:

- Lower rates of chronic disease, injury, behavioral health disorders, and sleep disorders.
- Higher percentage meeting P3 nutrition targets.

CHALLENGES:

- Higher proportion not medically ready.

Community Health

North Carolina ranked 31st in overall health out of 50 states in 2015. The state reported an obesity rate of 30%, and smoking prevalence was estimated at 19%.

Compared to the state, Cumberland, the county in which Fort Bragg is located, had higher levels of obesity (32%) and smoking (22%).

Obesity levels (21%) among Fort Bragg's Active Component Soldiers were substantially lower than U.S. levels (30%) after standardizing with the U.S. adult population by age and gender. Smoking rates reported at Fort Bragg averaged 16%.

REFERENCES: America's Health Rankings, Robert Wood Johnson Foundation County Health Rankings, Public Health 360

‡ For details regarding the installations' population statistic, reference the methods section in Appendix I.

Fort Campbell

Installation Profile (2015):[‡]

Population: Approximately 28,800 AC Soldiers:
82% under 35 years old, 10% female

Main Healthcare Facility: Blanchfield Army Community Hospital

Affiliated Counties: Montgomery, TN and Christian, KY



INSTALLATION HEALTH INDEX (IHI) MEASURES*

MEASURE	VALUE	REFERENCE ARMY VALUE	VALUE RANGE
Medical Readiness			
Medical readiness classification (% not ready)	13.8	16.9	11.8–24.3
Health Factors			
Obesity (%)	16.9	16.9	11.9–20.9
Sleep disorder diagnoses (%)	10.8	10.7	5.6–16.4
Tobacco use (%)	34.1	27.8	10.7–36.6
Substance abuse diagnoses (%)	3.6	4.0	1.1–7.2
Chlamydia infection incidence (rate per 1,000)	17.9	18.7	9.4–31.3
Health Outcomes			
Chronic disease diagnoses (%)	11.0	12.9	10.5–20.3
Injury incidence (rate per 1,000)	1,361.1	1,361.2	1,111.9–1,659.1
Behavioral health diagnoses (%)	17.7	20.3	12.7–27.9
Healthcare Delivery			
Preventable hospital admissions (%)	1.7	2.2	0.7–4.4
HEDIS composite score	91.0	77.0	57.3–92.1
IHI Score**	0.33	0	-1.28–0.94

* See Appendix I for details regarding measure computations.

** The IHI Score reflects standard deviations from the Army average for the collective health measures. Positive values indicate better overall health status. Scores ≤-2 or ≥2 reflect statistically significant differences.

PERFORMANCE TRIAD SCORES



Score: 68.8
Army average: 68.3
Army range: 62–74



Score: 82.2
Army average: 80.9
Army range: 78–85



Score: 70.1
Army average: 69.9
Army range: 67–75

POOR AIR QUALITY DAYS/YEAR

1.2
Army average: 7.7
Army range: 0–55

STRENGTHS:

- Lower rate of chronic disease.
- Higher HEDIS Composite Score.

CHALLENGES:

- Higher rate of tobacco use.

Community Health

Tennessee ranked 43rd in overall health out of 50 states in 2015. The state reported an obesity rate of 31%, and smoking prevalence was estimated at 24%.

Compared to the state, Montgomery, the county in which Fort Campbell's ACH is located, had similar levels of obesity (29%) and smoking (23%). Neighboring Christian KY had higher rates of obesity (37%) and smoking (27%).

Obesity levels (19%) among Fort Campbell's Active Component Soldiers were substantially lower than U.S. levels (30%) after standardizing with the U.S. adult population by age and gender. Smoking rates reported at Fort Campbell averaged 22%.

REFERENCES: America's Health Rankings, Robert Wood Johnson Foundation County Health Rankings, Public Health 360

[‡] For details regarding the installations' population statistic, reference the methods section in Appendix I.

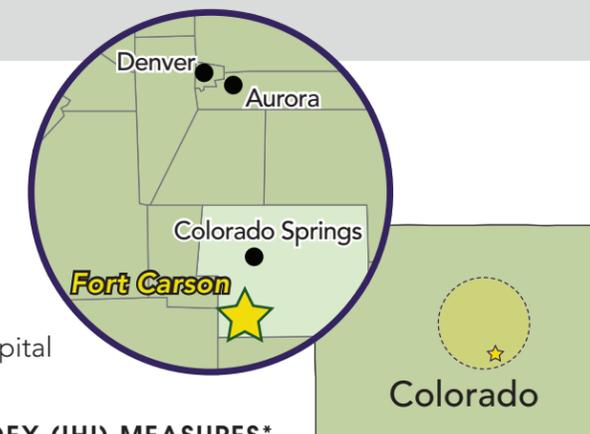
Fort Carson

Installation Profile (2015):[‡]

Population: Approximately 24,600 AC Soldiers:
82% under 35 years old, 12% female

Main Healthcare Facility: Evans Army Community Hospital

Affiliated County: El Paso



INSTALLATION HEALTH INDEX (IHI) MEASURES*

MEASURE	VALUE	REFERENCE ARMY VALUE	VALUE RANGE
Medical Readiness			
Medical readiness classification (% not ready)	13.7	16.9	11.8–24.3
Health Factors			
Obesity (%)	14.6	16.9	11.9–20.9
Sleep disorder diagnoses (%)	10.2	10.7	5.6–16.4
Tobacco use (%)	32.9	27.8	10.7–36.6
Substance abuse diagnoses (%)	4.7	4.0	1.1–7.2
Chlamydia infection incidence (rate per 1,000)	12.4 ^φ	18.7	9.4–31.3
Health Outcomes			
Chronic disease diagnoses (%)	11.7	12.9	10.5–20.3
Injury incidence (rate per 1,000)	1,187.1	1,361.2	1,111.9–1,659.1
Behavioral health diagnoses (%)	19.5	20.3	12.7–27.9
Healthcare Delivery			
Preventable hospital admissions (%)	1.9	2.2	0.7–4.4
HEDIS composite score	73.3	77.0	57.3–92.1
IHI Score**	0.40	0	-1.28–0.94

* See Appendix I for details regarding measure computations.

^φ Value should be interpreted with caution as preliminary case-finding estimates were <50%.

** The IHI Score reflects standard deviations from the Army average for the collective health measures. Positive values indicate better overall health status. Scores ≤-2 or ≥2 reflect statistically significant differences.

PERFORMANCE TRIAD SCORES



Score: 69.1
Army average: 68.3
Army range: 62–74



Score: 82.2
Army average: 80.9
Army range: 78–85



Score: 69.5
Army average: 69.9
Army range: 67–75

POOR AIR QUALITY DAYS/YEAR

8.6
Army average: 7.7
Army range: 0–55

STRENGTHS:

- Lower proportion not medically ready.
- Lower rates of obesity and injury.
- Higher percentage meeting P3 activity target.

CHALLENGES:

- Higher rate of tobacco use.
- Low confidence in reported chlamydia infections.

Community Health

Colorado ranked 8th in overall health out of 50 states in 2015. The state reported an obesity rate of 21%, and smoking prevalence was estimated at 16%.

Compared to the state, El Paso, the county in which Fort Carson is located, had similar levels of obesity (21%) and smoking (15%).

Obesity levels (19%) among Fort Carson's Active Component Soldiers were substantially lower than U.S. levels (30%) after standardizing with the U.S. adult population by age and gender. Smoking rates reported at Fort Carson averaged 23%.

REFERENCES: America's Health Rankings, Robert Wood Johnson Foundation County Health Rankings, Public Health 360

[‡] For details regarding the installations' population statistic, reference the methods section in Appendix I.

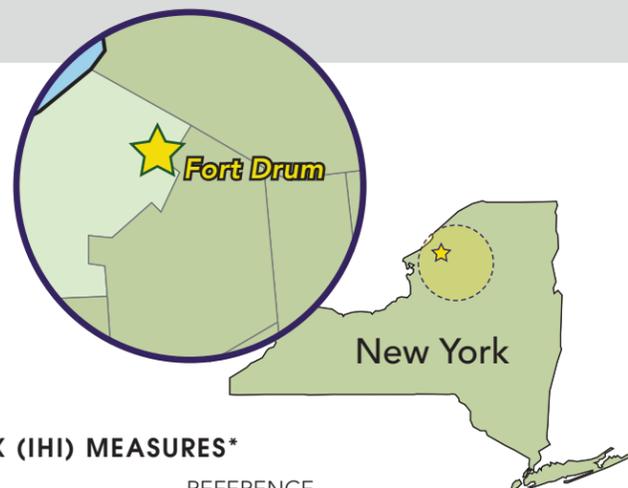
► Fort Drum

Installation Profile (2015):‡

Population: Approximately 15,300 AC Soldiers:
83% under 35 years old, 10% female

Main Healthcare Facility: Guthrie Army Health Clinic

Affiliated County: Jefferson



INSTALLATION HEALTH INDEX (IHI) MEASURES*

MEASURE	VALUE	REFERENCE ARMY VALUE	VALUE RANGE
Medical Readiness			
Medical readiness classification (% not ready)	14.9	16.9	11.8–24.3
Health Factors			
Obesity (%)	18.6	16.9	11.9–20.9
Sleep disorder diagnoses (%)	10.7	10.7	5.6–16.4
Tobacco use (%)	33.5	27.8	10.7–36.6
Substance abuse diagnoses (%)	4.4	4.0	1.1–7.2
Chlamydia infection incidence (rate per 1,000)	14.6	18.7	9.4–31.3
Health Outcomes			
Chronic disease diagnoses (%)	12.8	12.9	10.5–20.3
Injury incidence (rate per 1,000)	1,421.4	1,361.2	1,111.9–1,659.1
Behavioral health diagnoses (%)	21.9	20.3	12.7–27.9
Healthcare Delivery			
Preventable hospital admissions (%)	1.1	2.2	0.7–4.4
HEDIS composite score	72.4	77.0	57.3–92.1
IHI Score**	-0.09	0	-1.28–0.94

* See Appendix I for details regarding measure computations.

** The IHI Score reflects standard deviations from the Army average for the collective health measures. Positive values indicate better overall health status. Scores ≤-2 or ≥2 reflect statistically significant differences.

PERFORMANCE TRIAD SCORES



Score: 68.7
Army average: 68.3
Army range: 62–74



Score: 81.1
Army average: 80.9
Army range: 78–85



Score: 69.9
Army average: 69.9
Army range: 67–75

POOR AIR QUALITY DAYS/YEAR

2.8

Army average: 7.7
Army range: 0–55

STRENGTHS:

- Lower rate of preventable admissions.

CHALLENGES:

- Higher rate of tobacco use.

Community Health

New York ranked 13th in overall health out of 50 states in 2015. The state reported an obesity rate of 27%, and smoking prevalence was estimated at 14%.

Compared to the state, Jefferson, the county in which Fort Drum is located, had the same level of obesity (27%) and a higher rate of smoking (16%).

Obesity levels (26%) among Fort Drum's Active Component Soldiers were substantially lower than U.S. levels (30%) after standardizing with the U.S. adult population by age and gender. Smoking rates reported at Fort Drum averaged 22%.

REFERENCES: America's Health Rankings, Robert Wood Johnson Foundation County Health Rankings, Public Health 360

‡ For details regarding the installations' population statistic, reference the methods section in Appendix I.

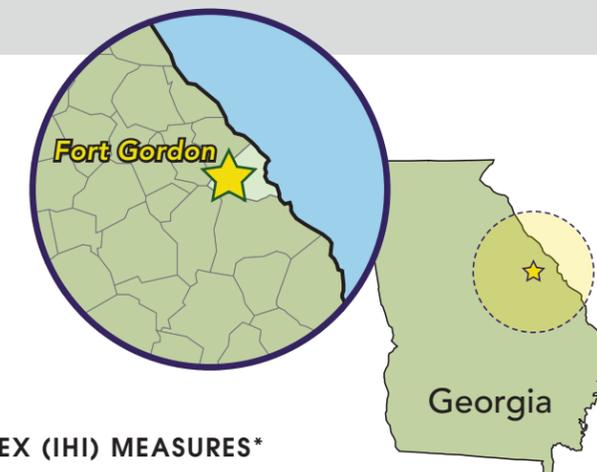
► Fort Gordon

Installation Profile (2015):‡

Population: Approximately 8,600 AC Soldiers:
72% under 35 years old, 20% female

Main Healthcare Facility: Dwight D. Eisenhower Army Medical Center

Affiliated County: Richmond



INSTALLATION HEALTH INDEX (IHI) MEASURES*

MEASURE	VALUE	REFERENCE ARMY VALUE	VALUE RANGE
Medical Readiness			
Medical readiness classification (% not ready)	22.5	16.9	11.8–24.3
Health Factors			
Obesity (%)	20.5	16.9	11.9–20.9
Sleep disorder diagnoses (%)	9.7	10.7	5.6–16.4
Tobacco use (%)	18.1	27.8	10.7–36.6
Substance abuse diagnoses (%)	4.2	4.0	1.1–7.2
Chlamydia infection incidence (rate per 1,000)	15.4	18.7	9.4–31.3
Health Outcomes			
Chronic disease diagnoses (%)	14.6	12.9	10.5–20.3
Injury incidence (rate per 1,000)	1,536.2	1,361.2	1,111.9–1,659.1
Behavioral health diagnoses (%)	21.3	20.3	12.7–27.9
Healthcare Delivery			
Preventable hospital admissions (%)	1.9	2.2	0.7–4.4
HEDIS composite score	80.1	77.0	57.3–92.1
IHI Score**	-0.46	0	-1.28–0.94

* See Appendix I for details regarding measure computations.

** The IHI Score reflects standard deviations from the Army average for the collective health measures. Positive values indicate better overall health status. Scores ≤-2 or ≥2 reflect statistically significant differences.

PERFORMANCE TRIAD SCORES



Score: 67.1
Army average: 68.3
Army range: 62–74



Score: 79.4
Army average: 80.9
Army range: 78–85



Score: 67.8
Army average: 69.9
Army range: 67–75

POOR AIR QUALITY DAYS/YEAR

3.2

Army average: 7.7
Army range: 0–55

STRENGTHS:

- Lower rate of tobacco use.

CHALLENGES:

- Higher rates of obesity and injury.
- Higher proportion not medically ready.
- Lower percentage meeting P3 nutrition and activity targets.

Community Health

Georgia ranked 40th in overall health out of 50 states in 2015. The state reported an obesity rate of 31%, and smoking prevalence was estimated at 17%.

Compared to the state, Richmond, the county in which Fort Gordon is located, had higher levels of obesity (35%) and smoking (20%).

Obesity levels (26%) among Fort Gordon's Active Component Soldiers were substantially lower than U.S. levels (30%) after standardizing with the U.S. adult population by age and gender. Smoking rates reported at Fort Gordon averaged 14%.

REFERENCES: America's Health Rankings, Robert Wood Johnson Foundation County Health Rankings, Public Health 360

‡ Population statistics provide approximations of AC Soldiers (permanent party and trainees, excluding cadets) based on time spent at the installation; refer to Appendix I for details.

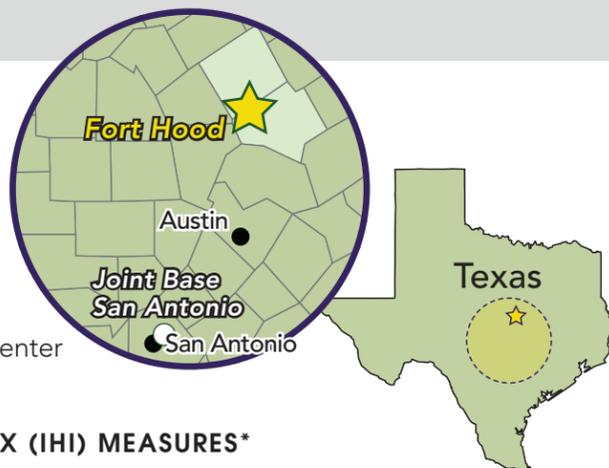
► Fort Hood

Installation Profile (2015):‡

Population: Approximately 31,500 AC Soldiers:
79% under 35 years old, 15% female

Main Healthcare Facility: Carl R. Darnall Army Medical Center

Affiliated County: Bell



INSTALLATION HEALTH INDEX (IHI) MEASURES*

MEASURE	VALUE	REFERENCE ARMY VALUE	VALUE RANGE
Medical Readiness			
Medical readiness classification (% not ready)	18.8	16.9	11.8–24.3
Health Factors			
Obesity (%)	19.6	16.9	11.9–20.9
Sleep disorder diagnoses (%)	16.4	10.7	5.6–16.4
Tobacco use (%)	30.5	27.8	10.7–36.6
Substance abuse diagnoses (%)	7.2	4.0	1.1–7.2
Chlamydia infection incidence (rate per 1,000)	31.3	18.7	9.4–31.3
Health Outcomes			
Chronic disease diagnoses (%)	14.0	12.9	10.5–20.3
Injury incidence (rate per 1,000)	1,418.6	1,361.2	1,111.9–1,659.1
Behavioral health diagnoses (%)	27.5	20.3	12.7–27.9
Healthcare Delivery			
Preventable hospital admissions (%)	2.6	2.2	0.7–4.4
HEDIS composite score	61.1	77.0	57.3–92.1
IHI Score**	-1.28	0	-1.28–0.94

* See Appendix I for details regarding measure computations.

** The IHI Score reflects standard deviations from the Army average for the collective health measures. Positive values indicate better overall health status. Scores ≤-2 or ≥2 reflect statistically significant differences.

PERFORMANCE TRIAD SCORES

Score: 65.2
Army average: 68.3
Army range: 62–74

Score: 79.9
Army average: 80.9
Army range: 78–85

Score: 66.9
Army average: 69.9
Army range: 67–75

POOR AIR QUALITY DAYS/YEAR

6.4
Army average: 7.7
Army range: 0–55

STRENGTHS:

- Similar to Army average for tobacco use, injury, and chronic disease, and P3 activity targets.

CHALLENGES:

- Higher rates of obesity, reported chlamydia infections, sleep disorders, behavioral health disorders, and substance abuse.
- Lower percentage meeting P3 nutrition and sleep targets.
- Lower HEDIS Composite Score.

Community Health

Texas ranked 34th in overall health out of 50 states in 2015. The state reported an obesity rate of 32%, and smoking prevalence was estimated at 15%.

Compared to the state, Bell, the county in which Fort Hood is located, had a similar rate of obesity (30%) and higher rates of smoking (18%).

Obesity levels (24%) among Fort Hood's Active Component Soldiers were substantially lower than U.S. levels (30%) after standardizing with the U.S. adult population by age and gender. Smoking rates reported at Fort Hood averaged 23%.

REFERENCES: America's Health Rankings, Robert Wood Johnson Foundation County Health Rankings, Public Health 360

‡ For details regarding the installations' population statistic, reference the methods section in Appendix I.

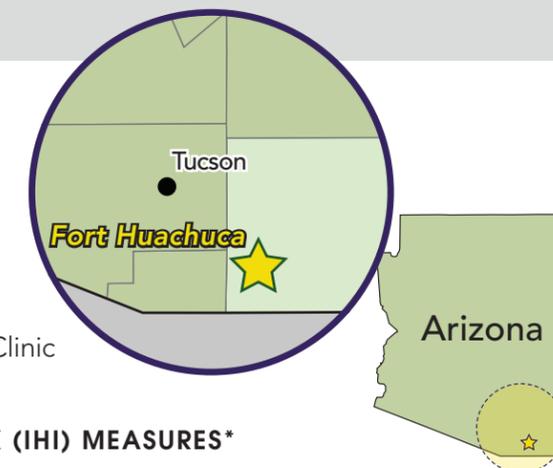
► Fort Huachuca

Installation Profile (2015):‡

Population: Approximately 3,800 AC Soldiers:
73% under 35 years old, 17% female

Main Healthcare Facility: Raymond W. Bliss Army Health Clinic

Affiliated County: Cochise



INSTALLATION HEALTH INDEX (IHI) MEASURES*

MEASURE	VALUE	REFERENCE ARMY VALUE	VALUE RANGE
Medical Readiness			
Medical readiness classification (% not ready)	19.2	16.9	11.8–24.3
Health Factors			
Obesity (%)	12.3	16.9	11.9–20.9
Sleep disorder diagnoses (%)	9.6	10.7	5.6–16.4
Tobacco use (%)	17.8	27.8	10.7–36.6
Substance abuse diagnoses (%)	2.1	4.0	1.1–7.2
Chlamydia infection incidence (rate per 1,000)	9.7	18.7	9.4–31.3
Health Outcomes			
Chronic disease diagnoses (%)	14.6	12.9	10.5–20.3
Injury incidence (rate per 1,000)	1,612.6	1,361.2	1,111.9–1,659.1
Behavioral health diagnoses (%)	16.1	20.3	12.7–27.9
Healthcare Delivery			
Preventable hospital admissions (%)	1.3	2.2	0.7–4.4
HEDIS composite score	57.4	77.0	57.3–92.1
IHI Score**	0.38	0	-1.28–0.94

* See Appendix I for details regarding measure computations.

** The IHI Score reflects standard deviations from the Army average for the collective health measures. Positive values indicate better overall health status. Scores ≤-2 or ≥2 reflect statistically significant differences.

PERFORMANCE TRIAD SCORES

Score: 69.2
Army average: 68.3
Army range: 62–74

Score: 81.7
Army average: 80.9
Army range: 78–85

Score: 69.9
Army average: 69.9
Army range: 67–75

POOR AIR QUALITY DAYS/YEAR

3.0
Army average: 7.7
Army range: 0–55

STRENGTHS:

- Lower rates of obesity, reported chlamydia infections, tobacco use, behavioral health disorders, and substance abuse.

CHALLENGES:

- Higher rates of chronic disease and injury.
- Lower HEDIS Composite Score.

Community Health

Arizona ranked 30th in overall health out of 50 states in 2015. The state reported an obesity rate of 29%, and smoking prevalence was estimated at 17%.

Compared to the state, Cochise, the county in which Fort Huachuca is located, had lower levels of obesity (25%) and smoking (16%).

Obesity levels (16%) among Fort Huachuca's Active Component Soldiers were substantially lower than U.S. levels (30%) after standardizing with the U.S. adult population by age and gender. Smoking rates reported at Fort Huachuca averaged 12%.

REFERENCES: America's Health Rankings, Robert Wood Johnson Foundation County Health Rankings, Public Health 360

‡ Population statistics provide approximations of AC Soldiers (permanent party and trainees, excluding cadets) based on time spent at the installation; refer to Appendix I for details.

Fort Irwin

Installation Profile (2015):[‡]

Population: Approximately 4,000 AC Soldiers:
74% under 35 years old, 13% female

Main Healthcare Facility: Weed Army Community Hospital

Affiliated County: San Bernardino



INSTALLATION HEALTH INDEX (IHI) MEASURES*

MEASURE	VALUE	REFERENCE ARMY VALUE	VALUE RANGE
Medical Readiness			
Medical readiness classification (% not ready)	12.1	16.9	11.8–24.3
Health Factors			
Obesity (%)	17.2	16.9	11.9–20.9
Sleep disorder diagnoses (%)	10.3	10.7	5.6–16.4
Tobacco use (%)	31.0	27.8	10.7–36.6
Substance abuse diagnoses (%)	5.2	4.0	1.1–7.2
Chlamydia infection incidence (rate per 1,000)	22.3	18.7	9.4–31.3
Health Outcomes			
Chronic disease diagnoses (%)	14.2	12.9	10.5–20.3
Injury incidence (rate per 1,000)	1,521.7	1,361.2	1,111.9–1,659.1
Behavioral health diagnoses (%)	24.0	20.3	12.7–27.9
Healthcare Delivery			
Preventable hospital admissions (%)	1.3	2.2	0.7–4.4
HEDIS composite score	85.8	77.0	57.3–92.1
IHI Score**	-0.12	0	-1.28–0.94

* See Appendix I for details regarding measure computations.

** The IHI Score reflects standard deviations from the Army average for the collective health measures. Positive values indicate better overall health status. Scores ≤-2 or ≥2 reflect statistically significant differences.

PERFORMANCE TRIAD SCORES



Score: 68.2
Army average: 68.3
Army range: 62–74



Score: 80.4
Army average: 80.9
Army range: 78–85



Score: 69.1
Army average: 69.9
Army range: 67–75

POOR AIR QUALITY DAYS/YEAR

13.0
Army average: 7.7
Army range: 0–55

STRENGTHS:

- Lower proportion not medically ready.
- Higher HEDIS composite score.

CHALLENGES:

- Higher rates of chronic disease, injury, and behavioral health disorders.

Community Health

California ranked 16th in overall health out of 50 states in 2015. The state reported an obesity rate of 25%, and smoking prevalence was estimated at 13%.

Compared to the state, San Bernardino, the county in which Fort Irwin is located, had higher levels of obesity (29%) and smoking (14%).

Obesity levels (24%) among Fort Irwin's Active Component Soldiers were substantially lower than U.S. levels (30%) after standardizing with the U.S. adult population by age and gender. Smoking rates reported at Fort Irwin averaged 23%.

REFERENCES: America's Health Rankings, Robert Wood Johnson Foundation County Health Rankings, Public Health 360

[‡] For details regarding the installations' population statistic, reference the methods section in Appendix I.

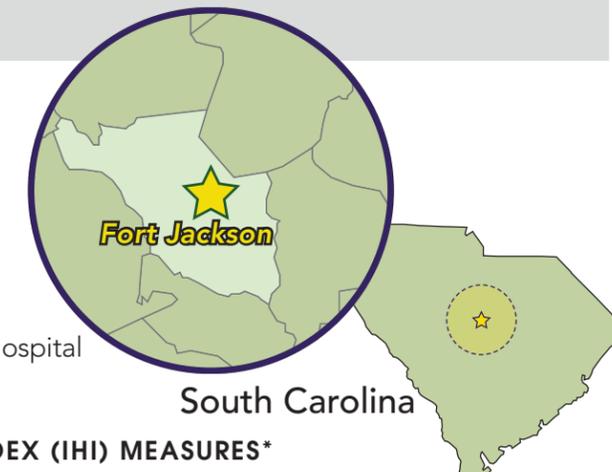
Fort Jackson

Installation Profile (2015):[‡]

Population: Approximately 8,900 AC Soldiers:
82% under 35 years old, 27% female

Main Healthcare Facility: Moncrief Army Community Hospital

Affiliated County: Richland



INSTALLATION HEALTH INDEX (IHI) MEASURES*

MEASURE	VALUE	REFERENCE ARMY VALUE	VALUE RANGE
Medical Readiness			
Medical readiness classification (% not ready)	19.6	16.9	11.8–24.3
Health Factors			
Obesity (%)	13.4	16.9	11.9–20.9
Sleep disorder diagnoses (%)	8.4	10.7	5.6–16.4
Tobacco use (%)	17.7	27.8	10.7–36.6
Substance abuse diagnoses (%)	2.2	4.0	1.1–7.2
Chlamydia infection incidence (rate per 1,000)	10.7	18.7	9.4–31.3
Health Outcomes			
Chronic disease diagnoses (%)	12.7	12.9	10.5–20.3
Injury incidence (rate per 1,000)	1,450.6	1,361.2	1,111.9–1,659.1
Behavioral health diagnoses (%)	17.6	20.3	12.7–27.9
Healthcare Delivery			
Preventable hospital admissions (%)	1.6	2.2	0.7–4.4
HEDIS composite score	73.5	77.0	57.3–92.1
IHI Score**	0.55	0	-1.28–0.94

* See Appendix I for details regarding measure computations.

** The IHI Score reflects standard deviations from the Army average for the collective health measures. Positive values indicate better overall health status. Scores ≤-2 or ≥2 reflect statistically significant differences.

PERFORMANCE TRIAD SCORES



Score: 62.3
Army average: 68.3
Army range: 62–74



Score: 80.7
Army average: 80.9
Army range: 78–85



Score: 72.2
Army average: 69.9
Army range: 67–75

POOR AIR QUALITY DAYS/YEAR

4.2
Army average: 7.7
Army range: 0–55

STRENGTHS:

- Lower rates of obesity, reported chlamydia infections, tobacco use, sleep disorders, and substance abuse.

CHALLENGES:

- Higher proportion not medically ready.
- Lower percentage meeting P3 sleep target.

Community Health

South Carolina ranked 42nd in overall health out of 50 states in 2015. The state reported an obesity rate of 32%, and smoking prevalence was estimated at 22%.

Compared to the state, Richland, the county where Fort Jackson is located, had the same rate of obesity (32%) and a lower rate of smoking (16%).

Obesity levels (20%) among Fort Jackson's Active Component Soldiers were substantially lower than U.S. levels (30%) after standardizing with the U.S. adult population by age and gender. Smoking rates reported at Fort Jackson averaged 12%.

REFERENCES: America's Health Rankings, Robert Wood Johnson Foundation County Health Rankings, Public Health 360

[‡] Population statistics provide approximations of AC Soldiers (permanent party and trainees, excluding cadets) based on time spent at the installation; refer to Appendix I for details.

► Fort Knox

Installation Profile (2015):[‡]

Population: Approximately 4,900 AC Soldiers:
68% under 35 years old, 19% female

Main Healthcare Facility: Ireland Army Community Hospital

Affiliated County: Hardin



INSTALLATION HEALTH INDEX (IHI) MEASURES*

MEASURE	VALUE	REFERENCE ARMY VALUE	VALUE RANGE
Medical Readiness			
Medical readiness classification (% not ready)	20.2	16.9	11.8–24.3
Health Factors			
Obesity (%)	13.5	16.9	11.9–20.9
Sleep disorder diagnoses (%)	10.9	10.7	5.6–16.4
Tobacco use (%)	28.6	28.6	10.7–36.6
Substance abuse diagnoses (%)	4.3	4.0	1.1–7.2
Chlamydia infection incidence (rate per 1,000)	10.4	18.7	9.4–31.3
Health Outcomes			
Chronic disease diagnoses (%)	16.9	12.9	10.5–20.3
Injury incidence (rate per 1,000)	1,372.2	1,361.2	1,111.9–1,659.1
Behavioral health diagnoses (%)	23.0	20.3	12.7–27.9
Healthcare Delivery			
Preventable hospital admissions (%)	1.6	2.2	0.7–4.4
HEDIS composite score	71.7	77.0	57.3–92.1
IHI Score**	-0.41	0	-1.28–0.94

* See Appendix I for details regarding measure computations.

** The IHI Score reflects standard deviations from the Army average for the collective health measures. Positive values indicate better overall health status. Scores ≤-2 or ≥2 reflect statistically significant differences.

PERFORMANCE TRIAD SCORES



Score: 69.7
Army average: 68.3
Army range: 62–74



Score: 81.5
Army average: 80.9
Army range: 78–85



Score: 71.0
Army average: 69.9
Army range: 67–75

POOR AIR QUALITY DAYS/YEAR

2.3
Army average: 7.7
Army range: 0–55

STRENGTHS:

- Lower rate of obesity.

CHALLENGES:

- Higher rate of chronic disease.
- Higher proportion not medically ready.

Community Health

Kentucky ranked 44th in overall health out of 50 states in 2015. The state reported an obesity rate of 32%, and smoking prevalence was estimated at 26%.

Compared to the state, Hardin, the county in which Fort Knox is located, had the same level of obesity (32%) and a lower rate of smoking (22%).

Obesity levels (15%) among Fort Knox's Active Component Soldiers were substantially lower than U.S. levels (30%) after standardizing with the U.S. adult population by age and gender. Smoking rates reported at Fort Knox averaged 19%.

REFERENCES: America's Health Rankings, Robert Wood Johnson Foundation County Health Rankings, Public Health 360

[‡] Population statistics provide approximations of AC Soldiers (permanent party and trainees, excluding cadets) based on time spent at the installation; refer to Appendix I for details.

► Fort Leavenworth

Installation Profile (2015):[‡]

Population: Approximately 3,300 AC Soldiers:
48% under 35 years old, 16% female

Main Healthcare Facility: Munson Army Health Clinic

Affiliated County: Leavenworth



INSTALLATION HEALTH INDEX (IHI) MEASURES*

MEASURE	VALUE	REFERENCE ARMY VALUE	VALUE RANGE
Medical Readiness			
Medical readiness classification (% not ready)	19.9	16.9	11.8–24.3
Health Factors			
Obesity (%)	20.9	16.9	11.9–20.9
Sleep disorder diagnoses (%)	10.9	10.7	5.6–16.4
Tobacco use (%)	17.3	27.8	10.7–36.6
Substance abuse diagnoses (%)	3.4	4.0	1.1–7.2
Chlamydia infection incidence (rate per 1,000)	19.4	18.7	9.4–31.3
Health Outcomes			
Chronic disease diagnoses (%)	15.5	12.9	10.5–20.3
Injury incidence (rate per 1,000)	1,659.1	1,361.2	1,111.9–1,659.1
Behavioral health diagnoses (%)	23.1	20.3	12.7–27.9
Healthcare Delivery			
Preventable hospital admissions (%)	1.3	2.2	0.7–4.4
HEDIS composite score	92.1	77.0	57.3–92.1
IHI Score**	-0.52	0	-1.28–0.94

* See Appendix I for details regarding measure computations.

** The IHI Score reflects standard deviations from the Army average for the collective health measures. Positive values indicate better overall health status. Scores ≤-2 or ≥2 reflect statistically significant differences.

PERFORMANCE TRIAD SCORES



Score: 71.1
Army average: 68.3
Army range: 62–74



Score: 78.6
Army average: 80.9
Army range: 78–85



Score: 69.6
Army average: 69.9
Army range: 67–75

POOR AIR QUALITY DAYS/YEAR

7.8
Army average: 7.7
Army range: 0–55

STRENGTHS:

- Lower rate of tobacco use.
- Higher HEDIS Composite Score.

CHALLENGES:

- Higher rates of obesity, chronic disease, and injury.
- Lower percentage meeting P3 activity target.

Community Health

Kansas ranked 26th in overall health out of 50 states in 2015. The state reported an obesity rate of 31%, and smoking prevalence was estimated at 18%.

Compared to the state, Leavenworth, the county in which Fort Leavenworth is located, had the same levels of obesity (31%) and smoking (18%).

Obesity levels (20%) among Fort Leavenworth's Active Component Soldiers were substantially lower than U.S. levels (30%) after standardizing with the U.S. adult population by age and gender. Smoking rates reported at Fort Leavenworth averaged 10%.

REFERENCES: America's Health Rankings, Robert Wood Johnson Foundation County Health Rankings, Public Health 360

[‡] Population statistics provide approximations of AC Soldiers (permanent party and trainees, excluding cadets) based on time spent at the installation; refer to Appendix I for details.

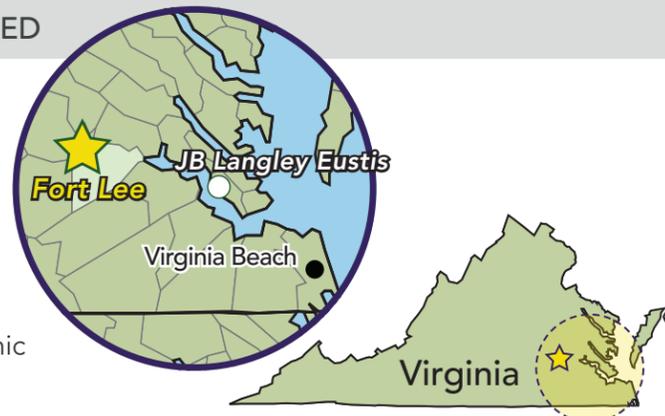
Fort Lee

Installation Profile (2015):[‡]

Population: Approximately 6,800 AC Soldiers:
73% under 35 years old, 23% female

Main Healthcare Facility: Kenner Army Health Clinic

Affiliated County: Prince George



INSTALLATION HEALTH INDEX (IHI) MEASURES*

MEASURE	VALUE	REFERENCE ARMY VALUE	VALUE RANGE
Medical Readiness			
Medical readiness classification (% not ready)	20.4	16.9	11.8–24.3
Health Factors			
Obesity (%)	16.4	16.9	11.9–20.9
Sleep disorder diagnoses (%)	10.8	10.7	5.6–16.4
Tobacco use (%)	17.0	27.8	10.7–36.6
Substance abuse diagnoses (%)	2.7	4.0	1.1–7.2
Chlamydia infection incidence (rate per 1,000)	11.2	18.7	9.4–31.3
Health Outcomes			
Chronic disease diagnoses (%)	15.7	12.9	10.5–20.3
Injury incidence (rate per 1,000)	1,585.4	1,361.2	1,111.9–1,659.1
Behavioral health diagnoses (%)	19.3	20.3	12.7–27.9
Healthcare Delivery			
Preventable hospital admissions (%)	1.2	2.2	0.7–4.4
HEDIS composite score	69.6	77.0	57.3–92.1
IHI Score**	-0.05	0	-1.28–0.94

* See Appendix I for details regarding measure computations.

** The IHI Score reflects standard deviations from the Army average for the collective health measures. Positive values indicate better overall health status. Scores ≤-2 or ≥2 reflect statistically significant differences.

PERFORMANCE TRIAD SCORES



Score: 65.8
Army average: 68.3
Army range: 62–74



Score: 78.6
Army average: 80.9
Army range: 78–85



Score: 67.9
Army average: 69.9
Army range: 67–75

POOR AIR QUALITY DAYS/YEAR

NA

Army average: 7.7
Army range: 0–55

STRENGTHS:

- Lower rates of tobacco use, substance abuse, reported chlamydia infections, and preventable admissions.

CHALLENGES:

- Higher proportion not medically ready.
- Higher rates of chronic disease and injury.
- Lower percentage meeting P3 sleep, activity, and nutrition targets.

Community Health

Virginia ranked 21st in overall health out of 50 states in 2015. The state reported an obesity rate of 29%, and smoking prevalence was estimated at 20%.

Compared to the state, Prince George, the county in which Fort Lee is located, had similar levels of obesity (28%) and a higher rate of smoking (24%).

Obesity levels (23%) among Fort Lee's Active Component Soldiers were substantially lower than U.S. levels (30%) after standardizing with the U.S. adult population by age and gender. Smoking rates reported at Fort Lee averaged 12%.

REFERENCES: America's Health Rankings, Robert Wood Johnson Foundation County Health Rankings, Public Health 360

[‡] Population statistics provide approximations of AC Soldiers (permanent party and trainees, excluding cadets) based on time spent at the installation; refer to Appendix I for details.

Fort Leonard Wood

Installation Profile (2015):[‡]

Population: Approximately 9,100 AC Soldiers:
80% under 35 years old, 18% female

Main Healthcare Facility: General Leonard Wood Army Community Hospital

Affiliated County: Pulaski



INSTALLATION HEALTH INDEX (IHI) MEASURES*

MEASURE	VALUE	REFERENCE ARMY VALUE	VALUE RANGE
Medical Readiness			
Medical readiness classification (% not ready)	15.5	16.9	11.8–24.3
Health Factors			
Obesity (%)	16.0	16.9	11.9–20.9
Sleep disorder diagnoses (%)	9.4	10.7	5.6–16.4
Tobacco use (%)	22.4	27.8	10.7–36.6
Substance abuse diagnoses (%)	1.9	4.0	1.1–7.2
Chlamydia infection incidence (rate per 1,000)	12.9	18.7	9.4–31.3
Health Outcomes			
Chronic disease diagnoses (%)	15.5	12.9	10.5–20.3
Injury incidence (rate per 1,000)	1,594.0	1,361.2	1,111.9–1,659.1
Behavioral health diagnoses (%)	18.5	20.3	12.7–27.9
Healthcare Delivery			
Preventable hospital admissions (%)	1.2	2.2	0.7–4.4
HEDIS composite score	86.0	77.0	57.3–92.1
IHI Score**	0.27	0	-1.28–0.94

* See Appendix I for details regarding measure computations.

** The IHI Score reflects standard deviations from the Army average for the collective health measures. Positive values indicate better overall health status. Scores ≤-2 or ≥2 reflect statistically significant differences.

PERFORMANCE TRIAD SCORES



Score: 66.9
Army average: 68.3
Army range: 62–74



Score: 80.3
Army average: 80.9
Army range: 78–85



Score: 68.5
Army average: 69.9
Army range: 67–75

POOR AIR QUALITY DAYS/YEAR

NA

Army average: 7.7
Army range: 0–55

STRENGTHS:

- Lower rates of reported chlamydia infections, sleep disorders, preventable admissions, and substance abuse.

CHALLENGES:

- Higher rates of chronic disease and injury.

Community Health

Missouri ranked 36th in overall health out of 50 states in 2015. The state reported an obesity rate of 30%, and smoking prevalence was estimated at 21%.

Compared to the state, Pulaski, the county in which Fort Leonard Wood is located, had a higher level of obesity (33%) and the same level of smoking (21%).

Obesity levels (20%) among Fort Leonard Wood's Active Component Soldiers were substantially lower than U.S. levels (30%) after standardizing with the U.S. adult population by age and gender. Smoking rates reported at Fort Leonard Wood averaged 15%.

REFERENCES: America's Health Rankings, Robert Wood Johnson Foundation County Health Rankings, Public Health 360

[‡] Population statistics provide approximations of AC Soldiers (permanent party and trainees, excluding cadets) based on time spent at the installation; refer to Appendix I for details.

► Fort Meade

Installation Profile (2015):[‡]

Population: Approximately 4,000 AC Soldiers:
61% under 35 years old, 20% female

Main Healthcare Facility: Kimbrough Ambulatory Care Center

Affiliated County: Anne Arundel



INSTALLATION HEALTH INDEX (IHI) MEASURES*

MEASURE	VALUE	REFERENCE ARMY VALUE	VALUE RANGE
Medical Readiness			
Medical readiness classification (% not ready)	23.5 [†]	16.9	11.8–24.3
Health Factors			
Obesity (%)	19.3	16.9	11.9–20.9
Sleep disorder diagnoses (%)	10.9	10.7	5.6–16.4
Tobacco use (%)	14.8	27.8	10.7–36.6
Substance abuse diagnoses (%)	4.3	4.0	1.1–7.2
Chlamydia infection incidence (rate per 1,000)	9.4	18.7	9.4–31.3
Health Outcomes			
Chronic disease diagnoses (%)	14.2	12.9	10.5–20.3
Injury incidence (rate per 1,000)	1,345.1	1,361.2	1,111.9–1,659.1
Behavioral health diagnoses (%)	22.5	20.3	12.7–27.9
Healthcare Delivery			
Preventable hospital admissions (%)	1.2	2.2	0.7–4.4
HEDIS composite score	72.8	77.0	57.3–92.1
IHI Score**	-0.19	0	-1.28–0.94

* See Appendix I for details regarding measure computations.

[†] This estimate includes Soldiers from the surrounding capital region.

** The IHI Score reflects standard deviations from the Army average for the collective health measures. Positive values indicate better overall health status.

Scores ≤-2 or ≥2 reflect statistically significant differences.

PERFORMANCE TRIAD SCORES



Score: 70.0
Army average: 68.3
Army range: 62–74



Score: 80.8
Army average: 80.9
Army range: 78–85



Score: 70.5
Army average: 69.9
Army range: 67–75

POOR AIR QUALITY DAYS/YEAR

8.6

Army average: 7.7
Army range: 0–55

STRENGTHS:

- Lower rates of tobacco use, reported chlamydia infections, and preventable admissions.

CHALLENGES:

- Higher proportion not medically ready.
- Higher rate of obesity.

Community Health

Maryland ranked 18th in overall health out of 50 states in 2015. The state reported an obesity rate of 30%, and smoking prevalence was estimated at 15%.

Compared to the state, Anne Arundel, the county in which Fort Meade is located, had similar levels of obesity (28%) and smoking (13%).

Obesity levels (23%) among Fort Meade's Active Component Soldiers were substantially lower than U.S. levels (30%) after standardizing with the U.S. adult population by age and gender. Smoking rates reported at Fort Meade averaged 11%.

REFERENCES: America's Health Rankings, Robert Wood Johnson Foundation County Health Rankings, Public Health 360

[‡] For details regarding the installations' population statistic, reference the methods section in Appendix I.

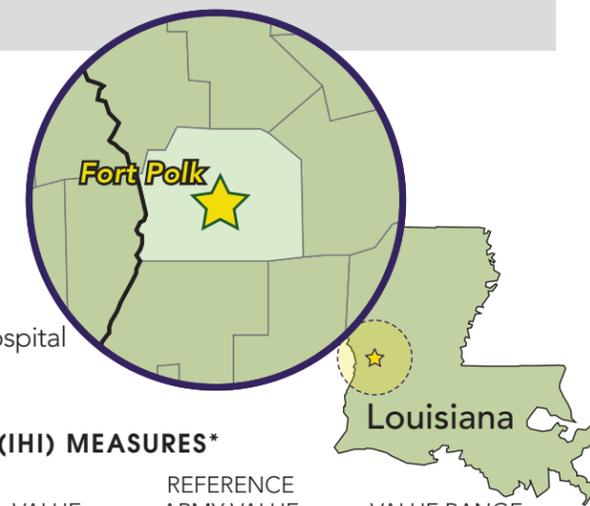
► Fort Polk

Installation Profile (2015):[‡]

Population: Approximately 7,400 AC Soldiers:
77% under 35 years old, 11% female

Main Healthcare Facility: Bayne-Jones Army Community Hospital

Affiliated County: Vernon Parish



INSTALLATION HEALTH INDEX (IHI) MEASURES*

MEASURE	VALUE	REFERENCE ARMY VALUE	VALUE RANGE
Medical Readiness			
Medical readiness classification (% not ready)	18.1	16.9	11.8–24.3
Health Factors			
Obesity (%)	19.1	16.9	11.9–20.9
Sleep disorder diagnoses (%)	12.0	10.7	5.6–16.4
Tobacco use (%)	36.6	27.8	10.7–36.6
Substance abuse diagnoses (%)	3.1	4.0	1.1–7.2
Chlamydia infection incidence (rate per 1,000)	23.8	18.7	9.4–31.3
Health Outcomes			
Chronic disease diagnoses (%)	14.0	12.9	10.5–20.3
Injury incidence (rate per 1,000)	1,249.8	1,361.2	1,111.9–1,659.1
Behavioral health diagnoses (%)	23.2	20.3	12.7–27.9
Healthcare Delivery			
Preventable hospital admissions (%)	2.2	2.2	0.7–4.4
HEDIS composite score	84.7	77.0	57.3–92.1
IHI Score**	-0.37	0	-1.28–0.94

* See Appendix I for details regarding measure computations.

** The IHI Score reflects standard deviations from the Army average for the collective health measures. Positive values indicate better overall health status.

Scores ≤-2 or ≥2 reflect statistically significant differences.

PERFORMANCE TRIAD SCORES



Score: 67.3
Army average: 68.3
Army range: 62–74



Score: 80.2
Army average: 80.9
Army range: 78–85



Score: 68.0
Army average: 69.9
Army range: 67–75

POOR AIR QUALITY DAYS/YEAR

NA

Army average: 7.7
Army range: 0–55

STRENGTHS:

- Lower injury rate.

CHALLENGES:

- Higher rate of tobacco use.
- Lower percentage meeting P3 nutrition target.

Community Health

Louisiana ranked 50th in overall health out of 50 states in 2015. The state reported an obesity rate of 35%, and smoking prevalence was estimated at 24%.

Compared to the state, Vernon, the parish in which Fort Polk is located, had a higher rate of obesity (38%) and a similar rate of smoking (22%).

Obesity levels (26%) among Fort Polk's Active Component Soldiers were substantially lower than U.S. levels (30%) after standardizing with the U.S. adult population by age and gender. Smoking rates reported at Fort Polk averaged 25%.

REFERENCES: America's Health Rankings, Robert Wood Johnson Foundation County Health Rankings, Public Health 360

[‡] For details regarding the installations' population statistic, reference the methods section in Appendix I.

Fort Riley

Installation Profile (2015): ‡

Population: Approximately 16,800 AC Soldiers:
82% under 35 years old, 12% female

Main Healthcare Facility: Irwin Army Community Hospital

Affiliated County: Riley



INSTALLATION HEALTH INDEX (IHI) MEASURES*

MEASURE	VALUE	REFERENCE ARMY VALUE	VALUE RANGE
Medical Readiness			
Medical readiness classification (% not ready)	11.8	16.9	11.8–24.3
Health Factors			
Obesity (%)	17.2	16.9	11.9–20.9
Sleep disorder diagnoses (%)	9.1	10.7	5.6–16.4
Tobacco use (%)	34.5	27.8	10.7–36.6
Substance abuse diagnoses (%)	5.4	4.0	1.1–7.2
Chlamydia infection incidence (rate per 1,000)	24.6	18.7	9.4–31.3
Health Outcomes			
Chronic disease diagnoses (%)	13.8	12.9	10.5–20.3
Injury incidence (rate per 1,000)	1,345.4	1,361.2	1,111.9–1,659.1
Behavioral health diagnoses (%)	20.6	20.3	12.7–27.9
Healthcare Delivery			
Preventable hospital admissions (%)	2.0	2.2	0.7–4.4
HEDIS composite score	86.8	77.0	57.3–92.1
IHI Score**	0.01	0	-1.28–0.94

* See Appendix I for details regarding measure computations.

** The IHI Score reflects standard deviations from the Army average for the collective health measures. Positive values indicate better overall health status. Scores ≤-2 or ≥2 reflect statistically significant differences.

PERFORMANCE TRIAD SCORES



Score: 67.7
Army average: 68.3
Army range: 62–74



Score: 81.3
Army average: 80.9
Army range: 78–85



Score: 68.2
Army average: 69.9
Army range: 67–75

POOR AIR QUALITY DAYS/YEAR

NA

Army average: 7.7
Army range: 0–55

STRENGTHS:

- Lower proportion not medically ready.
- Higher HEDIS Composite Score.

CHALLENGES:

- Higher rates of tobacco use and substance abuse.

Community Health

Kansas ranked 26th in overall health out of 50 states in 2015. The stated reported an obesity rate of 31%, and smoking prevalence was estimated at 18%.

Compared to the state, Riley, the county in which Fort Riley is located, had lower levels of obesity (24%) and smoking (17%).

Obesity levels (21%) among Fort Riley's Active Component Soldiers were substantially lower than U.S. levels (30%) after standardizing with the U.S. adult population by age and gender. Smoking rates reported at Fort Riley averaged 24%.

REFERENCES: America's Health Rankings, Robert Wood Johnson Foundation County Health Rankings, Public Health 360

‡ For details regarding the installations' population statistic, reference the methods section in Appendix I.

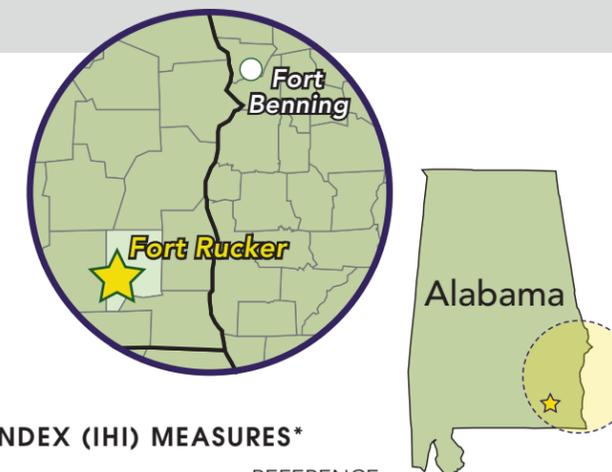
Fort Rucker

Installation Profile (2015): ‡

Population: Approximately 3,300 AC Soldiers:
65% under 35 years old, 13% female

Main Healthcare Facility: Lyster Army Health Clinic

Affiliated County: Dale



INSTALLATION HEALTH INDEX (IHI) MEASURES*

MEASURE	VALUE	REFERENCE ARMY VALUE	VALUE RANGE
Medical Readiness			
Medical readiness classification (% not ready)	17.9	16.9	11.8–24.3
Health Factors			
Obesity (%)	13.0	16.9	11.9–20.9
Sleep disorder diagnoses (%)	12.4	10.7	5.6–16.4
Tobacco use (%)	15.3	27.8	10.7–36.6
Substance abuse diagnoses (%)	1.1	4.0	1.1–7.2
Chlamydia infection incidence (rate per 1,000)	12.1	18.7	9.4–31.3
Health Outcomes			
Chronic disease diagnoses (%)	12.1	12.9	10.5–20.3
Injury incidence (rate per 1,000)	1,466.3	1,361.2	1,111.9–1,659.1
Behavioral health diagnoses (%)	12.7	20.3	12.7–27.9
Healthcare Delivery			
Preventable hospital admissions (%)	1.6	2.2	0.7–4.4
HEDIS composite score	79.6	77.0	57.3–92.1
IHI Score**	0.66	0	-1.28–0.94

* See Appendix I for details regarding measure computations.

** The IHI Score reflects standard deviations from the Army average for the collective health measures. Positive values indicate better overall health status. Scores ≤-2 or ≥2 reflect statistically significant differences.

PERFORMANCE TRIAD SCORES



Score: 74.1
Army average: 68.3
Army range: 62–74



Score: 82.6
Army average: 80.9
Army range: 78–85



Score: 72.3
Army average: 69.9
Army range: 67–75

POOR AIR QUALITY DAYS/YEAR

NA

Army average: 7.7
Army range: 0–55

STRENGTHS:

- Lower rates of obesity, tobacco use, behavioral health disorders, substance abuse, and reported chlamydia infections.
- Higher percentage meeting P3 sleep, activity, and nutrition targets.

CHALLENGES:

- Higher injury rate.

Community Health

Alabama ranked 46th in overall health out of 50 states in 2015. The state reported an obesity rate of 34%, and smoking prevalence was estimated at 21%.

Compared to the state, Dale, the county in which Fort Rucker is located in, had similar levels of obesity (36%) and smoking (20%).

Obesity levels (16%) among Fort Rucker's Active Component Soldiers were substantially lower than U.S. levels (30%) after standardizing with the U.S. adult population by age and gender. Smoking rates reported at Fort Rucker averaged 9%.

REFERENCES: America's Health Rankings, Robert Wood Johnson Foundation County Health Rankings, Public Health 360

‡ Population statistics provide approximations of AC Soldiers (permanent party and trainees, excluding cadets) based on time spent at the installation; refer to Appendix I for details.

► Fort Sill

Installation Profile (2015):[‡]

Population: Approximately 10,500 AC Soldiers:
81% under 35 years old, 17% female

Main Healthcare Facility: Reynolds Army Community Hospital

Affiliated County: Comanche



INSTALLATION HEALTH INDEX (IHI) MEASURES*

MEASURE	VALUE	REFERENCE ARMY VALUE	VALUE RANGE
Medical Readiness			
Medical readiness classification (% not ready)	15.5	16.9	11.8–24.3
Health Factors			
Obesity (%)	18.7	16.9	11.9–20.9
Sleep disorder diagnoses (%)	11.8	10.7	5.6–16.4
Tobacco use (%)	26.6	27.8	10.7–36.6
Substance abuse diagnoses (%)	5.0	4.0	1.1–7.2
Chlamydia infection incidence (rate per 1,000)	10.4	18.7	9.4–31.3
Health Outcomes			
Chronic disease diagnoses (%)	14.2	12.9	10.5–20.3
Injury incidence (rate per 1,000)	1,553.6	1,361.2	1,111.9–1,659.1
Behavioral health diagnoses (%)	25.2	20.3	12.7–27.9
Healthcare Delivery			
Preventable hospital admissions (%)	2.9	2.2	0.7–4.4
HEDIS composite score	90.4	77.0	57.3–92.1
IHI Score**	-0.49	0	-1.28–0.94

* See Appendix I for details regarding measure computations.

** The IHI Score reflects standard deviations from the Army average for the collective health measures. Positive values indicate better overall health status. Scores ≤-2 or ≥2 reflect statistically significant differences.

PERFORMANCE TRIAD SCORES



Score: 64.7
Army average: 68.3
Army range: 62–74



Score: 79.6
Army average: 80.9
Army range: 78–85



Score: 67.7
Army average: 69.9
Army range: 67–75

POOR AIR QUALITY DAYS/YEAR

6.4
Army average: 7.7
Army range: 0–55

STRENGTHS:

- Higher HEDIS Composite Score.

CHALLENGES:

- Higher rates of behavioral disorders and injury.
- Lower percentage meeting P3 sleep and nutrition targets.

Community Health

Oklahoma ranked 45th in overall health out of 50 states in 2015. The state reported an obesity rate of 33%, and smoking prevalence was estimated at 21%.

Compared to the state, Comanche, the county in which Fort Sill is located, had similar levels of obesity (35%) and smoking (22%).

Obesity levels (25%) among Fort Sill's Active Component Soldiers were substantially lower than U.S. levels (30%) after standardizing with the U.S. adult population by age and gender. Smoking rates reported at Fort Sill averaged 20%.

REFERENCES: America's Health Rankings, Robert Wood Johnson Foundation County Health Rankings, Public Health 360

[‡] Population statistics provide approximations of AC Soldiers (permanent party and trainees, excluding cadets) based on time spent at the installation; refer to Appendix I for details.

► Fort Stewart

Installation Profile (2015):[‡]

Population: Approximately 20,600 AC Soldiers:
81% under 35 years old, 14% female

Main Healthcare Facility: Winn Army Community Hospital

Affiliated County: Liberty



INSTALLATION HEALTH INDEX (IHI) MEASURES*

MEASURE	VALUE	REFERENCE ARMY VALUE	VALUE RANGE
Medical Readiness			
Medical readiness classification (% not ready)	15.9	16.9	11.8–24.3
Health Factors			
Obesity (%)	18.6	16.9	11.9–20.9
Sleep disorder diagnoses (%)	10.4	10.7	5.6–16.4
Tobacco use (%)	33.3	27.8	10.7–36.6
Substance abuse diagnoses (%)	2.7	4.0	1.1–7.2
Chlamydia infection incidence (rate per 1,000)	20.3	18.7	9.4–31.3
Health Outcomes			
Chronic disease diagnoses (%)	12.9	12.9	10.5–20.3
Injury incidence (rate per 1,000)	1,237.3	1,361.2	1,111.9–1,659.1
Behavioral health diagnoses (%)	22.7	20.3	12.7–27.9
Healthcare Delivery			
Preventable hospital admissions (%)	2.4	2.2	0.7–4.4
HEDIS composite score	86.0	77.0	57.3–92.1
IHI Score**	0.05	0	-1.28–0.94

* See Appendix I for details regarding measure computations.

** The IHI Score reflects standard deviations from the Army average for the collective health measures. Positive values indicate better overall health status. Scores ≤-2 or ≥2 reflect statistically significant differences.

PERFORMANCE TRIAD SCORES



Score: 66.4
Army average: 68.3
Army range: 62–74



Score: 80.5
Army average: 80.9
Army range: 78–85



Score: 67.7
Army average: 69.9
Army range: 67–75

POOR AIR QUALITY DAYS/YEAR

NA
Army average: 7.7
Army range: 0–55

STRENGTHS:

- Lower rates of injury and substance abuse.
- Higher HEDIS Composite Score.

CHALLENGES:

- Higher rate of tobacco use.
- Lower percentage meeting P3 nutrition score.

Community Health

Georgia ranked 40th in overall health out of 50 states in 2015. The state reported an obesity rate of 31%, and smoking prevalence was estimated at 17%.

Compared to the state, Liberty, the county in which Fort Stewart is located, had higher levels of obesity (34%) and smoking (20%).

Obesity levels (24%) among Fort Stewart's Active Component Soldiers were substantially lower than U.S. levels (30%) after standardizing with the U.S. adult population by age and gender. Smoking rates reported at Fort Stewart averaged 23%.

REFERENCES: America's Health Rankings, Robert Wood Johnson Foundation County Health Rankings, Public Health 360

[‡] For details regarding the installations' population statistic, reference the methods section in Appendix I.

► Fort Wainwright

Installation Profile (2015):[‡]

Population: Approximately 6,400 AC Soldiers:
86% under 35 years old, 9% female

Main Healthcare Facility: Bassett Army Community Hospital

Affiliated County: Fairbanks North Star Borough



INSTALLATION HEALTH INDEX (IHI) MEASURES*

MEASURE	VALUE	REFERENCE ARMY VALUE	VALUE RANGE
Medical Readiness			
Medical readiness classification (% not ready)	17.1 [†]	16.9	11.8–24.3
Health Factors			
Obesity (%)	17.7	16.9	11.9–20.9
Sleep disorder diagnoses (%)	9.5	10.7	5.6–16.4
Tobacco use (%)	34.9	27.8	10.7–36.6
Substance abuse diagnoses (%)	4.7	4.0	1.1–7.2
Chlamydia infection incidence (rate per 1,000)	22.1	18.7	9.4–31.3
Health Outcomes			
Chronic disease diagnoses (%)	12.4	12.9	10.5–20.3
Injury incidence (rate per 1,000)	1,337.3	1,361.2	1,111.9–1,659.1
Behavioral health diagnoses (%)	22.1	20.3	12.7–27.9
Healthcare Delivery			
Preventable hospital admissions (%)	1.1	2.2	0.7–4.4
HEDIS composite score	82.9	77.0	57.3–92.1
IHI Score**	-0.12	0	-1.28–0.94

* See Appendix I for details regarding measure computations.

[†] This is a combined estimate that includes Joint Base Elmendorf-Richardson.

** The IHI Score reflects standard deviations from the Army average for the collective health measures. Positive values indicate better overall health status.

Scores ≤-2 or ≥2 reflect statistically significant differences.

PERFORMANCE TRIAD SCORES



Score: 66.9
Army average: 68.3
Army range: 62–74



Score: 81.2
Army average: 80.9
Army range: 78–85



Score: 67.7
Army average: 69.9
Army range: 67–75

POOR AIR QUALITY DAYS/YEAR

54.6
Army average: 7.7
Army range: 0–55

STRENGTHS:

- Lower rate of preventable admissions.

CHALLENGES:

- Higher rate of tobacco use.
- Lower percentage meeting P3 nutrition target.

Community Health

Alaska ranked 27th in overall health out of 50 states in 2015. The state reported an obesity rate of 30%, and smoking prevalence was estimated at 20%.

Compared to the state, Fairbanks North Star Borough, where Fort Wainwright is located, had a similar level of obesity (29%) but a lower rate of smoking (16%).

Obesity levels (22%) among Fort Wainwright's Active Component Soldiers were substantially lower than U.S. levels (30%) after standardizing with the U.S. adult population by age and gender. Smoking rates reported at Fort Wainwright averaged 23%.

REFERENCES: America's Health Rankings, Robert Wood Johnson Foundation County Health Rankings, Public Health 360

[‡] For details regarding the installations' population statistic, reference the methods section in Appendix I.

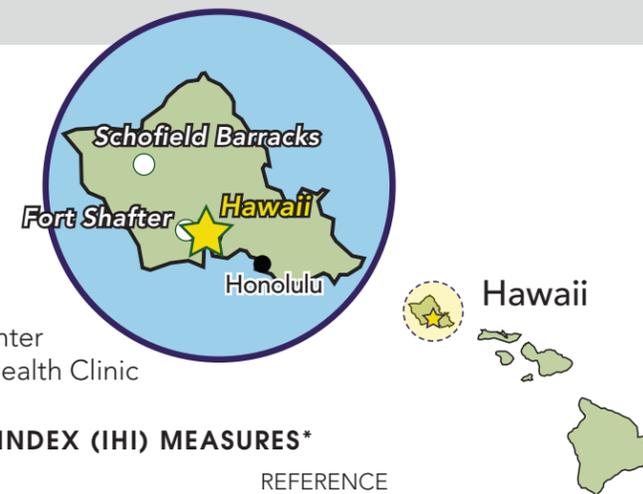
► Hawaii

Installation Profile (2015):[‡]

Population: Approximately 20,900 AC Soldiers:
77% under 35 years old, 17% female

Main Healthcare Facility: Tripler Army Medical Center and Schofield Barracks Health Clinic

Affiliated County: Honolulu



INSTALLATION HEALTH INDEX (IHI) MEASURES*

MEASURE	VALUE	REFERENCE ARMY VALUE	VALUE RANGE
Medical Readiness			
Medical readiness classification (% not ready)	16.1	16.9	11.8–24.3
Health Factors			
Obesity (%)	15.3	16.9	11.9–20.9
Sleep disorder diagnoses (%)	11.5	10.7	5.6–16.4
Tobacco use (%)	27.9	27.8	10.7–36.6
Substance abuse diagnoses (%)	2.8	4.0	1.1–7.2
Chlamydia infection incidence (rate per 1,000)	27.7	18.7	9.4–31.3
Health Outcomes			
Chronic disease diagnoses (%)	12.9	12.9	10.5–20.3
Injury incidence (rate per 1,000)	1,463.7	1,361.2	1,111.9–1,659.1
Behavioral health diagnoses (%)	18.9	20.3	12.7–27.9
Healthcare Delivery			
Preventable hospital admissions (%)	1.2	2.2	0.7–4.4
HEDIS composite score	76.5	77.0	57.3–92.1
IHI Score**	0.02	0	-1.28–0.94

* See Appendix I for details regarding measure computations.

** The IHI Score reflects standard deviations from the Army average for the collective health measures. Positive values indicate better overall health status.

Scores ≤-2 or ≥2 reflect statistically significant differences.

PERFORMANCE TRIAD SCORES



Score: 68.1
Army average: 68.3
Army range: 62–74



Score: 82.1
Army average: 80.9
Army range: 78–85



Score: 70.1
Army average: 69.9
Army range: 67–75

POOR AIR QUALITY DAYS/YEAR

0.4
Army average: 7.7
Army range: 0–55

STRENGTHS:

- Lower rates of obesity and preventable admissions.
- Higher percentage meeting P3 activity target.

CHALLENGES:

- Higher rate of reported chlamydia infections.

Community Health

Hawaii ranked 1st in overall health out of 50 states in 2015. The state reported an obesity rate of 22%, and smoking prevalence was estimated at 14%.

Compared to the state, Honolulu, the county in which Schofield Barracks/Fort Shafter is located, had similar levels of obesity (22%) and smoking (13%).

Obesity levels (17%) among Hawaii's Active Component Soldiers were substantially lower than U.S. levels (30%) after standardizing with the U.S. adult population by age and gender. Smoking rates reported at Hawaii averaged 19%.

REFERENCES: America's Health Rankings, Robert Wood Johnson Foundation County Health Rankings, Public Health 360

[‡] For details regarding the installations' population statistic, reference the methods section in Appendix I.

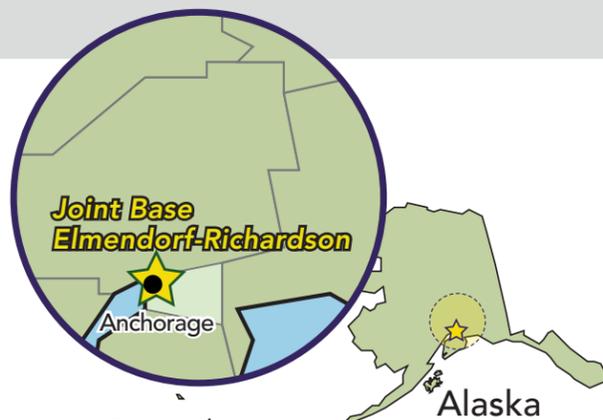
Joint Base Elmendorf-Richardson

Installation Profile (2015):[‡]

Population: Approximately 5,200 AC Soldiers:
85% under 35 years old, 9% female

Main Healthcare Facility: Joint Base
Elmendorf-Richardson Hospital

Affiliated County: Anchorage



INSTALLATION HEALTH INDEX (IHI) MEASURES*

MEASURE	VALUE	REFERENCE ARMY VALUE	VALUE RANGE
Medical Readiness			
Medical readiness classification (% not ready)	17.1 [†]	16.9	11.8–24.3
Health Factors			
Obesity (%)	15.3	16.9	11.9–20.9
Sleep disorder diagnoses (%)	9.3	10.7	5.6–16.4
Tobacco use (%)	33.3	27.8	10.7–36.6
Substance abuse diagnoses (%)	2.5	4.0	1.1–7.2
Chlamydia infection incidence (rate per 1,000)	17.8	18.7	9.4–31.3
Health Outcomes			
Chronic disease diagnoses (%)	12.0	12.9	10.5–20.3
Injury incidence (rate per 1,000)	1,361.8	1,361.2	1,111.9–1,659.1
Behavioral health diagnoses (%)	18.3	20.3	12.7–27.9
Healthcare Delivery			
Preventable hospital admissions (%)	NA	2.2	0.7–4.4
HEDIS composite score	NA	77.0	57.3–92.1
IHI Score**	0.30	0	-1.28–0.94

* See Appendix I for details regarding measure computations.

[†] This is a combined estimate that includes Fort Wainwright.

** The IHI Score reflects standard deviations from the Army average for the collective health measures. Positive values indicate better overall health status. Scores ≤-2 or ≥2 reflect statistically significant differences.

PERFORMANCE TRIAD SCORES



Score: 67.9
Army average: 68.3
Army range: 62–74



Score: 82.4
Army average: 80.9
Army range: 78–85



Score: 70.5
Army average: 69.9
Army range: 67–75

POOR AIR QUALITY DAYS/YEAR

0.8

Army average: 7.7
Army range: 0–55

STRENGTHS:

- Lower rates of obesity and substance abuse.
- Higher percentage meeting P3 activity target.

CHALLENGES:

- Higher rate of tobacco use.

Community Health

Alaska ranked 27th in overall health out of 50 states in 2015. The state reported an obesity rate of 30%, and smoking prevalence was estimated at 20%.

Compared to the state, Anchorage, the county in which Joint Base Elmendorf-Richardson is located, had a similar level of obesity (27%) but a lower rate of smoking (16%).

Obesity levels (20%) among Joint Base Elmendorf-Richardson's Active Component Soldiers were substantially lower than U.S. levels (30%) after standardizing with the U.S. adult population by age and gender. Smoking rates reported at Joint Base Elmendorf-Richardson averaged 19%.

REFERENCES: America's Health Rankings, Robert Wood Johnson Foundation County Health Rankings, Public Health 360

[‡] For details regarding the installations' population statistic, reference the methods section in Appendix I.

Joint Base Langley Eustis

Installation Profile (2015):[‡]

Population: Approximately 4,900 AC Soldiers:
67% under 35 years old, 17% female

Main Healthcare Facility: McDonald Army Health Clinic

Affiliated County: Newport News City



INSTALLATION HEALTH INDEX (IHI) MEASURES*

MEASURE	VALUE	REFERENCE ARMY VALUE	VALUE RANGE
Medical Readiness			
Medical readiness classification (% not ready)	16.9	16.9	11.8–24.3
Health Factors			
Obesity (%)	20.8	16.9	11.9–20.9
Sleep disorder diagnoses (%)	9.6	10.7	5.6–16.4
Tobacco use (%)	21.9	27.8	10.7–36.6
Substance abuse diagnoses (%)	3.8	4.0	1.1–7.2
Chlamydia infection incidence (rate per 1,000)	15.3	18.7	9.4–31.3
Health Outcomes			
Chronic disease diagnoses (%)	16.1	12.9	10.5–20.3
Injury incidence (rate per 1,000)	1,584.8	1,361.2	1,111.9–1,659.1
Behavioral health diagnoses (%)	23.4	20.3	12.7–27.9
Healthcare Delivery			
Preventable hospital admissions (%)	1.9	2.2	0.7–4.4
HEDIS composite score	89.7	77.0	57.3–92.1
IHI Score**	-0.31	0	-1.28–0.94

* See Appendix I for details regarding measure computations.

** The IHI Score reflects standard deviations from the Army average for the collective health measures. Positive values indicate better overall health status. Scores ≤-2 or ≥2 reflect statistically significant differences.

PERFORMANCE TRIAD SCORES



Score: 69.4
Army average: 68.3
Army range: 62–74



Score: 79.0
Army average: 80.9
Army range: 78–85



Score: 69.4
Army average: 69.9
Army range: 67–75

POOR AIR QUALITY DAYS/YEAR

3.6

Army average: 7.7
Army range: 0–55

STRENGTHS:

- Lower tobacco use.
- Higher HEDIS Composite Score.

CHALLENGES:

- Higher rates of obesity, chronic disease, and injury.
- Lower percentage meeting P3 activity targets.

Community Health

Virginia ranked 21st in overall health out of 50 states in 2015. The state reported an obesity rate of 29%, and smoking prevalence was estimated at 20%.

Compared to the state, Newport News City, the county in which Joint Base Langley Eustis is located, had higher levels of obesity (34%) and smoking (21%).

Obesity levels (24%) among Active Component Soldiers at Joint Base Langley Eustis were substantially lower than U.S. levels (30%) after standardizing with the U.S. adult population by age and gender. Smoking rates reported at Joint Base Langley Eustis averaged 17%.

REFERENCES: America's Health Rankings, Robert Wood Johnson Foundation County Health Rankings, Public Health 360

[‡] Population statistics provide approximations of AC Soldiers (permanent party and trainees, excluding cadets) based on time spent at the installation; refer to Appendix I for details.

► Joint Base Lewis-McChord

Installation Profile (2015):[‡]

Population: Approximately 27,400 AC Soldiers:
78% under 35 years old, 14% female

Main Healthcare Facility: Madigan Army Medical Center

Affiliated County: Pierce



INSTALLATION HEALTH INDEX (IHI) MEASURES*

MEASURE	VALUE	REFERENCE ARMY VALUE	VALUE RANGE
Medical Readiness			
Medical readiness classification (% not ready)	14.4	16.9	11.8–24.3
Health Factors			
Obesity (%)	17.8	16.9	11.9–20.9
Sleep disorder diagnoses (%)	11.3	10.7	5.6–16.4
Tobacco use (%)	29.7	27.8	10.7–36.6
Substance abuse diagnoses (%)	2.5	4.0	1.1–7.2
Chlamydia infection incidence (rate per 1,000)	22.6	18.7	9.4–31.3
Health Outcomes			
Chronic disease diagnoses (%)	11.7	12.9	10.5–20.3
Injury incidence (rate per 1,000)	1,355.0	1,361.2	1,111.9–1,659.1
Behavioral health diagnoses (%)	20.0	20.3	12.7–27.9
Healthcare Delivery			
Preventable hospital admissions (%)	1.7	2.2	0.7–4.4
HEDIS composite score	75.7	77.0	57.3–92.1
IHI Score**	0.16	0	-1.28–0.94

* See Appendix I for details regarding measure computations.

** The IHI Score reflects standard deviations from the Army average for the collective health measures. Positive values indicate better overall health status. Scores ≤ -2 or ≥ 2 reflect statistically significant differences.

PERFORMANCE TRIAD SCORES



Score: 68.0
Army average: 68.3
Army range: 62–74



Score: 81.4
Army average: 80.9
Army range: 78–85



Score: 69.9
Army average: 69.9
Army range: 67–75

POOR AIR QUALITY DAYS/YEAR

6.0
Army average: 7.7
Army range: 0–55

STRENGTHS:

- Lower proportion not medically ready.
- Lower rates of chronic disease and substance abuse.

CHALLENGES:

- Higher rate of reported chlamydia infections.

Community Health

Washington ranked 9th in overall health out of 50 states in 2015. The state reported an obesity rate of 27%, and smoking prevalence was estimated at 15%.

Compared to the state, Pierce, the county in which Joint Base Lewis-McChord is located, had higher levels of obesity (31%) and smoking (17%).

Obesity levels (23%) among Active Component Soldiers at Joint Base Lewis-McChord were substantially lower than U.S. levels (30%) after standardizing with the U.S. adult population by age and gender. Smoking rates reported at Joint Base Lewis-McChord averaged 19%.

REFERENCES: America's Health Rankings, Robert Wood Johnson Foundation County Health Rankings, Public Health 360

[‡] For details regarding the installations' population statistic, reference the methods section in Appendix I.

► Joint Base Myer-Henderson Hall

Installation Profile (2015):[‡]

Population: Approximately 2,100 AC Soldiers:
78% under 35 years old, 10% female

Main Healthcare Facility: Andrew Rader Army Health Clinic

Affiliated County: Arlington



INSTALLATION HEALTH INDEX (IHI) MEASURES*

MEASURE	VALUE	REFERENCE ARMY VALUE	VALUE RANGE
Medical Readiness			
Medical readiness classification (% not ready)	24.3 [†]	16.9	11.8–24.3
Health Factors			
Obesity (%)	12.6	16.9	11.9–20.9
Sleep disorder diagnoses (%)	8.9	10.7	5.6–16.4
Tobacco use (%)	25.6	27.8	10.7–36.6
Substance abuse diagnoses (%)	5.1	4.0	1.1–7.2
Chlamydia infection incidence (rate per 1,000)	22.7	18.7	9.4–31.3
Health Outcomes			
Chronic disease diagnoses (%)	11.6	12.9	10.5–20.3
Injury incidence (rate per 1,000)	1,199.9	1,361.2	1,111.9–1,659.1
Behavioral health diagnoses (%)	22.4	20.3	12.7–27.9
Healthcare Delivery			
Preventable hospital admissions (%)	2.3	2.2	0.7–4.4
HEDIS composite score	57.3	77.0	57.3–92.1
IHI Score**	-0.19	0	-1.28–0.94

* See Appendix I for details regarding measure computations.

[†] This is a combined estimate that includes Fort Belvoir.

** The IHI Score reflects standard deviations from the Army average for the collective health measures. Positive values indicate better overall health status. Scores ≤ -2 or ≥ 2 reflect statistically significant differences.

PERFORMANCE TRIAD SCORES



Score: 68.8
Army average: 68.3
Army range: 62–74



Score: 83.1
Army average: 80.9
Army range: 78–85



Score: 71.7
Army average: 69.9
Army range: 67–75

POOR AIR QUALITY DAYS/YEAR

8.6
Army average: 7.7
Army range: 0–55

STRENGTHS:

- Lower rates of obesity and injury.
- Higher P3 activity and nutrition scores.

CHALLENGES:

- Higher proportion not medically ready.
- Lower HEDIS Composite Score.

Community Health

Virginia ranked 21st in overall health out of 50 states in 2015. The state reported an obesity rate of 29%, and smoking prevalence was estimated at 20%.

Compared to the state, Arlington, the county in which Joint Base Myer-Henderson Hall is located, had lower levels of obesity (17%) and smoking (13%).

Obesity levels (15%) among Joint Base Myer-Henderson Hall's Active Component Soldiers were substantially lower than U.S. levels (30%) after standardizing with the U.S. adult population by age and gender. Smoking rates reported at Joint Base Myer-Henderson Hall averaged 16%.

REFERENCES: America's Health Rankings, Robert Wood Johnson Foundation County Health Rankings, Public Health 360

[‡] For details regarding the installations' population statistic, reference the methods section in Appendix I.

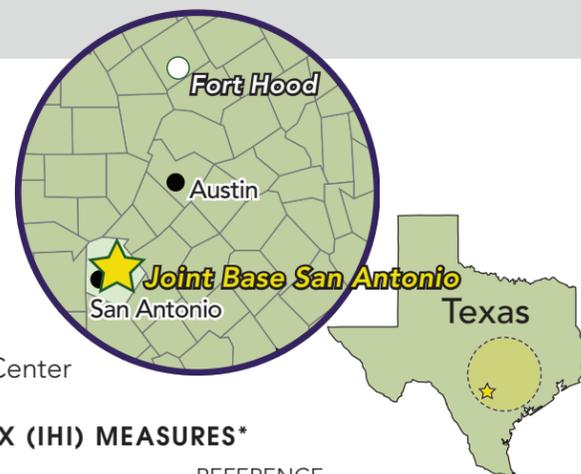
► Joint Base San Antonio

Installation Profile (2015):[‡]

Population: Approximately 8,200 AC Soldiers:
61% under 35 years old, 28% female

Main Healthcare Facility: San Antonio Military Medical Center

Affiliated County: Bexar



INSTALLATION HEALTH INDEX (IHI) MEASURES*

MEASURE	VALUE	REFERENCE ARMY VALUE	VALUE RANGE
Medical Readiness			
Medical readiness classification (% not ready)	17.5	16.9	11.8–24.3
Health Factors			
Obesity (%)	14.8	16.9	11.9–20.9
Sleep disorder diagnoses (%)	12.1	10.7	5.6–16.4
Tobacco use (%)	11.1	27.8	10.7–36.6
Substance abuse diagnoses (%)	1.7	4.0	1.1–7.2
Chlamydia infection incidence (rate per 1,000)	16.2	18.7	9.4–31.3
Health Outcomes			
Chronic disease diagnoses (%)	15.3	12.9	10.5–20.3
Injury incidence (rate per 1,000)	1,360.3	1,361.2	1,111.9–1,659.1
Behavioral health diagnoses (%)	21.2	20.3	12.7–27.9
Healthcare Delivery			
Preventable hospital admissions (%)	4.2	2.2	0.7–4.4
HEDIS composite score	62.3	77.0	57.3–92.1
IHI Score**	0.12	0	-1.28–0.94

* See Appendix I for details regarding measure computations.

** The IHI Score reflects standard deviations from the Army average for the collective health measures. Positive values indicate better overall health status. Scores ≤-2 or ≥2 reflect statistically significant differences.

PERFORMANCE TRIAD SCORES



Score: 66.1
Army average: 68.3
Army range: 62–74



Score: 81.3
Army average: 80.9
Army range: 78–85



Score: 71.6
Army average: 69.9
Army range: 67–75

POOR AIR QUALITY DAYS/YEAR

15.0
Army average: 7.7
Army range: 0–55

STRENGTHS:

- Lower rates of tobacco use and substance abuse.

CHALLENGES:

- Higher rates of chronic disease and preventable admissions.
- Lower HEDIS Composite Score.

Community Health

Texas ranked 34th in overall health out of the 50 states in 2015. The state reported an obesity rate of 32%, and smoking prevalence was estimated at 15%.

Compared to the state, Bexar, the county in which Joint Base San Antonio is located, had lower levels of obesity (28%) and smoking (13%).

Obesity levels (18%) among Joint Base San Antonio's Active Component Soldiers were substantially lower than U.S. levels (30%) after standardizing with the U.S. adult population by age and gender. Smoking rates reported at Joint Base San Antonio averaged 8%.

REFERENCES: America's Health Rankings, Robert Wood Johnson Foundation County Health Rankings, Public Health 360

[‡] For details regarding the installations' population statistic, reference the methods section in Appendix I.

► Presidio of Monterey

Installation Profile (2015):[‡]

Population: Approximately 1,600 AC Soldiers:
84% under 35 years old, 22% female

Main Healthcare Facility: Presidio of Monterey Army Health Clinic

Affiliated County: Monterey



INSTALLATION HEALTH INDEX (IHI) MEASURES*

MEASURE	VALUE	REFERENCE ARMY VALUE	VALUE RANGE
Medical Readiness			
Medical readiness classification (% not ready)	NA	16.9	11.8–24.3
Health Factors			
Obesity (%)	11.9	16.9	11.9–20.9
Sleep disorder diagnoses (%)	8.8	10.7	5.6–16.4
Tobacco use (%)	15.9	27.8	10.7–36.6
Substance abuse diagnoses (%)	2.7	4.0	1.1–7.2
Chlamydia infection incidence (rate per 1,000)	14.5	18.7	9.4–31.3
Health Outcomes			
Chronic disease diagnoses (%)	13.8	12.9	10.5–20.3
Injury incidence (rate per 1,000)	1,166.5	1,361.2	1,111.9–1,659.1
Behavioral health diagnoses (%)	16.9	20.3	12.7–27.9
Healthcare Delivery			
Preventable hospital admissions (%)	0.7	2.2	0.7–4.4
HEDIS composite score	67.3	77.0	57.3–92.1
IHI Score**	0.94	0	-1.28–0.94

* See Appendix I for details regarding measure computations.

** The IHI Score reflects standard deviations from the Army average for the collective health measures. Positive values indicate better overall health status. Scores ≤-2 or ≥2 reflect statistically significant differences.

PERFORMANCE TRIAD SCORES



Score: 73.1
Army average: 68.3
Army range: 62–74



Score: 85.2
Army average: 80.9
Army range: 78–85



Score: 74.6
Army average: 69.9
Army range: 67–75

POOR AIR QUALITY DAYS/YEAR

0.2
Army average: 7.7
Army range: 0–55

STRENGTHS:

- Lower rates of obesity, injury, and tobacco use.
- Higher percentage meeting P3 sleep, nutrition, and activity targets.

CHALLENGES:

- Lower HEDIS Composite Score.

Community Health

California ranked 16th in overall health out of 50 states in 2015. The state reported an obesity rate of 25%, and smoking prevalence was estimated at 13%.

Compared to the state, Monterey, the county in which Presidio of Monterey is located, had similar levels of obesity (24%) and smoking (14%).

Obesity levels (8%) among Presidio of Monterey's Active Component Soldiers were substantially lower than U.S. levels (30%) after standardizing with the U.S. adult population by age and gender. Smoking rates reported at Presidio of Monterey averaged 12%.

REFERENCES: America's Health Rankings, Robert Wood Johnson Foundation County Health Rankings, Public Health 360

[‡] Population statistics provide approximations of AC Soldiers (permanent party and trainees, excluding cadets) based on time spent at the installation; refer to Appendix I for details.

► USAG West Point



Installation Profile (2015):‡

Population: Approximately 1,500 AC Soldiers:
57% under 35 years old, 17% female

Main Healthcare Facility: Keller Army Community Hospital

Affiliated County: Orange

INSTALLATION HEALTH INDEX (IHI) MEASURES*

MEASURE	VALUE	REFERENCE ARMY VALUE	VALUE RANGE
Medical Readiness			
Medical readiness classification (% not ready)	20.7	16.9	11.8–24.3
Health Factors			
Obesity (%)	13.3	16.9	11.9–20.9
Sleep disorder diagnoses (%)	5.6	10.7	5.6–16.4
Tobacco use (%)	10.7	27.8	10.7–36.6
Substance abuse diagnoses (%)	2.0	4.0	1.1–7.2
Chlamydia infection incidence (rate per 1,000)	NA	18.7	9.4–31.3
Health Outcomes			
Chronic disease diagnoses (%)	12.1	12.9	10.5–20.3
Injury incidence (rate per 1,000)	1,359.9	1,361.2	1,111.9–1,659.1
Behavioral health diagnoses (%)	13.2	20.3	12.7–27.9
Healthcare Delivery			
Preventable hospital admissions (%)	4.4	2.2	0.7–4.4
HEDIS composite score	78.8	77.0	57.3–92.1
IHI Score**	0.87	0	-1.28–0.94

* See Appendix I for details regarding measure computations.

** The IHI Score reflects standard deviations from the Army average for the collective health measures. Positive values indicate better overall health status. Scores ≤-2 or ≥2 reflect statistically significant differences.

PERFORMANCE TRIAD SCORES



Score: 74.0
Army average: 68.3
Army range: 62–74



Score: 81.2
Army average: 80.9
Army range: 78–85



Score: 73.6
Army average: 69.9
Army range: 67–75

POOR AIR QUALITY DAYS/YEAR

1.4
Army average: 7.7
Army range: 0–55

STRENGTHS:

- Lower rates of obesity, tobacco use, sleep disorders, behavioral health disorders, and substance abuse.
- Higher P3 sleep and nutrition scores.

CHALLENGES:

- Higher proportion not medically ready.
- Higher rate of preventable admissions.

Community Health

New York ranked 13th in overall health out of 50 states in 2015. The state reported an obesity rate of 27%, and smoking prevalence was estimated at 14%.

Compared to the state, Orange, the county in which USAG West Point is located in, had the similar levels of obesity (26%) and smoking (15%).

Obesity levels (9%) among USAG West Point's Active Component Soldiers were substantially lower than U.S. levels (30%) after standardizing with the U.S. adult population by age and gender. Smoking rates reported at USAG West Point averaged 5%.

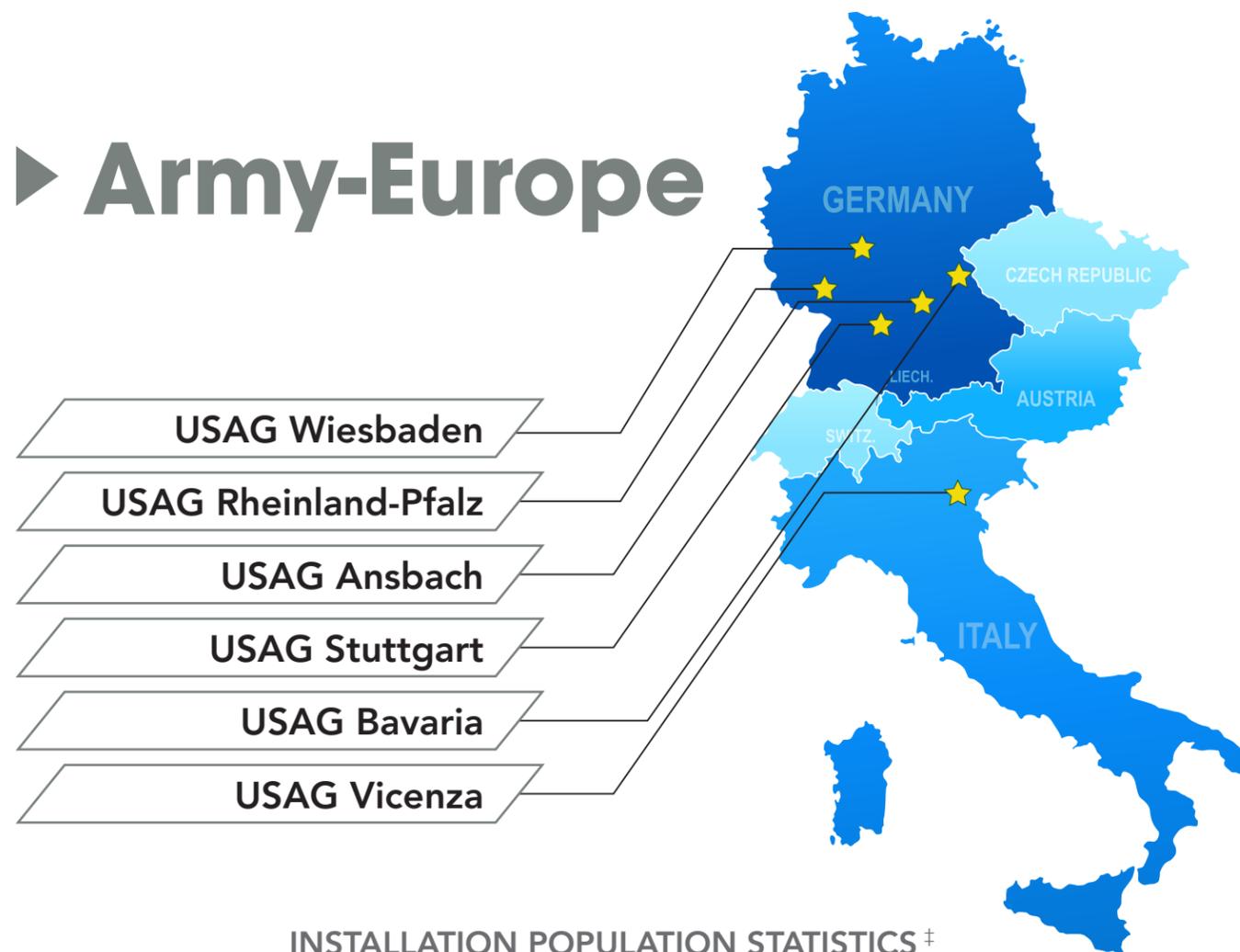
REFERENCES: America's Health Rankings, Robert Wood Johnson Foundation County Health Rankings, Public Health 360

‡ Population statistics provide approximations of AC Soldiers (excluding cadets) based on time assigned to the installation; refer to Appendix I for details.

OCONUS INSTALLATIONS

- *Army-Europe*
- *Army-Pacific*

► Army-Europe



INSTALLATION POPULATION STATISTICS ‡

	USAG Ansbach	USAG Bavaria	USAG Rheinland-Pfalz	USAG Stuttgart	USAG Wiesbaden	USAG Vicenza
Approximate population	~1,950	~9,500	~6,200	~1,700	~1,800	~3,150
%Female	13	9	19	7	17	9
%Under 35	78	82	72	58	68	79



PERFORMANCE TRIAD SCORES

	USAG Ansbach	USAG Bavaria	USAG Rheinland-Pfalz	USAG Stuttgart	USAG Wiesbaden	USAG Vicenza	Army-Europe Reference
Sleep Score	70.1	67.0	67.1	70.0	68.8	67.6	68.6
Activity Score	82.2	81.9	80.2	81.0	81.6	83.5	81.4
Nutrition Score	69.6	68.8	68.2	71.8	68.7	71.9	69.8

INSTALLATION HEALTH INDEX SCORES

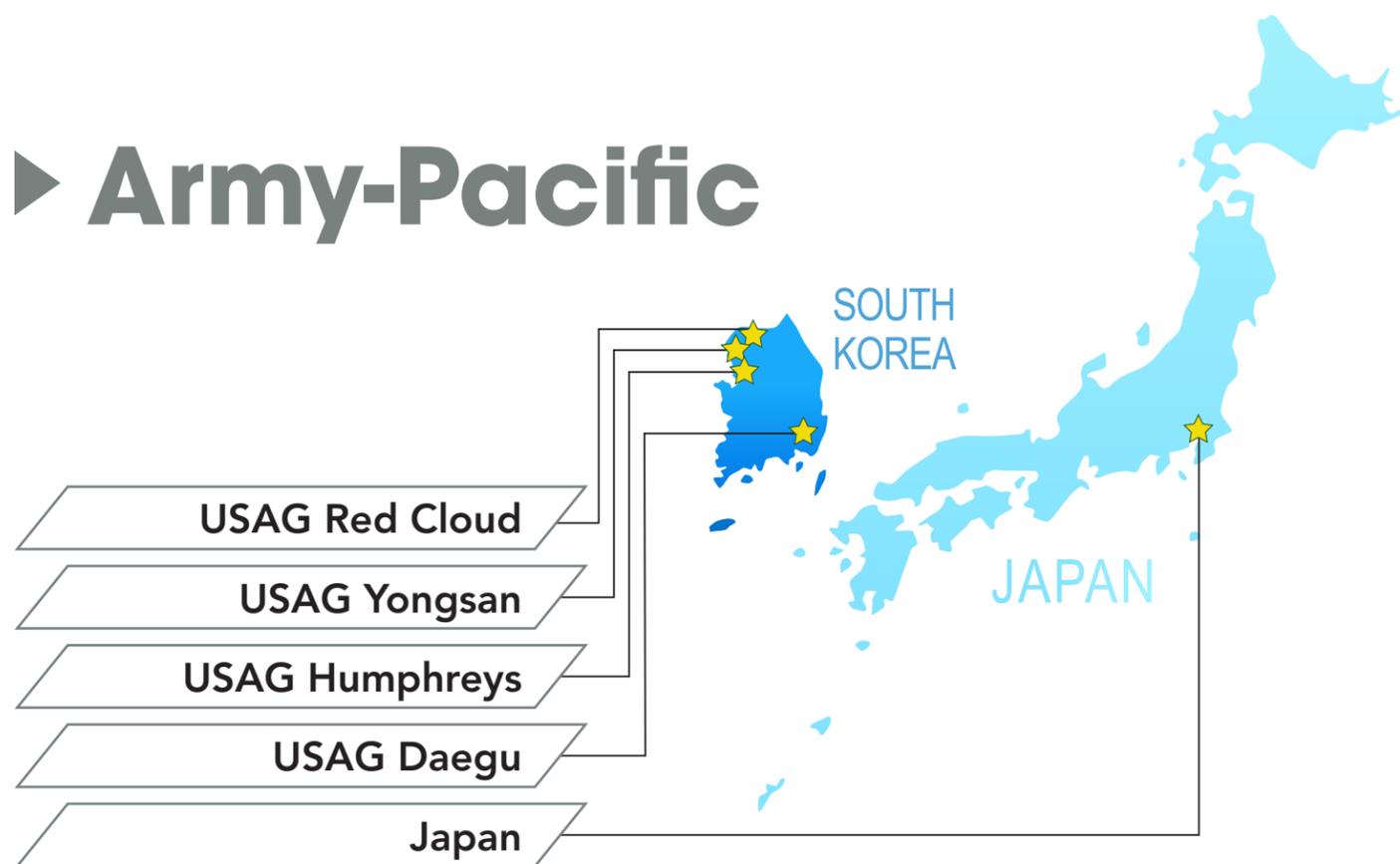
MEASURE	USAG Ansbach	USAG Bavaria	USAG Rheinland-Pfalz	USAG Stuttgart	USAG Wiesbaden	USAG Vicenza	Army-Europe Reference*
Medical Readiness							
Medical readiness classification (%not ready)^	13.8	13.8	13.8	13.8	13.8	13.8	13.8
Dental readiness classification (%not ready)	3.9	3.9	3.9	3.9	3.9	3.9	3.9
Permanent Profile (%P3 or P4)	3.8	4.2	4.4	3.2	3.3	2.1	3.8
Health Factors							
Obesity (%)	15.7	15.2	18.2	16.1	16.1	11.4	15.6
Sleep disorder diagnoses (%)	10.8	7.5	12.7	10.8	10.0	8.4	9.5
Tobacco use (%)	27.8	32.9	22.7	18.1	22.1	23.2	26.4
Substance abuse diagnoses (%)	7.0	5.9	5.0	3.1	5.0	4.7	5.4
Chlamydia infection incidence (rate per 1,000)	24.4	22.7	32.3	7.7	36.7	18.7	24.7
Health Outcomes							
Chronic disease diagnoses (%)	13.3	12.6	15.0	12.8	15.3	11.2	13.2
Injury incidence (rate per 1,000)	1,192.5	1,258.3	1,318.7	1,227.9	1,115.3	1,064.7	1,228.9
Hearing injury (rate per 1,000)	16.1	28.4	19.2	16.9	18.6	23.7	23.2
Eye injury (rate per 1,000)	9.6	10	11.9	13.5	8.5	8.0	9.8
Behavioral health diagnoses (%)	24.6	22.0	22.5	16.5	19.5	17.8	21.1
Healthcare Delivery							
Preventable hospital admissions (%)	2.2	8.5	2.4	3.7	1.9	1.8	4.6
HEDIS compliance composite score (%)	76.7	73.5	61.8	73.5	49.4	83.0	73.0
Chlamydia screening compliance (%)	91.6	91.0	80.4	94.3	87.1	79.0	85.9

* Reference value based on Army-Europe. With the exception of healthcare delivery and medical readiness measures, installation values were adjusted by age and gender to the Army-Europe population distribution for comparison. (Medical readiness measures were only adjusted for age and healthcare delivery measures are crude.)

^ Disaggregated readiness data were not available for Europe.

‡ For details regarding the installations' population statistic, reference the methods section in Appendix I.

► Army-Pacific



INSTALLATION POPULATION STATISTICS †

	Japan	USAG Daegu	USAG Humphreys	USAG Red Cloud	USAG Yongsan
Approximate population	~2,400	~1,900	~3,900	~4,550	~4,500
%Female	13	23	17	12	20
%Under 35	72	68	79	80	72



† For details regarding the installations' population statistic, reference the methods section in Appendix I.



PERFORMANCE TRIAD SCORES

	Japan	USAG Daegu	USAG Humphreys	USAG Red Cloud	USAG Yongsan	Army-Pacific Reference
Sleep Score	68.3	68.8	69.6	67.5	70.0	68.8
Activity Score	82.2	81.8	82.0	81.6	82.1	81.9
Nutrition Score	69.7	68.2	69.0	68.5	70.4	69.2

INSTALLATION HEALTH INDEX SCORES

MEASURE	Japan	USAG Daegu	USAG Humphreys	USAG Red Cloud	USAG Yongsan	Army-Pacific Reference*
Medical Readiness						
Medical readiness classification (% not ready) ^	10.5	11.3	11.3	11.3	11.3	11.2
Dental readiness classification (% not ready)	2.6	3.2	3.2	3.2	3.2	3.1
Permanent Profile (%P3 or P4)	1.1	1.2	1.5	1.2	1.3	1.3
Health Factors						
Obesity (%)	20.6	15.6	15.9	16.3	14.7	15.9
Sleep disorder diagnoses (%)	7.5	10.2	8.6	8.1	8.5	8.5
Tobacco use (%)	22.1	25.7	27.6	36.0	16.4	28.2
Substance abuse diagnoses (%)	2.6	3.5	2.1	2.7	2.4	2.5
Chlamydia infection incidence (rate per 1,000)	4.1	57.5	42.0	48.2	29.4	37.5
Health Outcomes						
Chronic disease diagnoses (%)	11.4	12.9	9.5	10.9	12.7	11.9
Injury incidence (rate per 1,000)	1,043.4	1,331.8	1,124.5	859.0	1,282.5	1,103.2
Hearing injury (rate per 1,000)	8.9	14.9	13.8	15.2	16.2	14.2
Eye injury (rate per 1,000)	12.7	13.7	5.9	5.8	8.6	8.3
Behavioral health diagnoses (%)	16.2	18.4	13.5	17.7	15.1	15.6
Healthcare Delivery						
Preventable hospital admissions (%)	8.0	2.4	4.2	2.0	2.8	3.0
HEDIS compliance composite score (%)	81.7	82.3	73.1	83.1	85.8	83.4
Chlamydia screening compliance (%)	84.7	88.5	85.7	90.7	88.7	88.1

* Reference value based on Army-Pacific. With the exception of healthcare delivery and medical readiness measures, installation values were adjusted by age and gender to the Army-Pacific population distribution for comparison. (Medical readiness measures were only adjusted for age and healthcare delivery measures are crude.)

^ Disaggregated readiness data were not available for Korean installations.

APPENDICES

- *Methods*
- *Acknowledgments*

METHODS

I. Performance Triad (P3) Indicators

Installation P3 measures (sleep, activity, and nutrition) were obtained in aggregate from the Army Resiliency Directorate (ARD-G1) in coordination with the Army Analytics Group. Estimates were derived using relevant survey items on the Global Assessment Tool (GAT), which Soldiers are required to complete annually.

The sleep metric was based on GAT survey questions assessing sleep duration, sleep satisfaction, and the frequency of poor sleep. The activity metric was based on GAT survey questions assessing body mass index, moderate/vigorous activity, resistance training, and low intensity activity. The nutrition metric was based on GAT survey questions assessing healthy eating habits, breakfast, recovery snacks, and water consumption. Because each metric was based on multiple survey items with varying degrees of possible healthy behavior, each response was assigned a certain number of points with higher points equal to higher levels of recommended healthy behaviors. These were used to generate percentages of maximum possible points, similar to a test score, with values ranging from 0 to 100%. The percentages reported reflect the installations' overall score for that measure.

The OTSG target score for each measure is 85. An additional metric which computes the percentage of Soldiers meeting this target score was also provided. Data use restrictions prohibited provision of parsed installation level data by gender and age; therefore measures could not be adjusted. However, these potential contributing factors were assessed collectively for Army Soldiers assigned to the installations reviewed for the report to determine potential behavioral differences between these groups.

II. Environmental Health Indicators

Air Quality Status at *Health of the Force* installations was based on National Ambient Air Quality Standard (NAAQS) attainment designations, and the 2012–2014 county-level design values for the 2015 ozone NAAQS published by the United States Environmental Protection Agency (EPA). Regions designated as nonattainment areas for failure to comply with NAAQS, and regions where design values indicated noncompliance with the new ozone standard, were identified as high air pollution areas in the report. The frequency of Poor Air Quality Days near *Health of the Force* installations was obtained from Air Quality Index (AQI) scores. Daily AQIs are calculated from air pollution measurements at state and federally-operated air monitoring stations throughout the United States. An AQI score greater than 100 indicates that local air pollution levels violate a short term NAAQS. AQI scores from monitoring stations representative of the air quality at *Health of Force* installations were examined to determine the maximum, minimum and mean number of days/year when the AQI exceeded a score of 100. The Air Quality Score presented in the Installation Profile Summaries is the mean number of days/year over a five year interval (2011–2015), when the AQI was greater than 100. The range of the means, and the average of the means are also reported.

III. Leading Health Indicators (LHI)

The LHIs selected were prioritized based on a review of measures recommended by nationally recognized public health authorities. These measures were adapted as needed for relevancy to the Soldier population. Indexing techniques were modeled after those used by the Robert Wood Johnson Foundation, which employs similar methods for the purposes of generating county health indexing. The United Health Foundation's 'America's Health Rankings' was also consulted throughout the process. Estimates for all of the LHIs described below were determined for the AC Soldier population assigned to the U.S.-based installations assessed in this report. Installations with fewer than 1,000 Soldiers were excluded from the evaluation.

OCONUS installations with a minimum of 1,000 assigned AC Soldiers were evaluated separately due to inherent differences which may have biased the comparison with U.S.-based installations. For example, OCONUS Soldiers are more likely to meet deployment medical standards to qualify for OCONUS assignment. There are also unique differences in terms of healthcare delivery given that OCONUS installations are more likely to outsource care, and that care is not subject to U.S. regulations. Additionally, the community health comparisons performed for U.S. installations were not possible for OCONUS sites.

When possible, estimates were aggregated by gender and/or age group to allow for standardization with the U.S.-based Army population. OCONUS installation estimates were likewise standardized to their respective regional Army population. This improved the reliability of comparisons across the installations by controlling for demographic differences which could have confounded the results.

a. Medical Readiness: Medical readiness classification (MRC) data were obtained from the Medical Operational Data System (MODS). Installation assignment was determined by unit identification codes (UICs). Non-deployed AC Soldiers with MRCs of 3 or above (3A, 3B, and 4) were identified for the analysis as not medically ready for deployment within 72 hours; trainees, transients, holdees, and students (TTHS) were excluded. These classifications are defined as follows: MRC 3A Soldiers have medical issues requiring 72 hours to 30 days to resolve, MRC 3B have medical issues requiring more than 30 days to resolve, and those with MRC4 have an unknown status due to overdue medical or dental exams. Mid-point and end of year MRC estimates were averaged to approximate the yearly estimate, as opposed to the single end of year snapshot used for the previous 2015 report. Monthly variation in MRC was also examined for the Army AC population, revealing stable estimates in aggregate. Installation estimates were adjusted by Soldier age group.

Additionally, two factors which influence MRC were assessed to provide further insight: dental readiness classification (DRC) and permanent profile status. The DRC is pro-

cessed similarly to the MRC. DRC3 and DRC4 represent treatment or exam needs that can cause significant delays whereas DRC1 represents no dental treatment needs and DRC2 equates to minor treatment needs. DRC data were also obtained from MODS, standardized by age, and limited to non-deployed, non-TTHS AC Soldiers. Permanent profile data (i.e., p3 and p4 profiles) were obtained from the Medical Readiness Assessment Tool (MRAT) and installation estimates were age and gender adjusted.

b. Injury: The incidence of injury and musculoskeletal conditions resulting from injury was evaluated for AC Soldiers and trainees, excluding cadets for whom data were unavailable. Estimates were extracted from the Public Health 360 (PH360) which included data processed from the Defense Medical Surveillance System (DMSS). Installation assignment was determined by the Soldier's unit ZIP code.

New or incident injuries were identified based on ICD9 and ICD10 codes outlined in the Soldier's medical records (direct military treatment facility (MTF)-based care and purchased care covered by TRICARE claims) using published case definitions from the APHC. Only unique medical visits with injury diagnoses codes included in the case definition were counted; follow-up visits less than 60 days apart were excluded. Rates per 1,000 Soldiers were computed based on Soldier person-time; time deployed was excluded to account for missed cases not identified during deployment. Installation estimates were adjusted by gender and age.

The percentage of Soldiers injured during the calendar year was also evaluated for the Army as a whole with age and gender differences examined; injury subsets (hearing and vision) were also evaluated. Similar standardization and statistical techniques were used to examine these injury rates across installations. Hearing testing results are also provided to give context to the diagnosed hearing injury rates. The percentage of Soldiers with Significant Threshold Shifts on monitoring audiometry was determined from the Defense Occupational and Environmental Health Readiness System-Hearing Conservation (DOEHRS-HC).

c. Chronic Disease: The prevalence of six chronic conditions of interest (cardiovascular conditions, asthma, arthritis, chronic obstructive pulmonary disease (COPD), cancer, and diabetes) among AC Soldiers and trainees (excluding cadets) was evaluated. Installation assignment was determined by the Soldier's unit ZIP code.

Soldiers with one or more of the selected conditions were identified for the analysis. Estimates were extracted from the PH360 which includes data processed from the DMSS. Soldiers were assigned to a disease category based on ICD9 and ICD10 codes outlined in the Soldier's medical records (direct MTF-based care and purchased care covered by TRICARE claims). Case definitions used for the prior *Health of the Force* report were refined in collaboration with the Defense Health Agency Armed Forces Health Surveillance Branch (AFHSB) to exclude potential acute conditions and to extrapolate the contribution of hypertension as a cardiovascular condition. Installation estimates were adjusted by gender and age.

d. Behavioral Health Studies: The prevalence of seven behavioral health disorders of interest (adjustment disorders, mood disorders, anxiety, PTSD, substance abuse, personality disorders, and psychoses) among AC Soldiers and trainees (excluding cadets) was evaluated. Installation assignment was determined by the Soldier's unit ZIP code.

Soldiers with one or more of the selected conditions were identified for analysis. Estimates were extracted from PH360 which includes data processed from the DMSS. PH360 assigns Soldiers to a disease category based on ICD9 and ICD10 codes outlined in the Soldier's medical records (direct MTF-based care and purchased care covered by TRICARE claims). Case definitions established by the APHC and refined by AFHSB were used. Installation estimates were adjusted by gender and age.

e. Obesity: The prevalence of obesity was evaluated for AC Soldiers and trainees (excluding cadets). Installation mapping was based on the Soldier's assigned base ID as tracked by the Defense Manpower Data Center (DMDC).

Overweight was defined as having a body mass index (BMI) between 25 and 29, and obesity was defined as having a BMI greater than or equal to 30. BMI data were obtained from the MRAT which collects BMI information from height and weight measurements entered during the Soldier's Army Physical Fitness Test (APFT) and/or medical encounters. Some Soldiers with athletic builds may be misclassified as overweight despite having a healthy body fat percentage because they carry extra muscle mass. Soldiers without height or weight measurements available were excluded from the estimation, an improvement over the prior report which generated estimates for all assigned Soldiers. Additional BMI classifications were also examined by gender and age. Installation estimates were adjusted by gender and age.

To assess Army obesity estimates against rates reported for the U.S. adult population ≥ 18 years of age, rates were also standardized against the U.S. population distribution. Pearson chi square estimates were generated to examine possible geographic correlations between installation estimates and estimates from respective U.S. states. These estimates are reported in the community health section of the installation profile summary and differ from the estimates used in the installation IHI table.

The prevalence of obesity was also evaluated for AC Soldiers' beneficiaries ages 3–17 and 18+ years. Data extracted from the MHS Population Health Portal (MHSPH) were used in the analysis. Included beneficiaries were those enrolled in TRICARE for 11 of the 12 months of 2015 and whose height and weight measurements were recorded during a primary care outpatient encounter. Obesity was defined as a BMI of 30 or greater for adults, and a BMI percentile of 95 or greater for children. Beneficiaries without height or weight measurements available were excluded, as were any women with an ICD9 code indicating pregnancy during the measurement year.

f. Tobacco Use: The prevalence of tobacco use was evaluated for AC Soldier dental patients. Installation assignment was based on dental clinic location. Monthly data extracts were obtained from the Corporate Dental System (CDS) which collects information on tobacco use (smoking and smokeless) during dental exams. Monthly data were averaged to generate annual estimates. Installation estimates were adjusted by gender and age.

g. Sleep Disorders: The prevalence of sleep disorders was evaluated for AC Soldiers and trainees (excluding cadets). Sleep disorder data were obtained from the MRAT which maps installation assignment by DMDC base identifiers. Sleep disorder diagnoses were determined by ICD9 and ICD10 codes entered in the Soldier's medical record. Installation estimates were adjusted by gender and age.

h. Substance Abuse Disorders: The prevalence of substance abuse disorders (excluding tobacco dependence), a subcomponent of the behavioral health disorder measure, was evaluated for AC Soldiers and trainees (excluding cadets). As with the behavioral health disorder category, estimates were extracted from PH360 which processed the data from the DMSS. Installation assignment was determined by the Soldier's assigned unit ZIP code. Soldiers were assigned to a disease category based on ICD9 and ICD10 codes outlined in the Soldier's medical records (direct MTF-based care and purchased care covered by TRICARE claims).

i. Chlamydia: Reported cases of chlamydia are tracked both nationally and within the Army to monitor the burden of sexually transmitted infections. The incidence of reported chlamydia infections was evaluated for AC Soldiers and trainees (excluding cadets). Estimates were extracted from PH360 which included data processed from the Disease Reporting System internet (DRSi) and the DMSS. Installation assignment was based on the Soldier's assigned unit ZIP code.

New or incident infections were identified from case reports submitted through the DRSi using case definitions published by the DHA AFHSB. Only unique case reports were counted; follow-up reports less than 30 days apart were excluded. Rates per 1,000 Soldiers were computed based on Soldier person-time extracted from the DMSS; time deployed was excluded to account for missed cases not identified during deployment. Installation estimates were adjusted by gender and age. Rates for installations with fewer than 10 cases were not reported (this occurred at Aberdeen P.G. and USAG West Point). While estimates were provided for all other installations, installations with less than 50% reporting compliance as determined by the DRSi case finding module were considered less reliable and denoted as such in the installation profile IHI table.

Chlamydia screening, which is recommended for sexually active women under 25, was also examined using data extracted from the Military Health System Population Health Portal (MHSPHP). The estimates provide context for the reported rates and outline additional areas for improvement.

j. Preventable Admissions: Preventable admission rates for AC Soldiers enrolled for care at MTFs affiliated with each respective installation were assessed. Data were extracted from the Command Management System (CMS) for fiscal year 2015 (FY15), which served as a proxy for the calendar year used for the remaining measures. Because the data were aggregated and subject to the limitations imposed by the system, standardization by age and gender was not possible.

The CMS tracks this measure on a monthly basis at the MTF level. Preventable admissions are defined according to AHRQ specifications for the following preventable admission categories: diabetes short-term complication, diabetes long-term complication, uncontrolled diabetes, lower-extremity amputation among diabetic patients, perforated appendix, COPD, hypertension, congestive heart failure, dehydration, bacterial pneumonia, urinary tract infection, angina admission without procedure, and adult asthma.

k. HEDIS Composite: The Healthcare Effectiveness Data and Information Set (HEDIS) Composite Score is an index score that consolidates 9 HEDIS performance indicators: asthma control, diabetes A1c screening, diabetes A1c<9, diabetes LDL<100, cervical cancer screening, breast cancer screening, colon cancer screening, chlamydia screening and well child visits. The measure is MTF based and covers all Army beneficiaries enrolled to the MTFs for a given installation. The standard of care is assumed to be the same for AC and non-AC beneficiaries.

The data were extracted from the CMS for FY15 which served as a proxy for the calendar year. Data were aggregated and were not standardized by gender or age. As with any composite or index measure, it is important not to overlook the contribution of each individual HEDIS measure which can provide more actionable indicators of MTF work performance. The 9 subsets may be reviewed independently and on a monthly basis through CMS.

IV. Composite Indices

a. Installation Health Index (IHI): For each LHI, installations were compared against the Army average or reference value for that measure to compute a Z-score. The Z-score measures the number of standard deviations below or above the population average for a given installation. For the overall index these measures were collated by summing the Z-scores for the individual measures. Prior to this aggregation, the HEDIS composite score, which was the only positive IHI attribute, was inverted so that it was on the same scale as the remaining adverse measures. The measures were weighted in a manner that took into account factors such as prevalence, supporting evidence, and mission impact. The medical readiness metric was assigned a weight of 15%, the healthcare delivery metrics (preventable admissions and HEDIS composite score) were assigned a total weight of 5% and the remaining 8 measures were equally weighted at 10% each. Additional measures included in the report which were considered a subset

for the given core measure category (i.e., dental readiness, permanent profiles, hearing injuries, eye injuries and compliance with recommended hearing and chlamydia screening) or external to the AC Soldier population (e.g. obesity among AC family members) were excluded from the IHI computation. When an installation was missing one or more core measures, metric weights for that installation were adjusted so that the total weight equaled 100%, as it did for installations with a complete measure assessment.

The collation of these weighted Z-scores provided an overall measure of an installation's health for the key areas evaluated, relative to the U.S.-based Army population used in the comparison. Z-scores ≥ 2 or ≤ -2 reflected statistically significant deviations from the Army average for the collective LHIs.

b. Installation P3 Index (IPI): The IPI was computed in a manner similar to the overall IHI: P3 metric scores and the percentage of Soldiers meeting recommended targeted scores for each installation were compared to the average for the U.S.-based Army installations included in the review, and Z-scores were computed to assess the standard deviation from the Army reported values.

The individual metric scores were equally weighted and summed for an overall IPI score. Lower Z-scores represented lower collective levels of recommended P3 health behaviors.

V. Installation Profile Summaries

Population demographics obtained from the PH360 are included in the installation profile summary pages to provide context for installation population dynamics in terms of manpower and age and gender distributions. The estimates are derived from the DMSS which uses DMDC rosters to generate person time estimates for AC Soldiers and trainees (excluding cadets) assigned to a given installation as determined by unit ZIP codes. Because the estimates are based on time spent at the installation (as opposed to a roll-up of all Soldiers ever assigned to the installation over the course of the year) it provides a general snapshot of the average number of Soldiers at the installation at any given point during the year. Estimates provided are rounded and provided as approximations.

These estimates are intended to be a frame of reference and don't necessarily correspond to the population evaluated for each LHI and P3 measure included in the installation profile summary. As outlined previously many of these measures were estimated using population subsets from each installation (e.g., survey respondents, MTF enrollees, dental patients). Healthcare facilities provided represent the installation's predominant Army or joint-based treatment facility from which AC Soldiers may seek care. However, these facilities are not the Soldiers' only option for healthcare.

Data limitations:

- When interpreting the results, it is important to keep in mind that higher estimates for certain LHIs may not be indicative of a problem but may instead reflect a higher emphasis on detection and treatment.
- Composite measures or indices may hide important differences seen at the individual metric level; therefore, it's important to examine these sub-components for which more targeted prevention programs can be developed.
- Medical data for cadets were not available; therefore USAG West Point estimates are limited to permanent party AC Soldiers.
- Chronic disease case definitions were refined with the report update to exclude potentially acute conditions (e.g., temporary hypertension associated with acute comorbidities); this resulted in more conservative estimates.
- The data source for chronic disease and behavioral health measures used for this report update changed from the Medical Data Repository (MDR) to the DMSS. This streamlined the data process for health outcomes given that injury rate estimates are also generated from DMSS data. While the MDR is a source system for the DMSS, records obtained are further processed by the AFHSB and validated against personnel records for integration into the DMSS. AFHSB processing and data extraction refinements made within the update affected rate estimates; chronic disease estimates decreased while behavioral health condition estimates increased. Trend charts dating back to 2008 were also updated to reflect the new data capture.
- Roughly 15% of medical records and APFT records were missing height and weight measurements used for obesity estimation; the percentage missing was substantially higher at training sites. The percentage missing height and weight measurements ranged from 5% to 38% across installations with basic training sites exceeding 20%.
- Measures based on ICD9 or ICD10 codes entered in patient medical records are subject to coding errors. Estimates may also be conservative given that individuals may not seek care or may choose to seek care outside the MHS or TRICARE claims network.
- Measures based on self-reported data (GAT and tobacco use) are limited to a subset of the population (i.e. survey respondents and dental patients) and may be prone to biases. GAT data used for the Performance Triad (P3) measures were aggregated which prevented age and gender standardization for the installations. An assessment of Army-level demographic data revealed some differences, particularly for activity.

- The chlamydia measure relies on reporting compliance, which was shown to be highly variable. For nearly half of the installations, reporting compliance was estimated to fall below 50%. Additionally, estimates are conservative given the high proportion of asymptomatic infections that go undetected.
- The comparability of the smoking data acquired from dental visits to that collected nationally is unclear. While both types assess current smoking rates, their definitions may differ. National data are provided as a reference point, but further exploration of these potential differences is warranted.
- Healthcare delivery data (preventable admissions and HEDIS composite scores) were only available in aggregate, which prevented age and gender standardization.
- Medical readiness data were not available by gender, which limited the ability to assess it as a risk factor or provide additional standardization. Inclusion of gender should be explored further given that pregnancy can impact readiness for women. Additionally, only midpoint and end of year installation data were available. While Army trending throughout the year indicated stability for this measure, installation variability can occur. Assessment of monthly installation data could improve the accuracy of annual estimates.
- Available injury and medical readiness data were aggregated, which prevented the assessment of associations between musculoskeletal injuries (MSKI) and readiness. Given the strong association these factors should be explored further.
- Community health data included in the installation profile are not as timely as the Army data; therefore, national estimates for smoking and obesity may lag by roughly 2 years. Additionally, comparable international data were not available to consistently apply community health comparisons across all installations. This drawback coupled with other population differences prevented full integration of OCONUS installations into the report's index process.

ACKNOWLEDGMENTS

The *Health of the Force* report was completed by U.S. Army Public Health Center staff at the request of the Army OTSG. It was a collaborative endeavor undertaken by the team members acknowledged.

Health of the Force Steering Committee

Amy Millikan Bell, MD, MPH, Chair¹
APHC Medical Advisor

Jason Embrey¹
Visual Information Specialist
Visual Information Division

Mimi Eng^{1,2}
Research Assistant
Disease Epidemiology Division

Nikki Jordan, MPH¹
Senior Epidemiologist
Disease Epidemiology Division

Ethel Kefauver¹
Visual Information Specialist
Visual Information Division

Laura Mitvalsky¹
Director
Health Promotion and Wellness Directorate

Theresa Jackson Santo, PhD, MPH¹
Public Health Scientist and Acting Division Manager
Public Health Assessment Division

Health of the Force Data Work Group

Nikki Jordan, MPH, Chair¹
Senior Epidemiologist
Disease Epidemiology Division

Alfonza Brown, MPH^{1,2}
Epidemiologist
Disease Epidemiology Division

David Canada^{1,2}
Epidemiology Intern
Disease Epidemiology Division

Michelle Canham Chervak, PhD, MPH¹
Senior Epidemiologist
Injury Prevention Division

Elizabeth Corrigan, MA^{1,3}
Data Analyst
Behavioral and Social Health Outcomes
Practice Division

Zachary McCormic, MPH^{1,2}
Epidemiologist
Disease Epidemiology Division

Lisa M. Polyak, MSE, MHS¹
Environmental Engineer
Air Quality Surveillance Division

Caitlin Rivers, PhD, MPH¹
Epidemiologist
Disease Epidemiology Division

Anna Schuh, PhD¹
Safety Engineer
Injury Prevention Division

Laura Tourdot, MPH^{1,2}
Epidemiologist
Disease Epidemiology Division

Health of the Force Writers and Contributors

Theresa Jackson Santo, PhD, MPH, Chair¹
Public Health Scientist and Acting Division Manager
Public Health Assessment Division

LTC James Auvil, OD, MBA, FAAO¹
Chief
Tri-Service Vision Conservation and
Readiness Division (D63)

Amanda Braasch^{1,2}
Presidio of Monterey Health Promotion Officer
Health Promotion Operations Division

Cynthia J. Branton, MES^{1,2}
Project Officer
Health Promotion Operations

BethAnn Cameron, MS, MCHES^{1,8}
Health Educator
Integrated Health Education Division

Jennifer D. Cearfoss, P.E.¹
Executive Officer, Environmental Engineer
Environmental Health Sciences
& Engineering Directorate

Steven H. Clarke, P.E.¹
Environmental Engineer
Drinking Water Quality Branch,
Environmental Health Sciences
& Engineering Directorate

Chris Curran⁹
Master Resilience Trainer-Performance Expert
Fort Sill CSF2 Training Center

Claire Dermer, MSA^{1,2}
Fort Lee Health Promotion Officer
Health Promotion Operations Division

Claudia Drum, RDN^{1,2}
Registered Dietitian
Integrated Health Education Division

Michael E. Faran, MD⁸
Program Manager
Child and Family Behavioral Health System
Behavioral Health Division; Health Policy
and Services HQ

Lauren E. Grattan, PhD^{1,2}
Program Evaluator
Public Health Assessment Division

Thomas Helfer, PhD^{1,5}
DOD Hearing Injury Surveillance Specialist
Armed Forces Health Surveillance Satellite

Chad E. Jones
Sports and Fitness Program Manager
Child, Youth and School Services
IMCOM-HQ G9, Family and MWR Programs

Matthew Jones⁹
Master Resilience Trainer-Performance Expert
Fort Polk CSF2 Training Center

Nikki Jordan, MPH¹
Senior Epidemiologist
Disease Epidemiology Division

LTC Ian Lee, PT, DSc, MHA, MBA, OCS⁶
OTSG Allied Health Staff Officer /
Deputy Chief Physical Performance Service Line

LTC Ingrid Lim, PsyD⁶
Sleep Lead, System for Health and
Performance Triad
Deputy Chief of Staff for Public Health

COL Robert C. Oh, MD, MPH, CAQSM⁶
Physician Lead, System for Health and
Performance Triad
Deputy Chief of Staff for Public Health

COL Christopher D. Perrin, DDS
Chief, Dental Programs Division
Dental Directorate, G3/5/7

Lisa M. Polyak, MSE, MHS¹
Environmental Engineer
Directorate of Environmental Health Sciences and
Engineering, Air Quality Surveillance Division

COL Joanna Reagan, MS, MHA, MSS, RDN¹
Division Manager, Integrated Health Education
Health Promotion and Wellness Directorate

Ms. Barb Agen Ryan, MS, RN, PNP, LTC (Ret)⁶
Training, Education, Communication Lead,
System for Health and Performance Triad
Deputy Chief of Staff for Public Health

Mellina Stephen, MPH^{1,2}
Health Communications Fellow
Injury Prevention Division

Lisa J. Young, MS, MCHES¹
Health Educator
Integrated Health Education Division

Health of the Force Reviewers

Amy Millikan Bell, MD, MPH¹
APHC Medical Advisor

Emily Briskin, MPH¹
Epidemiologist
Disease Epidemiology Division

Alfonza Brown, MPH^{1,2}
Epidemiologist
Disease Epidemiology Division

Jill Brown, PhD^{1,2}
Quantitative Data Analyst
Public Health Assessment Division

Steven B. Cersovsky, MD, MPH, FACPM¹
APHC Science Advisor
Public Health Assessment Division

Nikki Jordan, MPH¹
Senior Epidemiologist
Disease Epidemiology Division

Anne Quirin^{1,4}
Technical Writer/Editor
Publications Management Division

Caitlin Rivers, PhD, MPH¹
Epidemiologist
Disease Epidemiology Division

Theresa Jackson Santo, PhD, MPH¹
Public Health Scientist and Acting Division Manager
Public Health Assessment Division

Laura Tourdot, MPH^{1,2}
Epidemiologist
Disease Epidemiology Division

1 U.S. Army Public Health Center
2 Oak Ridge Institute for Science and Education
3 Battelle Memorial Institute
4 NorthTide Group, LLC

5 Defense Health Agency
6 Office of the Surgeon General
7 U.S. Army Medical Command
8 Edmond Scientific
9 Science Applications International Corporation

Recommended Citation:
U.S. Army Public Health Center. 2016. *Health of the Force*. Aberdeen Proving Ground, Maryland.

2016

HEALTH OF THE FORCE REPORT



We appreciate your feedback on this report.
Please follow the link below to take a five-minute survey.

<http://go.usa.gov/xxhaw>