Create a healthier force for tomorrow.
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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 features an 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. Metrics 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. This section 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 include environmental factors that impact well-being. 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 outcomes of interest. Data sources were streamlined to use the Defense Health Agency (DHA)/Army 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.

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 outcomes of interest. Data sources were streamlined to use the Defense Health Agency (DHA)/Army 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 metrics presented 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.

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 metrics 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 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 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 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.

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

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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
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). Among Soldiers receiving audiometry testing, 4% experienced a new Significant Threshold Shift in 2015.

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

PERFORMANCE TRIAD (P3)

HEALTH OF THE FORCE

INSTALLATION P3 INDEX (IPI)

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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 disorders, 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.
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 Breysse, PhD
National Center for Environmental Health/Agency for Toxic Substances and Disease Registry
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.

What is Fine Particulate Matter?

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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$_{2.5}$ 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.

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.

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.
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 PM2.5 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.

$113 billion in annual monetary damages
95% of damages are human morbidity and mortality

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.

References:
5. IARC Monographs, Volume 105, Diesel and Gasoline Engine Exhausts and Some Nitroarenes, 2013
6. IARC Monographs, Volume 109, Outdoor Air Pollution, 2015
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. 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.

DID YOU KNOW?
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.
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
Army Medicine

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.

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.

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.

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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.
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.

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

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<thead>
<tr>
<th>Installation</th>
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<th>10%</th>
<th>20%</th>
<th>30%</th>
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<th>60%</th>
<th>70%</th>
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<td>32.7%</td>
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<tr>
<td>USAG West Point</td>
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<td></td>
<td>35.9%</td>
<td></td>
<td></td>
<td></td>
<td>32.2%</td>
</tr>
<tr>
<td>Presidio of Monterey</td>
<td>29.9%</td>
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<td></td>
<td>35.6%</td>
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<td>39.1%</td>
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<tr>
<td>Fort George G. Meade</td>
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<td>31.6%</td>
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<td></td>
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<td>42.4%</td>
</tr>
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Army Average, 2015

- **45.9%**
  - Range: 32–59%

- **23.2%**
  - Range: 16–35%
  - Approximately 23% of Soldiers met OTSG targets for Sleep goals and standards.

- **30.9%**
  - Range: 25–36%

“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
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)

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<th>10%</th>
<th>20%</th>
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<th>80%</th>
<th>90%</th>
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<tbody>
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<td>USAG Presidio</td>
<td>65.0%</td>
<td>20.0%</td>
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<tr>
<td>Joint Base Myer-Henderson Hall</td>
<td>58.5%</td>
<td>23.0%</td>
<td>18.5%</td>
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<tr>
<td>Fort Rucker</td>
<td>58.2%</td>
<td>22.1%</td>
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<tr>
<td>Hawaii</td>
<td>56.5%</td>
<td>23.1%</td>
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</tbody>
</table>

Green=Score≥85  Amber=Score70–84.9  Red=Score<70

Army Average, 2015

- **24.0%**  Range: 20–32%
- **22.2%**  Range: 15–27%
- **53.8%**  Range: 47–65%

Approximately 54% of Soldiers met OTSG targets for Activity goals and standards.

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
HEALTH OF THE FORCE

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)

<table>
<thead>
<tr>
<th>Installation</th>
<th>Green</th>
<th>Amber</th>
<th>Red</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presidio of Monterey</td>
<td>34.0%</td>
<td>34.0%</td>
<td>31.9%</td>
</tr>
<tr>
<td>Fort Rucker</td>
<td>30.1%</td>
<td>31.9%</td>
<td>38.0%</td>
</tr>
<tr>
<td>Fort Bragg</td>
<td>28.8%</td>
<td>31.9%</td>
<td>39.3%</td>
</tr>
<tr>
<td>USAG West Point</td>
<td>28.5%</td>
<td>37.2%</td>
<td>34.4%</td>
</tr>
<tr>
<td>Joint Base San Antonio</td>
<td>27.8%</td>
<td>33.2%</td>
<td>39.0%</td>
</tr>
</tbody>
</table>

* Green=Score≥85, Amber=Score70–84.9, Red=Score<70

Army Average, 2015

- 42.7% Range: 30–37%
- 24.8% Range: 20–34%
- 32.6% Range: 32–49%

Approximately 25% of Soldiers met OTSG targets for Nutrition goals and standards.

“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
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*
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.

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)

*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)
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.

SPOTLIGHT
Local Actions

“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
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.

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.

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

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%
2. FORT IRWIN 12.1%
3. FORT CARSON 13.7%
4. FORT CAMPBELL 13.8%
5. JOINT BASE LEWIS-MCCHORD 14.4%
Percent in Medical Readiness Classification by Month, Army AC Soldiers, 2015

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<table>
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<tr>
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<tr>
<td>Dec</td>
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**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.

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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.

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“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*
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%
2. FORT SILL 2.1%
3. FORT LEE 2.4%
4. FORT STEWART 2.7%
5. FORT IRWIN 2.8%

“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
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.**

References:

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

For more information on Go First Class, visit: http://www.armygfc.info/
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%
2. FORT RUCKER 2.7%
3. FORT JACKSON 2.8%
4. ABERDEEN P.G. 2.8%
5. FORT LEE 2.9%

“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:

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

- 3,721 Soldiers were eligible for P3T in FY16 Q1
- 2,653 Soldiers were enrolled in P3T in FY16 Q1
- 1,335 pregnant Soldiers attended regularly
- 875 postpartum Soldiers attended regularly

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

- 53% of Soldiers said, “P3T participation helped me with my physical job performance.”
- 49% of Soldiers said, “P3T participation helped me with my mental job performance.”
- 42% of Soldiers said, “I would not have been able to meet the standards for AR 600-9 without P3T.”
- 65% of Soldiers said, “I would not have passed my run without P3T.”
- 68% of Soldiers said, “I would not have passed my sit-ups without P3T.”
- 69% of Soldiers said, “I would not have passed my push-ups without P3T.”

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

- 18% of Soldiers said, “P3T participation influenced me to reenlist in the Army.”
- 65% of Soldiers said, “I would not have passed my run without P3T.”
- 42% of Soldiers said, “I would not have been able to meet the standards for AR 600-9 without P3T.”
- 69% of Soldiers said, “I would not have passed my push-ups without P3T.”

*Survey response feedback from January 2015 to April 2016 (N=774); 70% of these pregnant Soldiers were in the 19–26 age group.

**Survey response feedback from January 2015 to April 2016 (N=781)**
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
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.

**BEST RANKING INSTALLATIONS**

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

CHRONIC DISEASE

HEALTH OUTCOMES

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

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

FORT LEE

CHRONIC DISEASE

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

<table>
<thead>
<tr>
<th>Year</th>
<th>Any</th>
<th>Cardiovascular</th>
<th>Arthritis</th>
<th>Asthma</th>
<th>COPD</th>
<th>Diabetes</th>
<th>Cancer</th>
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<td>2008</td>
<td>11.9</td>
<td>7.7</td>
<td>1.7</td>
<td>2.3</td>
<td>1.4</td>
<td>0.3</td>
<td>0.2</td>
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<tr>
<td>2009</td>
<td>12.8</td>
<td>8.3</td>
<td>1.9</td>
<td>2.4</td>
<td>1.6</td>
<td>0.4</td>
<td>0.2</td>
</tr>
<tr>
<td>2010</td>
<td>13.3</td>
<td>8.7</td>
<td>2.1</td>
<td>2.4</td>
<td>1.6</td>
<td>0.4</td>
<td>0.3</td>
</tr>
<tr>
<td>2011</td>
<td>13.9</td>
<td>9.3</td>
<td>2.4</td>
<td>2.3</td>
<td>1.4</td>
<td>0.5</td>
<td>0.3</td>
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<tr>
<td>2012</td>
<td>14.6</td>
<td>9.9</td>
<td>2.7</td>
<td>2.7</td>
<td>1.3</td>
<td>0.5</td>
<td>0.3</td>
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<tr>
<td>2013</td>
<td>14.2</td>
<td>9.8</td>
<td>2.8</td>
<td>2.8</td>
<td>1.1</td>
<td>0.4</td>
<td>0.3</td>
</tr>
<tr>
<td>2014</td>
<td>13.6</td>
<td>9.5</td>
<td>2.8</td>
<td>2.1</td>
<td>0.9</td>
<td>0.4</td>
<td>0.3</td>
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<td>2015</td>
<td>12.8</td>
<td>8.5</td>
<td>3.2</td>
<td>1.9</td>
<td>0.7</td>
<td>0.3</td>
<td>0.3</td>
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</tbody>
</table>

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

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>&lt;25</td>
<td>1,441.5</td>
<td>1,402.2</td>
<td>1,421.2</td>
<td>1,356.0</td>
<td>1,316.6</td>
<td>1,241.1</td>
<td>1,214.2</td>
<td>1,188.1</td>
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<tr>
<td>25–34</td>
<td>1,335.9</td>
<td>1,339.6</td>
<td>1,401.1</td>
<td>1,390.1</td>
<td>1,382.9</td>
<td>1,337.5</td>
<td>1,304.5</td>
<td>1,283.3</td>
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<tr>
<td>35–44</td>
<td>1,476.3</td>
<td>1,528.4</td>
<td>1,640.1</td>
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<td>1,634.0</td>
<td>1,647.0</td>
<td>1,670.5</td>
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<tr>
<td>45+</td>
<td>1,569.9</td>
<td>1,656.2</td>
<td>1,798.0</td>
<td>1,842.7</td>
<td>1,847.6</td>
<td>1,914.6</td>
<td>1,961.0</td>
<td>2,068.5</td>
</tr>
</tbody>
</table>

"...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

<table>
<thead>
<tr>
<th>Cause of Injury</th>
<th>Percentage of Unintentional Injuries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overexertion</td>
<td>24.8%</td>
</tr>
<tr>
<td>Fall</td>
<td>18.0%</td>
</tr>
<tr>
<td>Struck by, Against</td>
<td>16.9%</td>
</tr>
<tr>
<td>Natural/Environmental</td>
<td>10.2%</td>
</tr>
<tr>
<td>Motor Vehicle Traffic</td>
<td>9.8%</td>
</tr>
</tbody>
</table>

Percentages based on cause coded outpatient records


<table>
<thead>
<tr>
<th>Calendar Year</th>
<th>Rate Per 1,000 Person-Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>1,411.8</td>
</tr>
<tr>
<td>2009</td>
<td>1,408.8</td>
</tr>
<tr>
<td>2010</td>
<td>1,466.9</td>
</tr>
<tr>
<td>2011</td>
<td>1,441.7</td>
</tr>
<tr>
<td>2012</td>
<td>1,424.8</td>
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<tr>
<td>2013</td>
<td>1,383.2</td>
</tr>
<tr>
<td>2014</td>
<td>1,367.3</td>
</tr>
<tr>
<td>2015</td>
<td>1,361.2</td>
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</table>

<table>
<thead>
<tr>
<th>Calendar Year</th>
<th>Rate Per 1,000 Person-Years</th>
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<tbody>
<tr>
<td>2008</td>
<td>748.8</td>
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<tr>
<td>2009</td>
<td>742.9</td>
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<td>2010</td>
<td>764.1</td>
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<td>2011</td>
<td>750.2</td>
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<td>2012</td>
<td>746.0</td>
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<td>2013</td>
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<td>2014</td>
<td>730.0</td>
</tr>
<tr>
<td>2015</td>
<td>769.8</td>
</tr>
</tbody>
</table>
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

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ARMY PUBLIC HEALTH CENTER
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.

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 military combat training activities.


References:

Recent data from the Armed Forces Health Surveillance Center 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:
- Department of the Army Pamphlet 40-501, Army Hearing Program, 8 January 2015.
S P O T L I G H T

MILITARY COMBAT EYE PROTECTION: A FORCE PROTECTION SUCCESS STORY

The U.S. Army retooled 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 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

---

**DOD Overall Eye Injury Trend, CY 2000–CY 2015**

*Figure 1.*

*Figure 2.*

*Calculated for the current APEL by the Program Executive Office Soldier, U.S. Army, May 2005.*

*For the current APEL, visit: [http://www.peosoldier.army.mil/equipment/eyewear](http://www.peosoldier.army.mil/equipment/eyewear)*
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.

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.
**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.³–⁴
- Mental health diagnoses occur at a higher rate for children and wives of deployed Soldiers.⁵–⁷
- 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 need and demonstrates that children and families often prefer to receive treatment for BH needs as a component of their primary care.¹² 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)
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 on-post 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.

The CAFBHS model has adopted and adapted the Regional tele-consultation, a new initiative within the CAFBHS model, will provide direct child psychology, 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
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.

 Failures Sharpshooter Expert

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

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<thead>
<tr>
<th>No CSF2-TC Support</th>
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“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
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

“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
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.

“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
OBESITY

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 program’s effectiveness both during and after Soldiers’ participation.

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

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.

References:
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). Children whose parent or family members have served in the military are likely to join the military as adults. Because today’s youth are the Soldiers of the future, youth obesity and overweight pose a serious threat to our Force readiness. 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. 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. 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.

- 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.

- 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.

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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.

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 twofold: 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.

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

References:
2. 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).

HEALTH FACTORS
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.

### BEST RANKING INSTALLATIONS

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

Inadequate sleep impairs essential mission abilities, including detecting and appropriately determining threat levels and coordinating squad tactics.
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 changeover 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 us.army.performance.triad.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

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.

BEST RANKING INSTALLATIONS*

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

*Percentages are based off all tobacco use
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 (6%) 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.


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:
5. FDA. Clarification of whether products made or derived from tobacco are regulated as drugs, devices, or combination products; amendments to regulations regarding “intended use.” 2015. Federal Register. 80(186):57756-57765.
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.

BEST RANKING INSTALLATIONS

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

“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
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.
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 of age, 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 threefold 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

### 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.
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
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
Healthcare Delivery

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.

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.mil@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%
2. FORT CAMPBELL 91.0%
3. FORT SILL 90.4%
4. JOINT BASE LANGLEY EUSTIS 89.7%
5. FORT RILEY 86.8%

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.

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 Profile Summaries

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***

<table>
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<th>MEASURE</th>
<th>VALUE</th>
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**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

**STRENGTHS:**
- Lower rate of tobacco use.
- Higher HEDIS Composite Score.

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

**REFERENCES:**
- America’s Health Rankings, Robert Wood Johnson Foundation County Health Rankings, Public Health 360
- Installation profile summaries are provided in alphabetical order

**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%.
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**

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<th>MEASURE</th>
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<td>HEDIS composite score</td>
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<td>57.3–92.1</td>
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**SCORE**

- Medical Readiness: 24.3
- Health Factors: 14.1
- Behavioral Health: 27.9
- Healthcare Delivery: 2.2
- IHI Score**: -1.23

**PERFORMANCE TRIAD SCORES**

- Score: 68.4
- Score: 77.8
- Score: 70.0
- Score: 8.6

**POOR AIR QUALITY**

- DAYS/YEAR

- PERFORMANCE TRIAD SCORES

- Score: 66.4
- Score: 80.7
- Score: 71.3

**INSTALLATION SUMMARY**

**STRENGTHS:**
- Lower rate of tobacco use.
- 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.

**CHALLENGES:**
- Higher rates of obesity, chronic disease, sleep disorders, behavioral health disorders, and substance abuse.
- Higher percentage meeting P3 nutrition target.
- Higher rate of chronic disease and injury.
- Low confidence in reported chlamydia infections.

**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.
**Installation Profile (2015):**

**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 16%.

**Strenghts:**

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

**Challenges:**

- Higher proportion not medically ready.

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

**Installation Profile (2015):**

**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 18%.

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%.

**Strenghts:**

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

**Challenges:**

- Higher proportion not medically ready.

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

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<td>Obesity (%)</td>
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<td>Healthcare Delivery</td>
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<td>Preventable hospital admissions (%)</td>
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<td>91.0</td>
<td>77.0</td>
<td>57.3–92.1</td>
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</table>

**INSTALLATION PROFILE SUMMARIES**

**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 28%.

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 (33%) 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%.

**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**

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<td>73.3</td>
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**INSTALLATION PROFILE SUMMARIES**

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

**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 installation’s population statistic, reference the methods section in Appendix I.
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 Profile Summaries
U.S.-BASED

Installation Profile Summaries
U.S.-BASED

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

CONTINUE TO PAGE 116.

CHALLENGES:
- Lower rate of preventable admissions.

STRENGTHS:
- Lower 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%.

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%.

† 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.

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

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

INSTALLATION HEALTH INDEX (IHI) MEASURES*

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† 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 SCAres

INSTALLATION PROFILE SUMMARIES

‡ 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.

INSTALLATION PROFILE SUMMARIES

‡ 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.

INSTALLATION PROFILE SUMMARY

‡ 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.

REFERENCES: America’s Health Rankings, Robert Wood Johnson Foundation County Health Rankings, Public Health 360
Installation Profile Summaries

**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**

<table>
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<th>MEASURE</th>
<th>VALUE</th>
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<th>VALUE RANGE</th>
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<td>Sleep disorder diagnoses (%)</td>
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<td>Tobacco use (%)</td>
<td>30.5</td>
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<td>10.7–36.6</td>
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<td>Substance abuse diagnoses (%)</td>
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<td>Chlamydia infection incidence (rate per 1,000)</td>
<td>31.3</td>
<td>18.7</td>
<td>9.4–31.3</td>
</tr>
</tbody>
</table>

**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 |

**INSTALLATION HEALTH INDEX (IHI) SCORE**

-1.28

**POOR AIR QUALITY DAYS/YEAR**

**PERFORMANCE TRIAD SCORES**

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<th>PERFORMANCE TRIAD</th>
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<td>77.0</td>
<td>57.3–92.1</td>
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</table>

**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 statistics, refer to 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**

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<td>9.7</td>
<td>18.7</td>
<td>9.4–31.3</td>
</tr>
</tbody>
</table>

**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 |

**INSTALLATION HEALTH INDEX (IHI) SCORE**

0.38

**POOR AIR QUALITY DAYS/YEAR**

**PERFORMANCE TRIAD SCORES**

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<td>HEDIS composite score</td>
<td>57.4</td>
<td>77.0</td>
<td>57.3–92.1</td>
</tr>
</tbody>
</table>

**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
- For details regarding the installations’ population statistics, refer to Appendix I
Installation Profile Summary: 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

**San Bernardino Main Healthcare Facility:** Weed Army Community Hospital

74% under 35 years old, 13% female

**Population:** Approximately 4,000 AC Soldiers:

**Installation Profile (2015):**

**POOR AIR QUALITY DAYS/YEAR:**
- Score: 68.2
  - Army average: 68.3
  - Army range: 62–74

**PERFORMANCE TRIAD SCORES:**
- Score: 69.1
  - Army average: 69.9
  - Army range: 67–75

**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 15%
- 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%

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

**References:**
- America’s Health Rankings, Robert Wood Johnson Foundation County Health Rankings, Public Health 360
- Appendix I for details regarding the methods section.

---

Installation Profile Summary: 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

**Richland Main Healthcare Facility:** Moncrief Army Community Hospital

82% under 35 years old, 27% female

**Population:** Approximately 8,900 AC Soldiers:

**Installation Profile (2015):**

**POOR AIR QUALITY DAYS/YEAR:**
- Score: 62.3
  - Army average: 68.3
  - Army range: 62–74

**PERFORMANCE TRIAD SCORES:**
- Score: 80.7
  - Army average: 80.9
  - Army range: 78–85

**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%

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

**References:**
- America’s Health Rankings, Robert Wood Johnson Foundation County Health Rankings, Public Health 360
- Appendix I for details regarding the methods section.
### 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

#### Affiliated County:
Hardin

#### Main Healthcare Facility:
Ireland Army Community Hospital

#### Approximated AC Population:
Approximately 4,900 AC Soldiers

#### Population Statistics:
Provided approximations of AC Soldiers (permanent party and trainees, excluding cadets) based on time spent at the installation.

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

#### Challenges:
- Higher proportion not medically ready.
- Higher rates of obesity, chronic disease, and injury.

#### Strengths:
- Lower rate of smoking.
- Higher HEDIS Composite Score.

#### Installation Health Index (IHI) Measures:

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<th>Measure</th>
<th>Value</th>
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<td>Health Factors</td>
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<td>Obesity (%)</td>
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<td>11.9–20.9</td>
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<td>Sleep disorder diagnoses (%)</td>
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| IHI Score**                    | -0.41       | 0               | -1.28–0.94  |

### 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

#### Affiliated County:
Munson Army Health Clinic

#### Main Healthcare Facility:
Fort Riley

#### Approximated AC Population:
Approximately 3,300 AC Soldiers

#### Population Statistics:
Provided approximations of AC Soldiers (permanent party and trainees, excluding cadets) based on time spent at the installation.

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

#### Challenges:
- Higher proportion not medically ready.
- Higher smoking rates.
- Higher rates of obesity, chronic disease, and injury.

#### Strengths:
- Higher rate of tobacco use.
- Higher HEDIS Composite Score.

#### Installation Health Index (IHI) Measures:

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<td>Chlamydia infection (rate per 1,000)</td>
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<td>77.0</td>
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| IHI Score**                    | -0.52       | 0               | -1.28–0.94  |

#### Performance Triad Scores:

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<th>Measure</th>
<th>Value</th>
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<th>Value Range</th>
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</table>

| IHI Score**                    | -0.52       | 0               | -1.28–0.94  |

### Community Health

#### Fort Knox

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%.

#### Fort Leavenworth

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:
- Americas’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.
**Installation Profile Summaries**

### 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**

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<th>VALUE</th>
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<td>11.2</td>
<td>18.7</td>
<td>9.4–31.3</td>
</tr>
</tbody>
</table>

**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)

**Perfomance Triad Scores**
- IHI Score**: -0.05 (0, -1.28–0.94)

**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%.

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

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

**References:**
- America’s Health Rankings
- Robert Wood Johnson Foundation County Health Rankings
- Public Health 360

### 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**

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<td>11.2</td>
<td>18.7</td>
<td>9.4–31.3</td>
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</table>

**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)

**Perfomance Triad Scores**
- IHI Score**: 0.27 (0, -1.28–0.94)

**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%.

**Challenges:**
- Higher rates of chronic disease and injury.

**References:**
- America’s Health Rankings
- Robert Wood Johnson Foundation County Health Rankings
- Public Health 360

**POPULATION STATISTICS**
- U.S.-BASED

**REFERENCES:**
- America’s Health Rankings
- Robert Wood Johnson Foundation County Health Rankings
- Public Health 360

**POPULATION STATISTICS**
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**POPULATION STATISTICS**
- U.S.-BASED

**REFERENCES:**
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- Robert Wood Johnson Foundation County Health Rankings
- Public Health 360
Installation Profile Summary

**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

**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%.

**Challenges:**

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

**Strengths:**

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

**Health Outcomes**

- Chronic disease diagnoses (% not ready)

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

**Public Health Measures**

- Chlamydia infection incidence (rate per 1,000)

9.4 18.7 9.4–31.3

**Installation Health Index (IHI) Measures**

**Strengths:**

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

**Installation Health Index (IHI) Measures**

**Measure**

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<th>Value</th>
<th>Reference</th>
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**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

**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%.

**Challenges:**

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

**Public Health Measures**

- Chlamydia infection incidence (rate per 1,000)

23.8 18.7 9.4–31.3

**Installation Health Index (IHI) Measures**

**Strengths:**

- Lower injury rate.

**Installation Health Index (IHI) Measures**

**Measure**

<table>
<thead>
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<th>Medical Readiness</th>
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**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.

‡ For details regarding the installations’ population statistic, reference the methods section in Appendix I.
Installation Profile Summaries

**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**

<table>
<thead>
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<th>VALUE</th>
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<td>Health Factors</td>
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<tr>
<td>Obesity (%)</td>
<td>13.0</td>
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<td>11.9–20.9</td>
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<tr>
<td>Sleep disorder diagnoses (%)</td>
<td>12.4</td>
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<td>5.6–16.4</td>
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<tr>
<td>Tobacco use (%)</td>
<td>15.3</td>
<td>27.8</td>
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<td>Substance abuse diagnoses (%)</td>
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<td>Chlamydia infection incidence (rate per 1,000)</td>
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<tr>
<td>Health Outcomes</td>
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<tr>
<td>Chronic disease diagnoses (%)</td>
<td>12.1</td>
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<td>Injury incidence (rate per 1,000)</td>
<td>1,466.3</td>
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<td>Behavioral health diagnoses (%)</td>
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<td>Healthcare Delivery</td>
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<td>Preventable hospital admissions (%)</td>
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<td>HEDIS composite score</td>
<td>79.6</td>
<td>77.0</td>
<td>57.3–92.1</td>
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</tbody>
</table>

**IHI Score**: 0.01

**Performance Triad Scores**: Score: 74.1

**Poor Air Quality Days/Years**: NA

**Strengths**: Higher injury rate.

**Challenges**: Higher rates of obesity, tobacco use, behavioral health disorders, substance abuse, and reported chlamydia infections.

**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%).

**Challenges**: Higher rates of obesity and tobacco use, behavioral health disorders, substance abuse, and report ed chlamydia infections.

**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, 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%.

**Challenges**: Higher proportion not medically ready. Higher HEDIS Composite Score.
### 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 Profile Summaries

<table>
<thead>
<tr>
<th>Installation Profile Summaries</th>
<th>U.S.-BASED</th>
</tr>
</thead>
</table>

#### Health of the Force

**Installation Profile Summaries** refer to Appendix I for details.

**VECTOR READINESS BRIEFS**

**HEALTH FACTORS**

- **Obesity (%)**
  - Fort Sill: 18.7
  - Army average: 16.9
  - Value Range: 11.9–20.9
- **Sleep disorder diagnoses (%)**
  - Fort Sill: 11.8
  - Army average: 10.7
  - Value Range: 5.6–16.4
- **Tobacco use (%)**
  - Fort Sill: 26.6
  - Army average: 27.8
  - Value Range: 10.7–36.6
- **Substance abuse diagnoses (%)**
  - Fort Sill: 5.0
  - Army average: 4.0
  - Value Range: 1.1–7.2
- **Chlamydia infection incidence (rate per 1,000)**
  - Fort Sill: 10.4
  - Army average: 18.7
  - Value Range: 9.4–31.3

**HEALTH OUTCOMES**

- **Chronic disease diagnoses (%)**
  - Fort Sill: 14.2
  - Army average: 12.9
  - Value Range: 10.5–20.3
- **Incidence (rate per 1,000)**
  - Fort Sill: 1,553.6
  - Army average: 1,361.2
  - Value Range: 1,111.9–1,659.1
- **Behavioral health diagnoses (%)**
  - Fort Sill: 25.2
  - Army average: 20.3
  - Value Range: 12.7–27.9

**PERFORMANCE TRIAD SCORES**

- **Medical Readiness**
  - Fort Sill: 15.5
  - Army average: 16.9
  - Value Range: 11.8–24.3
- **Health Outcomes**
  - Fort Sill: 81% under 35 years old, 14% female
- **Healthcare Delivery**
  - Preventable hospital admissions (%): Fort Sill = 2.9, Army average = 2.2
  - HEDIS composite score: Fort Sill = 90.4, Army average = 77.0

**INSTALLATION HEALTH INDEX (IHI) MEASURES**

- **Medical Readiness**
  - Fort Sill: 15.9
  - Army average: 16.9
  - Value Range: 11.8–24.3
- **Health Factors**
  - Obesity (%): Fort Sill = 18.6, Army average = 16.9
  - Sleep disorder diagnoses (%): Fort Sill = 10.4, Army average = 10.7
  - Tobacco use (%): Fort Sill = 33.3, Army average = 27.8
  - Substance abuse diagnoses (%): Fort Sill = 2.7, Army average = 4.0
  - Chlamydia infection incidence (rate per 1,000): Fort Sill = 20.3, Army average = 18.7
- **Health Outcomes**
  - Chronic disease diagnoses (%): Fort Sill = 12.9, Army average = 12.9
  - Incidence (rate per 1,000): Fort Sill = 1,237.3
  - Behavioral health diagnoses (%): Fort Sill = 22.7, Army average = 20.3
- **Healthy Lifestyle**
  - Preventable hospital admissions (%): Fort Sill = 2.4, Army average = 2.2
  - HEDIS composite score: Fort Sill = 86.0, Army average = 77.0

**POOR AIR QUALITY DAYS/YEAR**

- Fort Sill: 68.3
- Army average: 65.3
- Value Range: 62.7–75

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

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### 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 Profile Summaries

<table>
<thead>
<tr>
<th>Installation Profile Summaries</th>
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</tr>
</thead>
</table>

#### Health of the Force

**Installation Profile Summaries** refer to Appendix I for details.

**VECTOR READINESS BRIEFS**

**HEALTH FACTORS**

- **Obesity (%)**
  - Fort Stewart: 18.7
  - Army average: 16.9
  - Value Range: 11.9–20.9
- **Sleep disorder diagnoses (%)**
  - Fort Stewart: 11.8
  - Army average: 10.7
  - Value Range: 5.6–16.4
- **Tobacco use (%)**
  - Fort Stewart: 26.6
  - Army average: 27.8
  - Value Range: 10.7–36.6
- **Substance abuse diagnoses (%)**
  - Fort Stewart: 5.0
  - Army average: 4.0
  - Value Range: 1.1–7.2
- **Chlamydia infection incidence (rate per 1,000)**
  - Fort Stewart: 10.4
  - Army average: 18.7
  - Value Range: 9.4–31.3

**HEALTH OUTCOMES**

- **Chronic disease diagnoses (%)**
  - Fort Stewart: 14.2
  - Army average: 12.9
  - Value Range: 10.5–20.3
- **Incidence (rate per 1,000)**
  - Fort Stewart: 1,553.6
  - Army average: 1,361.2
  - Value Range: 1,111.9–1,659.1
- **Behavioral health diagnoses (%)**
  - Fort Stewart: 25.2
  - Army average: 20.3
  - Value Range: 12.7–27.9

**PERFORMANCE TRIAD SCORES**

- **Medical Readiness**
  - Fort Stewart: 15.9
  - Army average: 16.9
  - Value Range: 11.8–24.3
- **Health Outcomes**
  - Obesity (%): Fort Stewart = 18.6, Army average = 16.9
  - Sleep disorder diagnoses (%): Fort Stewart = 10.4, Army average = 10.7
  - Tobacco use (%): Fort Stewart = 33.3, Army average = 27.8
  - Substance abuse diagnoses (%): Fort Stewart = 2.7, Army average = 4.0
  - Chlamydia infection incidence (rate per 1,000): Fort Stewart = 20.3, Army average = 18.7
- **Health Outcomes**
  - Chronic disease diagnoses (%): Fort Stewart = 12.9
  - Incidence (rate per 1,000): Fort Stewart = 1,237.3
  - Behavioral health diagnoses (%): Fort Stewart = 22.7
- **Healthy Lifestyle**
  - Preventable hospital admissions (%): Fort Stewart = 2.4
  - HEDIS composite score: Fort Stewart = 86.0

**INSTALLATION HEALTH INDEX (IHI) MEASURES**

- **Medical Readiness**
  - Fort Stewart: 15.9
  - Army average: 16.9
  - Value Range: 11.8–24.3
- **Health Factors**
  - Obesity (%): Fort Stewart = 18.6
  - Sleep disorder diagnoses (%): Fort Stewart = 10.4
  - Tobacco use (%): Fort Stewart = 33.3
  - Substance abuse diagnoses (%): Fort Stewart = 2.7
  - Chlamydia infection incidence (rate per 1,000): Fort Stewart = 20.3
- **Health Outcomes**
  - Chronic disease diagnoses (%): Fort Stewart = 12.9
  - Incidence (rate per 1,000): Fort Stewart = 1,237.3
  - Behavioral health diagnoses (%): Fort Stewart = 22.7
- **Healthy Lifestyle**
  - Preventable hospital admissions (%): Fort Stewart = 2.4
  - HEDIS composite score: Fort Stewart = 86.0

**POOR AIR QUALITY DAYS/YEAR**

- Fort Stewart: 6.4
- Army average: 6.4
- Value Range: 62.7–75

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

---

**STRENGTHS:**
- Higher HEDIS Composite Score.

**CHALLENGES:**
- Higher rates of behavioral disorders and injury.
- Lower percentage meeting P3 sleep and nutrition 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, 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 25%.

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

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Installation Profile Summaries  U.S.-BASED

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*  REFERENCE  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
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
Incidence rate (rate per 1,000) 1,333.3 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

INSTALLATION HEALTH INDEX (IHI) MEASURES**

IHI Score** -0.12 0 -1.28–0.94

PERFORMANCE TRIAD SCORES
Score: 66.9
Army average: 68.3
Army range: 62–74

POOR AIR QUALITY DAYS/YEAR
Score: 54.6
Army average: 7.7
Army range: 5–15

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 (14%).
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%.

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*  REFERENCE  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
Tobacco use (%) 34.9 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
Incidence rate (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

INSTALLATION HEALTH INDEX (IHI) MEASURES**

IHI Score** 0.02 0 -1.28–0.94

PERFORMANCE TRIAD SCORES
Score: 68.1
Army average: 68.3
Army range: 62–74

POOR AIR QUALITY DAYS/YEAR
Score: 82.1
Army average: 80.9
Army range: 76–85

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

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 installation’s population statistic, reference the methods section in Appendix I.
‡ For details regarding the installations’ population statistic, reference the methods section in Appendix I.
§ 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 c.2 or c.2 reflect statistically significant differences.
**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**

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<td>Healthcare Delivery</td>
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<tr>
<td>Preventable hospital admissions (%)</td>
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<td>NA</td>
<td>77.0</td>
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IHI Score**: 0.30 0 -1.28-0.94

**Performance Triad Scores**

- **Score:** 68.9
- **Army average:** 68.3
- **Army range:** 62-74

**Poor Air Quality Days/Year**

- **Score:** 0.8
- **Army average:** 7.7
- **Army range:** 0.0-15

**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 (14%).

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

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**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**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Value</th>
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<td>Sleep disorder diagnoses (%)</td>
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<td>10.7</td>
<td>5.6-16.4</td>
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<td>Tobacco use (%)</td>
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<td>27.8</td>
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<td>Substance abuse diagnoses (%)</td>
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<tr>
<td>Chlamydia infection incidence (rate per 1,000)</td>
<td>15.3</td>
<td>18.7</td>
<td>9.4-31.3</td>
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<tr>
<td>Health Outcomes</td>
<td></td>
<td></td>
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<tr>
<td>Chronic disease diagnoses (%)</td>
<td>16.1</td>
<td>12.9</td>
<td>10.5-20.3</td>
</tr>
<tr>
<td>Injury incidence (rate per 1,000)</td>
<td>1,584.8</td>
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<td>1,111.9-1,659.1</td>
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<tr>
<td>Healthcare Delivery</td>
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<tr>
<td>Preventable hospital admissions (%)</td>
<td>1.9</td>
<td>2.2</td>
<td>0.7-4.4</td>
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<tr>
<td>HEDIS composite score (%)</td>
<td>89.7</td>
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<td>57.3-92.1</td>
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</tbody>
</table>

IHI Score**: -0.31 0 -1.28-0.94

**Performance Triad Scores**

- **Score:** 69.4
- **Army average:** 68.3
- **Army range:** 62-74

**Poor Air Quality Days/Year**

- **Score:** 3.6
- **Army average:** 7.7
- **Army range:** 0.0-15

**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

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

<table>
<thead>
<tr>
<th>INSTALLATION HEALTH INDEX (IHI) MEASURES*</th>
<th>VALUE</th>
<th>REFERENCE VALUE</th>
<th>VALUE RANGE</th>
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<tbody>
<tr>
<td>Medical Readiness</td>
<td>14.4</td>
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<td>Health Factors</td>
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<td>Obesity (%)</td>
<td>17.8</td>
<td>16.9</td>
<td>11.9–20.9</td>
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<tr>
<td>Sleep disorder diagnoses (%)</td>
<td>11.3</td>
<td>10.7</td>
<td>5.6–16.4</td>
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<tr>
<td>Tobacco use (%)</td>
<td>29.7</td>
<td>27.8</td>
<td>10.7–36.6</td>
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<td>Substance abuse diagnoses (%)</td>
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<td>4.0</td>
<td>1.1–7.2</td>
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<td>Chlamydia infection incidence (rate per 1,000)</td>
<td>22.6</td>
<td>18.7</td>
<td>9.4–31.3</td>
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<tr>
<td>Health Outcomes</td>
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<td>Chronic disease diagnoses (%)</td>
<td>11.7</td>
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<td>Injury incidence (rate per 1,000)</td>
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<td>Behavioral health diagnoses (%)</td>
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<td>Healthcare Delivery</td>
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<tr>
<td>Preventable hospital admissions (%)</td>
<td>1.7</td>
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<td>HEDIScomposite score</td>
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<td>57.3–92.1</td>
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IHI Score**: 0.16 0 -1.28–0.94

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

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

POOR AIR QUALITY DAYS/YEAR

Score: 8.6
Army average: 7.7
Army range: 6–10

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%.

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

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<tr>
<th>INSTALLATION HEALTH INDEX (IHI) MEASURES*</th>
<th>VALUE</th>
<th>REFERENCE VALUE</th>
<th>VALUE RANGE</th>
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<tr>
<td>Medical Readiness</td>
<td>24.3</td>
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<td>Health Factors</td>
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<tr>
<td>Obesity (%)</td>
<td>12.6</td>
<td>16.9</td>
<td>11.9–20.9</td>
</tr>
<tr>
<td>Sleep disorder diagnoses (%)</td>
<td>8.9</td>
<td>10.7</td>
<td>5.6–16.4</td>
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<tr>
<td>Tobacco use (%)</td>
<td>25.6</td>
<td>27.8</td>
<td>10.7–36.6</td>
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<tr>
<td>Substance abuse diagnoses (%)</td>
<td>5.1</td>
<td>4.0</td>
<td>1.1–7.2</td>
</tr>
<tr>
<td>Chlamydia infection incidence (rate per 1,000)</td>
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<tr>
<td>Health Outcomes</td>
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<tr>
<td>Chronic disease diagnoses (%)</td>
<td>11.6</td>
<td>12.9</td>
<td>10.5–20.3</td>
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<tr>
<td>Injury incidence (rate per 1,000)</td>
<td>1,199.9</td>
<td>1,361.2</td>
<td>1,111.9–1,659.1</td>
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<tr>
<td>Behavioral health diagnoses (%)</td>
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<td>20.3</td>
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<td>Healthcare Delivery</td>
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<tr>
<td>Preventable hospital admissions (%)</td>
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<td>2.2</td>
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<tr>
<td>HEDIScomposite score</td>
<td>57.3</td>
<td>77.0</td>
<td>57.3–92.1</td>
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</table>

IHI Score**: -0.19 0 -1.28–0.94

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

Score: 8.6
Army average: 7.7
Army range: 6–10

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%.
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**

<table>
<thead>
<tr>
<th>MEASURE</th>
<th>VALUE</th>
<th>REFERENCE</th>
<th>VALUE RANGE</th>
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<td>17.5</td>
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<td>Sleep disorder diagnoses (%)</td>
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<tr>
<td>Chlamydia infection incidence (rate per 1,000)</td>
<td>16.2</td>
<td>18.7</td>
<td>9.4–31.3</td>
</tr>
</tbody>
</table>

**Health Outcomes**

Chlamydia infection incidence (rate per 1,000) 16.2 18.7 9.4–31.3

**Healthcare Delivery**

Preventable hospital admissions (%) 4.2 2.2 0.7–4.4
HEDIS composite score 62.3 77.0 57.3–92.1

**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%.

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**

<table>
<thead>
<tr>
<th>MEASURE</th>
<th>VALUE</th>
<th>REFERENCE</th>
<th>VALUE RANGE</th>
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<td>11.8–24.3</td>
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<td>Obesity (%)</td>
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<td>11.9–20.9</td>
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<tr>
<td>Sleep disorder diagnoses (%)</td>
<td>8.8</td>
<td>10.7</td>
<td>5.6–16.4</td>
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<tr>
<td>Tobacco use (%)</td>
<td>15.9</td>
<td>27.8</td>
<td>10.7–36.6</td>
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<tr>
<td>Substance abuse diagnoses (%)</td>
<td>2.7</td>
<td>4.0</td>
<td>1.1–7.2</td>
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<tr>
<td>Chlamydia infection incidence (rate per 1,000)</td>
<td>14.5</td>
<td>18.7</td>
<td>9.4–31.3</td>
</tr>
</tbody>
</table>

**Health Outcomes**

Chlamydia infection incidence (rate per 1,000) 14.5 18.7 9.4–31.3

**Healthcare Delivery**

Preventable hospital admissions (%) 0.7 2.2 0.7–4.4
HEDIS composite score 67.3 77.0 57.3–92.1

**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 (24%) 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

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

† 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.

U.S.-BASED

Installation Profile Summaries

HEALTH OF THE FORCE

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

<table>
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<th>VALUE</th>
<th>REFERENCE ARMY VALUE</th>
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<td>OCONUS INSTALLATIONS</td>
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<td>Army-Europe</td>
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<tr>
<td>Army-Pacific</td>
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</tr>
</tbody>
</table>

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.

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.
Army-Europe

INSTALLATION POPULATION STATISTICS

<table>
<thead>
<tr>
<th>Measure</th>
<th>USAG Ansbach</th>
<th>USAG Bavaria</th>
<th>USAG Rheinland-Pfalz</th>
<th>USAG Stuttgart</th>
<th>USAG Wiesbaden</th>
<th>USAG Vicenza</th>
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<td>~9,500</td>
<td>~6,200</td>
<td>~1,700</td>
<td>~1,800</td>
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<td>9</td>
<td>19</td>
<td>7</td>
<td>17</td>
<td>9</td>
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<td>%Under 35</td>
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<td>82</td>
<td>72</td>
<td>58</td>
<td>68</td>
<td>79</td>
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† For details regarding the installations’ population statistic, reference the methods section in Appendix I.

PERFORMANCE TRIAD SCORES

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<th>USAG Bavaria</th>
<th>USAG Rheinland-Pfalz</th>
<th>USAG Stuttgart</th>
<th>USAG Wiesbaden</th>
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<th>Army-Europe Reference</th>
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INSTALLATION HEALTH INDEX SCORES

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<td>Obesity (%)</td>
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<td>16.1</td>
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<td>Chlamydia infection incidence (rate per 1,000)</td>
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<td>Health Outcomes</td>
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<tr>
<td>Chronic disease diagnoses (%)</td>
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<td>Behavioral health diagnoses (%)</td>
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<tr>
<td>Preventable hospital admissions (%)</td>
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<td>HEDIS compliance composite score (%)</td>
<td>76.7</td>
<td>73.5</td>
<td>61.8</td>
<td>73.5</td>
<td>49.4</td>
<td>83.0</td>
<td>73.0</td>
</tr>
<tr>
<td>Chlamydia screening compliance (%)</td>
<td>91.6</td>
<td>91.0</td>
<td>80.4</td>
<td>94.3</td>
<td>87.1</td>
<td>79.0</td>
<td>85.9</td>
</tr>
</tbody>
</table>

* 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.
Army-Pacific

INSTALLATION POPULATION STATISTICS

<table>
<thead>
<tr>
<th></th>
<th>Japan</th>
<th>USAG Daegu</th>
<th>USAG Humphreys</th>
<th>USAG Red Cloud</th>
<th>USAG Yongsan</th>
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<tbody>
<tr>
<td>Approximate population</td>
<td>~2,400</td>
<td>~1,900</td>
<td>~3,900</td>
<td>~4,550</td>
<td>~4,500</td>
</tr>
<tr>
<td>%Female</td>
<td>13</td>
<td>23</td>
<td>17</td>
<td>12</td>
<td>20</td>
</tr>
<tr>
<td>%Under 35</td>
<td>72</td>
<td>68</td>
<td>79</td>
<td>80</td>
<td>72</td>
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</tbody>
</table>

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

PERFORMANCE TRIAD SCORES

<table>
<thead>
<tr>
<th>Measure</th>
<th>Japan</th>
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<th>USAG Red Cloud</th>
<th>USAG Yongsan</th>
<th>Army-Pacific Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sleep Score</td>
<td>68.3</td>
<td>68.8</td>
<td>69.6</td>
<td>67.5</td>
<td>70.0</td>
<td>68.8</td>
</tr>
<tr>
<td>Activity Score</td>
<td>82.2</td>
<td>81.8</td>
<td>82.0</td>
<td>81.6</td>
<td>82.1</td>
<td>81.9</td>
</tr>
<tr>
<td>Nutrition Score</td>
<td>69.7</td>
<td>68.2</td>
<td>69.0</td>
<td>68.5</td>
<td>70.4</td>
<td>69.2</td>
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INSTALLATION HEALTH INDEX SCORES

<table>
<thead>
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<tbody>
<tr>
<td>Medical Readiness classification</td>
<td>10.5</td>
<td>11.3</td>
<td>11.3</td>
<td>11.3</td>
<td>11.2</td>
<td>11.2</td>
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<tr>
<td>Dental readiness classification</td>
<td>2.6</td>
<td>3.2</td>
<td>3.2</td>
<td>3.2</td>
<td>3.2</td>
<td>3.1</td>
</tr>
<tr>
<td>Permanent Profile (P3 or P4)</td>
<td>1.1</td>
<td>1.2</td>
<td>1.5</td>
<td>1.2</td>
<td>1.3</td>
<td>1.3</td>
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Health Factors

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>Obesity (%)</td>
<td>20.6</td>
<td>15.6</td>
<td>15.9</td>
<td>16.3</td>
<td>14.7</td>
<td>15.9</td>
</tr>
<tr>
<td>Sleep disorder diagnoses (%)</td>
<td>7.5</td>
<td>10.2</td>
<td>8.6</td>
<td>8.1</td>
<td>8.5</td>
<td>8.5</td>
</tr>
<tr>
<td>Tobacco use (%)</td>
<td>22.1</td>
<td>25.7</td>
<td>27.6</td>
<td>36.0</td>
<td>16.4</td>
<td>28.2</td>
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<tr>
<td>Substance abuse diagnoses (%)</td>
<td>2.6</td>
<td>3.5</td>
<td>2.1</td>
<td>2.7</td>
<td>2.4</td>
<td>2.5</td>
</tr>
<tr>
<td>Chlamydia infection incidence (rate per 1,000)</td>
<td>4.1</td>
<td>57.5</td>
<td>42.0</td>
<td>48.2</td>
<td>29.4</td>
<td>37.5</td>
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Health Outcomes

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</tr>
</thead>
<tbody>
<tr>
<td>Chronic disease diagnoses (%)</td>
<td>11.4</td>
<td>12.9</td>
<td>9.5</td>
<td>10.9</td>
<td>12.7</td>
<td>11.9</td>
</tr>
<tr>
<td>Injury incidence (rate per 1,000)</td>
<td>1,043.4</td>
<td>1,331.8</td>
<td>1,124.5</td>
<td>859.0</td>
<td>1,282.5</td>
<td>1,103.2</td>
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<tr>
<td>Hearing injury (rate per 1,000)</td>
<td>8.9</td>
<td>14.9</td>
<td>13.8</td>
<td>15.2</td>
<td>16.2</td>
<td>14.2</td>
</tr>
<tr>
<td>Eye injury (rate per 1,000)</td>
<td>12.7</td>
<td>13.7</td>
<td>5.9</td>
<td>5.8</td>
<td>8.6</td>
<td>8.3</td>
</tr>
<tr>
<td>Behavioral health diagnoses (%)</td>
<td>16.2</td>
<td>18.4</td>
<td>13.5</td>
<td>17.7</td>
<td>15.1</td>
<td>15.6</td>
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</table>

Healthcare Delivery

<table>
<thead>
<tr>
<th>Measure</th>
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<tbody>
<tr>
<td>Preventable hospital admissions (%)</td>
<td>8.0</td>
<td>2.4</td>
<td>4.2</td>
<td>2.0</td>
<td>2.8</td>
<td>3.0</td>
</tr>
<tr>
<td>HEDIS compliance composite score</td>
<td>81.7</td>
<td>82.3</td>
<td>73.1</td>
<td>83.1</td>
<td>85.8</td>
<td>83.4</td>
</tr>
<tr>
<td>Chlamydia screening compliance (%)</td>
<td>84.7</td>
<td>88.5</td>
<td>85.7</td>
<td>90.7</td>
<td>88.7</td>
<td>88.1</td>
</tr>
</tbody>
</table>

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OCONUS

Installation Profile Summaries
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 quality is unhealthy for sensitive groups. The range of the means, and the average of the means are also reported.

The睡眠指标基于GAT调查问卷评估睡眠时长、睡眠满意度及低质睡眠的频率。活动指标基于GAT调查问卷评估BMI，中等/剧烈活动，阻力训练，以及低强度活动。营养指标基于GAT调查问卷评估健康饮食习惯，早餐，恢复零食及水摄入。由于每个指标基于多个调查问卷条目，每条目的得分范围为0到100%，反映该指标的总体得分。

OTSG目标分数为每条目85。此外，计算达到目标分数的士兵百分比作为另一个指标。数据使用限制不能提供按性别和年龄解析的安装级数据，因此措施不能被调整。然而，这些潜在影响因素被评估集体性，用于评估分配到报告审查的安装的Army士兵，以确定潜在行为差异。

环境健康指

空气质量状态基于全国环境空气质量标准（NAAQS）达标区域计算，以及2012-2014年县区空气质量值，根据2015年臭氧NAAQS发布的美国环保局信息。识别为未达标区域的地区，设计值不达标，被识别为高污染区域。空气质量日数（AQI）是根据空气质量测量数据计算的。每日AQI是根据当地的空气质量指数（AQI）值。AQI大于100表示对敏感群体来说空气质量不健康。每日AQI的平均值和平均值的平均值也报告。

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环境健康指

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The prevalence of six chronic conditions of interest (cardiovascular, diabetes, mental health, musculoskeletal, respiratory, and skin conditions) 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 AHFSB were used. Installation estimates were adjusted by gender and age.

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 AHFSB were used. 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 (DOEHS-HC).

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 (MHPH) 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 with out 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 equalled 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.

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APPENDIX II
We appreciate your feedback on this report. Please follow the link below to take a five-minute survey.

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