Assessing the Impact of the U.S. Army Wellness Centers on Soldier and Other Clients' Goal-Related Improvements in Health Behaviors and Chronic Disease Risk Factors

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INTRODUCTION

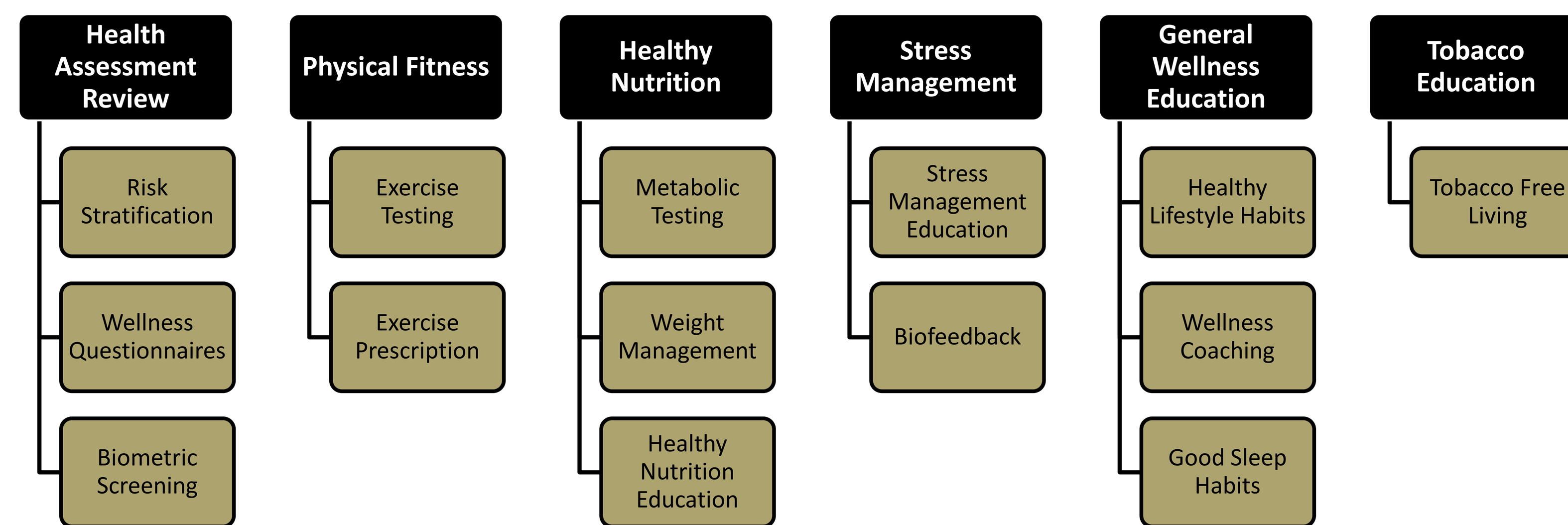
- The U.S. Army Public Health Center (APHC) implemented 35 Army Wellness Centers (AWC) in the Continental United States (CONUS) and outside of the Continental United States (OCONUS) (Figure 1) **to help Soldiers and other Army community members** reduce their risk factors for chronic, behaviorally-mediated disease by providing health education, health coaching, and individualized structural capabilities testing **to promote healthy behaviors and lifestyles** (Figure 2).
  - The AWC model is a primary prevention, individual-focused, health promotion model.
  - The AWCs provide primary prevention health education services to Soldiers, Family members, Retirees, and Department of Army Civilians who are either on or within a 40-mile radius of their associated Army installation.

Figure 1: Map of AWC Locations

Image Source: U.S. Army, APHC Illustration, GSI Branch

- **Unhealthy lifestyles and behaviors,** such as inadequate physical activity and poor dietary habits, can increase an individual's lifetime risk of developing various behaviorally-mediated chronic diseases and **ultimately undermines the Army's ability to maintain a ready force.**[1-3]
- **Fortunately, unhealthy behaviors are modifiable**, and the risk of becoming medically non-ready or developing various behaviorally-mediated, weight-related chronic conditions and diseases can be mitigated through interventions, such as the AWCs.

Figure 2: AWC Services



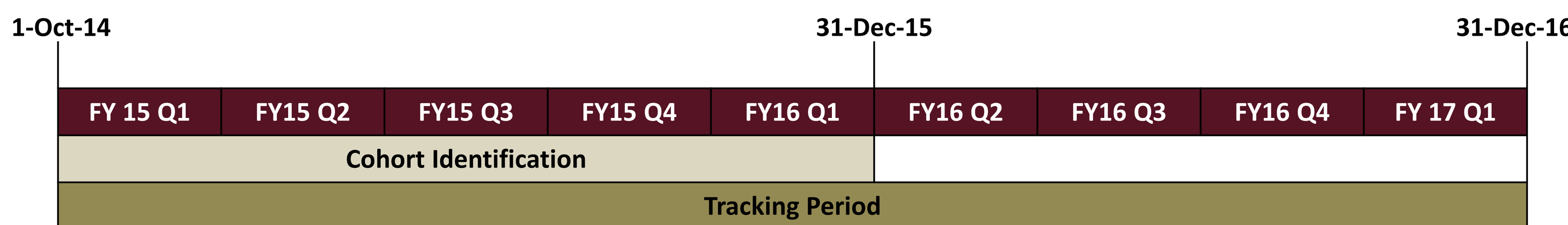
PURPOSE

The APHC conducted an outcome evaluation to assess AWC effectiveness by quantifying AWC clients' progress towards their health-related goals. The purpose of this evaluation was to **examine the extent to which AWC clients who set specific goals experience goal-related improvements in their health behaviors and risk factors for chronic diseases, which were the outcomes of interest.**

METHODS

- The APHC used an **intervention group only, pre-test/post-test design** wherein a cohort of AWC clients who were initially assessed at one of 25 operational AWCs **between 1 October 2014 and 31 December 2015 were tracked for 1 year after their initial assessment** (Figure 3).

Figure 3: Study Timeline

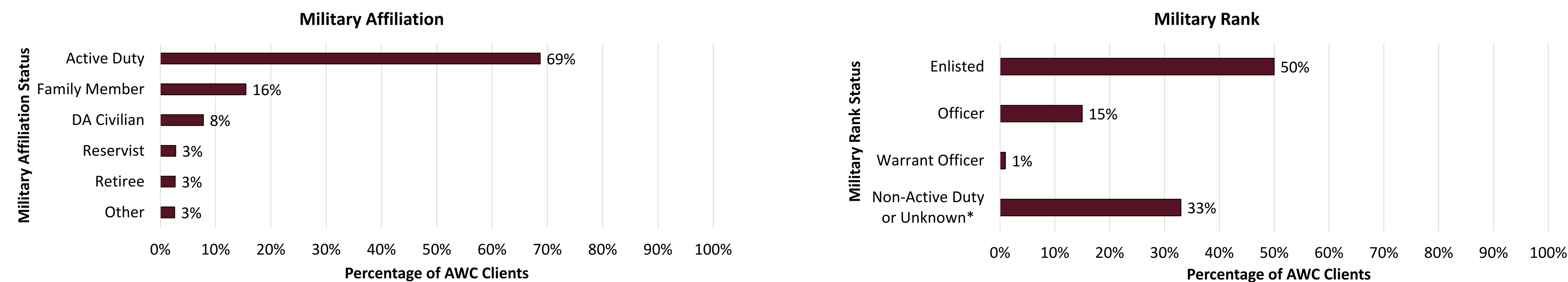


- **Data Analyses**
  - AWC clients with at least one follow-up assessment per outcome with at least 30 days between the initial and most recent assessment were included in outcome analyses.
  - The APHC examined descriptive statistics on all variables and conducted a mixed model linear regression analysis for continuous outcomes (body fat, body mass index (BMI), days of muscle strengthening and estimated VO_2 maximum).
    - Key independent variables include assessment type (initial vs. most recent follow-up) and the interaction between assessment type and whether clients selected an outcome-associated goal.
    - Key control variables include client demographic variables, self-efficacy to change health behavior, readiness to change health behavior, number of days between AWC assessments, number of AWC assessments (log-transformed), and outcome-associated goal (goal set vs. goal not set).
  - The APHC conducted chi-square tests for categorical outcomes (fruit and vegetable consumption).

RESULTS

- **Study Population:** A total of 40,386 clients participated in AWC services during the cohort identification period. Of this population, 22% had at least one follow-up visit. The majority of clients (63%) were male with an average age of 33.8 years. Two out of three clients were Active Duty Soldiers who were enlisted in the U.S. Army (Figure 4).

Figure 4: AWC Client Military Affiliation and Rank

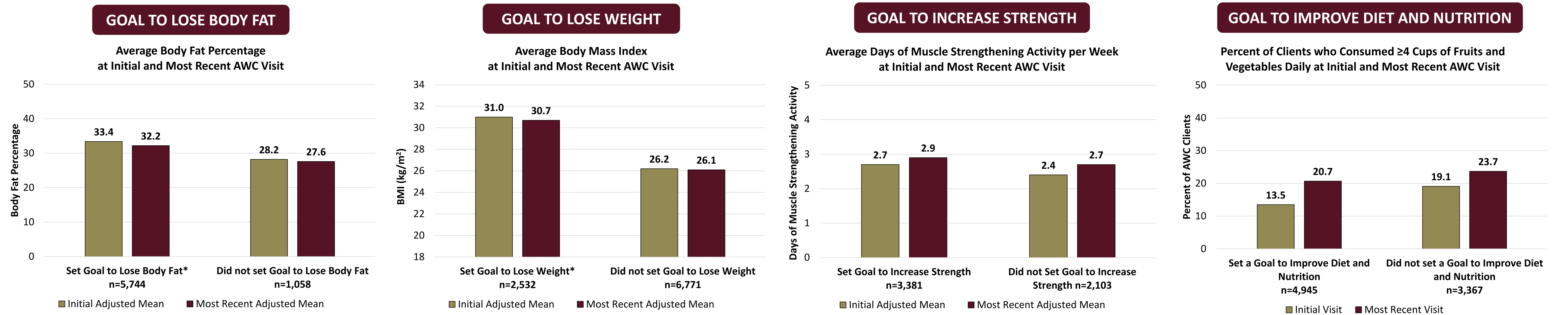


*AWC clients who either did not have a rank (e.g., DA Civilians, Family members, Retirees), did not identify their rank, or did not provide a clearly interpretable rank in the text box provided.

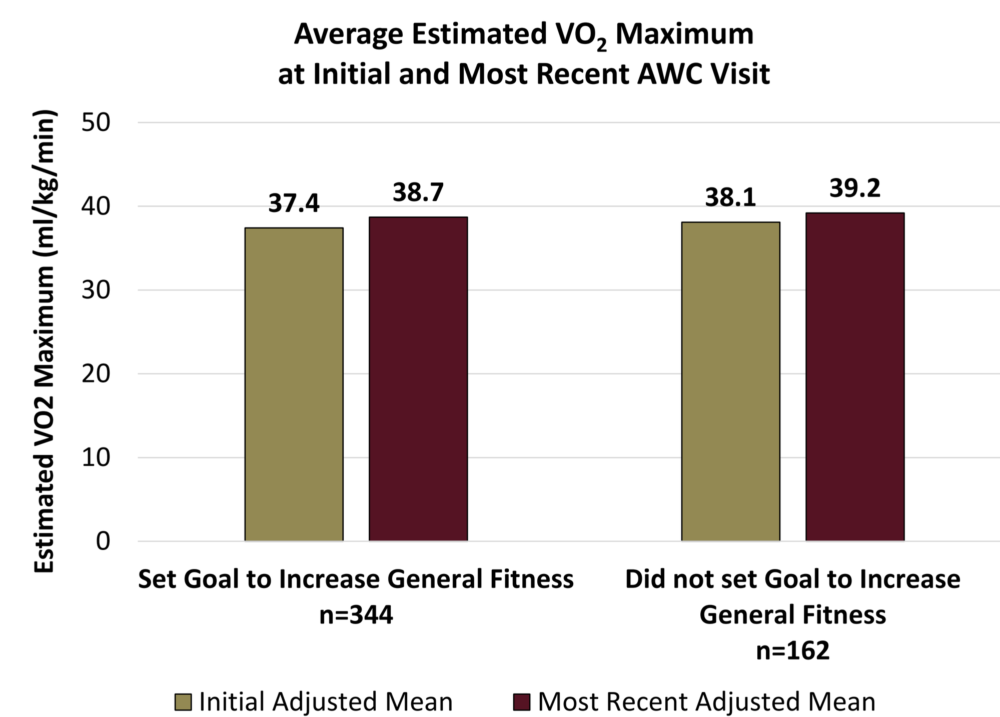
U.S. Photo by Sgt. Sean Callahan, USARAK Public Affairs Cleared for Public Release

- The results focus on the following goals that were established by more than 50% of AWC clients: Lose Body Fat, Lose Weight, Increase Strength, Improve Diet and Nutrition, and Improve General Fitness (Figure 5).

Figure 5: AWC Client Outcomes at Initial and Most Recent AWC Visit by Goal Setting



*Statistically significant interaction; AWC clients who set a goal saw a statistically larger magnitude of improvement than those who did not set a goal.



U.S. Army PHC Photo by J. Snodgrass Cleared for Public Release

CONCLUSIONS

- The AWC clients who completed initial and follow-up assessments during this 1-year timeframe saw **improvements to outcomes related to body fat, weight loss, general fitness, strength, and diet and nutrition.**
- The data suggest that **participation in the AWC program, whether or not a client sets specific goals, can improve a multitude of client health behaviors in support of readiness.**
- AWC clients who **set a goal to lose body fat or lose weight saw a greater change in body fat and BMI, respectively,** than those who did not set these goals.
- These findings further demonstrate the **effectiveness of AWCs in positively impacting Soldier readiness and the health of the Total Army Family.**

REFERENCES

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