



Walter Reed
National Military
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Murtha Cancer Center “The DoD Cancer Center of Excellence”

“Accelerating Progress against Cancer through Collaboration”

Smokeless Tobacco Use in the US Military

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Objectives

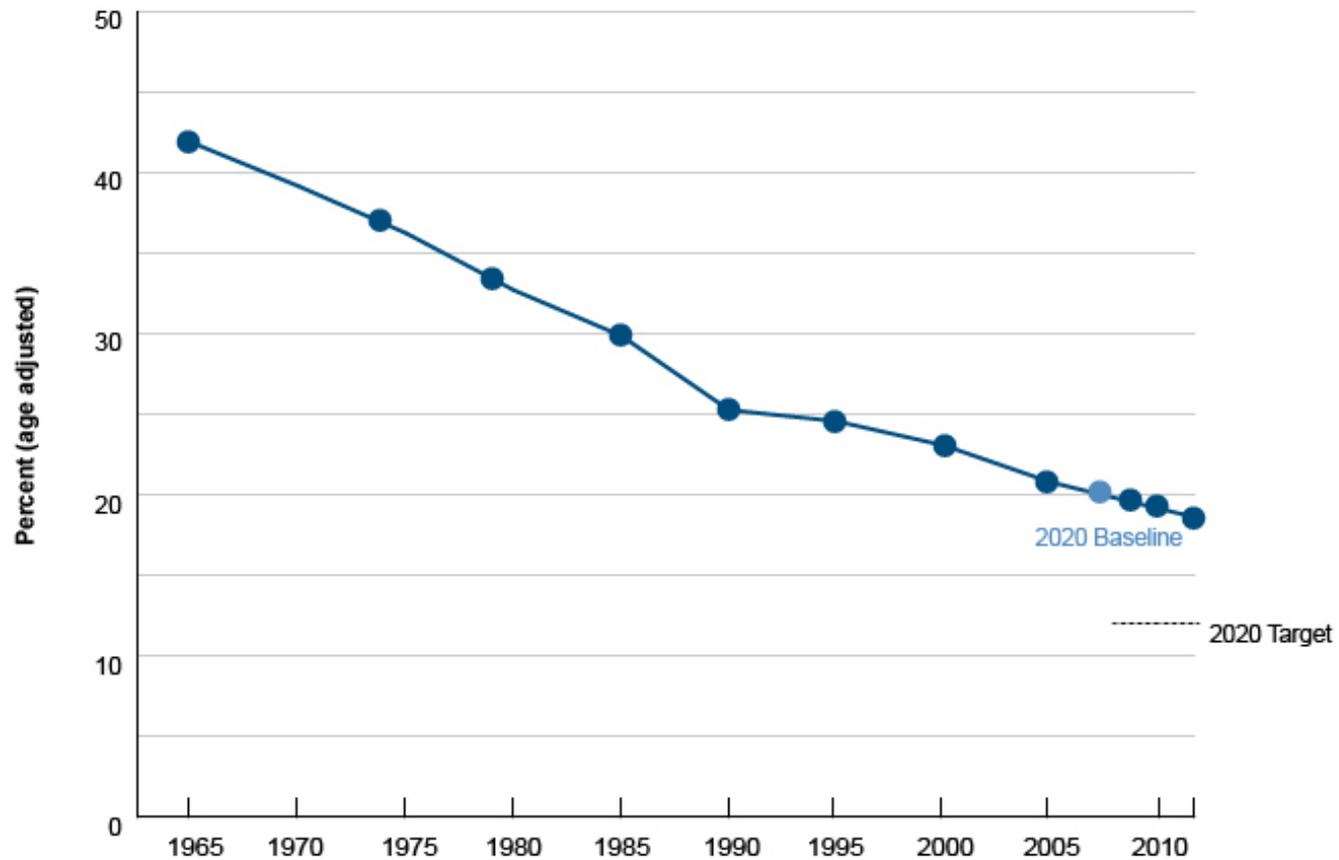
- Understand the health effects of smokeless tobacco
- Understand the prevalence of smokeless tobacco use in the US military
- Understand the short and long term goal of the current study, “Smokeless Tobacco use in the US Military”



- Tobacco is the leading cause of preventable death in the United States
- Responsible for 480,000 death every year
- DoD spends more than \$1.6 billion each year on tobacco-related medical care
- Smoking Cessation Effort
 - Increased legislation and social pressure

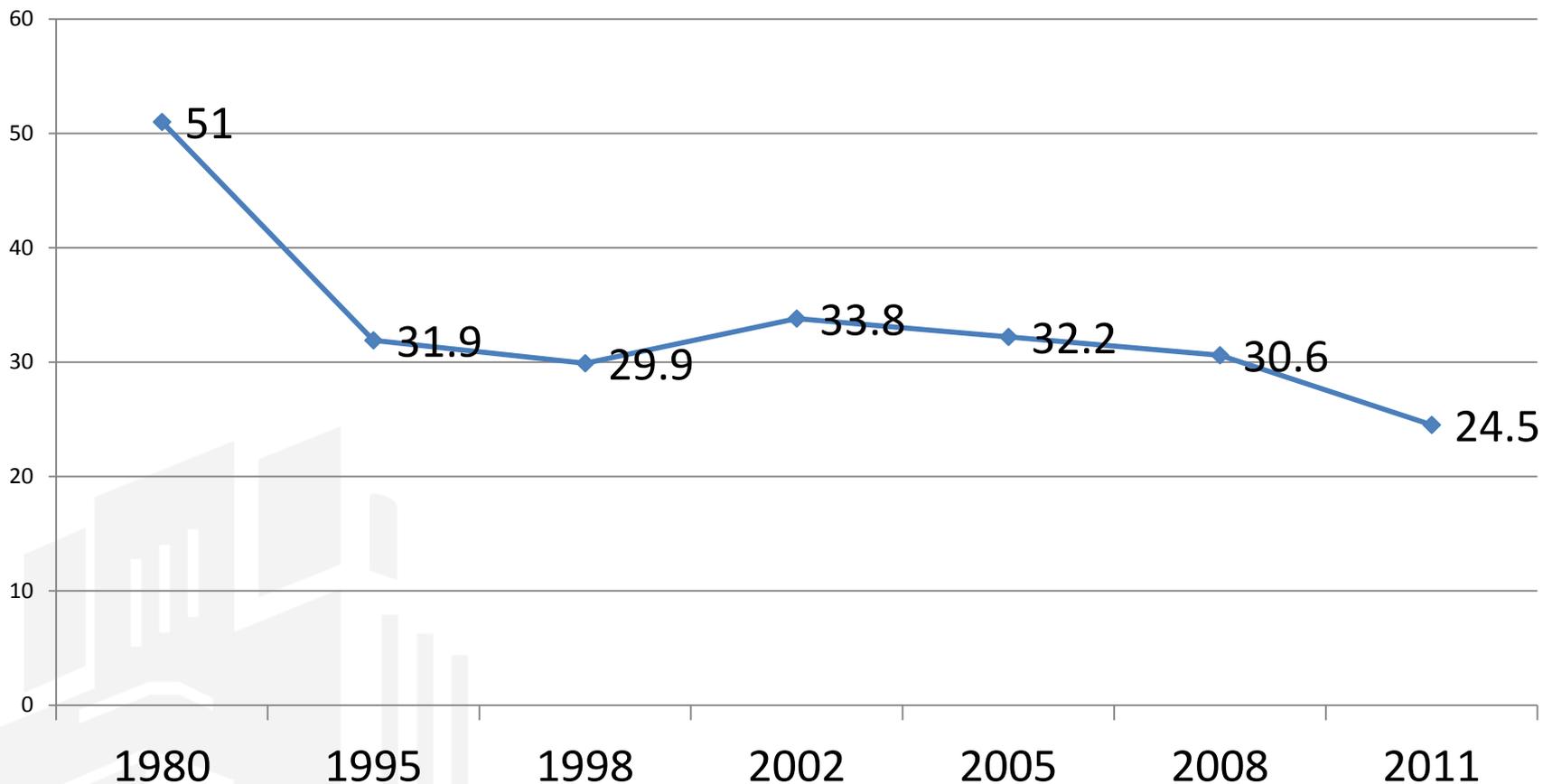


Cigarette Use, US Adults 1965-2010



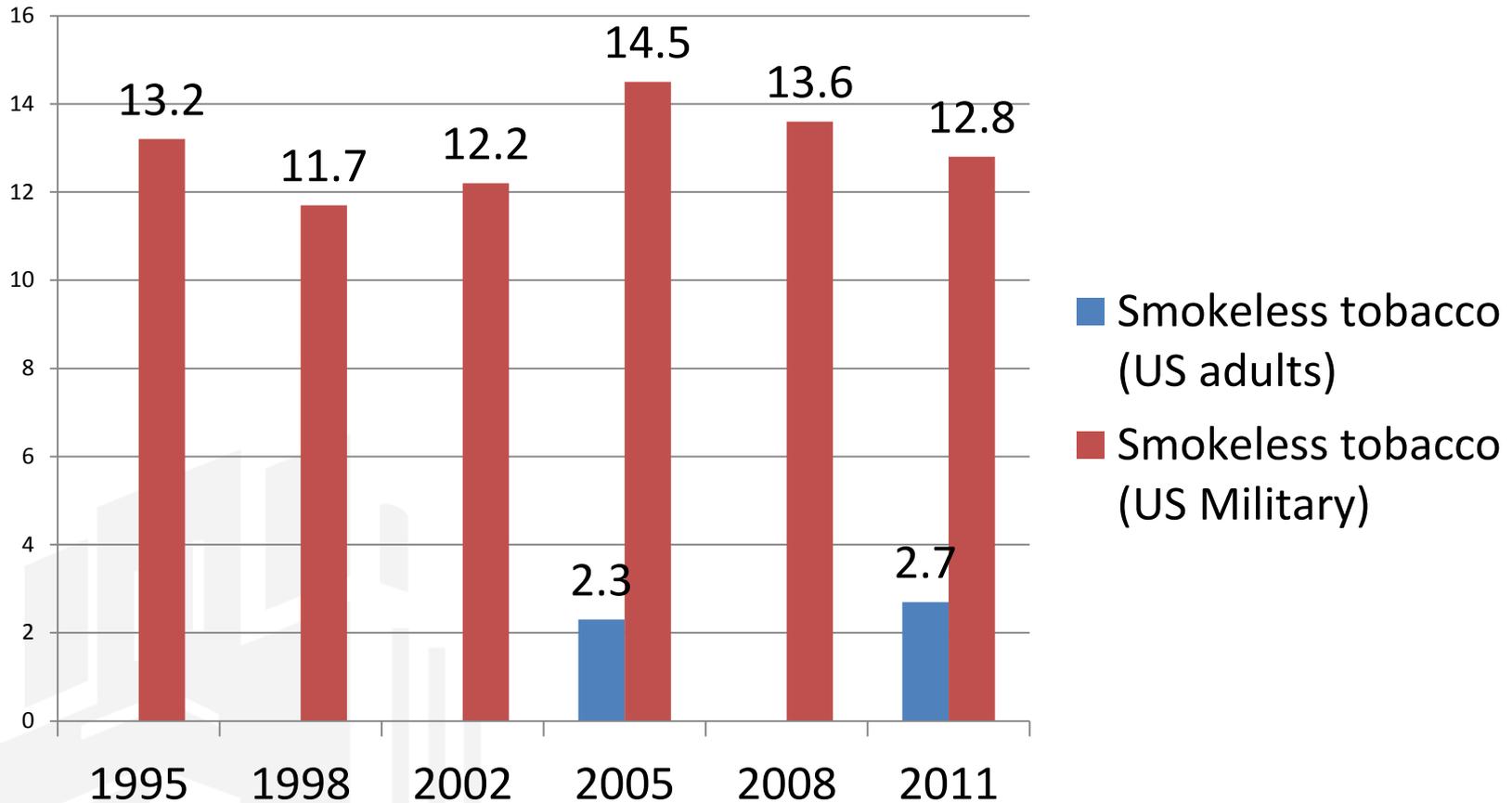


Cigarette Use, US Military 1980-2011





Smokeless Tobacco Use





- Smokeless tobacco
 - Smokeless tobacco is tobacco that is not burned
 - Nicotine is absorbed through the lining of the mouth
 - Types
 - Chewing tobacco
 - Snuff-finely cut or powdered tobacco. Sold in different scent and flavors. Moist or dry.
 - Dip (moist snuff) most common
 - Long cuts
 - Fine cuts
 - Pouches
 - Ready cuts (cute of long cuts)
 - Snus-no need to spit





- Harmful chemicals in smokeless tobacco
 - At least 28 carcinogens (1)
 - Most harmful-nitrosamine, directly related to the risk of cancer
 - Smokeless tobacco use is related to increased risk of oral cancer, esophageal cancer and pancreatic cancer
 - Smokeless tobacco may cause heart disease, gum disease, and oral lesions such as leukoplakia (precancerous white patches in the mouth)
- Nicotine addiction
 - Users of smokeless tobacco and users of cigarettes have comparable levels of nicotine in the blood

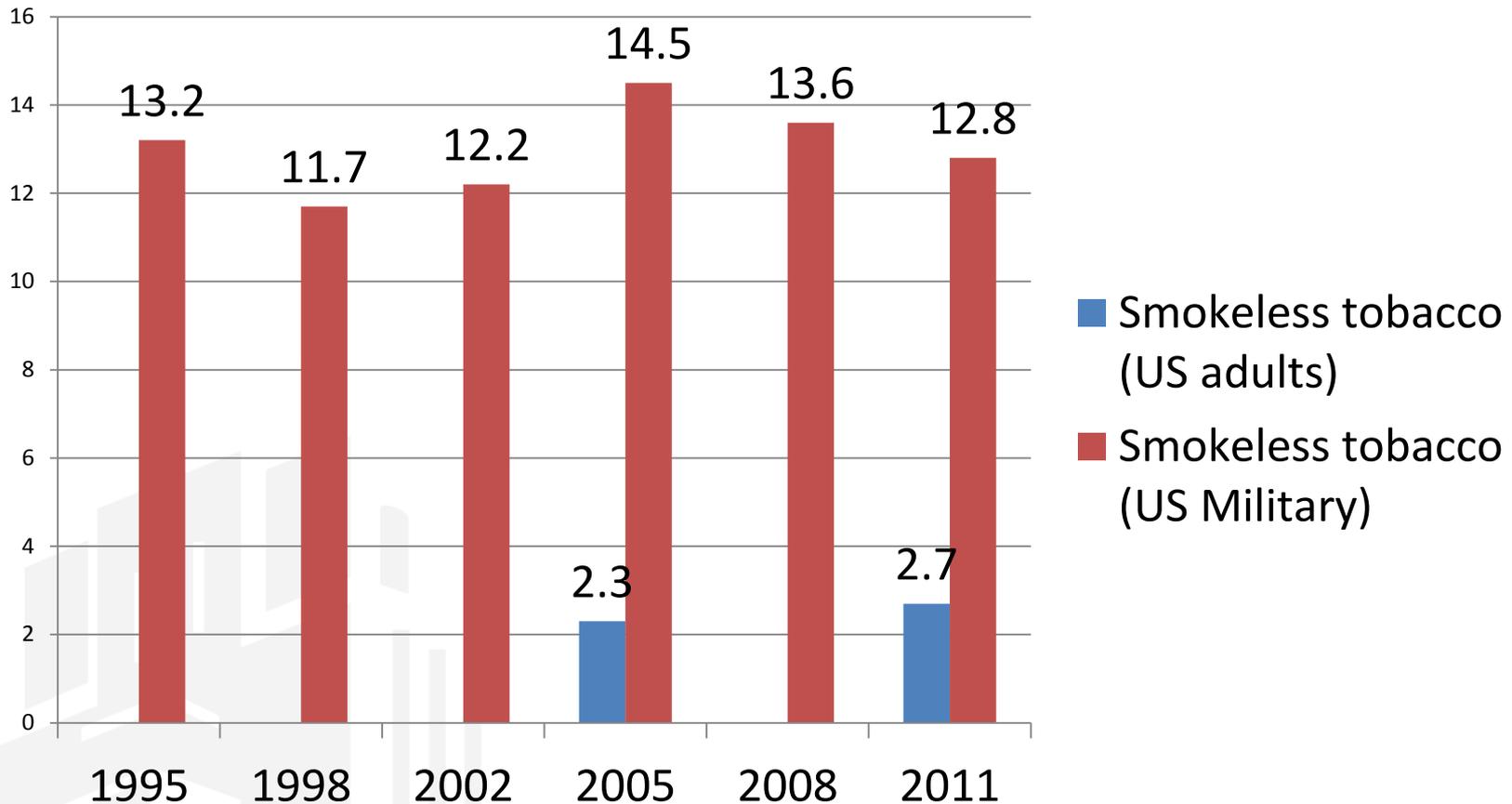
1. International Agency for Research on Cancer. *Smokeless Tobacco and Some Tobacco-Specific N-Nitrosamines*. Lyon, France: World Health Organization International Agency for Research on Cancer; 2007. IARC Monographs on the Evaluation of Carcinogenic Risks to Humans Volume 89.



- In 2011, manufacturers sold 122 million pounds of smokeless tobacco, 2.94 billion in sale revenue
- Five major smokeless tobacco manufacturer spent 451.7 million on advertizing and promotions in 2010
- Moist snuff is by far the most popular form accounting 86% of total sales
- Skoal is the most popular brand in US while Grizzly, a discounted product, is the most popular among youth
- Tobacco companies have increased marketing of smokeless tobacco products as cigarette smoking decreased



Smokeless Tobacco Use





2011 Health Related Behaviors Survey of Active Duty Military Personnel

- 12.8 % of the military personnel used smokeless tobacco in the past 30 days vs.. 2.7% US adults.
- Smokeless tobacco use differ between services
 - Marine 32%
 - Army 21%
 - Navy 17%
 - Air Force 13%
- Highest prevalence of smokeless tobacco use in young male age 18-25: 31%
- Healthy People 2020 objective : 0.5%



- Largest longitudinal study undertaken by DoD in 2001 to evaluate potential risk factors of health outcomes in the military
- Baseline questionnaire 2001-2003: 77,047
- Follow up 2004-2006: 55,021
- Single question-smokeless tobacco use in the past year
- 11% (9% persistent user, 2% new user), 86% never used smokeless tobacco
- Combat exposure is related with higher use of smokeless tobacco



Smokeless Tobacco Use in the US Military

- What we know
 - Smokeless tobacco use is higher in the US military vs. US adults
 - Smokeless tobacco use differs between branches
 - Combat deployment is related with increased use of smokeless tobacco use





- What we do not know
 - Why US military has 5 times higher prevalence in smokeless tobacco use
 - Initiation point
 - Other factors related to smokeless tobacco use
 - Optimal cessation strategy
 - Effect of smokeless tobacco use on military readiness and health





Smokeless Tobacco Use in the US Military Project

- Murtha Cancer Center
 - MAJ Steve Lee, PI
 - COL Craig Shriver, Director
 - Dr. Kangmin Zhu, Associate Director for Military Epidemiology and Population Sciences
 - Dr. Jie Lin, Senior Cancer Epidemiologist
- USU Postgraduate Dental College
 - MG(Ret) Patrick Sculley
- Department of the Army
 - MG Thomas Tempel, Chief, DC
 - MAJ Paul Colthirst
- Department of the Air Force
 - MG Gerard Caron, Chief, DC
 - LTC Katherine Morganti
 - LTC Sullivan
- Department of the Navy
 - CDR Steve Matis



- Pilot study
 - Study Sites
 - Fort Bragg-Army, San Antonio-Air Force, San Diego-Navy
 - Study Subjects
 - AD present to dental clinic for routine annual check up
 - Study Methods
 - Survey
 - 750 completed questionnaires



- Detailed questionnaires
 - Demographics (branch, rank, race/ethnicity, gender, age, marital status, education)
 - Deployment and combat exposure
 - Smokeless tobacco, cigarette, cigar, alcohol, e-cigarette use
 - Initiation point (age and military specific), amount, duration of use, reason for use, use during deployment, increased use during deployment
 - Second hand smoking
 - Family member smoking history
 - Opinion on tobacco price in the military store
 - Knowledge check
 - Intention on quitting tobacco
- Pilot study to evaluate feasibility of larger study



Long term goal

- Expansion of the pilot study to other military installations
- Longitudinal cohort study
- Outcomes evaluation utilizing Military Healthcare System Database
- Sampling of buccal mucosa sample, blood sample to potentially identify possible biomarkers for early oral cancer/ other cancer.



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Questions

