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Smokeless Tobacco Use in the US Military





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Presentation Outline

- Review of smokeless tobacco use in the US military
- Result of current smokeless tobacco research
- Future plan



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Smokeless Tobacco

- **Health Effects**
 - Contains at least 28 carcinogens
 - Related to increased risk of oral cancer, esophageal cancer and pancreatic cancer
 - May increase 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

Source: 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.



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Background

- Tobacco use is the leading cause of preventable death in the United States
- Responsible for 480,000 deaths every year
- DoD spends more than \$1.6 billion each year on tobacco-related medical care
- Tobacco companies have increased marketing of smokeless tobacco products as cigarette smoking decreased

Sources: http://mldc.whs.mil/public/docs/report/hb/DoD_Eval-of-TRICARE-Program-FY2014.pdf
<http://www.surgeongeneral.gov/library/reports/50-years-of-progress/exec-summary.pdf>



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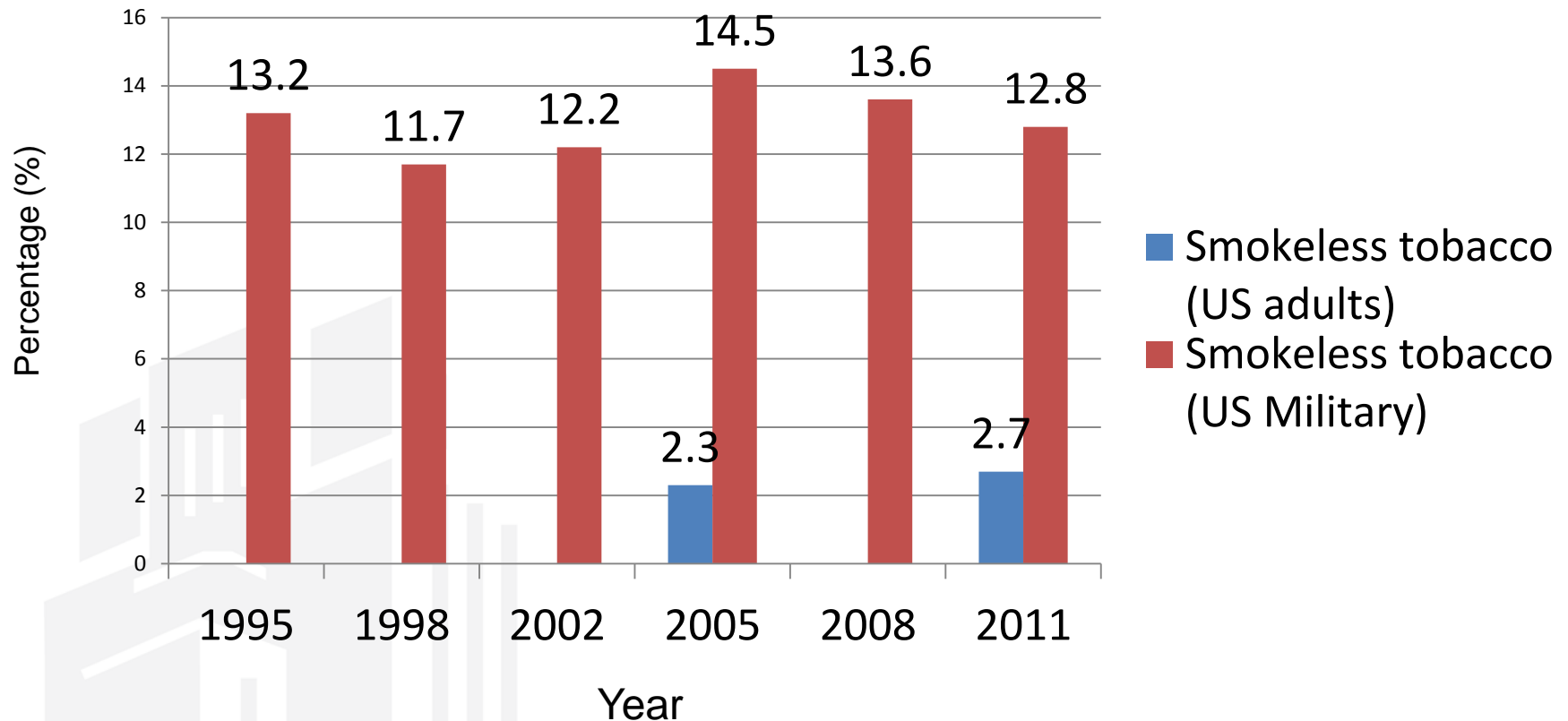
Smokeless Tobacco

- Five major smokeless tobacco manufacturers spent 451.7 million on advertising and promotions in 2011
- In 2011, manufacturers sold 122 million pounds of smokeless tobacco with 2.94 billion in sales revenue
- DoD Cigarette smoking cessation effort has been successful (50% to 20%), but not smokeless tobacco

Source: http://www.cdc.gov/tobacco/data_statistics/fact_sheets/tobacco_industry/marketing/index.htm



Smokeless Tobacco Use in military vs. general population



Source: http://mldc.whs.mil/public/docs/report/hb/DoD_Eval-of-TRICARE-Program-FY2014.pdf



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Smokeless Tobacco Use in the US Military

- In-depth study on smokeless tobacco use in the military is needed.
- Further Study Needs
 - Who
 - When
 - Why



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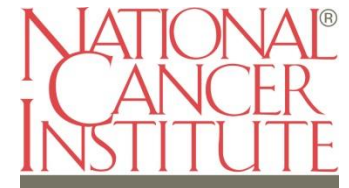


Tri-Federal Collaboration

- Walter Reed National Military Medical Center
 - Murtha Cancer Center
- Uniform Services University
 - Postgraduate Dental College
- National Cancer Institute



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Smokeless Tobacco Use in the US Military Project

- **Specific Aim 1:**
Investigate prevalence of smokeless tobacco in two military installations
- **Specific Aim 2:**
Investigate factors that may be associated with smokeless tobacco use (military environment, beliefs towards tobacco use, family history, intention and readiness-to-quit)
- **Specific Aim 3:**
Assess the feasibility of conducting a large-scale cohort study among active duty service members

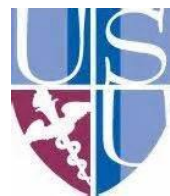


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Smokeless Tobacco Use in the US Military Project

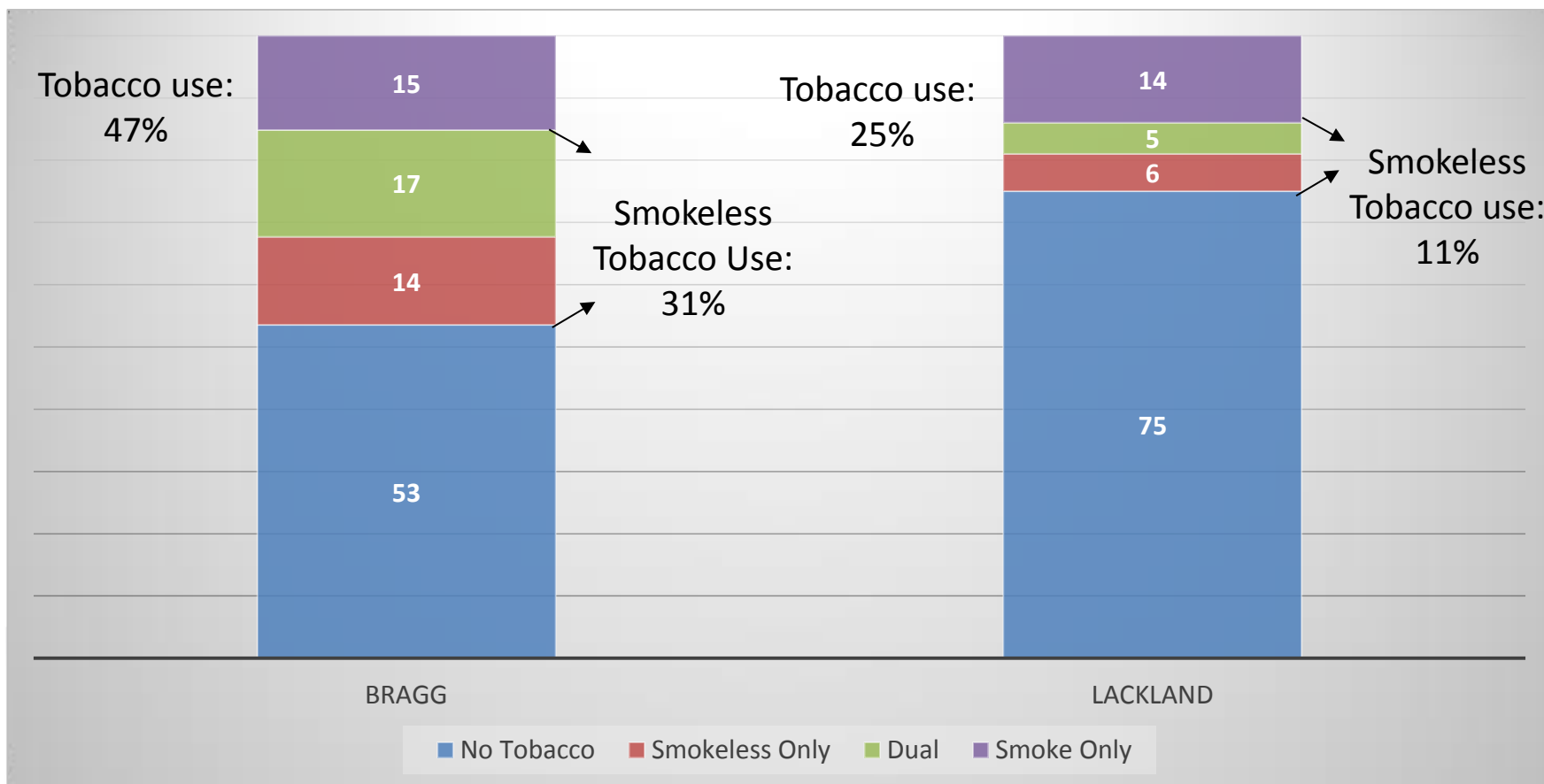
- **Study Design:** Cross-sectional study
- **Sites:** Fort Bragg, NC (Army); Lackland AFB, TX (Air Force)
- **Subjects:** Active duty members who present to dental clinics for routine annual check up
- **Data Collection Methods:** Self-administered Questionnaire
 - 2500 completed questionnaires (1250 from each site)
 - From March 2016 to May 2016



Smokeless Tobacco Use in the US Military

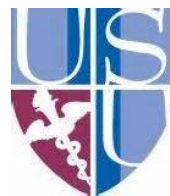
Demographic	Fort Bragg N=1250	Lackland AFB N=1250
Age, <30	65%	57%
Gender (Male)	88%	67%
Race (White)	63%	67%
Ethnicity (Hispanic)	16%	14%
Married	57%	47%
Rank E1-E4	45%	43%
E5-E9	37%	27%
Officer	12%	28%
Deployed	55%	33%
Combat Unit	34%	8%

Smokeless Tobacco Use





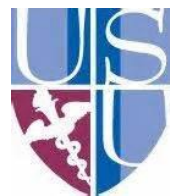
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Who uses Smokeless Tobacco (Fort Bragg)

		Fort Bragg	US population
Age	<20	20%	
	20-29	34%	
	30-39	33%	
	40 <	27%	
Gender	Male	36%	6.7%
	Female	3%	0.3%
Race/Ethnicity	White	41%	4.6%
	Black	13%	1.2%
	Hispanic	25%	0.9%
Education	<High School	35%	
	Some College	36%	
	College degree	24%	
Cigarette use	Yes	55%	
	No	22%	

https://www.cdc.gov/tobacco/data_statistics/fact_sheets/smokeless/use_us/

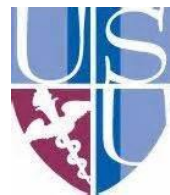


Who uses Smokeless Tobacco (Fort Bragg)

		OR (95% CI)
Gender	Female	1.0
	Male	10.3 (3.7-29.0)
Race	White	1.0
	Black	0.3 (0.2-0.5)
Deployment unit served	Combat	1.0
	Combat Support	0.6 (0.4-0.9)
	Never deployed	0.7 (0.5-0.9)
Use among family	None	1.0
	Father	2.4 (1.4-3.9)
	Other relatives	2.3 (1.6-3.5)
Perception	Less harmful than smoke	1.0
	Equally harmful	0.38
	More harmful	0.27
Cigarette smoking	No	1.00
	Yes	4.20 (3.1-5.6)

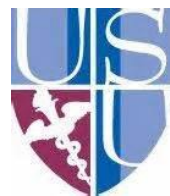


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When do they start to use Smokeless Tobacco (Fort Bragg)

Average age at first use	20
Before basic training	48%
During/After basic training	52%
During basic before first duty station	22%
First duty station	14%
Deployment	15%



Why do they continue to use Smokeless Tobacco (Fort Bragg)

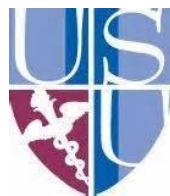
Perception of harm	
Less harmful than cigarettes	19%
Equally harmful as cigarettes	67%
More harmful than cigarettes	10%
Smokeless tobacco has no harm	1%

77% of users thinks smokeless tobacco is at least as harmful as cigarettes
But continue to use it.





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Why do they continue to use Smokeless Tobacco

Quit advice received	Yes	67%
	No	33%
Ever tried to quit	Yes	59%
	No	41%
Barriers to quit	Stress	31%
	Social pressure	6%
	Physical symptoms	6%



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Why do they continue to use Smokeless Tobacco

Method of Quitting	Percent tried
Cold turkey	45%
Gradual decrease	11%
Patch/gum/medication	7%
TRICARE telephone quit counselor	0%
UCANQUIT2 online quit support	0%
Health care provider counseling	0%



Who, When, Why

Who	Young White Male Enlisted Smoker in Combat Unit 22% of non-smokers still uses smokeless tobacco
When	Half came to the Military with Smokeless Tobacco Use Half pick up Smokeless Tobacco habit in the Military
Why	More than 40% never even tried More than 30% never been talked about quitting Stress is major reason for continued use Current cessation strategy not being utilized (0%)



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Who, When, Why

- Who
 - Young White Male Enlisted Smoker in Combat Unit
 - 22% of non-smokers still uses smokeless tobacco
- When
 - Half came to the Military with Smokeless Tobacco Use
 - Half learn in the Military
- Why
 - More than 40% never even tried
 - More than 30% never been talked about quitting
 - Stress is major reason for continued use
 - Current cessation strategy not being utilized (0%)



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Future collaboration with NCI

- Conduct longitudinal cohort study
- Collect buccal mucosa samples, blood samples to identify potential biomarkers for early detection of health issues
- Utilization of the Military Healthcare System Database
 - Outcome, healthcare utilization, disparity research
- Interventional Study



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Questions?
