Posttraumatic Stress Disorder in U.S. Air Force Aviators and Special Forces Operators

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- We have no financial relationships to disclose.
- We will not discuss off-label use and/or investigational use in the presentation.

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Diagnosis in DSM-5

- Criterion A (one required):
  - The person was exposed to death, threatened death, actual or threatened serious injury, or actual or threatened sexual violence, in the following way(s):
    - Direct exposure
    - Witnessing the trauma
    - Learning that a relative or close friend was exposed to a trauma
  - Indirect exposure to aversive details of the trauma, usually in the course of professional duties (e.g., first responders, medics)
  - Does not apply to exposure to aversive details of traumatic events through electronic media, television, or pictures
  - UNLESS this exposure is work related

Diagnosis in DSM-5

- Criterion B (one required): The traumatic event is persistently re-experienced, in the following way(s):
  - Unwanted upsetting memories
  - Nightmares
  - Flashbacks
  - Emotional distress after exposure to traumatic reminders
  - Physical reactivity after exposure to traumatic reminders

Diagnosis in DSM-5

- Criterion C (one required): Avoidance of trauma-related stimuli after the trauma, in the following way(s):
  - Trauma-related thoughts or feelings
  - Trauma-related reminders

Diagnosis in DSM-5

- Criterion D (two required): Negative thoughts or feelings that began or worsened after the trauma, in the following way(s):
  - Inability to recall key features of the trauma
  - Overly negative thoughts and assumptions about oneself or the world
  - Exaggerated blame of self or others for causing the trauma
  - Negative affect
  - Decreased interest in activities
  - Feeling isolated
  - Difficulty experiencing positive affect

Diagnosis in DSM-5

- Criterion E (two required): Trauma-related arousal and reactivity that began or worsened after the trauma, in the following way(s):
  - Irritability or aggression
  - Risky or destructive behavior
  - Hypervigilance
  - Heightened startle reaction
  - Difficulty concentrating
  - Difficulty sleeping

Diagnosis in DSM-5

- Criterion F (required):
  - Symptoms last for more than 1 month
- Criterion G (required):
  - Symptoms create distress or functional impairment (e.g., social, occupational)
- Criterion H (required):
  - Symptoms are not due to medication, substance use, or other illness

Trauma ≠ PTSD

- Lifetime prevalence rates of exposure to trauma are greater than 50%
- Not all individuals respond to traumatic events in the same way
- For those exposed to qualifying traumas, about 18% will develop PTSD

Trauma ≠ PTSD

- The risk varies with the type of trauma experienced and premorbid functioning
- Highest rates of PTSD include survivors of:
  - Rape
  - Military combat and captivity
  - Ethnically or politically motivated internment or genocide

Gender-Related Diagnostic Issues

- PTSD is more prevalent among females compared to males
- Possibly due to greater likelihood of exposure to traumatic events, such as rape and interpersonal violence
  - Sexual assault in the military is a leading cause for female soldiers developing PTSD
- Females tend to have a longer course of illness

Comorbidity

- With PTSD, psychiatric comorbidity is the rule rather than the exception
- Individuals with PTSD are 80% more likely to have another psychiatric disorder
- Major depressive disorder
  - Affecting nearly 50% of men and women with PTSD
- Alcohol abuse
  - >50% of men with PTSD
- Anxiety disorders
  - 3-7 times increased risk for both men and women with PTSD

Development and Course

- Symptoms of PTSD usually begin within the first 3 months after the trauma
  - There may be a delay of onset for several months or even years
- Duration of symptoms is variable
  - Complete recovery occurs in 3 months 50% of the time
  - Some remain symptomatic for years (or a lifetime)
  - With longer disease duration treatment becomes more difficult

Aeromedical Concerns

- The diagnosis of PTSD, especially in the combat environment, is fraught with difficulty
- Normal reactions to combat, operational stress, and emotional/stressful events can all be confused with and labeled as PTSD, especially when the member is routinely exposed to the stressful environment
- Prolonged severe operational stress can cause symptoms consistent with PTSD
- For these type of operational stress reactions, the individual's symptoms typically clear shortly after removal or restriction from duty

Aeromedical Concerns

- Prolonged restriction from duty may cause other difficulties
  - Can’t perform aviation duties
  - Assigned DNIF duties
  - Scut work
  - Stigma
  - Lose status
  - Demoralizing
  - Lose flight pay
  - Career impact

Aeromedical Concerns

- Many of the symptoms of PTSD can interfere with flying safety and mission completion
- Safety is paramount
- Severe PTSD symptoms markedly impair the ability to focus and concentrate on the task at hand
- Some of the more severe symptoms, such as flashbacks, may be acutely incapacitating

Aeromedical Concerns

- Updated Waiver Guide
  - Updated August 2013
- Even if diagnosed with PTSD, no waiver is required if member is able to return to full duty within 60 days of initiation of treatment (minor residual symptoms are acceptable)
- Sound clinical judgment is required

Aeromedical Concerns

- However, PTSD is disqualifying and a waiver will be required before consideration of return to flight status if any of the following conditions are met:
  - DNIF lasts greater than 60 days
  - Member experiences a recurrence of debilitating symptoms upon return to the operational environment
  - Original symptom severity was such that, in the opinion of the flight surgeon, return to the operational environment would entail high risk to the member, the mission, or flight safety

Aeromedical Concerns

- Flight surgeons caring for afflicted aviators, especially in times of combat, need to be particularly sensitive to these issues
- Flight surgeons should work closely with a psychiatrist or psychologist early in the evaluation, treatment, and aeromedical disposition of these aviators
  - whether or not their symptoms are caused by combat/operational stress or other traumatic incidents

PTSD in Military/Aviators

- In the military, the presenting signs and symptoms associated with PTSD include
  - Insomnia
  - Difficulty with concentration and focus
  - Occupational impairment
  - Fear of return to combat
  - Feelings of guilt and shame
    - Individuals with PTSD may also describe painful guilt about surviving when others did not survive or about the things they had to do to survive

Need to Identify

- Primary care settings tend to be the principal point of contact for patients with PTSD, although such patients rarely identify themselves as suffering from the disorder
- Screening for PTSD is important

Need to Identify

- Early intervention and treatment may prevent chronic disease and should commence once symptoms of PTSD persist for 3 or more weeks following the initiating trauma
- It is advisable for primary care providers and flight surgeons to refer these patients to a therapist or treatment team with experience in such therapies
- Long-term multifaceted treatment has shown the greatest benefit to those afflicted, given the complex nature of PTSD
- The “I can prescribe Zoloft” provider can worsen the course of PTSD
- Comprehensive psychiatric evaluation and treatment are best

Treatment

- Both psychotherapy and medication provide effective evidence-based treatments for PTSD
  - Healthy lifestyle interventions are vital as well
- Psychotherapy is the TREATMENT OF CHOICE with the strongest evidence for cognitive behavioral therapies such as cognitive processing therapy, prolonged exposure therapy, and stress inoculation therapy
  - Individual, marital, family, and group psychotherapy are also helpful

Treatment

- Medication can help to control the symptoms of PTSD (especially when overwhelming)
- The symptom relief that medication provides allows many patients to participate more effectively in psychotherapy

Treatment

- During the treatment phase, any reasonable treatment can be utilized (Prazosin, benzodiazepines, hydroxizine…)
- Antidepressants as monotherapy to be considered for a waiver:
    - Sertraline up to 200 mg/day
    - Citalopram up to 40 mg/day
    - Escitalopram up to 20 mg/day
    - Bupropion SR or XL up to 450 mg/day
- To be considered, the aviator needs to be clinically asymptomatic for at least 6 months

Treatment

- Selective serotonin reuptake inhibitors (SSRIs) were found to be effective as first-line drug therapy in a systematic review of 35 randomized trials and are recommended in treatment guidelines for PTSD from the American Psychiatric Association
- SSRIs reduce flashbacks, arousal, and avoidance in patients with PTSD
- SSRIs also address associated depressive and anxious symptoms

Enhanced Medical Standards

Battlefield Airmen	"Rated" Aircrew	Aircrew	Other
TAC-P	Pilots	Sensor operators	ATC
Combat Controller	RPA Pilots	Loadmasters	Missiliers
STO	Navigators	Aerial Refuelers	Adjunctive aircrew
Pararescue	Electronic Warfare Officers	Communication Specialists	
CRO	Combat Systems Officers		
	Air Battle Managers		
	Flight Surgeons		

Enhanced Medical Standards

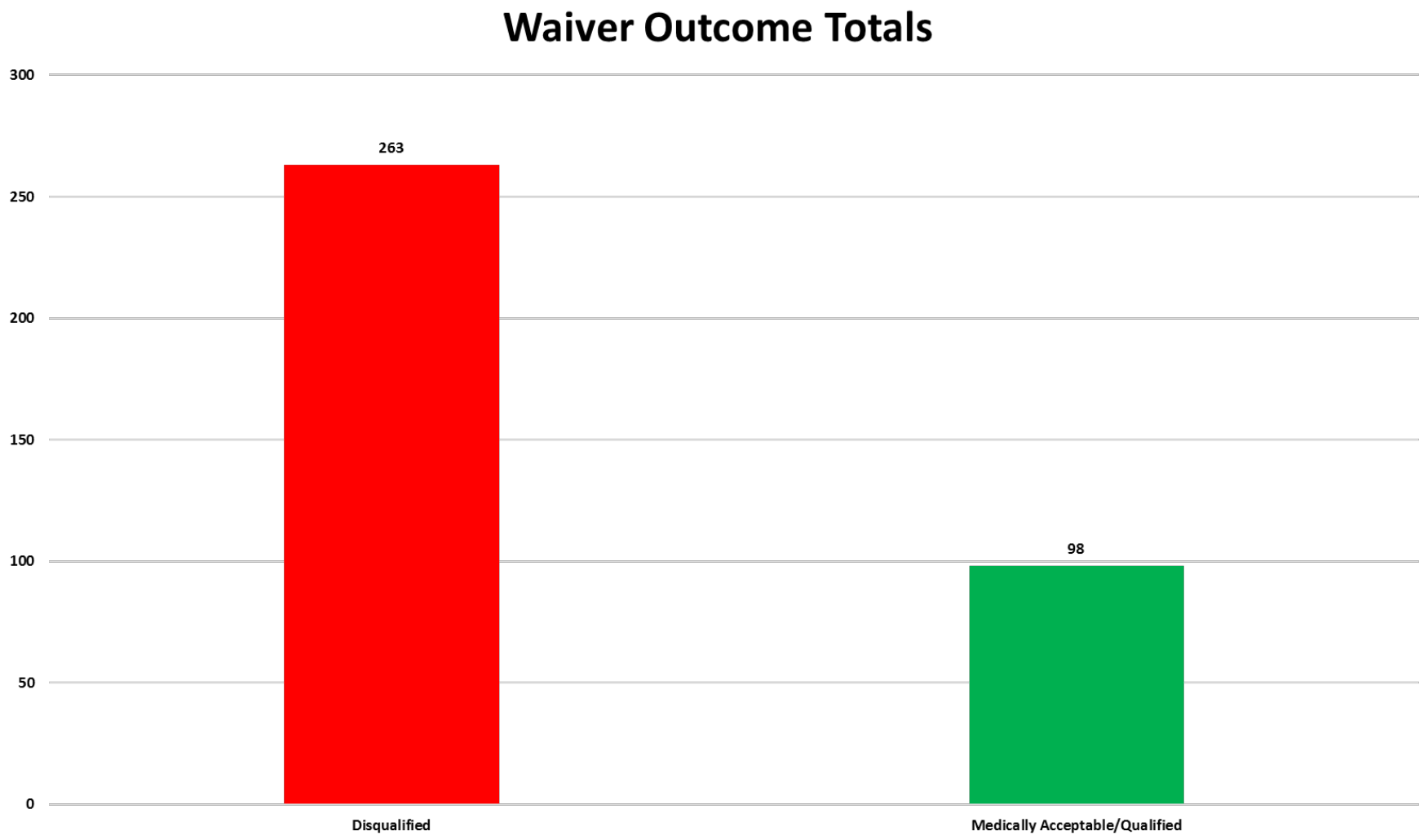
- Our population may not be a representative sample
  - Waiver eligible
    - “Residual symptoms” or in remission

- Not apparent how many aircrew have symptoms but do not report
  - Surveillance mechanisms have not reported an epidemic of PTSD (or related disorders) impairing duty in aircrew
    - This population is different than infantry and with different exposure

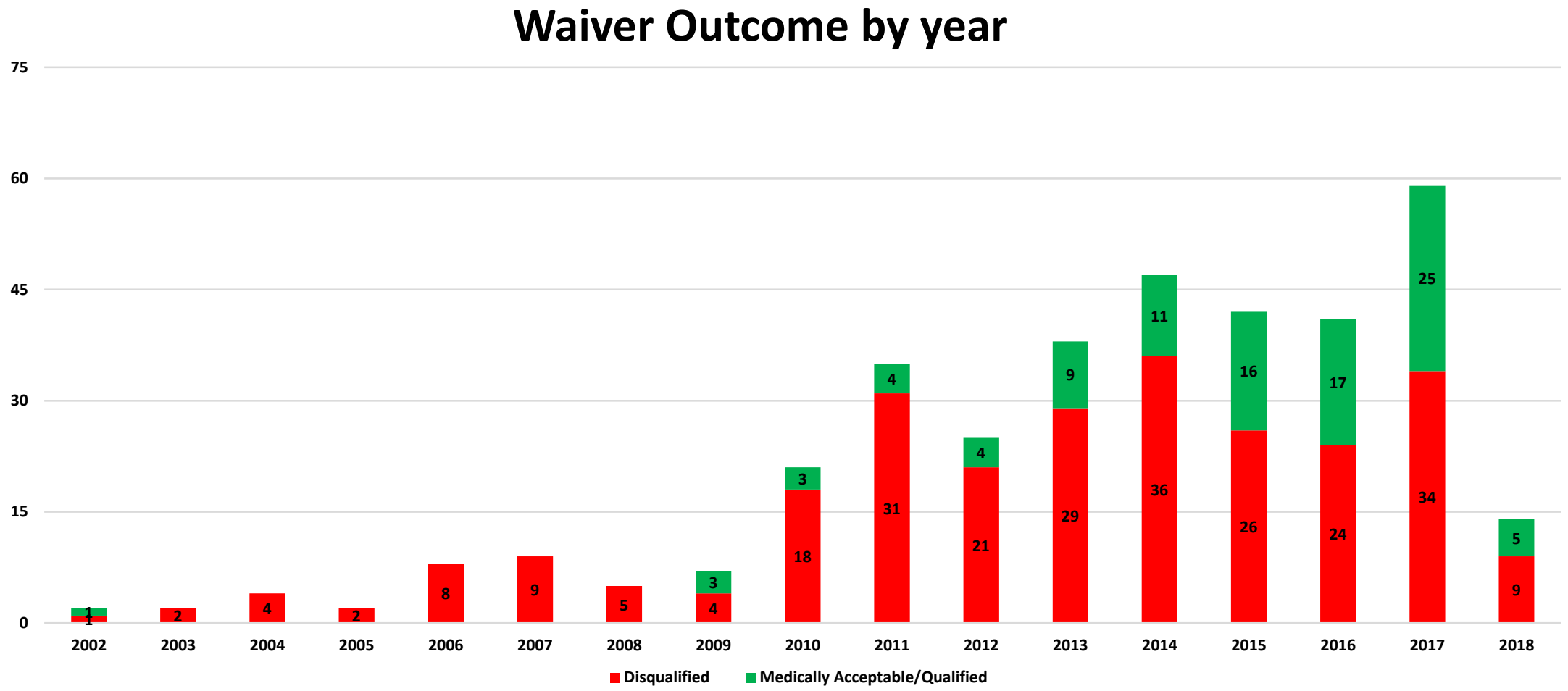
AIMWTS Review

- >350 aviators tracked in the “system” with a PTSD diagnosis
  - 17-year period
  - Unclear how well they did and whether they would be waiver eligible
    - Anticipate change in policy would affect this

AIMWTS Review



AIMWTS Review



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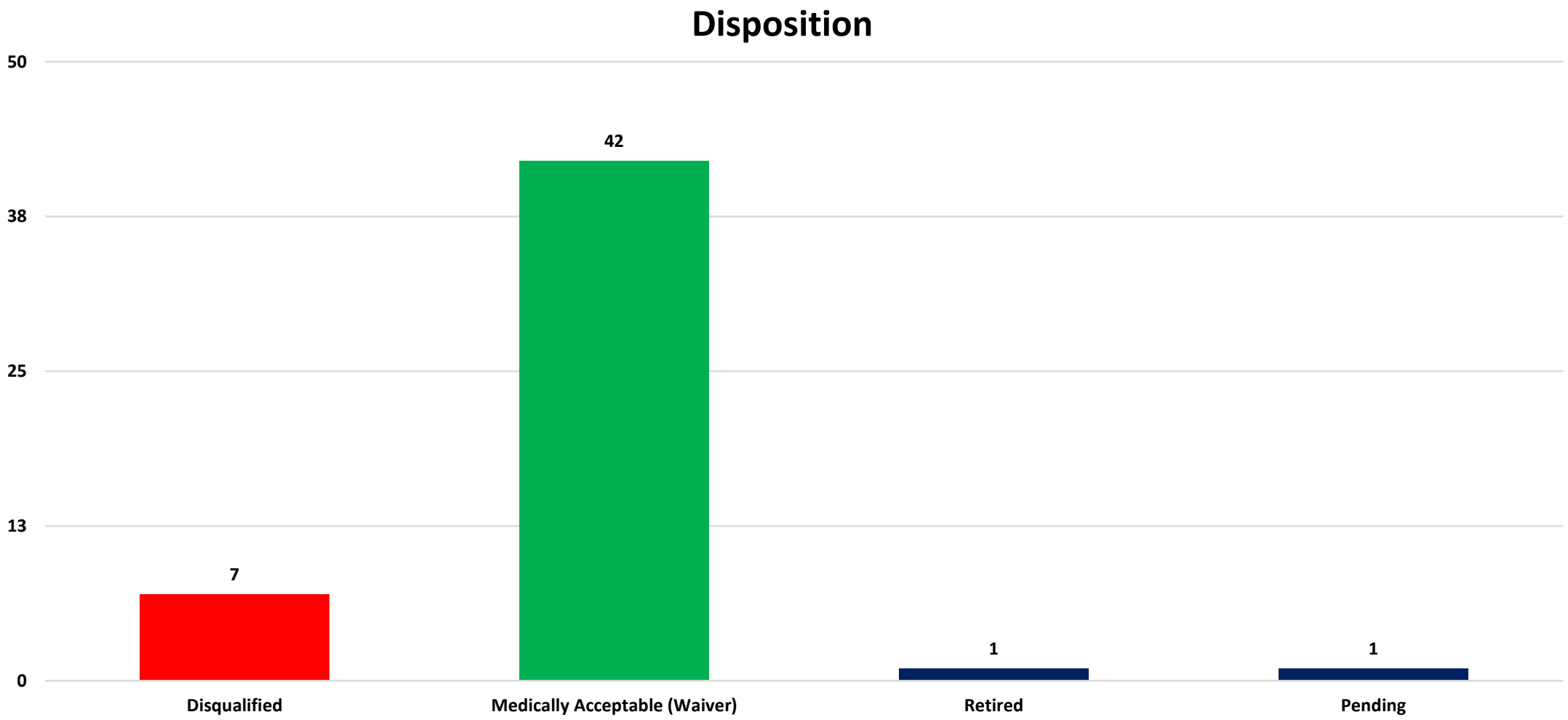

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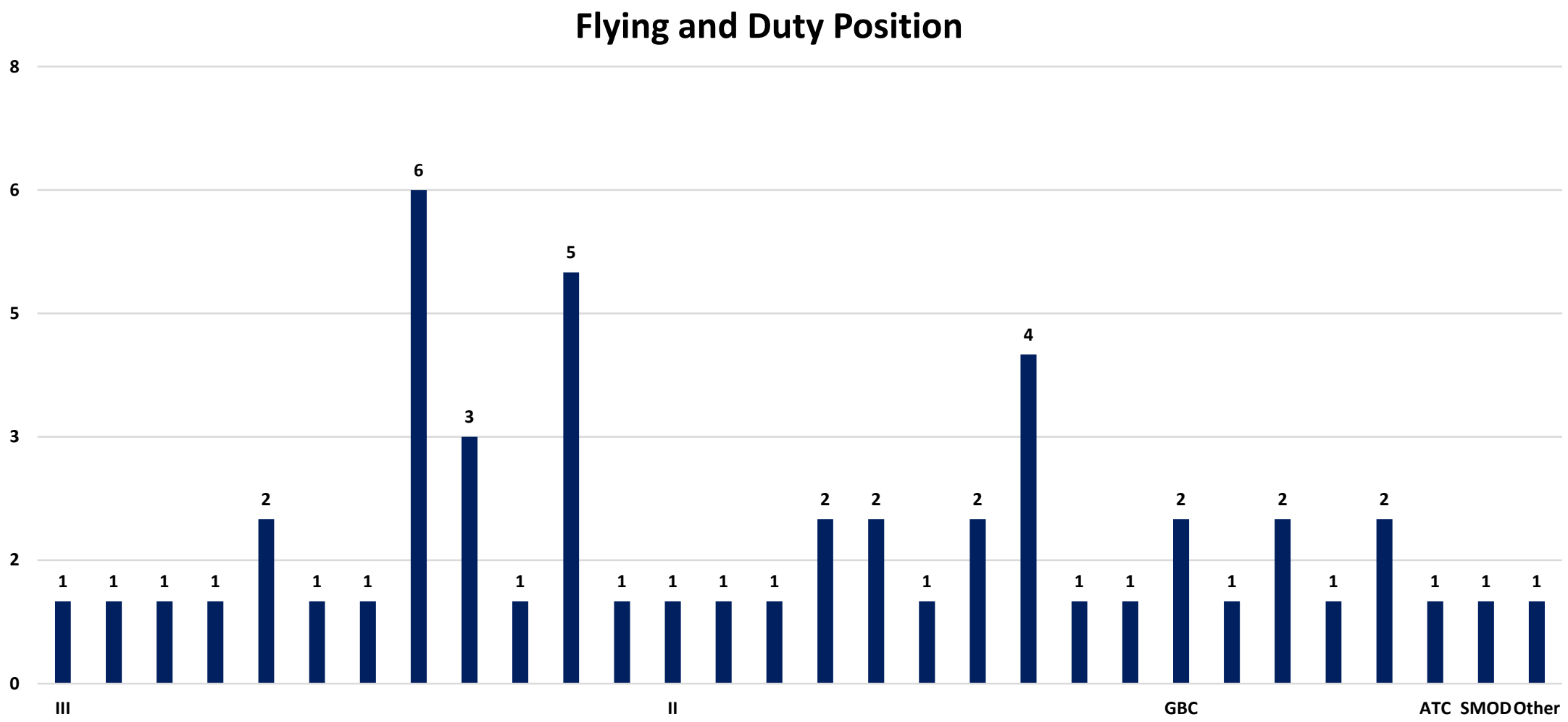

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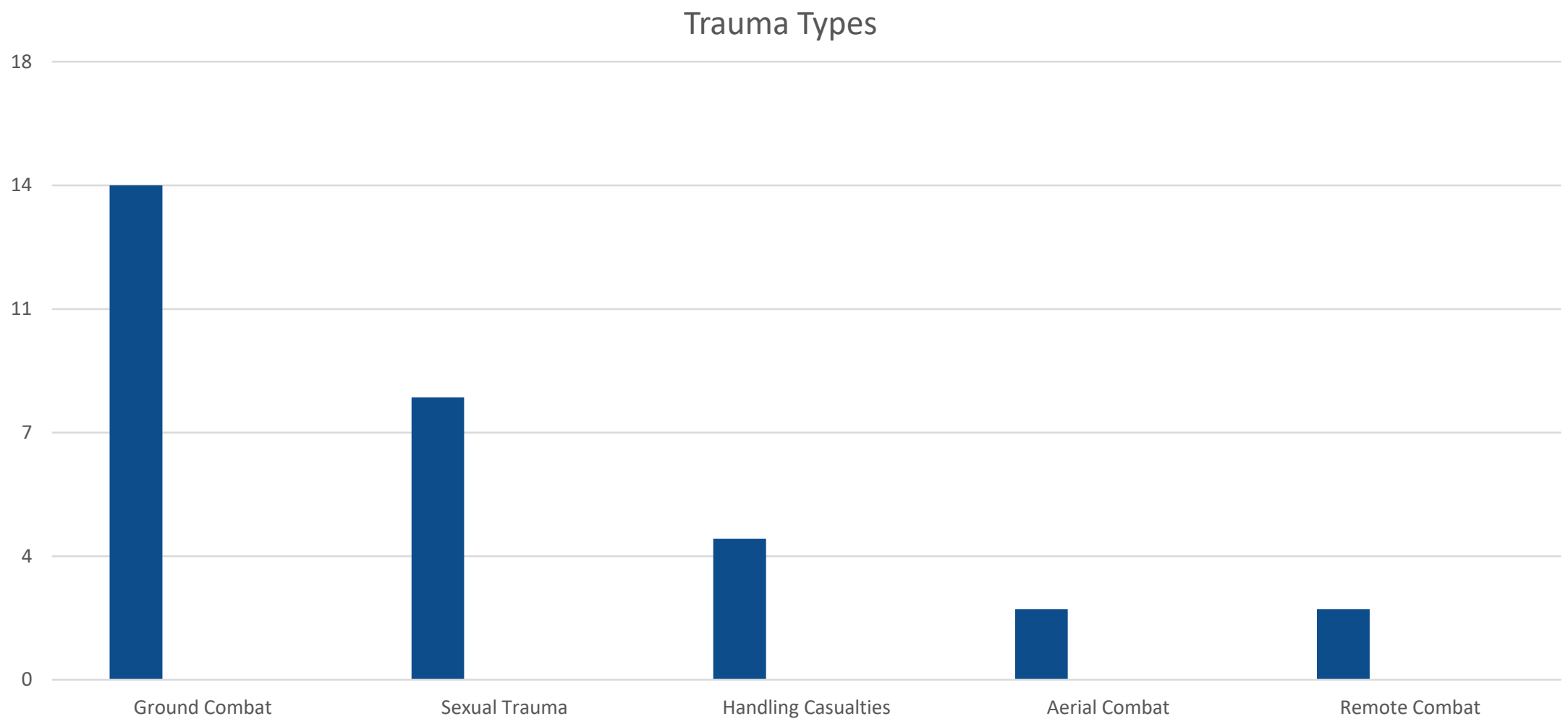

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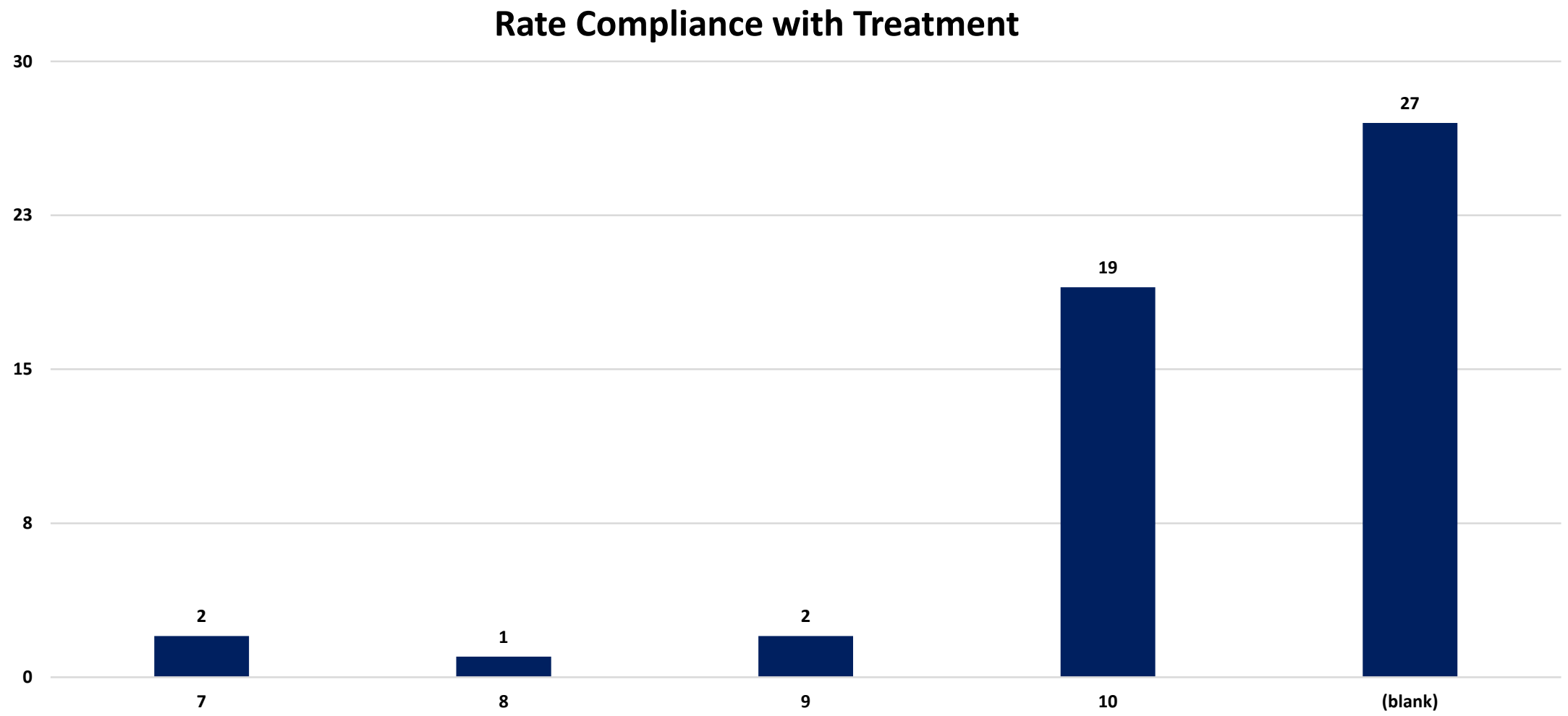

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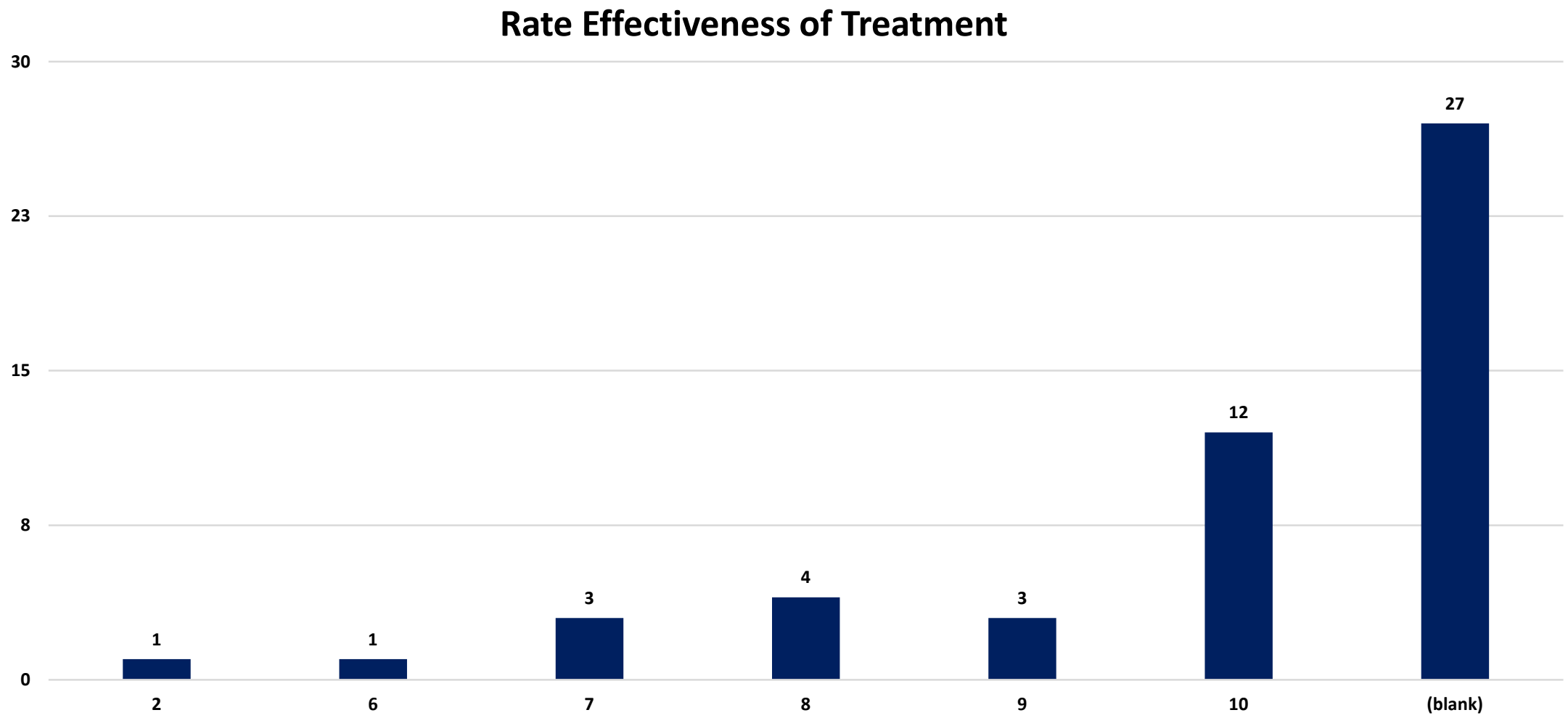

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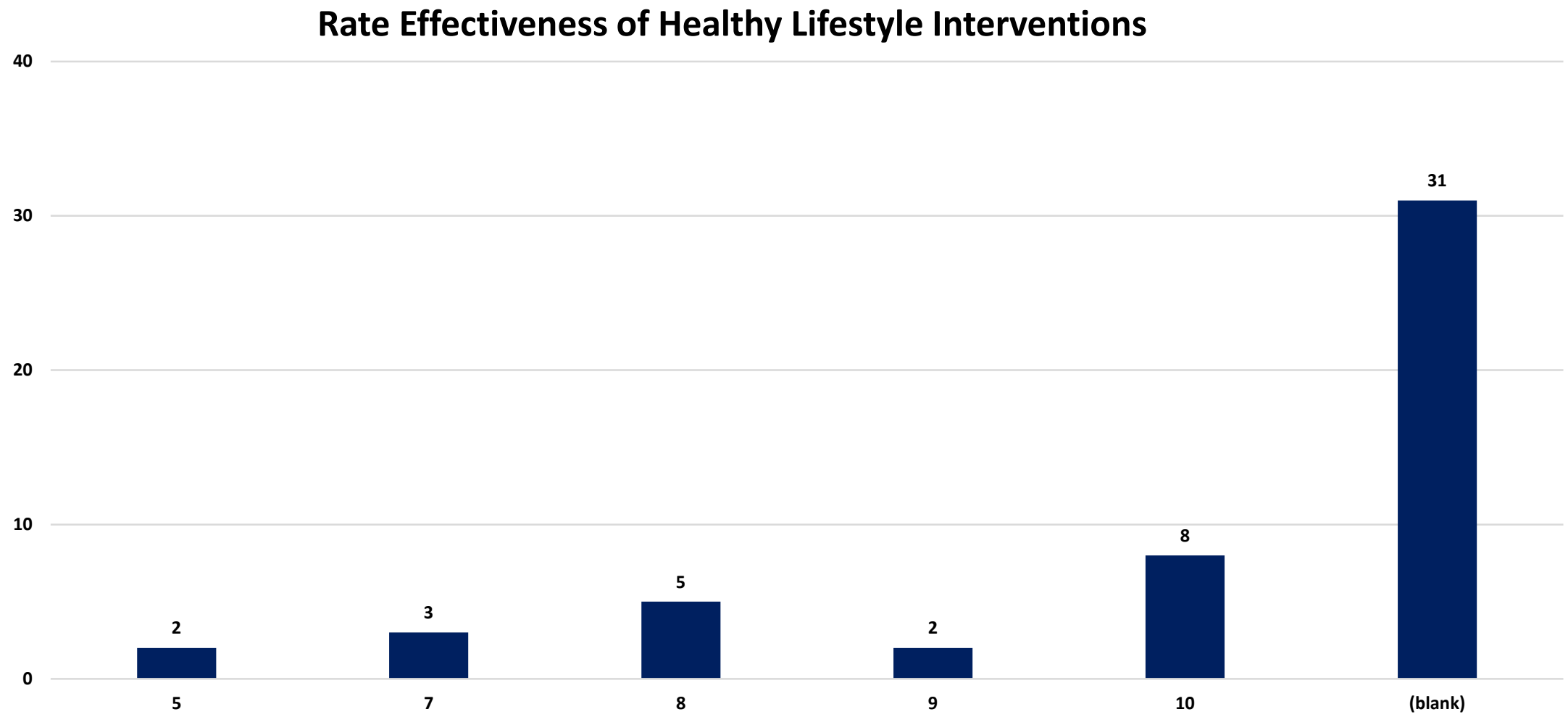

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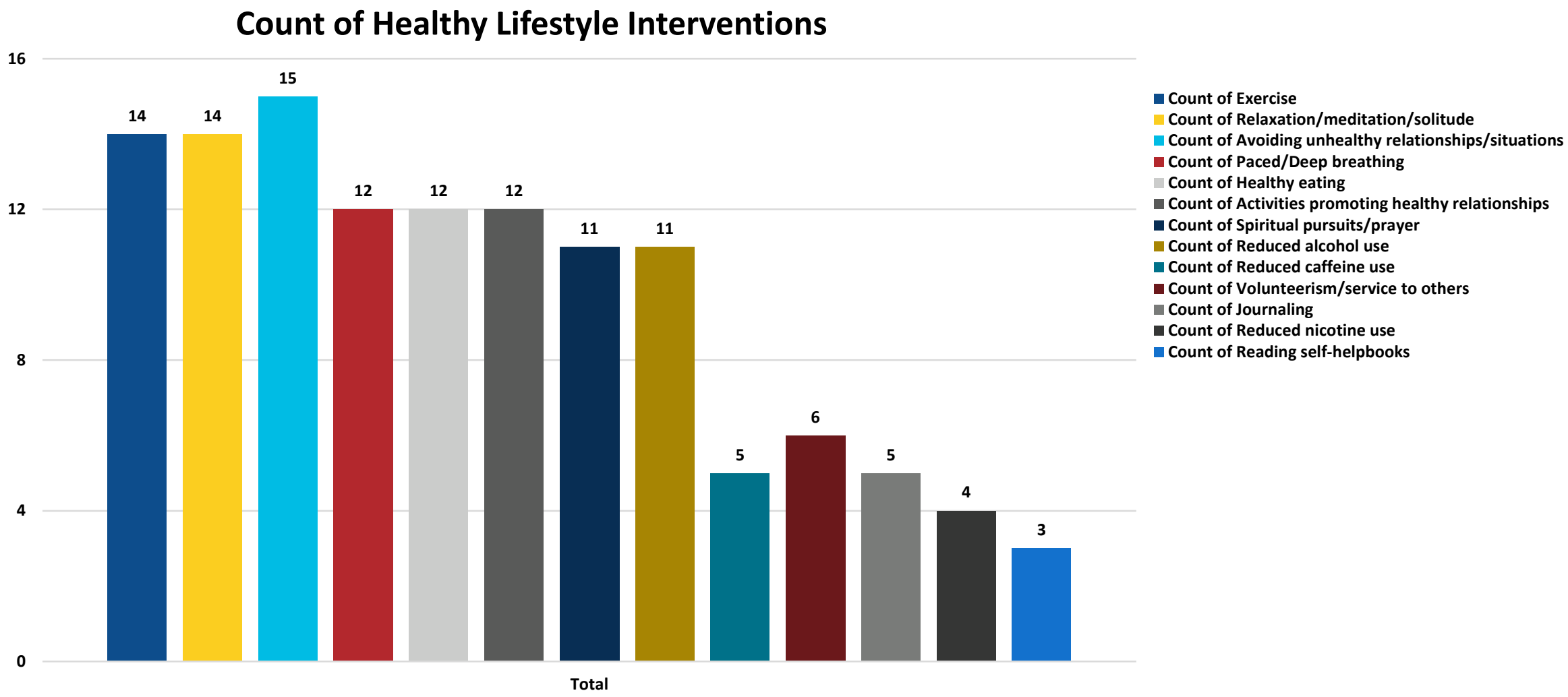

Conclusions

- With current Waiver Guidelines 85% of aviators with PTSD who see ACS are recommended for a waiver
  - Depends on crew position, type of trauma, severity of symptoms, and adequacy of treatment
- Those who are compliant with treatment have the most effective reduction in symptoms
- The more effective the treatment the more likely a waiver is recommended
- Most effective treatments are exposure based therapy with a trained professional
- Treatment with Antidepressants are best managed by psychiatry in this population

Conclusions

- Flight docs should work closely with the psychiatrist and psychologist
- Flight docs should help monitory healthy lifestyle changes:
  - Exercise
  - Relaxation/Meditation/Mindfulness/Spirituality
  - Maintaining healthy relationships
  - Breathing exercises
  - Healthy eating, Reduced caffeine/alcohol/nicotine

References

- American Psychiatric Association. Trauma and stressor-related disorders. In: Diagnostic and statistical manual of mental disorders, 5th ed. Arlington (VA): American Psychiatric Association; 2013.
- Chappelle W, Goodman T, Reardon L, Thompson W. An analysis of post-traumatic stress symptoms in United States Air Force drone operators. J Anxiety Disord. 2014; 28(5):480-487.
- Chappelle W, McDonald K, Thompson B, Swearengen J. Prevalence of high emotional distress and symptoms of post-traumatic stress disorder in U. S. Air Force active duty remotely piloted aircraft operators (2010 USAFSAM survey results). Wright-Patterson AFB (OH): U.S. Air Force School of Aerospace Medicine; 2012. Technical Report AFRL-SA-WP-TR-2013-0002.
- Coughlin SS. The epidemiology of post-traumatic stress disorder. In: Post-traumatic stress disorder and chronic health conditions. Washington (DC): American Public Health Association. 2013.
- Gates MA, Holowka DW, Vasterling JJ, et al. Posttraumatic stress disorder in veterans and military personnel: epidemiology, screening, and case recognition. Psychol Serv. 2012; 9(4):361-382.
- Litz BT, Schlenger WE. PTSD in service members and new veterans of the Iraq and Afghanistan wars: a bibliography and critique. PTSD Research Quarterly. 2009; 20(1):1-8.
- Otto JL, Webber BJ. Mental health diagnoses and counseling among pilots of remotely piloted aircraft in the United States Air Force. MSMR. 20(3):3-8.
- Ouma JA, Chappelle WL, Salinas A. Facets of occupational burnout among U.S. Air Force active duty and National Guard/Reserve MQ-1 Predator and MQ-9 Reaper operators. Wright-Patterson AFB (OH): U.S. Air Force School of Aerospace Medicine; 2011. Technical Report AFRL-SA-WP-TR-2011-0003.
- Ramchand R, Schell TL, Jaycox LH, Tanielian T. Epidemiology of trauma events and mental health outcomes among service members deployed to Iraq and Afghanistan. In: Ruzek JI, Schnurr PP, Vasterling JJ, Friedman MJ, eds. Caring for veterans with deployment-related stress disorders: Iraq, Afghanistan, and beyond. Washington (DC): American Psychological Association; 2011:13-34.
- Reardon L, Chappelle W, Goodman T, et al. Prevalence of posttraumatic stress symptoms in United States Air Force intelligence, surveillance, and reconnaissance agency imagery analysts. Psychol Trauma. 2016; 8(1):55-62.
- Richardson LK, Frueh CB, Acierno R. Prevalence estimates of combat-related post-traumatic stress disorder: a critical review. Aust N Z J Psychiatry. 2010; 44(1):4-19.
- Smith CS, Robie C, Folkard S, et al. A process model of shiftwork and health. J Occup Health Psychol. 1999; 4(3):207-218.

Questions?

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