

Combat and Operational Stress Control: Performance Improvement Study

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Psychiatric air evacuation accounts for nearly 30% of Theater evacuations from CENTCOM over the past five to seven years. Suicidal and other service members at behavioral health safety risk (self-injurious behavior, homicidal ideation) represent a significant number of the psychiatric evacuations from CENTCOM and presenting management challenges to deployed providers. The Combat and Operational Stress Control (COSC) mission is providing Behavioral Health (BH) prevention to units in Camp Arifjan (CAKU) and Camp Buehring (CBKU) in Kuwait, Prince Sultan Air Base (PSAB), Erbil Air Base (EAB) in Iraq, and Joint Training Center (JTC) in Jordan. Anxiety, combat related stress, depression, family or social stressors, occupational stress, and sleep are common behavioral health concerns for service members in CAKU, CBKU, PSAB, EAB, and JTC. The 785TH COSC provided 517 psychoeducational classes to mitigate presenting problems in deployed population.

Within a large sample of service members in CAKU ($n = 5000$), CBKU ($n = 7000$), PSAB ($n = 3000$), EAB ($n = 1000$), JTC ($n = 3000$), and TFS/MFO ($n = 1000$) we evaluated the contribution of psychoeducational classes given on stress management, anger management, sleep hygiene, mindfulness, resiliency, Forging Iron Team (FIT), nutrition, and suicide prevention to provide in-

creased suicide risk awareness and decrease psychiatric evacuation associated with suicidal ideation/behavior and other safety risks (self-injurious behavior, homicidal ideation).

COSC discrete surveillance and prevention (outreach psychoeducation classes) were not performed from January through May 2023. During this time period, psychoeducation classes on stress management, anger management, sleep hygiene, mindfulness, and suicide prevention were limited to clinic settings. Numbers of outreach psychoeducation classes and psychiatry evacuation from January to May 2023 are shown in Table 1.

To ascertain the impact of outreach psychoeducation classes (stress management, anger management, sleep hygiene, mindfulness, resiliency, Forging Iron Team (FIT), nutrition, and suicide prevention) on suicidal behavior, numbers of psychiatric air evacuation were tabulated for areas in which outreach psychoeducation classes were offered and compared to numbers of psychiatric air evacuation observed in areas where psychoeducation classes were not offered or not promoted in the community. As depicted in Table 2, psychiatric air evacuations associated with suicidal behavior were numerically low in areas of operation where outreach psychoeducation classes were offered.

Table 1. Numbers of Outreach Psychoeducation Classes and Numbers of Psychiatric Air Evacuations, Timeframe: January 2023 – May 2023

Area of Operation	Number of Outreach Psychoeducation Classes	Psychiatric Air Evacuations for Suicide Behavior	Total Psychiatric Air Evacuations
CAKU	None	8	23
CBKU	None	7	12
PSAB	50	2	2
EAB	None	2	4
AAAB	None	9	13
JTC	None	4	6
TFS/MFO	None	0	0

Table 2. Comparison between number of psychiatric air evacuation in area of operation where outreach psychoeducation classes were promoted or not, for a specific period

Timeframe	January–May 2023		June–December 2023	
Area of Operation	Psychiatric Air Evacuations for Suicide Behavior	Total Psychiatric Air Evacuations	Psychiatric Air Evacuations for Suicide Behavior	Total Psychiatric Air Evacuations
CAKU	8	23	10	24
CBKU	7	12	4	8
PSAB	2	2	4	4
EAB	2	4	3	6
AAAB	9	13	2	5
JTC	4	6	0	2
TFS/MFO	0	0	1	1

To increase suicide risk awareness and reduce suicidal behavior, psychoeducation classes were provided to Service Members on stress management, anger management, sleep hygiene, mindfulness, resiliency, Forging Iron Team (FIT), nutrition, and suicide prevention. Results shown in Table 3 revealed that numbers of psychiatric air evacuations were numerically lower in areas of operation where the percentage of population trained in psychoeducation is higher.

Areas of operation with no COSC BH presence included United Arab Emirates, Iraq (AAAB, BDSC), Qatar, and Bahrain. COSC BH was implemented in CAKU, CBKU, PSAB, EAB, JTC, and TFS/MFO where COSC discrete surveillance and prevention were promulgated. Comparisons between areas of operation with and without

COSC BH presence were examined in respect of outreach psychoeducation classes and numbers of psychiatric air evacuation associated with suicidal behavior. Results depicted in Table 3, for the period from June – December 2023, showed the percentage of psychiatric air evacuation was low in areas of operation with COSC BH presence.

Comparison between the total number of air evacuations recorded in 2022 and 2023 for CENTCOM areas of operation was examined to ascertain the effectiveness of the 785th COSC outreach prevention program. Results depicted in Table 4, for the calendar year 2022 and 2023, showed the percentage of psychiatric air evacuations was numerically lower in 2023 than 2022, a decrease of 17.4%.

Table 3. Population size, Psychoeducation Training Status, and Psychiatric Air Evacuations, June 2023 – December 2023

Area of Operation	Total Population	Classes Given	Attendees	% of Population attending Classes	Air Evacuations for Suicide Behavior	Total Psychiatric Air Evacuations
CAKU	5000	164	741	14.82%	10	24
CBKU	7000	194	2062	29.45%	4	8
PSAB	3000	53	951	31.7%	4	4
EAB	1000	21	406	40.6%	3	6
AAAB	500	12	91	18.2%	2	5
JTC	3000	37	231	7.7%	0	2
TFS/MFO	1000	34	912	91.2%	1	1
UAE	unknown	-	-	-	3	7
BDSC	unknown	-	-	-	2	2
QATAR	unknown	-	-	-	9	15
BAHRAIN	unknown	-	-	-	13	21

Table 4. Comparison between calendar year 2022 and 2023 of total CENTCOM air evacuations.

Timeframe	Total CENTCOM Air Evacuations	Psychiatric Air Evacuations	Percentage of Psychiatric Air Evacuations	Psychiatric Air Evacuations for Suicide Behavior
JAN-DEC 2022	525	218	41.5%	136
JAN-DEC 2023	515	124	24.1%	59

Suicidal and other service members at behavioral health safety risk (self-injurious behavior, homicidal ideation) represent a significant number of psychiatric evacuations from CENTCOM, and present management challenges to deployed providers. A significant number of psychiatric air evacuation has been reported on the weekly basis by 3D MED CMD. The precise cause of suicidal ideation among service members in CENTCOM is still not known. The rate quoted for psychiatric air evacuation is approximately 30% of all evacuations in CENTCOM over the past five to seven years.

COSC discrete surveillance and outreach prevention activities were not performed from January through May 2023. Instead, Service Members signed up and attended psychoeducation classes on stress management, anger management, sleep hygiene, mindfulness, resiliency, Forging Iron Team (FIT), nutrition, and suicide prevention in COSC clinics. As indicated on the 3D MED CMD (FWD) CENTCOM AE report, there were eight psychiatric air evacuations associated with suicidal ideation in CAKU, seven in CBKU, two in PSAB, two in EAB, nine in AAAB, four in JTC, and 0 in TFS/MFO. See Table 1.

Considering outreach prevention psychoeducation classes provided to service members between June 2023 and December 2023, we observed 10 psychiatric air evacuations related to suicide ideation in CAKU, four in CBKU, four in PSAB, three in EAB, two in AAAB, 0 in JTC, and one in TFS/MFO. In addition, numbers of psychiatric air evacuation were numerically low in areas with high percentage of population trained in psychoeducation. See Table 2. These prevention psychoeducation classes are postulated to have increased suicide prevention awareness with secondary reduction in suicidal behavior.

To positively impact the rate of psychiatric air evacuation, the 785th COSC implemented a COSC discrete surveillance program and promulgated a COSC prevention program inclusive of outreach psychoeducation classes. No historical data on COSC discrete surveillance and outreach prevention psychoeducation classes were available for review and analysis. As indicated on the 3D MED CMD (FWD) CENTCOM AE report, from January 2023 to May 2023, there were eight psychiatric air evacuations associated with suicidal ideation in CAKU, seven in CBKU, two in PSAB, two in EAB, nine in AAB, four in

JTC, and 0 in TFS/MFO. From June 2023 to December 2023, there were 10 psychiatric air evacuations associated with suicidal ideation in CAKU, four in CBKU, four in PSAB, three in EAB, two in AAAB, 0 in JTC, and one in TFS/MFO. See Table 3. We observed that numbers of psychiatric air evacuations were numerically low, from June to December 2023, in all areas of operation, exclusive of CAKU and PSAB. Furthermore, to evaluate the effectiveness of the 785th COSC outreach prevention program, we compared the 2022 and 2023 percentages of psychiatric air evacuations in CENTCOM. We observed a decrease of 17.4%, from 41.5% in 2022 to 24.1% in 2023. See Table 4. These findings underlined the impact of outreach psychoeducation classes (stress management, anger management, sleep hygiene, mindfulness, resiliency, Forging Iron Team (FIT), nutrition, and suicide prevention) on suicidal behavior and other behavioral health conditions. A correlation and causation study are strongly recommended.

COSC mission included providing BH prevention in CAKU, CBKU, PSAB, EAB, AAAB, JTC, and TFS/MFO. There is no COSC BH presence in United Arab Emirates, Iraq (BDSC), Qatar, and Bahrain. Considering numbers of outreach psychoeducation classes provided to service members and the percentage of the population, for each area of operation, that received outreach psychoeducation training, we observed low psychiatric air evacuations associated with suicidal behavior in areas of operation supported by COSC in comparison with areas of operation with no BH presence. See Table 3. Comparisons between area of operation with and without COSC BH presence were examined in respect of outreach psychoeducation classes and psychiatry evacuations associated with suicidal behavior. Results depicted in Table 3, for the period from June 2023 – December 2023, showed numbers of psychiatric air evacuations were similar in areas of operation with or without COSC BH presence. These findings encourage further examination of: 1) the impact of outreach COSC BH prevention psychoeducation classes on service members' suicidal behavior; 2) the need of BH presence in areas of operation not supported by a COSC BH team; and 3) risk factors of suicidal ideation among service members in CENTCOM.

There are several limitations to this study. First and foremost, this was a sample of convenience, as the study was carried out using the 785th COSC outreach prevention data. Thus, the findings of this study should be used for

COSC performance improvement only. It is also important to note that data were collected to evaluate the 785th COSC discrete surveillance and outreach prevention program. Therefore, the observed decrease in psychiatric air evacuation, associated with suicidal ideation, from June through December 2023 was due, in part, to outreach prevention psychoeducation classes, along with other factors not examined by this study, such as changes in operations tempo. A larger sample size collected over a longer period is necessary to determine the full impact of this model of COSC discrete surveillance and outreach prevention program.

Second, COSC outreach prevention data were de-identified data used to partially determine association between outreach prevention psychoeducation classes and decrease in psychiatric air evacuation. More comprehensive data (e.g., gender, sex, age) are needed for a full study of the impact of these prevention activities.

Third, although a decrease of psychiatric air evacuation, associated with suicidal ideation, was observed in areas supported by COSC that promulgated outreach prevention psychoeducation classes, there were no available data on the environment and the Air Force BH prevention program. Thus, the observed decrease in psychiatric air evacuation, associated with suicidal ideation, from June through December 2023 should not be attributed to the 785th COSC prevention program solely.

Last, there is availability bias in our data, as there are no historical COSC prevention data and we can only

assess the impact of COSC prevention psychoeducation classes on psychiatric air evacuation, associated with suicidal ideation, using available 785th COSC prevention data.

Given that relatively little empirical research exists about the impact of COSC prevention program on service members' suicidal behavior in CENTCOM, this performance improvement study elucidates, to a certain extent, the importance and inauguration of a well-structured COSC discrete surveillance and outreach prevention program. Future COSC performance improvement study, correlation and causation research, addressing these limitations, are warranted.

Service members in CENTCOM are highly susceptible to suicidal or homicidal ideation among all psychiatric conditions. A COSC discrete surveillance and outreach prevention performance study alone cannot confirm correlation nor causation between the COSC discrete surveillance and outreach prevention and decrease in psychiatric air evacuation associated with suicidal ideation. Further COSC discrete surveillance and outreach prevention performance study, correlation, and causation study are warranted, with larger service members populations, with special attention to suicidal ideation, to determine the full impact of the COSC discrete surveillance and outreach prevention program and develop a theoretical model of COSC behavioral health intensive warrior resiliency program for service members in CENTCOM.

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