



# U.S. Armed Forces Heat Illness Report September 2024

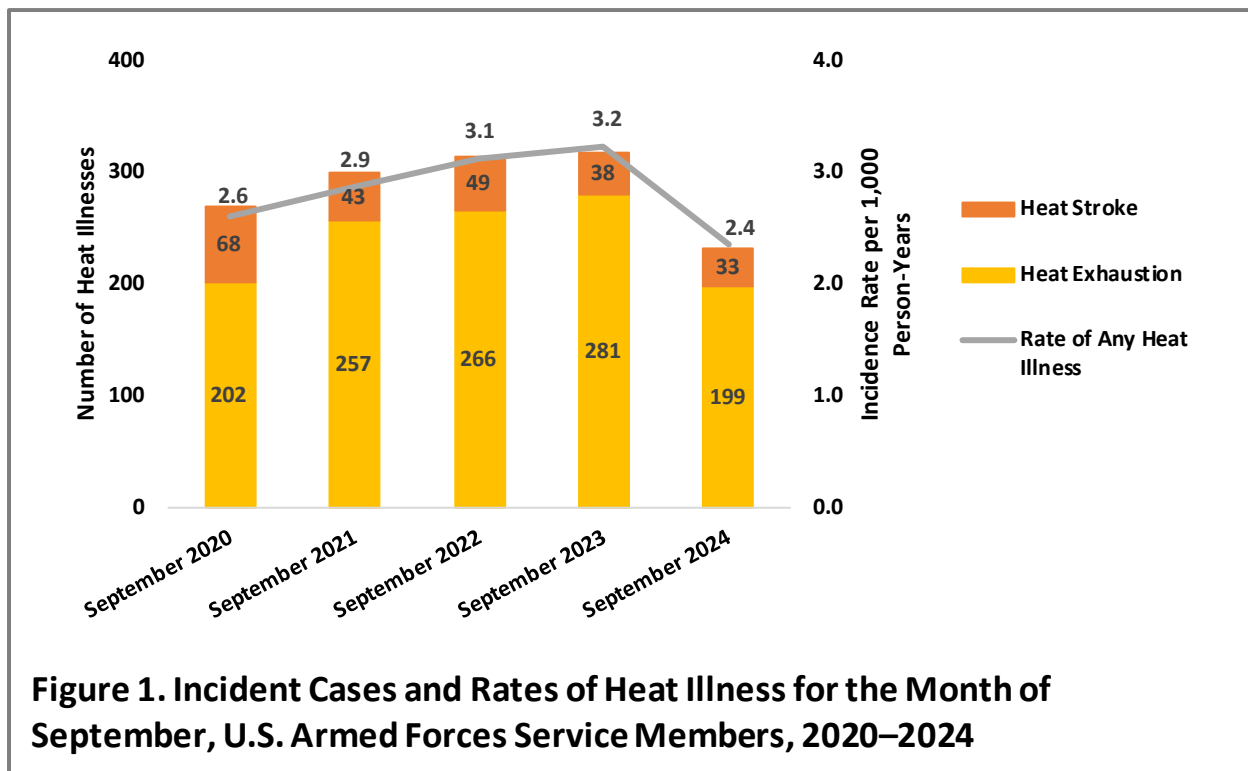
# DCPH-A

Defense Centers for Public Health – Aberdeen

This report serves to describe incident heat illness (HI) cases among U.S. Armed Forces Service members (SMs) including Active Duty, trainees, Reserve, and Guard members. Non-Service member beneficiaries are excluded. The data for this report are obtained from the Defense Health Agency’s Weather-related Injury Repository (WRIR), which captures a selection of *International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM)* codes in inpatient and outpatient medical encounter records from the Military Health System Data Repository (MDR), as well as medical event reports of heat exhaustion and heat stroke submitted through the Disease Reporting System-internet (DRSi).<sup>1</sup> The medical event reports used to identify HIs are adapted from standard case definitions established by the Armed Forces Health Surveillance Division (AFHSD).<sup>2</sup> SMs are counted as an incident case if they have an initial encounter for an HI within the calendar year. Consistent with the AFHSD case definition, SMs are considered an incident case only once per calendar year. Denominators used for the rate of any heat illness were obtained from MHS Mart (M2) by service branch and month. Due to late data entry and delayed processing of data in the MDR, values for 2024 may be artificially low.

Beginning in 2024, Coast Guard data were added to the WRIR. Coast Guard data from 2018 to 2023 were included in the WRIR for historical comparisons and new records will be included in the monthly updates to the WRIR moving forward. The completeness of the Coast Guard data is unknown at this time. The data in this report are not comparable to those of previous HI reports due to the addition of Coast Guard data.

In September 2024, 232 HIs (199 heat exhaustion cases, 33 heat stroke cases) were diagnosed among SMs (Figure 1). Of these, 14 cases were hospitalized (8 heat exhaustion cases, 6 heat stroke cases) (data not shown). The incidence rate of any HI in SMs for September 2024 was 2.4 cases of HI per 1,000 person-years. In the month of September during the last 5 years, HI rates rose from 2020 (2.6 cases of HI per 1,000 person-years) through 2023 (3.2 cases of HI per 1,000 person-years) and decreased to a 5 year low in 2024 (2.4 cases of HI per 1,000 person-years) (Figure 1).



### References

1. Armed Forces Health Surveillance Branch, Defense Health Agency. In collaboration with U.S. AirForce School of Aerospace Medicine, U.S. Army Public Health Center, and Navy and Marine Corps Public Health Center. Armed Forces Reportable Medical Events. Guidelines and Case Definitions, October 2022. Accessed May 20, 2024. <https://www.med.navy.mil/Portals/62/Documents/NMFA/NMCPHC/root/Documents/program-and-policy-support/DRSI/Armed-Forces-Reportable-Medical-Events-Oct-2022.pdf>
2. Armed Force Health Surveillance Branch. Surveillance Case Definition: Heat Illness. Accessed May 6, 2024. <https://health.mil/Reference-Center/Publications/2019/10/01/Heat-Injuries>

For more information: [DCPH-A Heat Illness Prevention](#)  
Contact us: [DCPH-A Disease Epidemiology Branch](#)

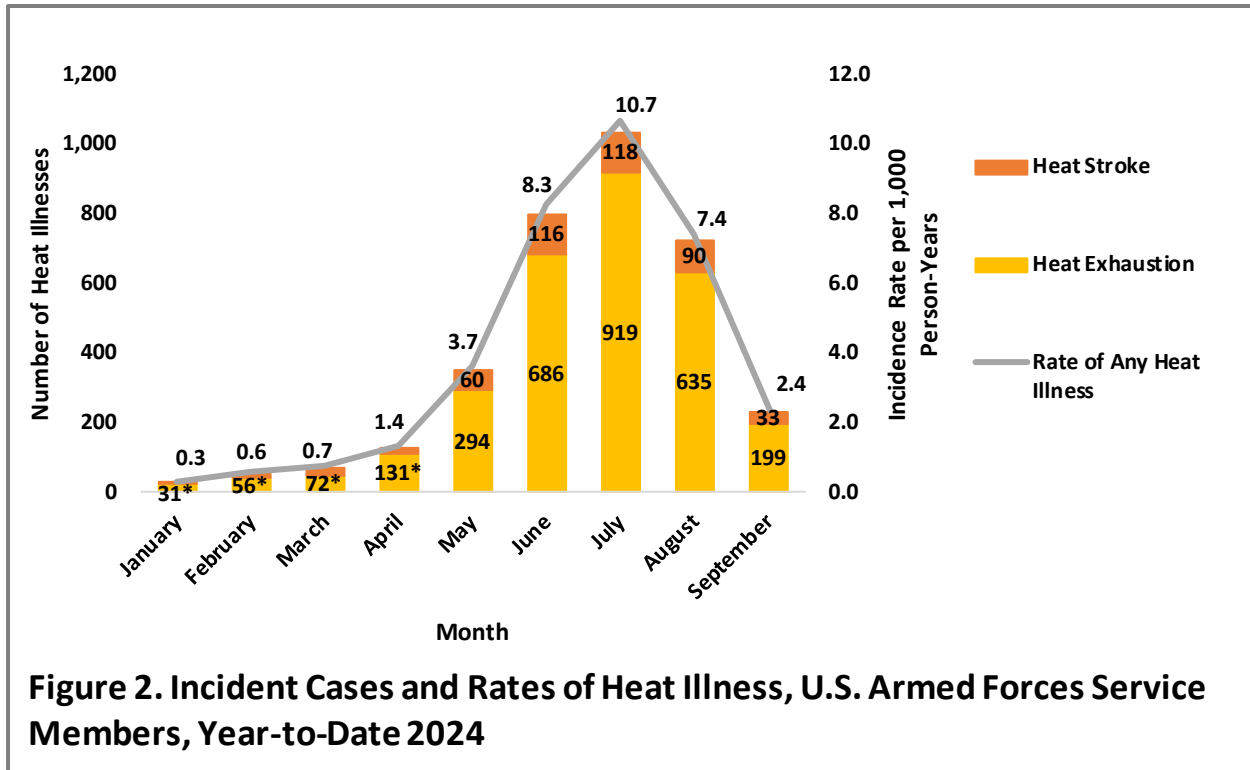
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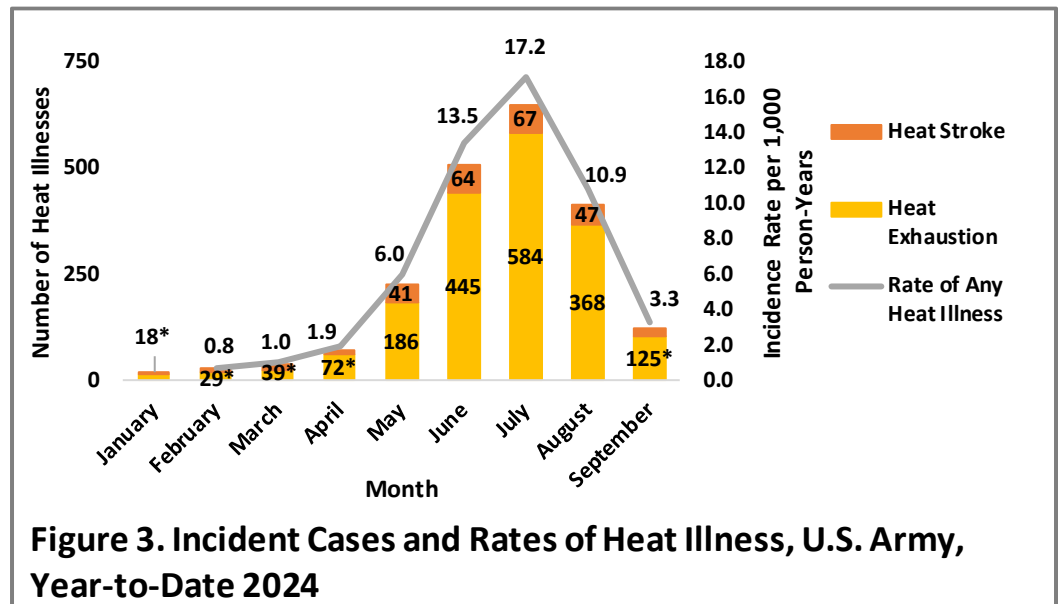
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## September 2024

During the 2024 heat year, the rate of HIs among SMs increased monthly to a season high in July 2024 and decreased through September 2024 (Figure 2).



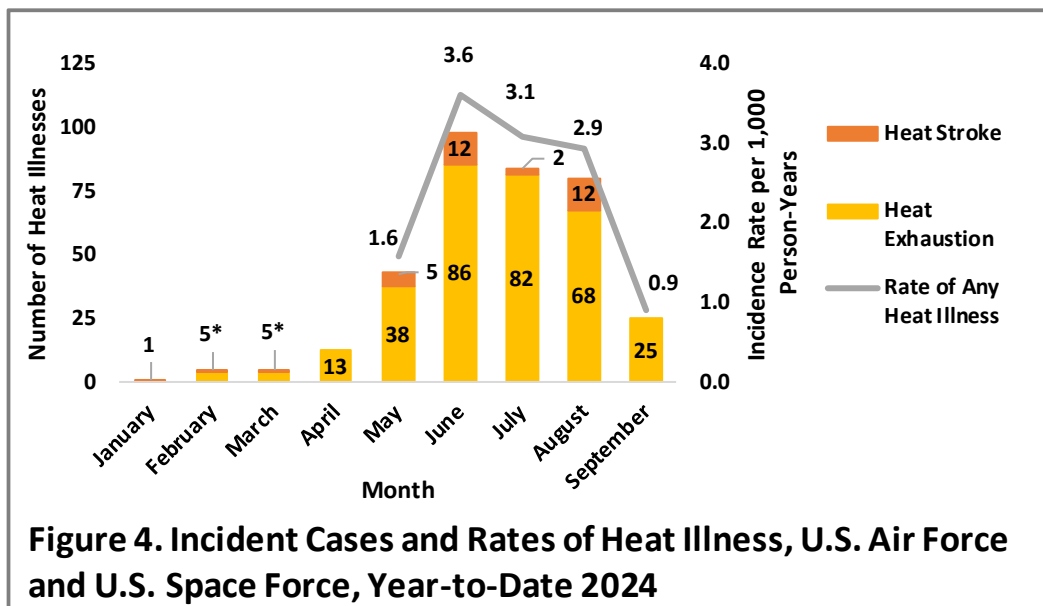
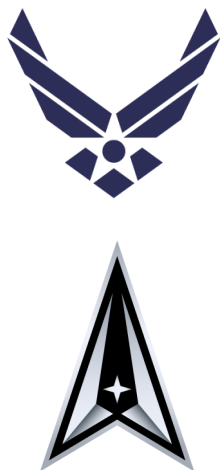
This section of the report contains additional figures and tables. Figures 3—7 present the number of HIs by service branch; rates are also presented when 20 or more cases of HI were recorded for the month. Table 1 provides a summary of HI cases by service branch, type of HI, hospitalizations, rank, sex, and age group. Figures 8 and 9 present HIs by installation for the month and the year, when 10 or more HIs occurred at the installation.



\*Sum of heat exhaustion and heat stroke cases.

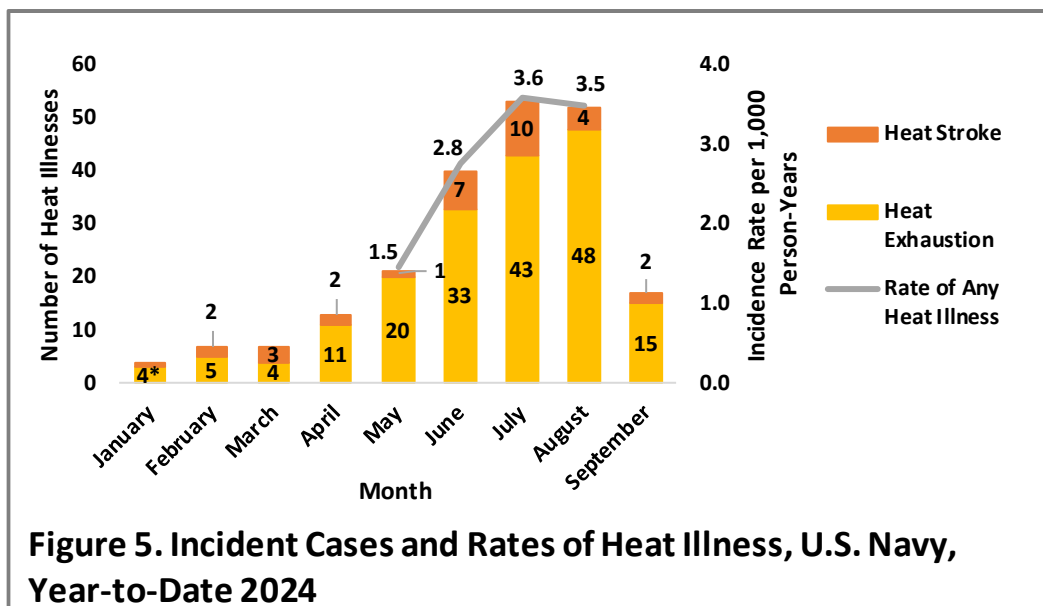
Note: Due to small numbers, rates are not calculated for each service when fewer than 20 heat illness cases are reported in the month.

### Air Force and Space Force



**Figure 4. Incident Cases and Rates of Heat Illness, U.S. Air Force and U.S. Space Force, Year-to-Date 2024**

### Navy



**Figure 5. Incident Cases and Rates of Heat Illness, U.S. Navy, Year-to-Date 2024**

\*Sum of heat exhaustion and heat stroke cases.

Note: Due to small numbers, rates are not calculated for each service when fewer than 20 heat illness cases are reported in the month.

## Marine Corps

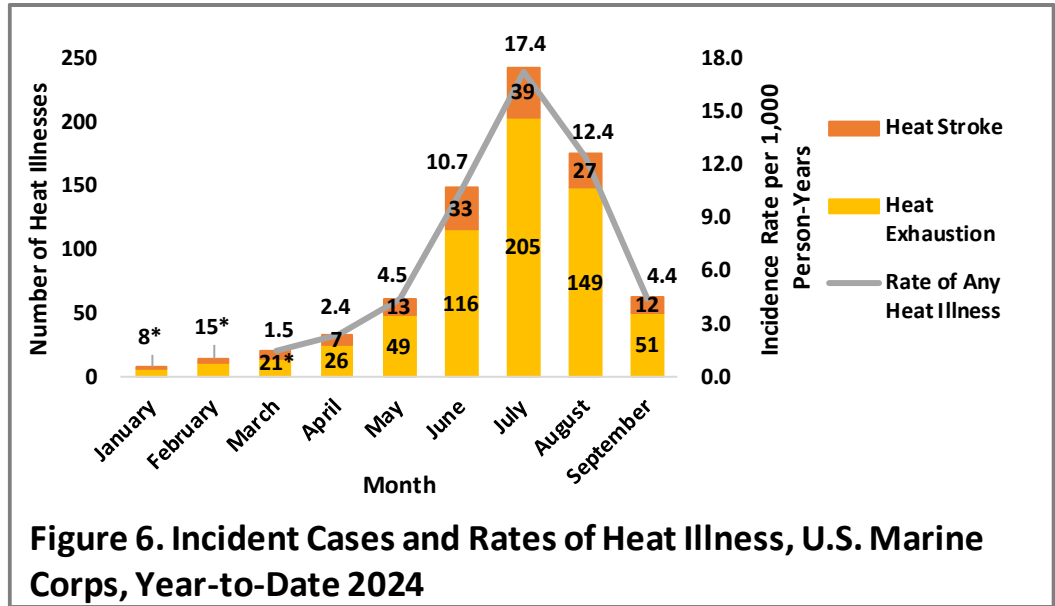


Figure 6. Incident Cases and Rates of Heat Illness, U.S. Marine Corps, Year-to-Date 2024

## Coast Guard

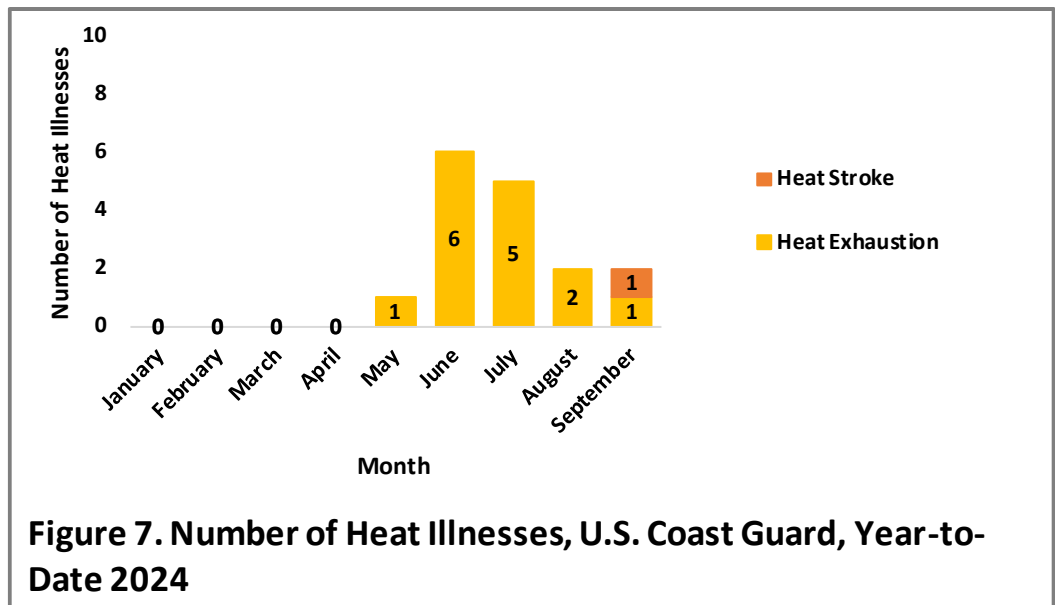


Figure 7. Number of Heat Illnesses, U.S. Coast Guard, Year-to-Date 2024

\*Sum of heat exhaustion and heat stroke cases.

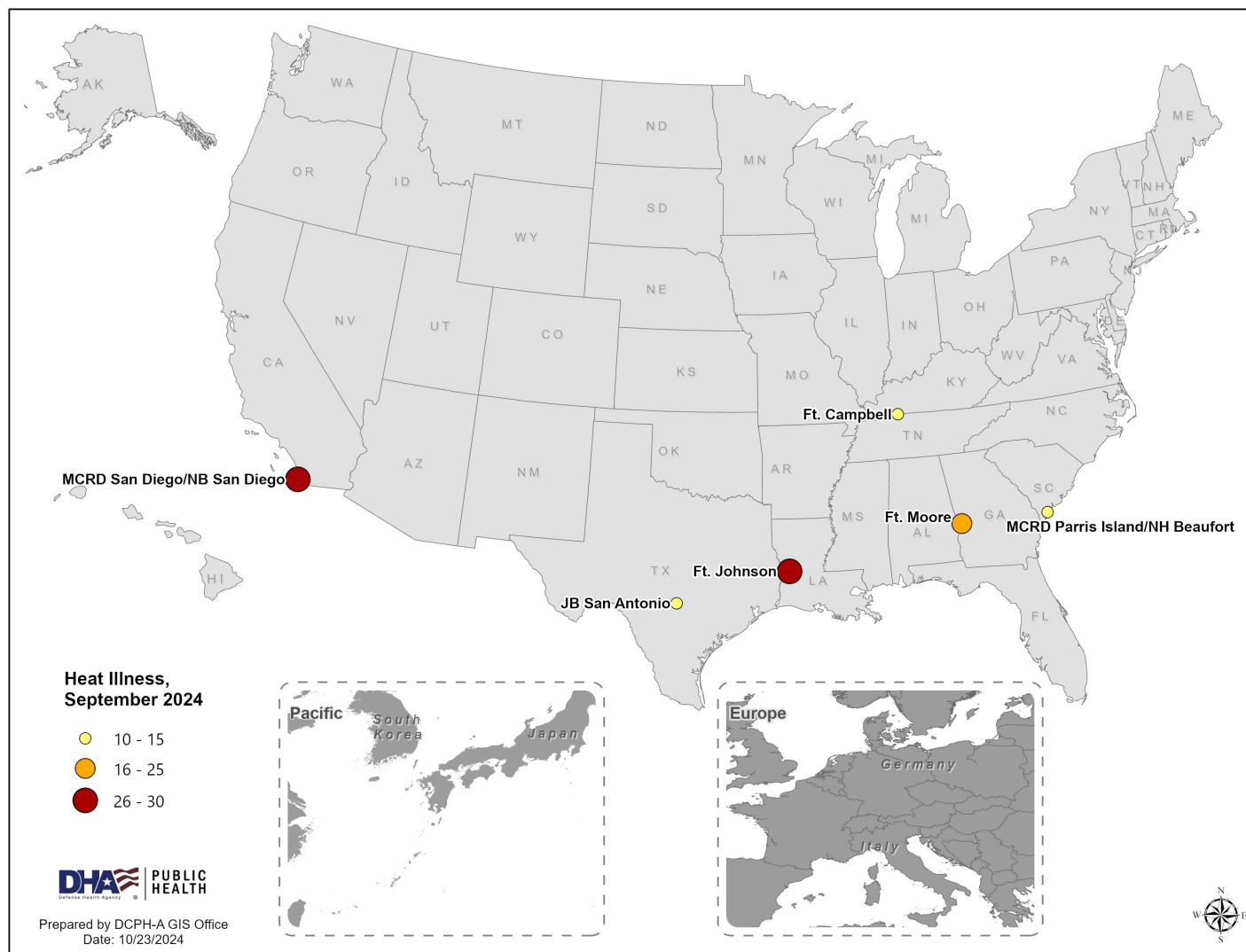
Note: Due to small numbers, rates are not calculated for each service when fewer than 20 heat illness cases are reported in the month.



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**Table 1. Heat Illnesses by Service, Year-To-Date 2024**

	Number of Cases by Service Branch				
	Army	Air Force and Space Force	Navy	Marine Corps	Coast Guard
<b>Total Heat Illness Cases</b>	<b>2,085</b>	<b>354</b>	<b>214</b>	<b>771</b>	<b>16</b>
Heat Exhaustion	1,816	320	182	628	15
Heat Stroke	269	34	32	143	1
<b>Heat Illness Hospitalizations</b>					
Heat Exhaustion	87	3	6	19	0
Heat Stroke	122	11	7	31	0
<b>Rank</b>					
Cadets and Midshipmen	7	1	1	0	1
Junior Enlisted (E1–E4)	526	68	58	117	3
Senior Enlisted (E5–E9)	165	43	35	17	5
Officer (O1–O10)	38	6	8	6	1
Warrant Officer (W1–W5)	5	0	0	0	0
Unknown	1,344	236	112	631	6
<b>Sex</b>					
Female	477	99	50	91	0
Male	1,608	184	127	653	8
Unknown	0	71	37	27	8
<b>Age Group (Years)</b>					
<25	1,255	207	118	651	8
25–34	642	102	65	108	4
35–44	150	34	27	12	4
45+	38	11	4	0	0



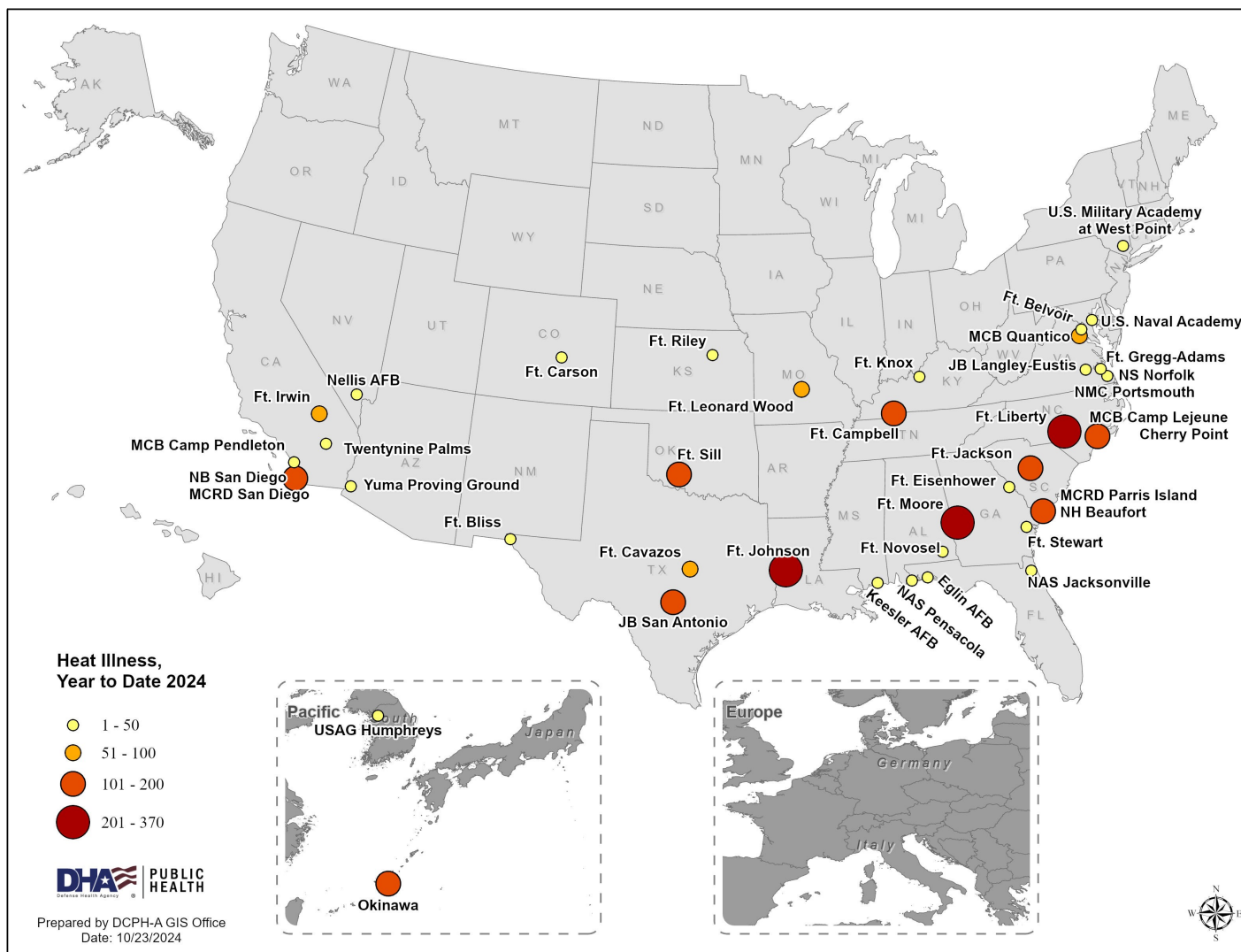
**Figure 8. Heat Illnesses by Installation, September 2024**

*Installations where the total number of diagnosed cases were less than 10 are not shown.*

*Ft.=Fort*

*JB=Joint Base*

*MCRD=Marine Corps Recruit Depot*



**Figure 9. Heat Illnesses by Installation, Year-to-Date 2024**

Installations where the total number of diagnosed cases were less than 10 are not shown.

AFB=Air Force Base

Ft.=Fort

JB=Joint Base

MCB=Marine Corps Base

MCRD=Marine Corps Recruit Depot

NAS=Naval Air Station

NB=Naval Base

NH=Naval Hospital

NMC=Naval Medical Center

NS=Naval Station

USAG=U.S. Army Garrison