

VDH-OEMS Heat-related Illness Case Definition



An emergency medical services (EMS) incident reported to the Virginia EMS State Repository will be counted as a heat-related illness injury if the incident meets at least one of the inclusion criteria (Table 1) and none of the exclusion criteria (Table 2).

Table 1. Virginia EMS Heat-related Illness Definition Inclusion Criteria

NEMESIS Field	Criteria*
Protocols Used (eProtocols.01)	Equal to at least one of the following protocols for heat-relief: <ul style="list-style-type: none"> • 9914027 – Environmental-Heat Exposure/Exhaustion • 9914029 – Environmental-Heat Stroke/Hyperthermia
Primary Impression (eSituation.11); Secondary Impressions (eSituation.12); or Cause of Injury (eInjury.01)	Includes at least one of the following ICD-10-CM codes [†] : <ul style="list-style-type: none"> • T67 (effect of heat and light) • X30 (exposure to excessive natural heat) AND includes none of the following ICD-10-CM codes [†] : <ul style="list-style-type: none"> • W92 (exposure to excessive heat of man-made origin) • T50.992A (misclassification related to 992 ICD9 code)
Complaint (eSituation.04)	Includes at least one of the following terms: <ul style="list-style-type: none"> • “heat “; heatcramp; heatex; heatst; heat-exhaust; heat-related; heat-stroke; hypertherm; overheat; “over heat”; over-heat; “sun stroke”; sunstr; sun-str; “to hot”; “too hot”; sun AND (ex OR poison OR rash); (heet OR hot) AND (excessive OR expos OR fatigue OR cramp OR stress OR in car OR outside OR prostration OR exhaust) AND includes none of the following terms: <ul style="list-style-type: none"> • <i>Feeling heat, swelling, redness, and/or pain:</i> allerg; “feeling hot”; “feels hot”; “felt hot”; “heat sensation”; inflam; radiat; redness; swell; swollen; surg; “post op”; hot AND sensation; pain AND red; pain AND (limb OR arm OR shoulder OR elbow OR wrist OR hand OR leg OR hip OR groin OR thigh OR knee OR ankle OR foot OR feet) • <i>Using heat / ice for therapeutic reasons:</i> ibuprofen; ibuprophen; alieve; motrin; tylenol; injur; trauma; heat AND ice; heat AND (applied OR tried OR used OR using); “heat pack”; “heating pad”; pain AND (back OR neck OR flank); lumbago; relief; resolve; relieve; releive • <i>Dental pain and sensitivities to hot / cold temperatures:</i> dental; heat AND cold; hot AND cold; oral AND surg; pain AND (jaw OR mouth OR teeth OR tooth); sensitiv AND (heat OR hot) • <i>Hot food or liquid:</i> hot AND coff; “hot dog”; “hot grease”; “hot peppers”; “hot tea” • <i>Misspelled heart; head; or health:</i> “heat ache”; heatache; “heat attack”; heatattack; “heat beat”; heatbeat; “heat burn”; heatburn; “heat flutter”; “heat racing”; “heat rate”; heatrate; heathl; heath; heathh; “hitting heat”; palpitation • <i>Includes the letters heat, heet, hot, or sun:</i> cheat; heated; heater; Heather; heating; hotel; lithotr; methotr; photo; psychotic; sheath; sheet; shot; Sunday; theat; wheat • <i>Miscellaneous:</i> accident; alcohol; burn AND mouth; distress; fever; gets hot; flash; fire; heat AND rash; “heat sensation”; hives; hot AND shower; “hot tub”; “no heat”; oven; suicid

VDH-OEMS Heat-related Illness Case Definition



Patient Narrative (eNarrative.01)	Includes at least one of the following terms: <ul style="list-style-type: none"> “heat cramp”; heat-cramp; heatcramp; heatex; “heat exposure”; heatst; “heat stroke”; heat-stroke; “heat exhaust”; heat-exhaust; “heat related”; heat-related; “over heat”; overheat; over-heat; “over heat”; overheet; over-heet; hypertherm; “sun stroke”; sunstr; sun-str; “heat emergenc”; “heat index”; “heat hazard”; “heat wave”; “all day in heat”; “all day in the heat”; “in the heat all day”; “in heat all day”; “hours in heat”; “hours in the heat”; “from heat”; “from the heat”; “due to the heat”; “due to heat”; “doesnt have AC”; “does not have AC”; “doesnt have air condition”; “does not have air condition”; “no air condition”; “hot weather”; “heat syncop”; “heat intolerance”; “extreme heat”; “hot environment”; “heat stress”; heat-induced; “heat induced”; “overexposure to heat”; “temperature-related illness”; “temp related illness”, “temperature related illness”, “overheated from sun”; “overheat from sun”; “over heat from sun”; “overheating in sun”; “heat sickness”; “overexertion in heat”; “over exertion in heat”
	OR at least one of the following words from List 1 within 100 characters of at least one of the following words from List 2: <ul style="list-style-type: none"> List 1: heat; “to hot”; “too hot”; “getting hot”; “got hot” List 2: syncop; work; exposure; yard; outside; outdoor; mow; “out in the”; bik; run; walk; golf; play; “all day”; stroke; exhaustion; fluid; water; excessive; fatigue; cramp; incar; “in car”; weak; dizzy; dizziness; dizines; “passed out”; passedout; passout; “pass out”; faint; “drinking fluid”; “drinking enough fluid”; “drink fluid”; “drink all day”; “drank fluid”; “drank water”; “drank much water”; “enough water”; “in high temp”; “high temp outside”; “high temperature outside”; exert
	AND does not include any of the following terms: <ul style="list-style-type: none"> fire; cheat; “heat ache”; heatache; “heat attack”; “heat beat”; heatbeat; “heat burn”; heatburn, “heat flutter”; “heat racing”; “heat rate”; heatrate; heatlh; heath; heatth; “hitting heat”; palpitation; accident; “gets hot”; flash; “heat sensation”; hive; “hot tub”; “no heat”; oven; suicid; “hot water”; burn; pollen; sauna
	OR does not include any of the following terms from list 1 within 100 characters of any of the terms from list 2: <ul style="list-style-type: none"> List 1: heat; hypertherm; “over heat”; over-heet; overheet; “sun stroke”; sunstr; sun-str; “to hot”; “too hot”; “getting hot”; “got hot” List 2: not; deny; denied; denies; “not feel”; “havent felt”; “havent been feeling”; “doesnt feel”; “dont feel”; “do not have”; “no heat”; “no hot”; “not hot”; room; environment; inside; engine; kitchen; oven; heater; shower; inflame; radiat; redness; swell; swollen; surg; postop; “post op”; pain; shower; ibuprofen; ibuprophen; motrin; Tylenol; inj; trauma; lumbago; “heat pack”; “heating pad”; applied; coat; fever; cold

*Keyword search terms are case-insensitive and trimmed of spaces. Any misspellings are intentional.

†The listed code may be an abbreviation of the full ICD-10-CM code. Codes are comprised of between 4 and 7 characters.

VDH-OEMS Heat-related Illness Case Definition



Table 2. Virginia EMS Heat-related Illness Definition Exclusion Criteria

NEMESIS Field	Exclusion Criteria
Type of Service Requested (eResponse.05)	Equal to one of the following: <ul style="list-style-type: none"> • Emergency Response (Intercept); • Emergency Response (Mutual Aid); • Hospital-to-Hospital Transfer; • Hospital to Non-Hospital Facility Transfer; • Non-Hospital Facility to Non-Hospital Facility Transfer; • Non-Hospital Facility to Hospital Transfer; • Other Routine Medical Transport; • Public Assistance; • Support Services; • Non-Patient Care Rescue/Extrication; • Crew Transport Only; • Transport of Organs or Body Parts; • Mortuary Services; • Mobile Integrated Health Care Encounter; • Evaluation for Special Referral/Intake Programs; or • Administrative Operations
Unit Disposition (eDisposition.27)	Equal to one of the following: <ul style="list-style-type: none"> • Cancelled on Scene; • Cancelled Prior to Arrival at Scene; • No Patient Contact; • No Patient Found; or • Non-Patient Incident (Not Otherwise Listed)
Patient Evaluation/Care (eDisposition.28)	Equal to Patient Support Services Provided
Crew Disposition (eDisposition.29)	Equal to one of the following: <ul style="list-style-type: none"> • Initiated Primary Care and Transferred to Another EMS Crew; • Provided Care Supporting Primary EMS Crew; • Back in Service, No Care/Support Services Required; or • Incident Support Services Provided (Including Standby)
Transport Disposition (eDisposition.30)	Equal to one of the following: <ul style="list-style-type: none"> • Transport by Another EMS Unit; • Transport by Another EMS Unit, with a Member of This Crew; or • Non-Patient Transport (Not Otherwise Listed)
Submission Status	Equal to failed or pending

The VDH-OEMS Heat-related Illness case definition is based upon the Council for State and Territorial Epidemiologists Syndromic Surveillance definition and Biospatial’s heat syndrome definition.