Using Data to Support Local Overdose Response and Prevention Work

Part 2: A Deeper Dive Into Oregon ESSENCE

Public Health Division, Oregon Health Authority

Oregon Health Authority

June 3, 2024

Agenda

- **Welcome & introductions**
- **Oregon ESSENCE**
- **Oregon EMS & Trauma Systems**
- **ESSENCE and injury epidemiology**
- **Q&A**

Oregon Health Authority

June 3, 2024

Public Health Division

Oregon ESSENCE: Public Health Applications of Syndromic Surveillance

Meagan McLafferty, Syndromic Surveillance Epidemiologist
Preparedness, Surveillance & Epidemiology Team
Acute & Communicable Disease Prevention Section
Public Health Division
Oregon Health Authority

ESSENCE Overview

ESSENCE

Electronic

Surveillance

System for the

Early

**N**otification of

Community-based

Epidemics

- Key words!
  - **Early**
  - **Community-based**
- Strength: a near real-time look at key data we may not otherwise be alerted to
- Utility: community-based, population-level birds eye view of what's happening in our EDs and urgent care centers
- When we first learn of an emergent public health issue in the community, we look to ESSENCE

EXAMPLE: H1N1, 2009
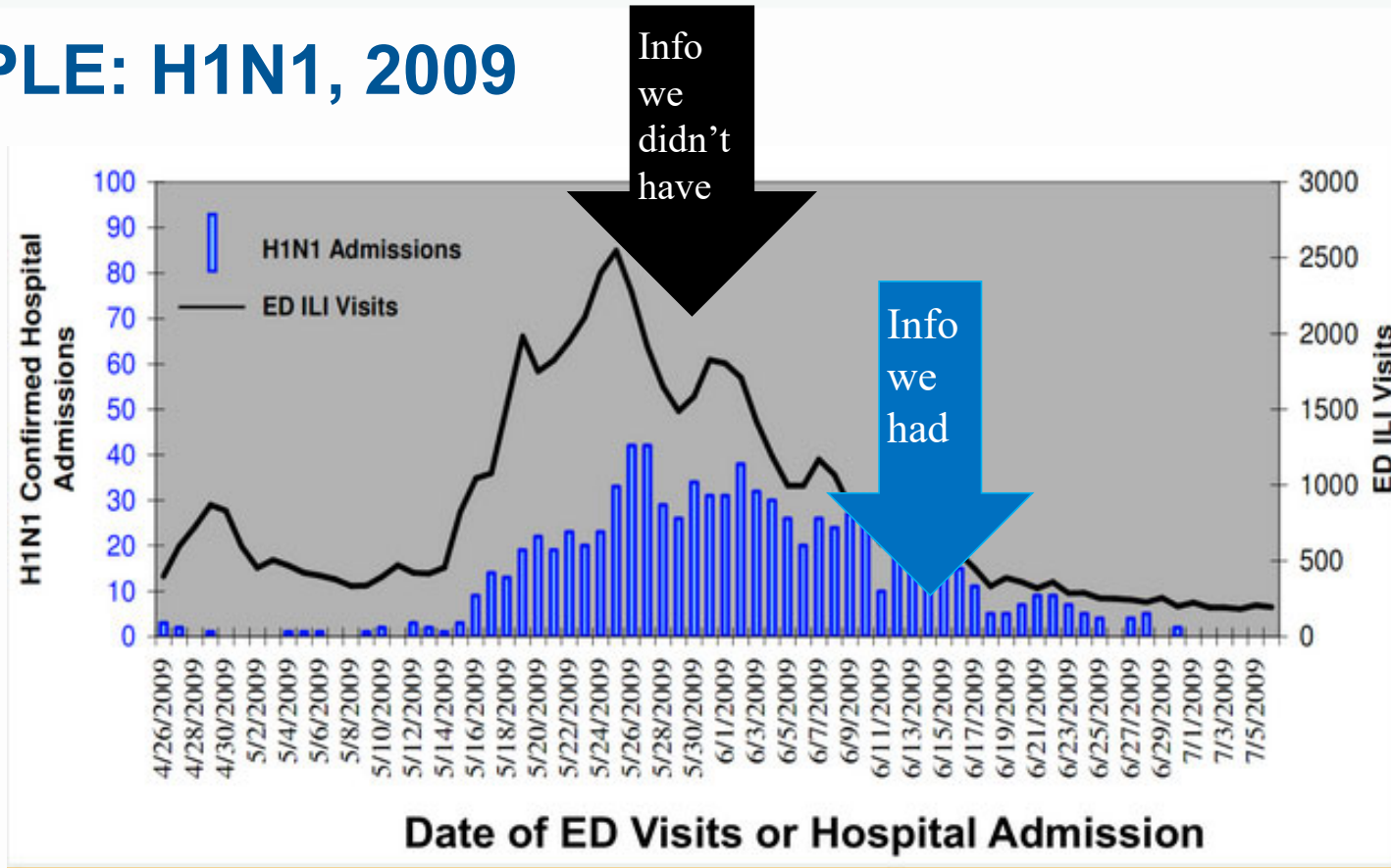
New York City Department of Health and Mental Hygiene Health Alert #27: Pandemic (H1N1) 2009 influenza update, revised reporting requirements and testing procedures

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ESSENCE Data Sources

- Emergency Department and Urgent Care
- Poison Control Center
- Death Records
- EMS
- Orpheus (reportable disease)
- Air Quality
- Weather

Legend:
- ▲ ED
- ED and Urgent Care
- Urgent care, no ED
- No ED or urgent care

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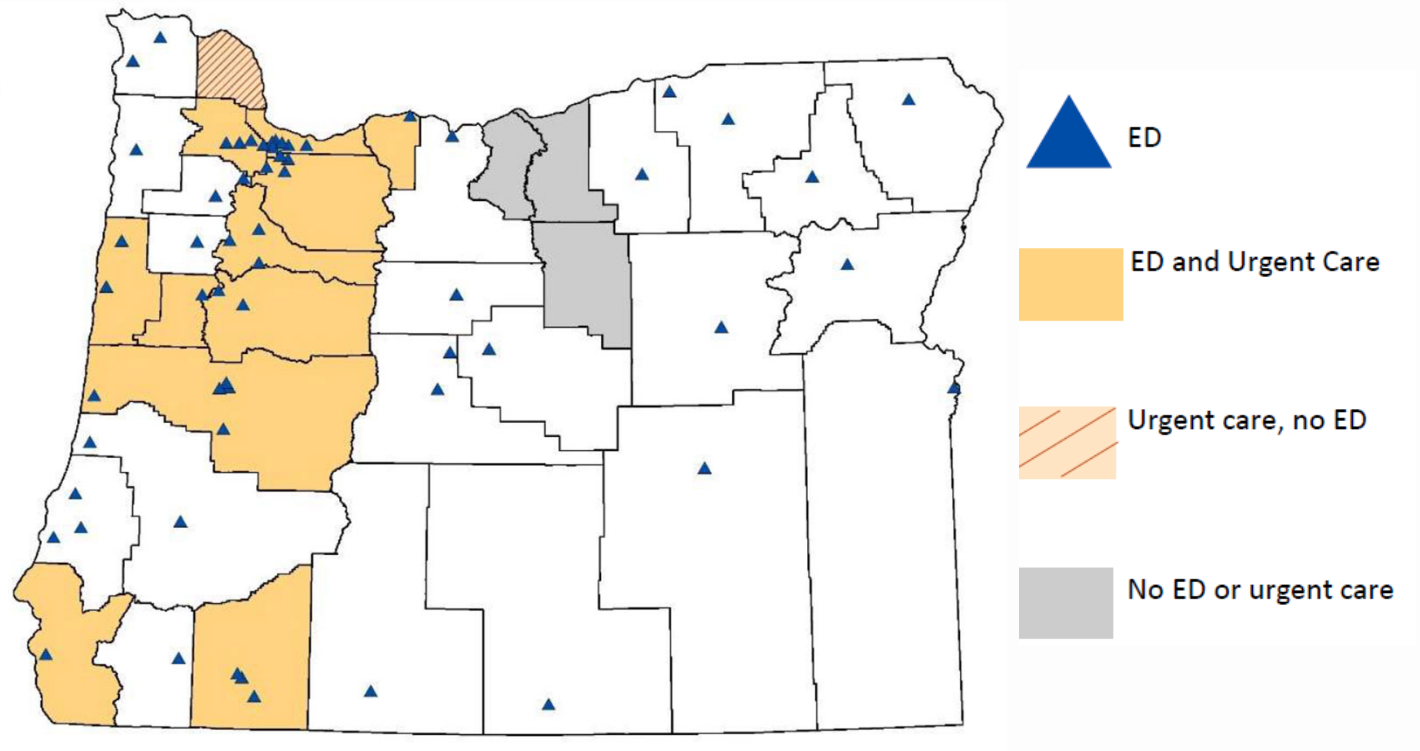
Oregon ESSENCE System
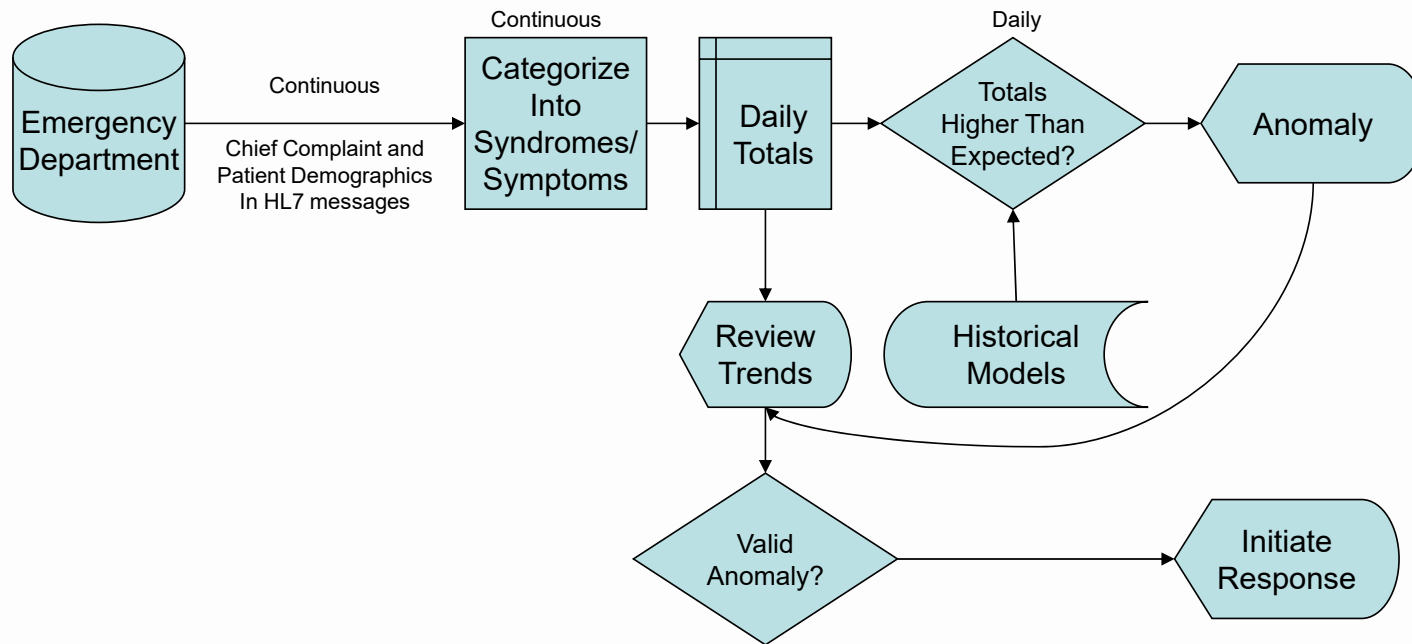
Source : Bill Storm, Ohio Department of Health

Potential areas of interest

- Injury
  - Motor vehicle accidents
  - Snake bites
  - Mammal bites (bats)
  - Intoxication
  - Alcohol
  - Fireworks/burns
  - Firearm injury
- Communicable disease
  - Food storage, handling
  - Respiratory outbreaks
  - Vector-borne illness

- Environmental
  - High heat, dehydration, sun exposure
  - Altitude sickness
  - Wildfire smoke (respiratory issues)
  - Evacuation for fires
- Event-related, e.g. eclipse
  - Eye injury
  - Diseases/threats specific to locations in arch of totality (examples: snake bites, mushroom poisoning)

Syndromic Surveillance

- **Real-time** collection, analysis, interpretation and dissemination of health data
- Not based on laboratory confirmed diagnosis of a disease but disease "**syndrome**"
- 12 primary syndrome groupings "pre-loaded" into system
  - Exposure
  - Fever
  - GI
  - ILI
  - Injury
  - Neurological
  - Rash
  - Respiratory, and others…
- Apply syndrome of interest to components of medical record, e.g. chief complaint

Hospital Surge and Capacity

Use ESSENCE to run queries for encounters associated with symptoms over the past 90 days.

i.e., Advance query: medication refill
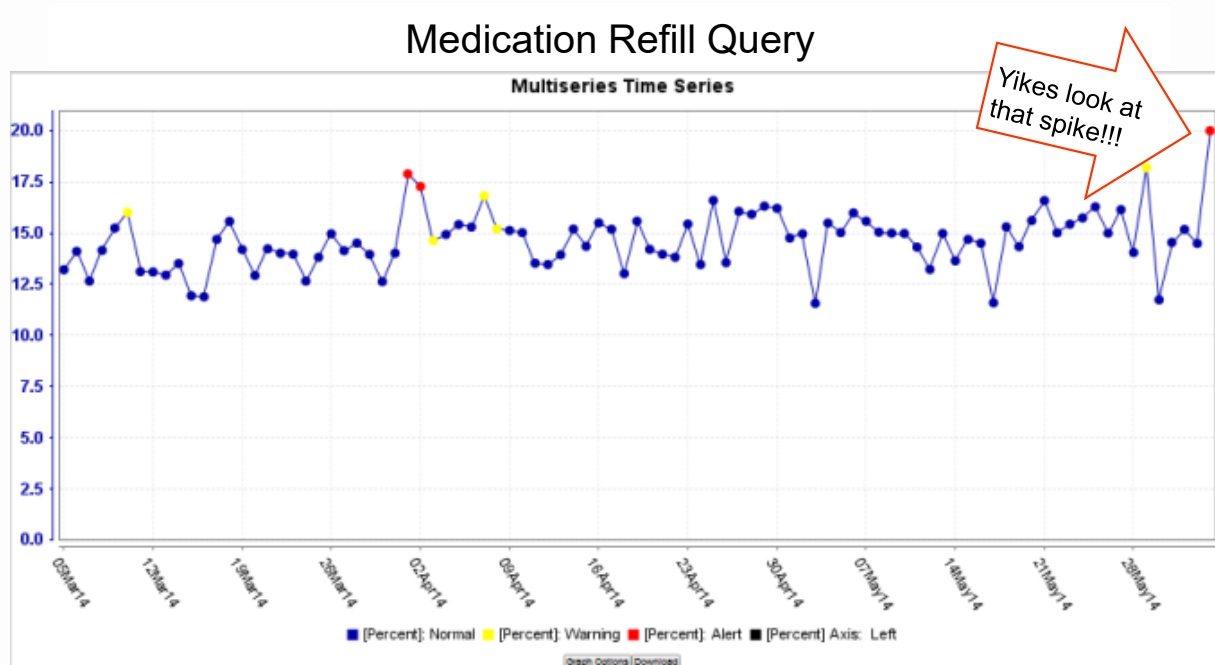
Medication requests following hurricane Wilma

Total cases: 801; Avg. age: 40
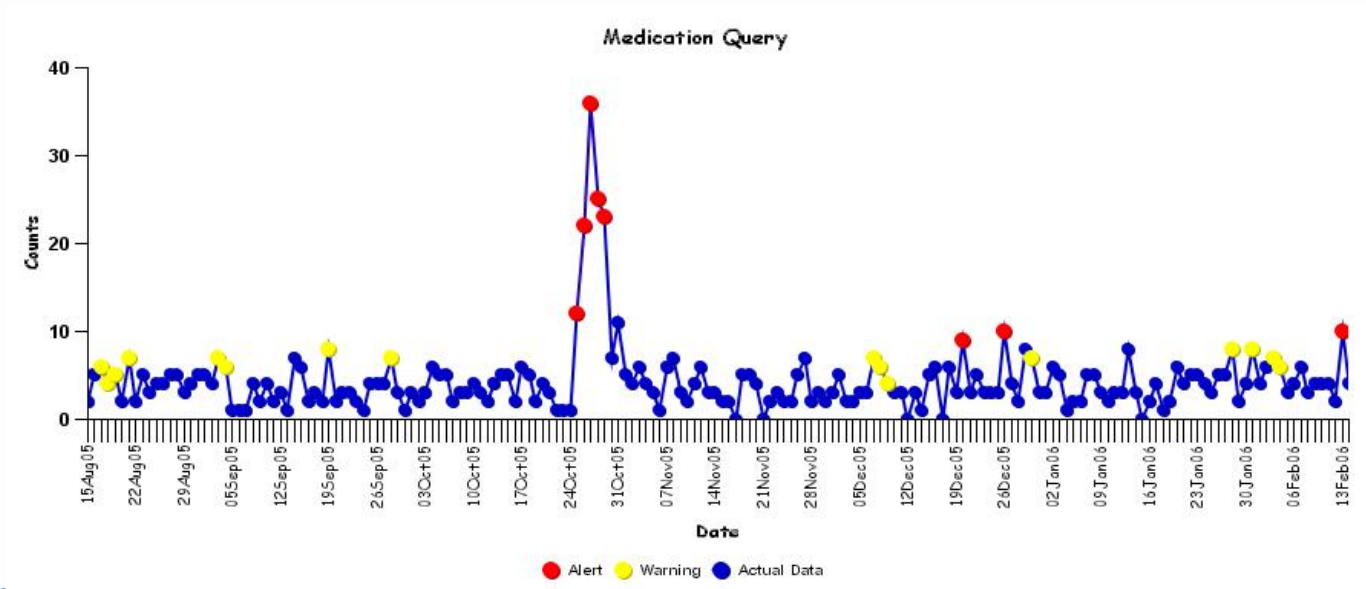
Gastroenteritis Syndrome May 20 – June 19
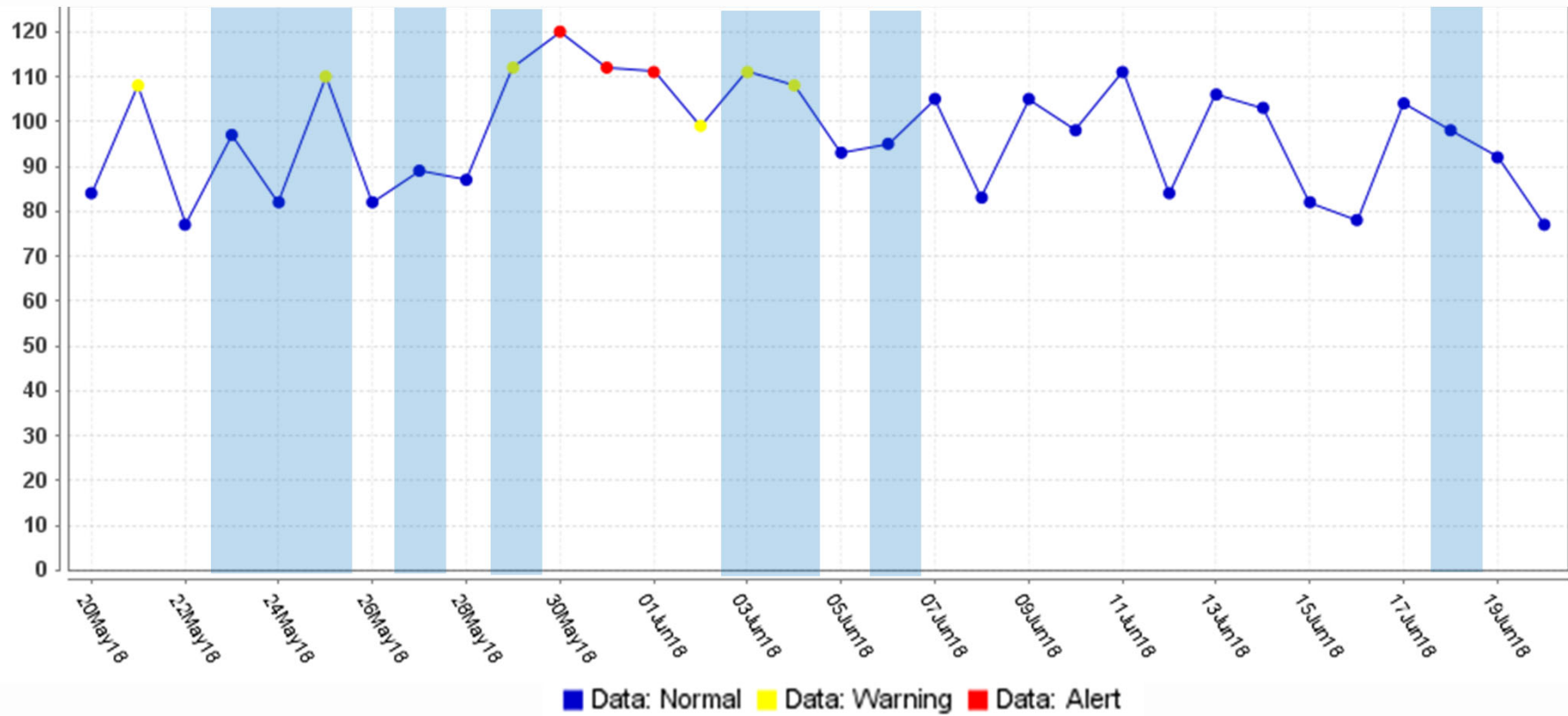
Data: Normal   Data: Warning   Data: Alert

Cyanotoxin detects

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"Water" visits and media coverage of cyanotoxins

Emergency alert

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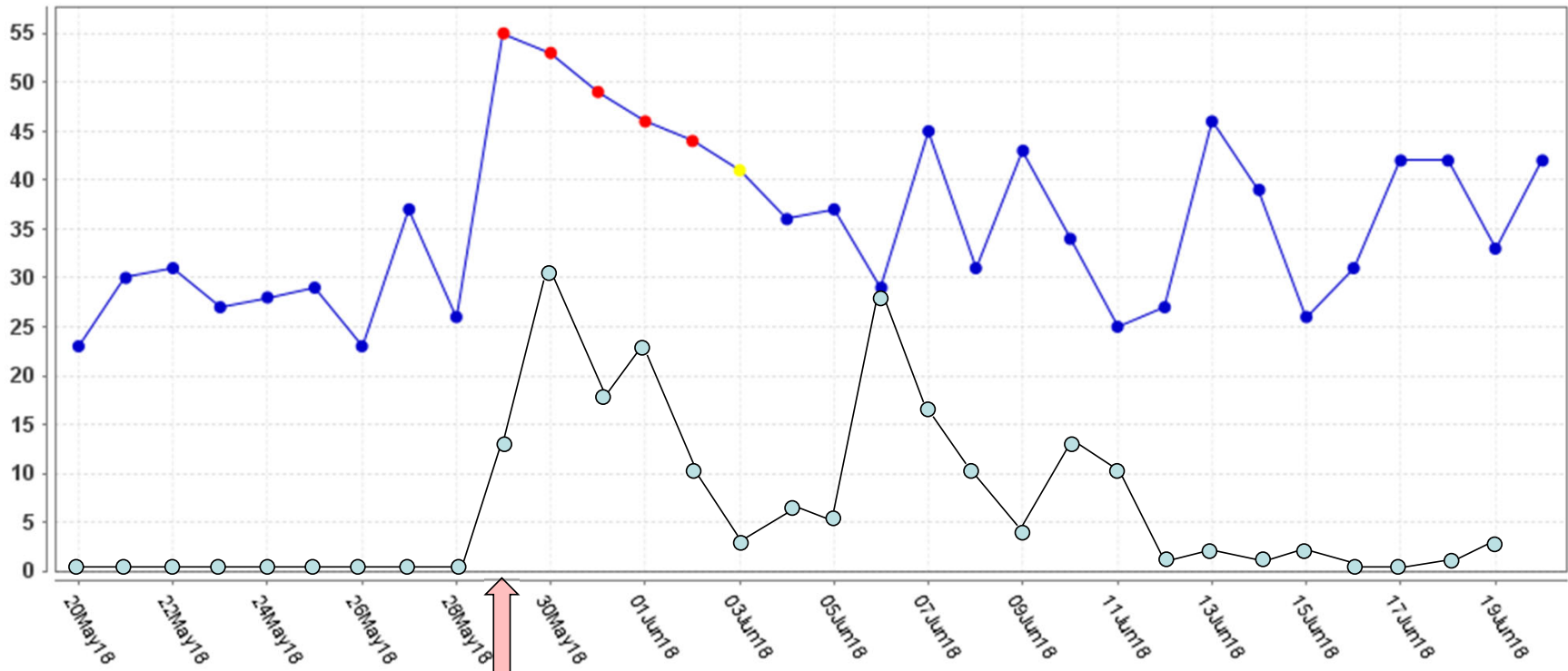
Oregon ESSENCE Summer Hazard Report

TOTAL VISITS	HEAT-RELATED	SUBMERSION	FIRE AND SMOKE	AIR QUALITY	ABOUT

HEAT-RELATED ILLNESS refers to a variety of conditions resulting from elevated body temperatures such as heat stroke, heat syncope (fainting), heat exhaustion, and heat cramps.

HEAT-RELATED ILLNESS (HRI) QUERY
This query looks for words like "heat," "sun stroke," and "hyperthermia" and HRI codes (including ICD-9 code 992 and ICD-10 code T67) among E.D. and urgent care patient chief complaints and discharge diagnoses.

SEASONAL HAZARD: HEAT-RELATED ILLNESS

Extreme heat makes many groups -- including people with chronic disease, young children, older adults, and outdoor workers -- vulnerable to heat-related illness (HRI). To reduce the risk of HRI, drink plenty of fluids, wear light colored clothing and sunscreen, and schedule outdoor activities during cooler times of the day.

For more information, see the Oregon Health Authority's HRI prevention website here

E.D. and urgent care center visits for heat-related illness

In this chart, we see an increase in heat-related illness (HRI) visits in May 2023 which is typical to see at this time of year as temperatures rise.

Year
- ○ 2018
- ○ 2019
- ○ 2020
- ○ 2021
- ○ 2022
- ● 2023

Published: 06/12/2023

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OK, but what's IN the data?

- Varies by data stream—ED is not the same as EMS etc.
- NOT individually identifiable
  - Remember, it's for detection of "**community-based** epidemics"
- ED/UC data:
  - Age, sex, zip code, race, ethnicity
  - Chief complaint
  - Discharge diagnoses
    - ICD-10 codes
  - Clinical impression
  - Triage notes

OREGON **ESSENCE**

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Level 3 - Restricted

Querying ESSENCE

- Queries can be simple, or very complex
- Pre-loaded queries for 12 primary syndromes, many more subsyndromes, and many specific queries created by CDC or OHA
- Write your own!
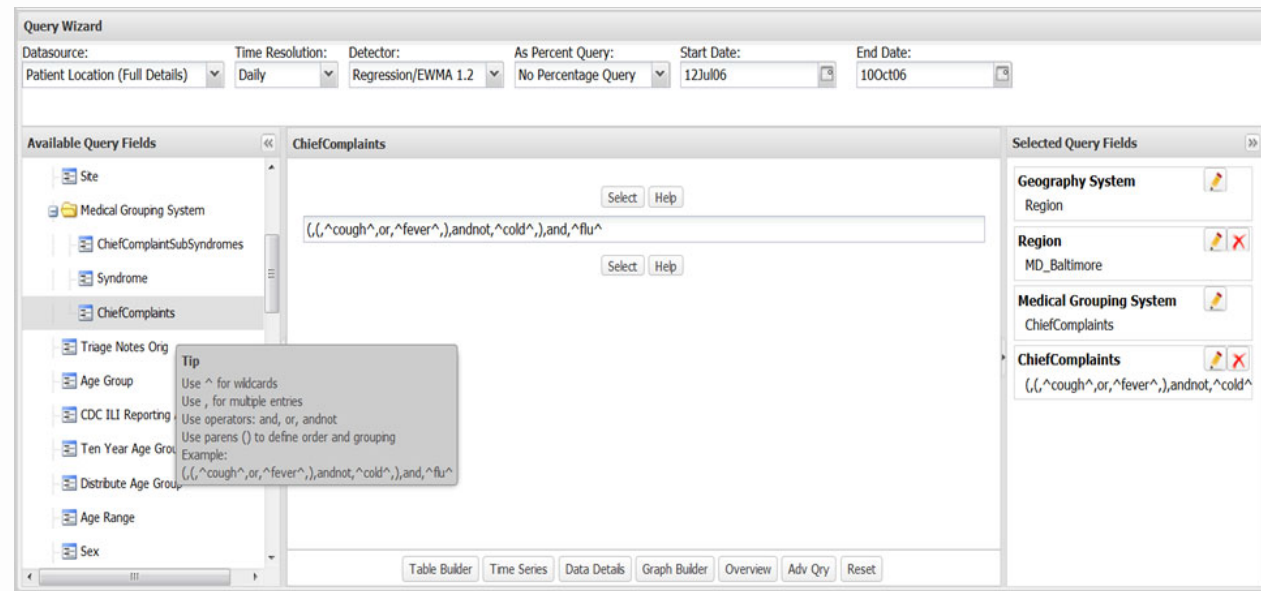
Querying ESSENCE

^;992^ ,or, ^;T67^ ,or, ^;E900^ ,or, ^;X30 ,or, ^heat ^ ,or, ^heatcramp^ ,or, ^heatex^ ,or, ^heatst^ ,or, ^heat-exhaust^ ,or, ^heat-related^ ,or, ^heat-stroke^ ,or, ^hypertherm^ ,or, ^overheat^ ,or, ^over heat^ ,or, ^sun stroke^ ,or, ^sunstr^ ,or, ^sun-str^ ,or, ^to hot^ ,or, ^too hot^ ,or, (,(, ^hot^ ,or, ^ heat ^ ,) ,and, (, ^excessive^ ,or, ^exhaust^ ,or, ^expos^ ,or, ^fatigue^ ,or, ^cramp^ ,or, ^stress^ ,or, ^in car^ ,or, ^outside^ or ^prostration^ ,),) ,andnot, (, ^heater^ ,or, ^heatrate^ ,or, ^cheat^ ,or, ^wheat^ ,)

CDC All Drug v1 Query

(.^[;/]295121001[;/]^.or.^[;/]295597003[;/]^.or.^[;/]295487009[;/]^.or.^[;/]295334008[;/]^.or.^[;/]295313001[;/]^.or.^[;/]295593004[;/]^.or.^[;/]295799003[;/]^.or.^[;/]295117008[;/]^.or.^[;/]295495008[;/]^.or.^[;/]295332007[;/]^.or.^[;/]295808006[;/]^.or.^[;/]295123003[;/]^.or.^[;/]295587007[;/]^.or.^[;/]295314007[;/]^.or.^[;/]295134000[;/]^.or.^[;/]295910009[;/]^.or.^[;/]296295001[;/]^.or.^[;/]296412004[;/]^.or.^[;/]296529003[;/]^.or.^[;/]296334003[;/]^.or.^[;/]296921006[;/]^.or.^[;/]296513006[;/]^.or.^[;/]296389000[;/]^.or.^[;/]296845006[;/]^.or.^[;/]296499009[;/]^.or.^[;/]296922004[;/]^.or.^[;/]296943003[;/]^.or.^[;/]296896006[;/]^.or.^[;/]296853003[;/]^.or.^[;/]296974001[;/]^.or.^[;/]296450005[;/]^.or.^[;/]296478006[;/]^.or.^[;/]296402006[;/]^.or.^[;/]296970005[;/]^.or.^[;/]296509004[;/]^.or.^[;/]296503003[;/]^.or.^[;/]296425007[;/]^.or.^[;/]296811004[;/]^.or.^[;/]296948007[;/]^.or.^[;/]297006008[;/]^.or.^[;/]297094003[;/]^.or.^[;/]297065005[;/]^.or.^[;/]96[01234789][;/]^.or.^[;/]96[01234789][0-9][;/]^.or.^[;/]965[014567891[;/]^.or.^[;/]965.[06][129][;/]^.or.^[;/]1965[06][129][;/]^.or.^[;/]966.[01234][;/]^.or.^[;/]969.[07][0123459][;/]^.or.^[;/]970.[0189][;/]^.or.^[;/]970[0189][;/]^.or.^[;/]970.8[019][;/]^.or.^[;/]9708[019][;/]^.or.^[;/]971.[0123][;/]^.or.^[;/]971[0123][;/]^.or.^[;/]97[23689].[0-9][;/]^.or.^[;/]97[23689][0-9][;/]^.or.^[;/]974.[0-7][;/]^.or.^[;/]975.[0-8][;/]^.or.^[;/]975[0-8][;/]^.or.^[;/]977[0123489][;/]^.or.^[;/]E85[058][0-9][;/]^.or.^[;/]E85[167][;/]^.or.^[;/]E852.[012345891[;/]^.or.^[;/]E852[01234589][;/]^.or.^[;/]E853.[01289][;/]^.or.^[;/]E853[01289][;/]^.or.^[;/]E854.[01248][;/]^.or.^[;/]E854[01248][;/]^.or.^[;/]E980.[0-5][;/]^.or.^[;/]E980[0-5][;/]^.or.^[;/]t40.5x1a^.or.^[;/]t405x1a^.or.^[;/]t40.5x4a^.or.^[;/]t405x4a^.or.^[;/]t43.6[012349][14]a^.or.^[;/]t436[01239][14]a^.or.^[;/]296321004;^.or.^[;/]441527004;^.or.^[;/]296290006;^.or.^[;/]61803000;^.or.^[;/]t40.[012346][x09][14]a^.or.^[;/]t40[012346][x09][14]a^.or.^[;/]verdose^[es]^.andnot,(^wiol^.or.^picked iol^.or.^pop ce^.or.^ce iol^.)^.or.^over dose^.or.^overose^.or.^narcan^.or.^naloxo^.or.^[;/]t3[6-9].[0-9][x09][14]a^.or.^[;/]t3[6-9][0-9][x09][14]a^.or.^[;/]t4[0-9].[0-9][x019][14]a^.or.^[;/]t4[0-9][0-9][x019][14]a^.or.^[;/]t50.[0-9][x09][14]a^.or.^[;/]t50[0-9][x09][14]a^.or.^[;/]t3[679].9[14]xa^.or.^[;/]t3[679]9[14]xa^.or.^[;/]t41.4[14]xa^.or.^[;/]t414[14]xa^.or.^[;/]t42.7[14]xa^.or.^[;/]t427[14]xa^.or.^[;/]t4[3579].9[14]xa^.or.^[;/]t4[3579]9[14]xa^.or.^[;/]f11.12[0129]^.or.^[;/]f11.22[0129]^.or.^[;/]f11.92[0129]^.or.^[;/]f1112[0129]^.or.^[;/]f1122[0129]^.or.^[;/]f1192[0129]^.or.^[;/]295174006;^.or.^[;/]295175007;^.or.^[;/]295176008;^.or.^[;/]295165009;^.or.^[;/]242253008^.or.^[;/]297199006;^.or.^[;/]295213004;^.or.^[;/]296321004;^.or.^[;/]441527004;^.or.^[;/]296290006;^.or.^[;/]61803000;^.or.^[;/]55680006;^.or.^[;/]59369008;^.or.^[;/]72431002;^.or.^[;/]33267003;^.or.^[;/]5116004;^.or.^[;/]371341003;^.or.^[;/]708079007;^.or.^[;/]242253008;^.or.^[;/]269688005;^.or.^[;/]290222000;^.).or.(((^poison^.or.^nodding^.or.^ nod ^.or.^snort^.or.^in[gj]est^.or.^intoxic^.or.^unresponsiv^.or.^loss of consciousness^.andnot,((^no loss of consciousness^.or.^denie[sd] loss of consciousness^.or.^negative loss of consciousness^.or.^denies any loss of consciousness^.).or.^syncop^.or.^shortness of breath^.andnot,((^no shortness of breath^.or.^denie[sd] shortness of breath^.or.^denies any shortness of breath^.).or.^short of breath^.or.^altered mental status^.)).and,(((((^marij^.or.^cannab^.or.^ edible ^.or.^smok^.).and,(^weed^.or.^ pot ^.or,(^ pot ^.and.^brown^.)).or.^speedball^.or.^speed ball^.or.^coc[ai][ia]ne^.or.^cocc[ai][ia]ne^.or.^cocane^.or.^cocanne^.or.^coke^.or.^crack^.or.^ meth ^.or.^amphetamine^.or.^c[ry][yr]stal meth^.or.^lisdexamfetamine^.or.^dextroamphetamine^.or.^levoamphetamine^.or.^biphetamine^.or.^dexedrine^.or.^adderal^.or.^aderal^.or.^vyvanse^.or.^concerta^.or.^methylin^.or.^ritalin^.or.^cathinone^.or.^ fla[ck]a ^.or.^ fla[ck][kc]a ^.or.^bath salt^.or.^bathsalt^.or.^stimulant^.or.^ mdma ^.or.^e[sc][cs]ta[cs]y^.or.^e[xsc]ta[sc]y^.or.^ex[sc]ta[scly^.or.^ moly ^.or.^ moll[iy] ^.or.^her[io][oi]n^.or.^ hod ^.or.^speedball^.or.^speed ball^.or.^dope^.or.^opioid^.or.^op[io][oi]d^.or.^opiate^.or.^opate^.or.^op[iu][ui]m^.or.^opum^.or.^methadone^.or.^suboxone^.or.^oxyco^.or.^oxyi^.or.^ oxy ^.or.^percoc^.or.^vicod^.or.^fent^.or.^hydrocod^.or.^morphin^.or.^cod[ei][ie]n^.or.^codene^.or.^oxymor^.or.^dilaud^.or.^hydromor^.or.^tramad^.or.^suboxin^.or.^buprenorphine^.or.^abstral^.or.^actiq^.or.^avinza^.or.^butrans^.or.^demer[oa]l^.or.^dolophine^.or.^duragesic^.or.^fentora ^.or.^hysingla^.or.^methadose^.or.^morphabond^.or.^nucynta^.or.^onsolis^.or.^oramorph^.or.^oxaydo^.or.^roxanol^.or.^sublimaze^.or.^xtampza^.or.^zohydro^.or.^anexsia ^.or.^co-gesic^.or.^embeda ^.or.^exalgo^.or.^hycet^.or.^hycodan^.or.^hydromet^.or.^ibudone^.or.^kadian^.or.^liquicet^.or.^lorcet^.or.^lortab^.or.^maxidone^.or.^ ms contin ^.or.^norco ^.or.^ opana ^.or.^oxycet^.or.^palladone^.or.^percodan^.or.^reprexain^.or.^rezira^.or.^roxicet^.or.^targiniq^.or.^tussicaps^.or.^ tussione ^.or.^tuzistra^.or.^vicoprofen^.or.^vituz^.or.^xartemis^.or.^xodol^.or.^zolvit^.or.^zutripro^.or.^zydone^.or.^ultram^.or.^[;/]f11.[129]0^.or.^[;/ /]f11[129]0^.or.^drug^.or.^ pill ^.or.^ pills ^.or.^kratom^.or.^herbal speedball^.or.^herbal speed ball^.or.^ketum^.or.^l[ao]per[oa]mide^.or.^took acid^.or.^drop acid^.or.^dropped acid^.or.^ lsd ^.or.^ salvia ^.or.^hallucinogen^.or.^angeldust ^.or.^ angel dust ^.or.^poly substance^.or.^polysubstance^.or.^poly drug^.or.^polydrug^.or.^gabapentin^.or.^gabbapentin^.or.^n[eu][ue]ront[oi]n^.or.^neurotin^.or.^gamma hydroxybutyrate^.or.^ ghb ^.or.^paroxetine^.or.^proza[ck]^.or.^paxil^.or.^fluoxetine^.or.^sertraline^.or.^zoloft^.or.^bupropi[aoe]n^.or.^welbutrin^.or.^wellbutrin^.or.^lexapro^.or.^escitalopram^.or.^effexor^.or.^venlafxine^.or.^traz[eioa]done^.or.^trazdon^.or.^oleptro^.or.^desyrel^.or.^cyclobenzaprene^.or.^ [sc]elexa ^.or.^cannabinoid^.or.^hashish^.or.^cannabis^.or.^ thc ^.or.^ spice ^.or.^ace of spades^.or.^ ak 47 ^.or.^ ak47 ^.or.^ ak 47 ^.or.^atomic blast^.or.^big bang^.or.^black magic smoke^.or.^black mamba^.or.^smoking a blunt^.or.^smoking blunt^.or.^smoked a blunt^.or.^smoking joint^.or.^smoked a joint^.or.^smoking a joint^.or.^smoke a blunt^.or.^smoke a joint^.or.^smoke joint^.or.^smoke blunt^.or.^blue cheese^.or.^buzz haze^.or.^cherry bomb^.or.^clockwork orange^.or.^cloud 10^.or.^cowboy kush^.or.^crystal skull^.or.^devils venom^.or.^dr feel good^.or.^dragon eye^.or.^earth blend^.or.^fake bake^.or.^fruit candy flavors^.or.^funky buddha^.or.^funky monkey^.or.^g force^.or.^gi joe^.or.^green dream^.or.^green peace^.or.^hipster^.or.^ice dragon^.or.^juicy leaf^.or.^just chill ^.or.^ k2 ^.or.^serenity^.or.^kaos^.or.^ karma ^.or.^krazy kandy^.or.^kryp2nite^.or.^kush^.or.^layer cake^.or.^limitless^.or.^mad hatter^.or.^mystique^.or.^odyssey^.or.^pandoras box^.or.^pineapple express^.or.^posh^.or.^potpourri^.or.^ pow ^.or.^red magic^.or.^rewind^.or.^scooby snax^.or.^ sexy ^.or.^spike diamond^.or.^sweet leaf^.or.^synthetic mari^.or.^time traveler^.or.^top gear^.or.^viper^.or.^voodoo child^.or.^wazabi^.or.^wizard^.or.^ xtreme ^.or.^zero gravity^.or.^ mescal[aieo]n ^.or.^peyote^.or.^peote^.or.^ketamine^.or.^ special k ^.or.^psilocybin^.or.^ shroom ^.or.^cariso^.or.^ soma ^.or.^happy pill^.or.^sedative^.or.^barbituate^.or.^phenobarb[eoi]tal^.or.^amytal^.or.^nembutal^.or.^ roofie ^.or.^zolpidem^.or.^ambien^.or.^lunesta^.or.^sonata^.or.^zaleplon^.or.^eszopiclone^.or.^benzo^.or.^benzodiazepine^.or.^benezos^.or.^lorazp[ae]m^.or.^clorazepate^.or.^diazepa[mn]^.or.^clonazepam^.or.^midazolam^.or.^alprazolam^.or.^temazepam^.or.^alprazolam^.or.^ xan ^.or.^[zx]an[oae]x^.or.^helex^.or.^trankimazin^.or.^onax ^.or.^ alprox ^.or.^ misar ^.or.^ restyl ^.or.^solanax^.or.^ tafil ^.or.^ neurol ^.or.^ frontin ^.or.^ librium ^.or.^[ck]lon[ae]z[ea]p[eoa]m^.or.^[ck]lon[iao]pin^.or.^lithium^.or.^lithum^.or.^valium^.or.^valum^.or.^iktorivil^.or.^paxam^.or.^riv[oa]tril^.or.^antenex^.or.^apaurin^.or.^apzepam^.or.^apozepam^.or.^hexalid^.or.^normabel^.or.^ pax ^.or.^stesolid^.or.^stedon^.or.^ vival ^.or.^valaxona^.or.^hipnosedon^.or.^vulbegal^.or^fluscand^.or.^flunipam^.or.^ ronal ^.or.^rohydorm^.or.^hypnodorm^.or.^loraz^.or.^ ativan ^.or.^zolam^.or.^bromazepam^.or.^diazepoxide^.or.^zolam^.or.^serax^.or.^temazepa[nm]^.or.^restor[aie]l^.or.^halcion^.or.^inhalant^.or.^cathinone^.or.^bathsalt^.or.^ bath salt^.or.^dextromethorphan^.).andnot,(^amyloidosis^.or.^hypoglycemia^.or.^[;/]L27^.or.^poison ivy^.or.^poison oak^.or.^requesting hydroco^.or.^given morphine^.or.^gave morphine^.or.^rec[ei][ei]ved morphine^.or.^morphine given^.or.^received morphine^.or.^received 4 morphine^.or.^en route fent^.or.^crackle^.or.^crackled^.or.^cracked^.or.^cracking^.or.^cracks^.or.^crackles^.or.^crackling^.or.^crackinling^.or.^crackiling^.or.^cracker^.or.^crackers^.or.^crackels^.or.^crackly^.or.^mccracken^.or.^buttcrack^.or.^a crack^.or.^crack in^.or.^knee crack^.or.^shoulder crack^.or.^butt crack^.or.^ankle crack^.or.^callous crack^.or.^pop crack^.or.^loud crack^.or.^heard crack^.or.^felt crack^.or,(^rib^.and,^crack^.)^.or.^fell crack^.or.^snap crack^.or.^growth plate^.or.^to crack of^.or.^crack sidewalk^.or.^sidewalk crack^.or.^tooth^.or.^teeth^.or.^hands cracke^.or.^heard something^.or.^nail^.or.^cracky^.or.^crack area^.or.^crack cast^.or.^back crack^.or.^crack of^.or.^crack his^.or.^liip^.and,^crack^.)^.or.^my crack^.or.^glass crack^.or,(^buttock^.and,^crack^.).or.^crack on ^.or.^crack to ^.or.^foot crack^.or.^no loss of consciousness^.or.^denie[sd] loss of consciousness^.or.^negative loss of consciousness^.or.^denies any loss of consciousness^.or.^denies drug^.or.^deny drug^.or.^denied drug^.or.^denying drug^.or.^denies any drug^.or.^ with dra ^.or.^withdra^.or.^detoxification^.or.^detos^.or.^detoz^.or.^dtox^.or.^drank a coke^.or.^coker^.or.^coke bottle^.or.^coke can^.or.^coke case^.or^case of coke^.or,(^rum^.and,^coke^.)^.or.^jack and coke^.or.^coke tea^.or.^coffee coke^.or.^delirium tremens coke^.or.^drink a coke^.or.^jack coke^.or.^dirnking coke^.or.^coke tab^.or.^scotch coke^.or.^drinking coke^.or.^aspirating on coke^.or.^coke colored^.or.^drank coke^.or.^cardiac-stimulant^.or.^cardiac stimulant^.or.^meth germantown^.or.^meth gmt^.or.^meth odist^.or.^meth obstet^.or.^meth group^.or.^without overdose^.or.^rule[ds] out overdose^.or.^ruling out overdose^.or.^denies her[io][oi]n^.or.^deny her[io][oi]n^.or.^denied her[io][oi]n^.or.^denying her[io][oi]n^.or.^denies marij^.or.^denies cannab^.or.^denies edible^.or.^denies drug^.or.^deny drug^.or.^denied drug^.or.^denying drug^.or.^denies any drug^.or.^with dra^.or.^withdra^.or.^detoxification^.or.^detos^.or.^detoz^.or.^dtox^.or.^ oxy sat ^.or.^ oxy state ^.or.^oxy high^.or.^oxy low^.or.^oxy mask ^.or.^oxy given^.or.^given oxy ^.or.^oxy clean^.or.^low oxy ^.or.^high oxy ^.or.^placed on oxy ^.or.^pulse oxy ^.or.^oxy deep cleaner^.or.^not enough oxy ^.or.^oxy level^.or.^sedat ^.or.^received fentanyl^.or.^administered fentanyl^.or.^given fentanyl^.or.^fentanyl en route^.or.^fentanyl enrt^.or.^fent en route^.or.^fentanyl given^.or.^fentynl given^.or.^gave fent^.or.^gave fentanyl^.or.^given fentanly^.or.^mcg fentanyl^.or.^mcg fentanyl^.or.^mcg fent^.or.^mcg of fent^.or.^fentanyl 75^.or.^fentanyl 50^.or.^50 fentanyl^.or.^fentanyl 100^.or.^100 fent^.or.^fentanyl 150^.or.^intranasal fent^.or.^milligram fent^.or.^milligram of fentanyl^.or.^ fenton ^.or.^fent pta^.or.^fentanyl pta^.or.^fentynl 100 ^.or.^fentynyl 100^.or.^fentynal 50^.or.^fentynl 50^.or.^fent 50^.or.^fent 100^.or.^fent 150^.or.^diffently^.or.^received fent ^.or.^recieved fent ^.or.^given 50 ^.or.^ given 100 ^.or.^ given 150 ^.or.^ gave 50 ^.or.^ gave 100 ^.or.^ gave 150 ^.or.^ doses of fent ^.or.^given ativan^.or.^rec[ie][ei]ved ativan^.or.^no loss of consciousness^.or.^denie[sd] loss of consciousness^.or.^negative loss of consciousness^.or.^without loss of consciousness^.or.^denies drug^.or.^deny drug^.or.^denied drug^.or.^denying drug^.or.^denies any drug^.or.^withdra^.or.^detoxification^.or.^detos^.or.^detoz^.or.^dtox^.or.^water pill^.or.^birth control^.or.^birthcontrol^.or.^abortion pill^.or.^iron pill^.or.^gas pill^.or.^vitamin pill^.or.^pills ok^.or.^diet^.or.^dieting^.or.^supplement pill^.or.^sodium pill^.or.^food pill^.or.^chemo^.or.^asthma^.or.^fluid pill^.or.^infection pill^.or.^blood pressure pill^.or.^nitro pill^.or.^hormone pill^.or.^drug screen^.or.^drug therapy^.or.^acid reducer^.or.^spasmolytic^.or.^hemolytic^.or.^rhabdomoly^.or.^anamoly^.or.^denies sync^.or.^hasnt been taking his prozac^.or.^off prozac^.or.^serenity house^.or.^by serenity^.or.^at serenity^.or.^from serenity^.or.^to serenity^.or.^with dra^.or.^withdra^.or.^detoxification^.or.^detos^.or.^detoz^.or.^dtox^.or,(((^poison^.or.^nodding^.or.^ nod ^.or.^snort^.or.^in[gj]est^.or.^intoxic^.or.^unresponsiv^.or.^loss of consciousness^.andnot,((^no loss of consciousness^.or.^denies loss of consciousness^.or.^negative loss of consciousness^.or.^denies any loss of consciousness^.).or.^syncop^.or.^altered mental status^.).and,(^pcp^.or.^phencyclidine^.)).andnot,(^pcp suggest^.or.^pcp want^.or.^pcdc advise^.or.^pcp is^.or.^pcp tol^.or.^pcp gave^.or.^pcp d^.or.^pcp sarwar^.or.^pcp stringfellow^.or.^pcp varma^.or.^pcp not in system^.or.^pcp not system^.or.^pcp kevin^.or.^to pcp^.or.^pcp smith^.or.^no pcp^.or.^pcp office^.or.^pcp doctor^.or.^from pcp^.or.^by pcp^.or.^at pcp^.or.^saw pcp^.or.^her pcp^.or.^his pcp^.or.^clinic^.or.^pender^.or.^connie^.or.^went to pcp^.or.^pcp none^.or.^normal pcp^.or.^consulted with pcp^.or.^no loss of consciousness^.or.^denies loss of consciousness^.or.^negative loss of consciousness^.or.^denies any loss of consciousness^.or.^from phencyclidine^.or.^sent by phencyclidine^.or.^phencyclidine advised^.or.^saw phencyclidine^.or.^phencyclidine cell^.or.^by phencyclidine^.or.^seen at phencyclidine^.or.^phencyclidine states^.or.^nad phencyclidine^.or.^to phencyclidine^.or.^pcp told^.or.^food poisoning^.or.^seen phencyclidine^.or.^phencyclidine prescribed^.or.^pcp price^.or.^pcp chadha^.or.^pcp nedeigh^.or.^pcp sharma^.or.^pcp suggested^.or.^ask pcp^.or.^pcp thinks^.or.^care phencyclidine^.or.^pcp feels^.or.^pcp sending^.or.^pcp griffin^.or.^pcp hahn^.or.^poison ivy^.or.^poison control^.),),),)

Who can access ESSENCE?

- Public health!
  - Specifically, entities outlined as public health in HIPAA 45 CFR 164.512
- Access granted to individuals, not organizations
- OHA and LPHA employees
- Tribal health employees
- Academia—staff and students at Oregon-based institutions
  - *For public health purposes only, NOT research
- Additional, more stringent access requests for data streams beyond ED/UC

Level 3 - Restricted

Contact Us!

Oregon.Essence@dhsoha.state.or.us

- ESSENCE team:
  - Meagan McLafferty
  - Larissa Williams
  - Madeline LeVasseur
  - Amanda Faulkner

Level 3 - Restricted

Oregon EMS & Trauma Systems

Using Data to Support Overdose Response & Prevention

Monday, June 3, 2024

PUBLIC HEALTH DIVISION
EMS and Trauma Systems

OR-EMSIS / ESSENCE Integration

- The ESSENCE Integration relies on our EMS DataMart, which is a mirror of our vendor's reporting database in our state data center
- Data in DataMart is queried by Rhapsody, an integration engine solution hosted in the state data center
- Data is then pushed to ESSENCE where it can be accessed by authorized personnel through the web portal

OR-EMSIS / ESSENCE Integration

OR-EMSIS / ESSENCE Data Flow Diagram

Revised 05/30/24

Key

OR-EMSIS = Oregon EMS Information System

ESSENCE = Electronic Surveillance System for the Early Notification of Community-Based Epidemics

Ambulance Agencies

Data entry

Report writer

ImageTrend Elite

OR-EMSIS Database

ESSENCE Portal

Reports

Queries

LPHAs

National Standards and code sets
- Oregon EMS State Dataset
- National EMS Information System (NEMSIS)
- International Classification of Disease (ICD-10)

SQL

Oregon EMS DataMart

SQL

Rhapsody

SQL

ESSENCE

State Data Center

Oregon Health Authority
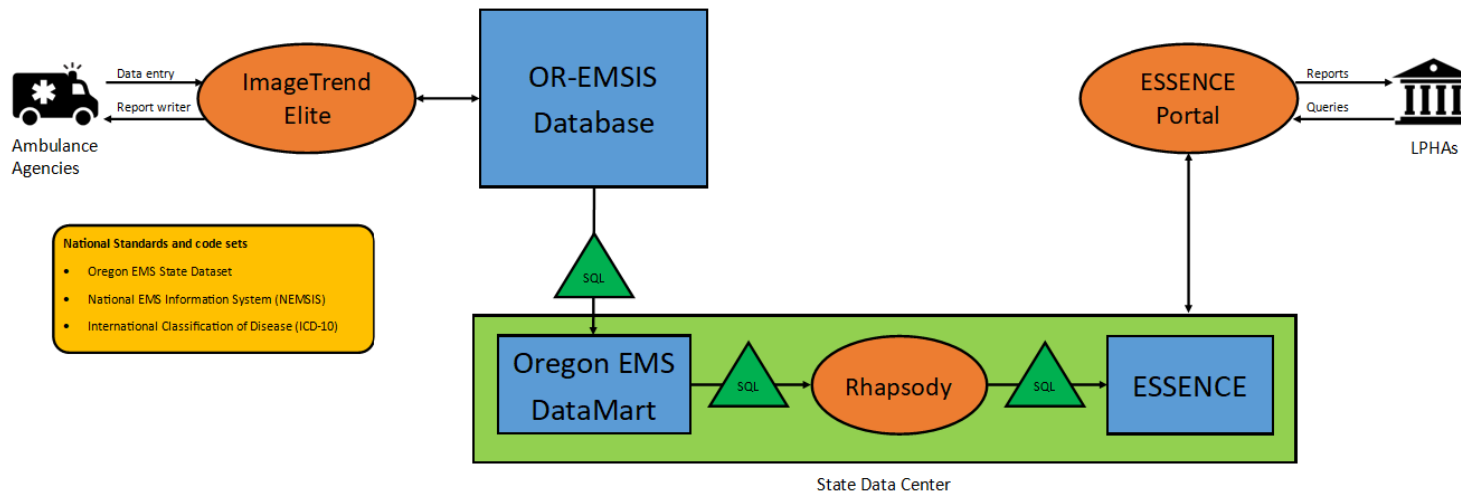
OR-EMSIS / ESSENCE Integration

Data Elements:
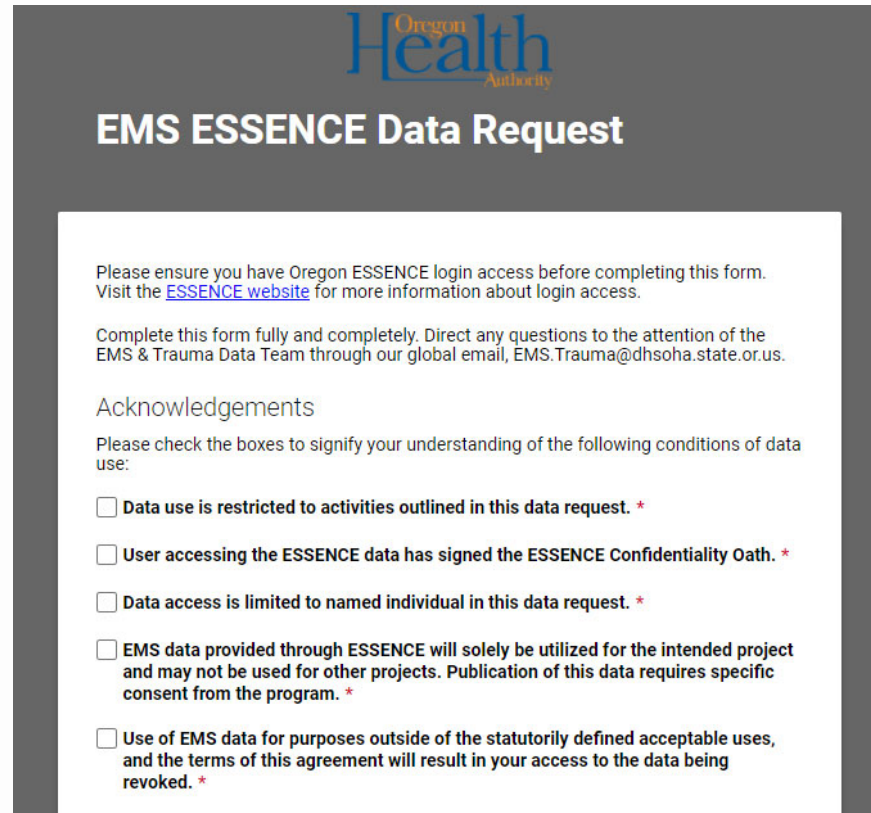
- Agency
- Response
- Times
- Patient
- Scene
- Situation
- Injury
- Arrest
- History
- Narrative

- Vitals
- Exam
- Medications
- Procedures
- Disposition

Access Request

You can request access to EMS data through our web form here:

https://app.smartsheet.com/b/form/4886c635ce73492aa96e9b2e5c2ac9ba

Access Request

Level 3 - Restricted

Access Request

- You must have Oregon ESSENCE login access before requesting access to the EMS data.

- Visit the ESSENCE website for more information about login access.

- The access request form will become the DUA between you and our program, so complete it fully and completely.

- Use of EMS data in ESSENCE is subject to all constraints on other ESSENCE data sets.

- There are additional constraints imposed by statute.

Oregon
Health
Authority

Access Request

Acknowledgements:

- Data use is restricted to activities outlined in this data request.*

- User accessing the ESSENCE data has signed the ESSENCE Confidentiality Oath.*

- Data access is limited to named individual in this data request.*

- EMS data provided through ESSENCE will solely be utilized for the intended project and may not be used for other projects.

- Publication of this data requires specific consent from the program.*

- Use of EMS data for purposes outside of the statutorily defined acceptable uses, or the terms of the data use agreement will result in your access to the data being revoked.*

Oregon Health Authority

Access Request

ESSENCE Acceptable Uses:

- To facilitate the interchange of information that can be used to coordinate responses and monitor events routinely and during a potential health event

- For early detection and characterization of events (or health-related threats) by building on state and local health departments systems and programs

- To provide health-related information for: (i) public health situation awareness, (ii) routine public health practice, or (iii) public health evaluation

- To improve the ability to detect emergency health threats by supporting the enhancement of systems to signal alerts for potential problems in collaboration with federal, state and local health jurisdictions and other potential stakeholders

Oregon
Health
Authority

Access Request

EMS Data acceptable uses under statute:

- Quality assurance
- Quality improvement
- Epidemiological assessment and investigation
- Public health critical response planning
- Prevention activities

Oregon Health Authority

Access Request

Information you will need to complete the form:

- Name and contact information
- Organization/Institution
- Authorizing Manager contact
- Project Name
- Duration
- Project
  – Description
  – Objectives
  – Dataset or report
  – Geography

Access Request

If you are looking to develop other syndromes using EMS data you will need to provide:

- Specific definitions and/or metrics
- Data elements needed for analysis
- Codes and criteria

Access Request

Data Security

- Physical and technical safeguards
- Plans for use of data
- Plans for ensuring confidentiality

Access Request

You may attach any supporting documents related to your project by dragging directly into the web form.

Access Request

Submitting your request

- You will receive a confirmation email that we received your request

- We will review your request within 10 business days

- Time to approval will depend upon complexity of the request .

Oregon
Health
Authority

Review Process

- Internal review of request
- Agency/Manager confirmation
- Clarification (if necessary)
- Generation of pdf documentation
- Signature (by Adobe Sign)
  - Requestor
  - Authorizing Manager
  - Oregon EMS & Trauma Medical Director
- Referral to ESSENCE team for permissions

Resources

EMS ESSENCE access request web form:

https://app.smartsheet.com/b/form/4886c635ce73492aa96e9b2e5c2ac9ba

Oregon State EMS dataset:

https://nemsis.org/media/nemsis_states/repository.html?repository=oregon&file=Resources/OR_StateDataSet.xml&at=refs%2Fheads%2Frelease-3.5.0

Questions?

PUBLIC HEALTH DIVISION
EMS and Trauma Systems

Level 3 - Restricted

Oregon
Health
Authority

Oregon EMS & Trauma Systems Program
EMS.Trauma@odhsoha.oregon.gov

PUBLIC HEALTH DIVISION
EMS and Trauma Systems

Using Data to Support Overdose Response & Prevention

Robyn Ellis, Data to Action Coordinator

ESSENCE Data available on OHA public page
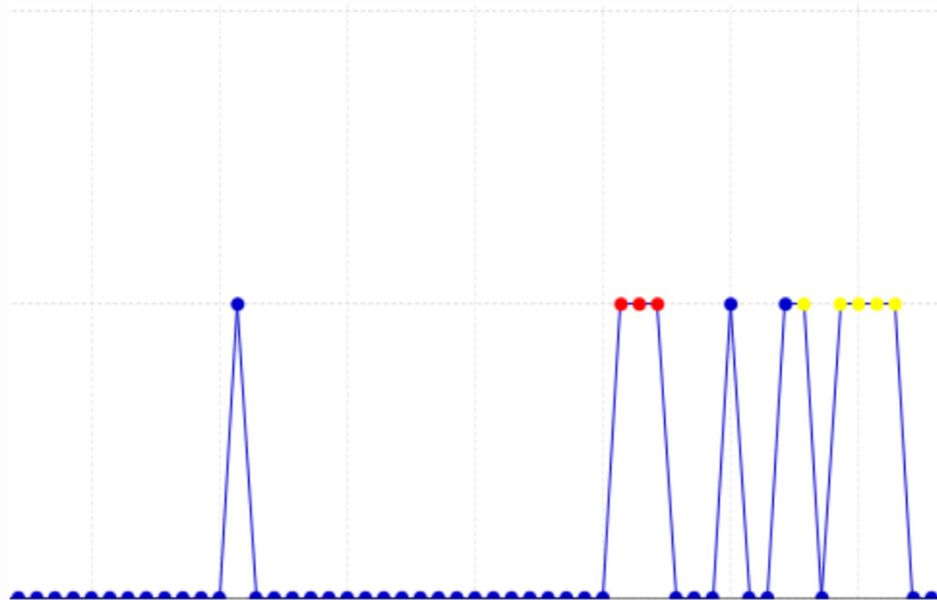
Opioid overdose visits to EDs and UCCs

Legend: 2021, 2022, 2023, 2024
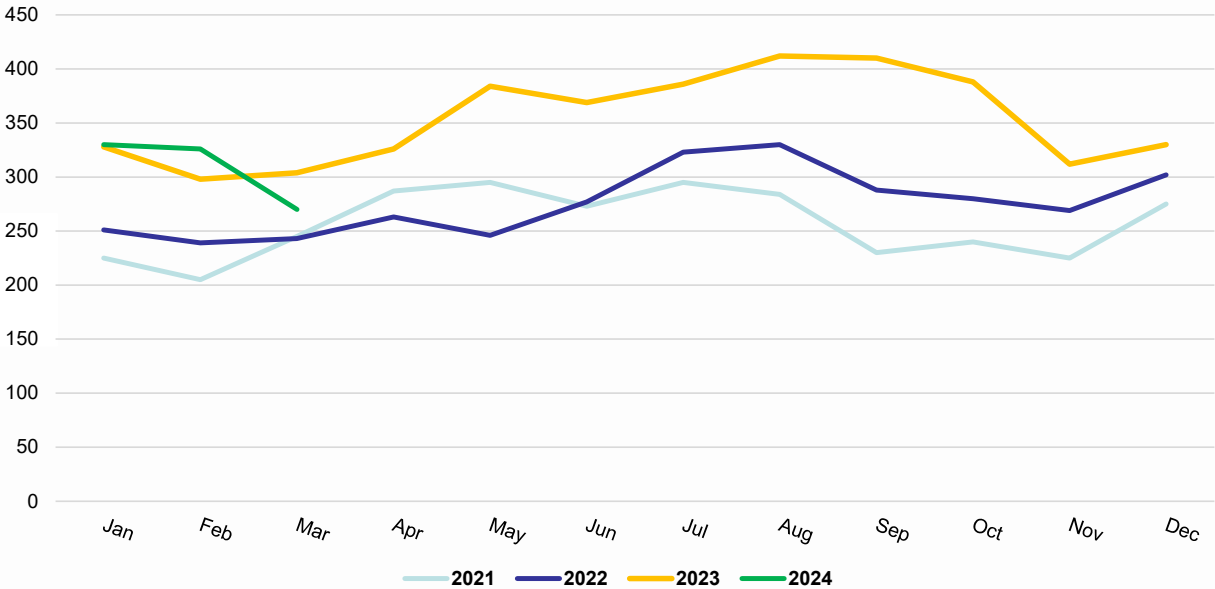
SUDORS Data available on OHA public page

Oregon Opioid Overdose Deaths

Legend: 2019, 2020, 2021, 2022, 2023
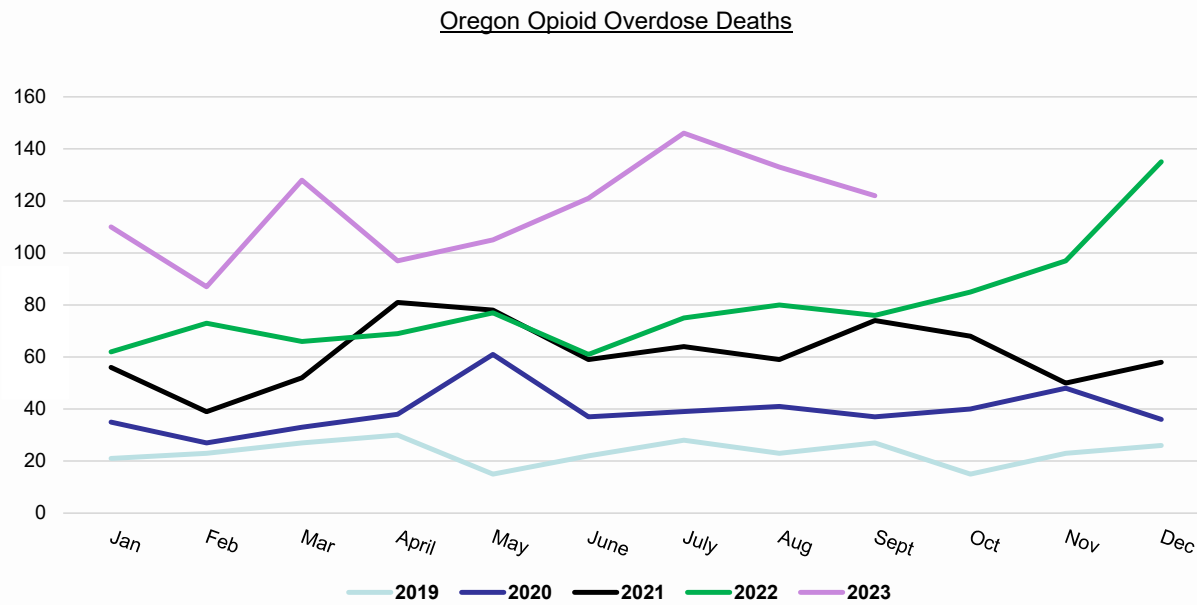
Connecting with Oregon Counties
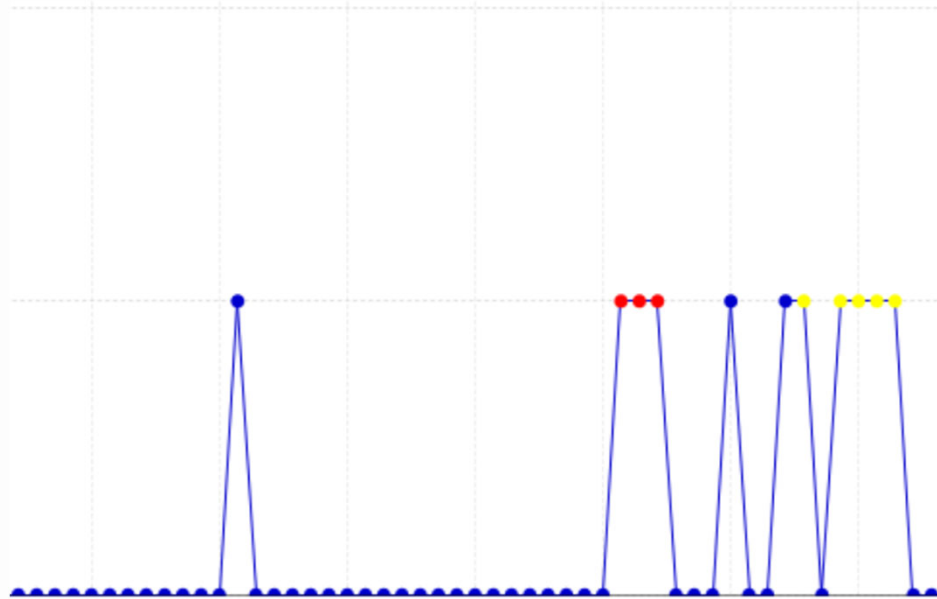
Connecting with Oregon Counties

Q&A

Oregon Health Authority

May 20, 2024

Public Health Division