# UNDERSTANDING SUICIDE DATA IN UTAH: INFORMATION YOU NEED TO SAVE LIVES

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SUICIDE PREVENTION PROGRAM ADMINISTRATOR







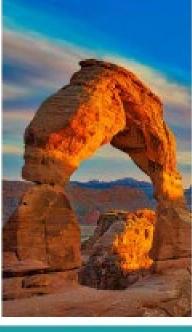


### WHAT YOU WILL LEARN TODAY

- Basic suicide trends in Utah
- How to obtain suicide data and other public wellness measures through behavioral health indicator systems
- How to interpret small numbers and big tragedies
- Prevention planning: using data to inform community efforts
- Suicide surveillance in Utah: What information and resources exist?







Utah Suicide Prevention State Plan 2022-2026



- Increase Availability and Access to Quality Physical and Behavioral Health Care
- Increase Social Norms Supportive of Help-seeking and Recovery
- Reduce Access to Lethal Means
- Increase Connectedness to Individuals, Family, Community and Social Institutions by Creating Safe and Supportive School and Community Environments
- Increase Coping and Problem Solving Skills
- Increase support to Survivors of Suicide Loss
- Strengthen Economic Supports

Other priorities include: I) Increasing Comprehensive Data Collection for Suicide to Guide Prevention Efforts 2) Engaging and Supporting High Risk or Underserved Groups.

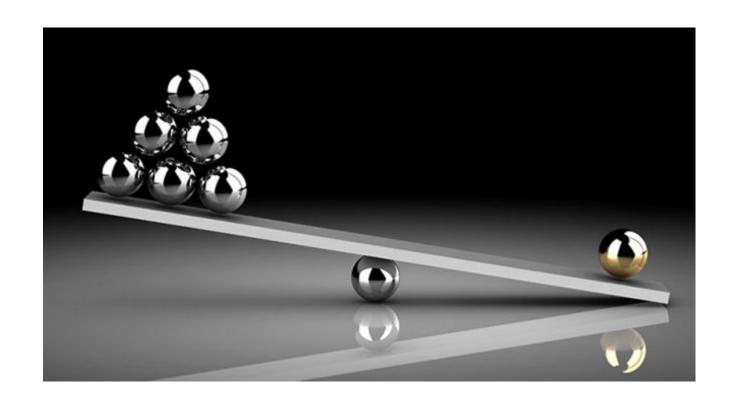
# LEGISLATION THAT SUPPORTS SUICIDE DATA COLLECTION TO INFORM PREVENTION EFFORTS

- Utah Suicide Prevention Coalition
- Utah Suicide Prevention State Plan
- Suicide Prevention Coordinator and Suicide Research Coordinator positions

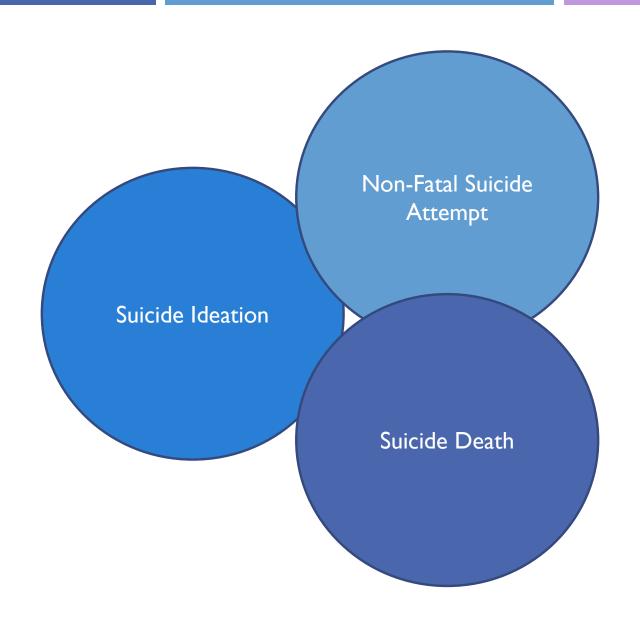


### THE IMPORTANCE OF COLLECTING SUICIDE-RELATED DATA

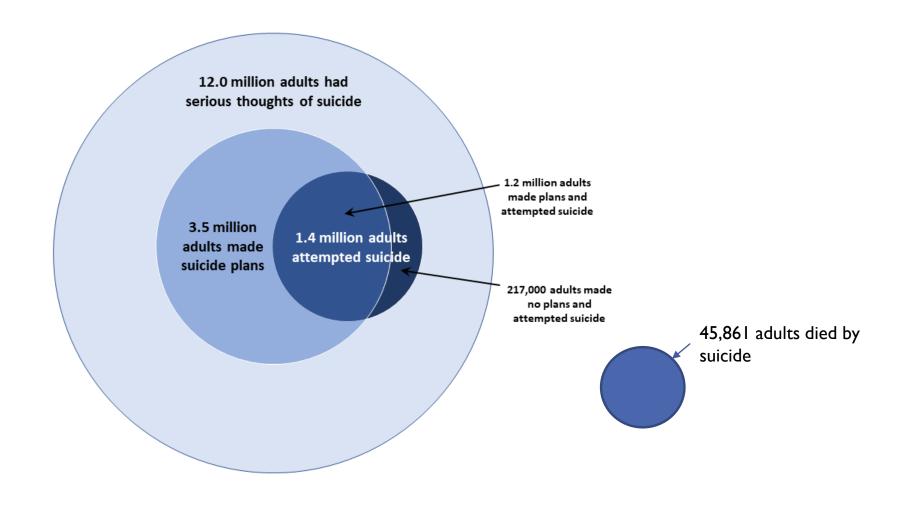
- Provide guidance to the Utah Suicide Prevention Coalition (USPC) and workgroups;
- Provide guidance to community partners and local communities for developing their own strategic plans for suicide prevention;
- Outline priorities for state agencies and legislators for legislation and policy-making;
- Report on current trends in suicide data in Utah.



## WHEN ACADEMICS TALK ABOUT SUICIDE ...

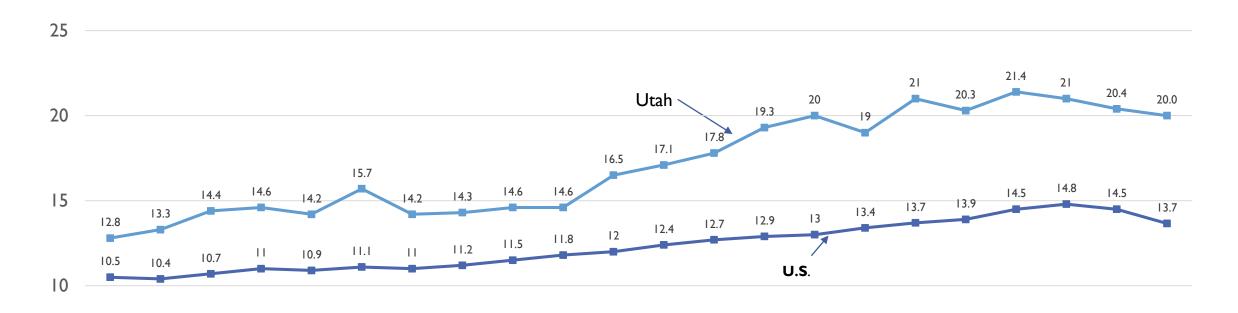


# PAST YEAR SUICIDAL THOUGHTS AND BEHAVIORS AMONG U.S. ADULTS, 2019



Source: NIMH, SAMHSA

## SUICIDE RATES IN THE U.S. AND UTAH, 1999 TO 2020

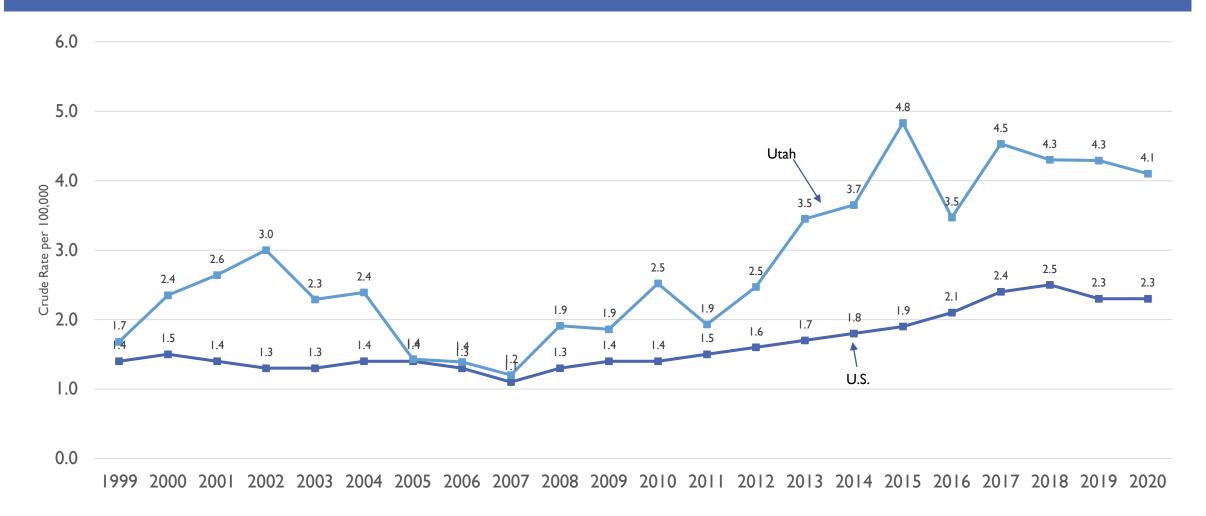


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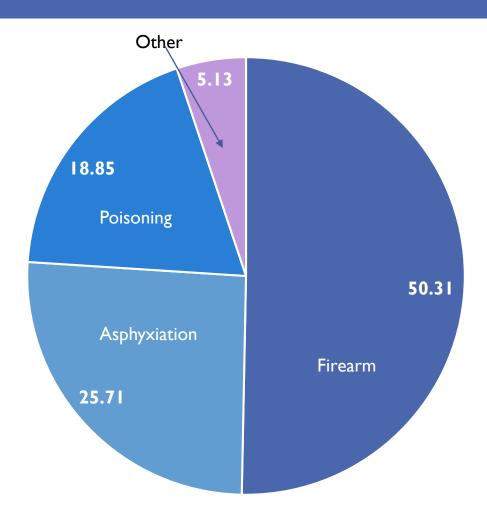
# WHAT PROPORTION OF ALL SUICIDE DEATHS EACH YEAR IN UTAH ARE 10 TO 17 YEAR-OLDS?

60/0

## SUICIDE RATES IN THE U.S. AND UTAH, AGES 0 TO 17, 1999 TO 2020



## SUICIDE DEATH IN UTAH BY METHOD, 2015 TO 2019



# PUBLIC HEALTH INDICATOR BASED INFORMATION SYSTEM (IBIS)

HOW MANY PEOPLE DIED BY SUICIDE IN UTAH IN THE PAST FIVE YEARS?

#### WHERE DOES THE DATA COME FROM?

- Utah Office of the Medical Examiner (OME)
  - Centralized Death Investigation System in Utah there are no coroners in Utah
  - Determine cause and manner, certifies death certificates
  - Deaths investigated are based on place: where the decedent died
- Office of Vital Records and Statistics (OVRS)
  - Source of official vital statistics, including suicides in Utah
  - Reports deaths based on place of residence, not place of death or injury
- Centers for Disease Control and Prevention (CDC) and National Vital Statistics System (NVSS)
  - Reconciles deaths to report accurate death data by residence (e.g., Wyoming resident who died in Utah would be "returned" to Wyoming)
- Funeral homes also play a role in gathering some important demographic information, such as race, education, etc.



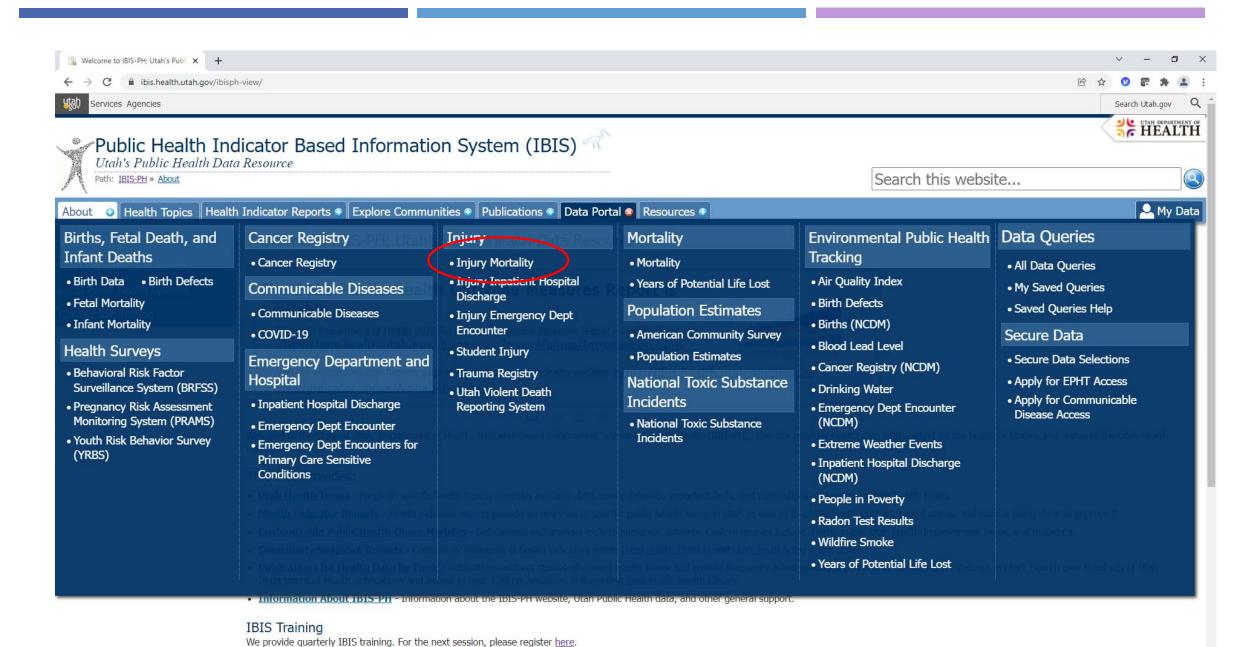


- . Health Indicator Reports Health indicator reports provide an overview of specific public health issues in Utah as well as its public health context, recent status, and what is being done to improve it.
- Customizable Public Health Query Modules Data access and analysis tools to numerical datasets. Custom queries include charts, maps, Utah Health Improvement Index, and metadata.
- Community Snapshot Reports Community measures of health indicators within Local Health Districts and Utah Small Areas in the state.
- <u>Publications for Health Data by Topic</u> Publications address studies of current health issues and answer frequently asked questions concerning current health statuses in Utah. Search over hundreds of Utah Department of Health publications and access to over 7,000 publications in the online <u>Utah Public Health Library</u>.
- Information About IBIS-PH Information about the IBIS-PH website, Utah Public Health data, and other general support.

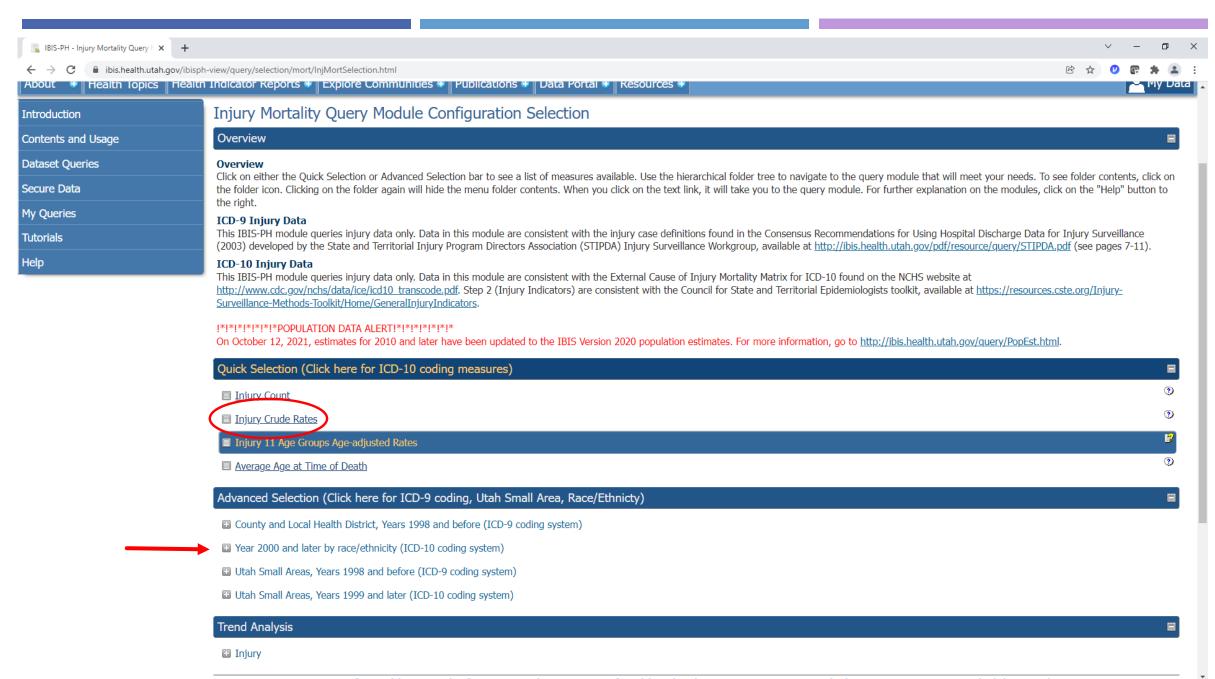
#### IBIS Training

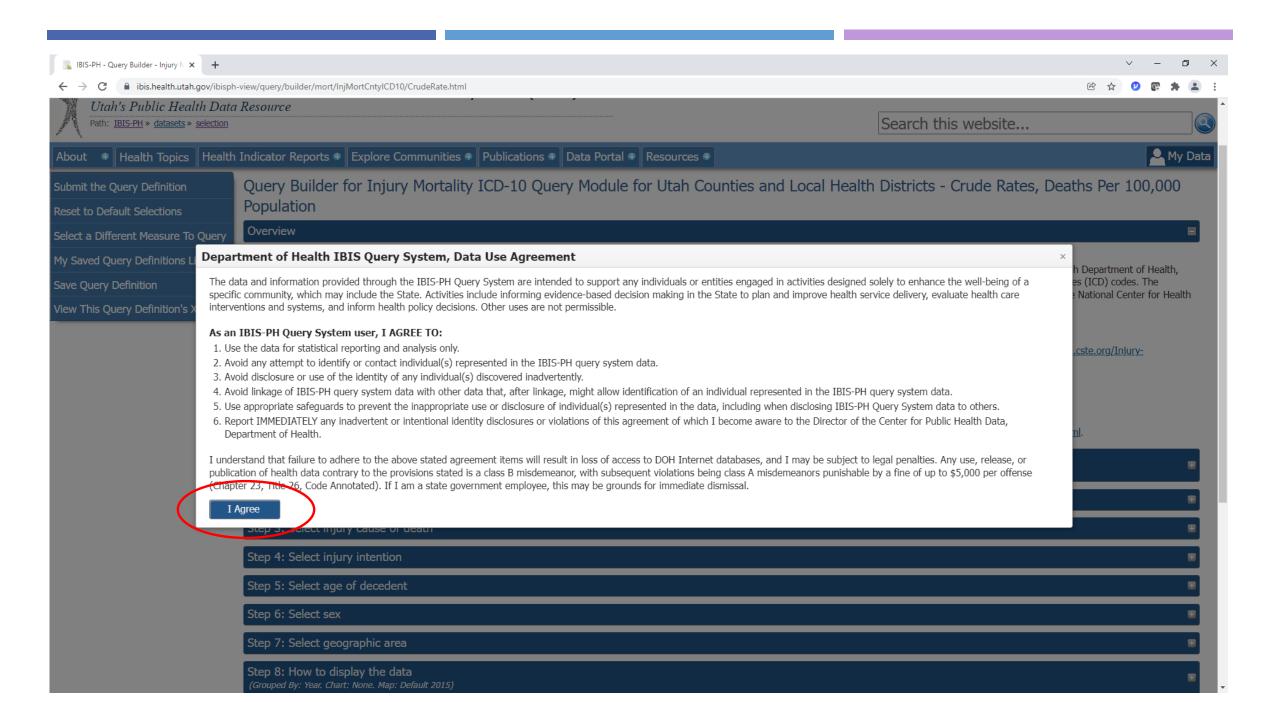
We provide quarterly IBIS training. For the next session, please register here.

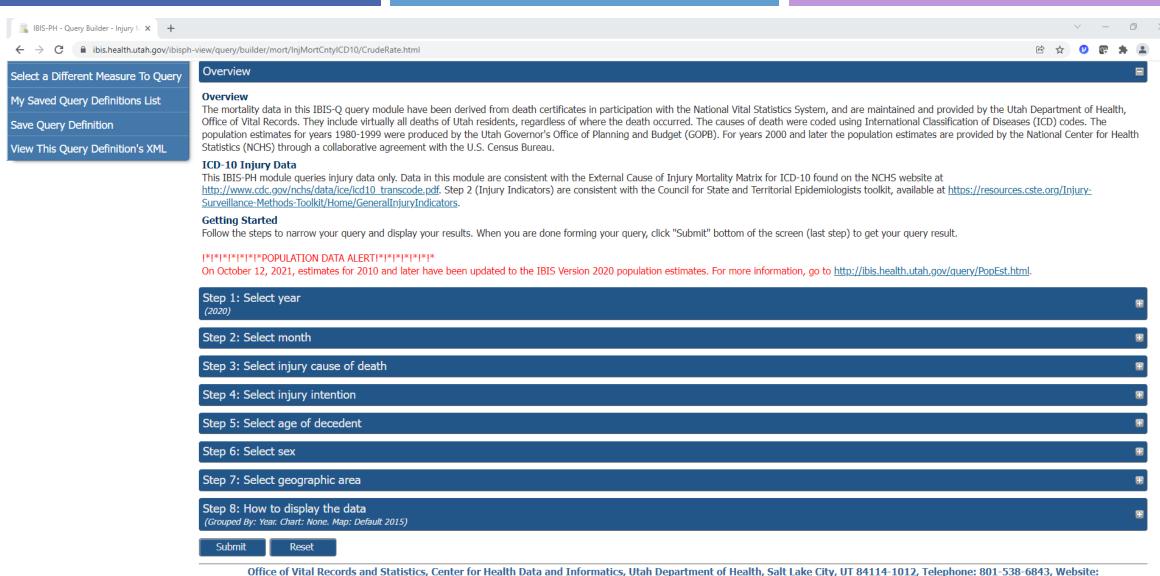
https://ibis.health.utah.gov/



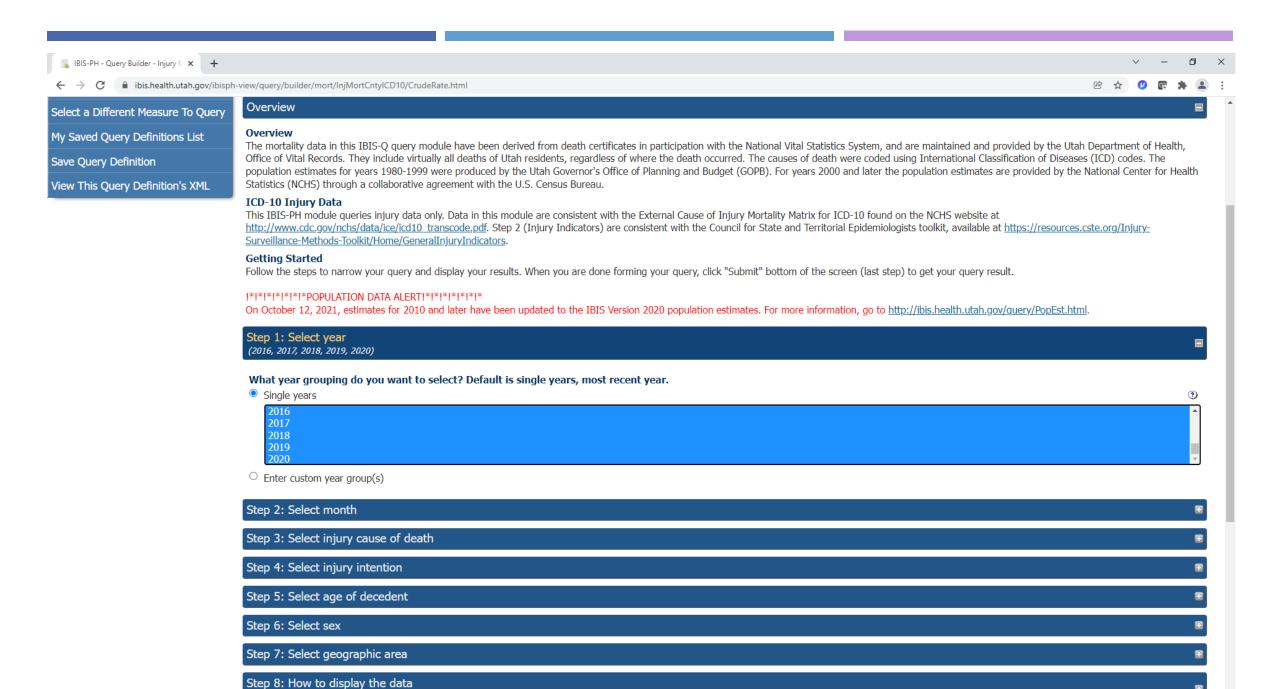
Questions, Concerns, and Feedback

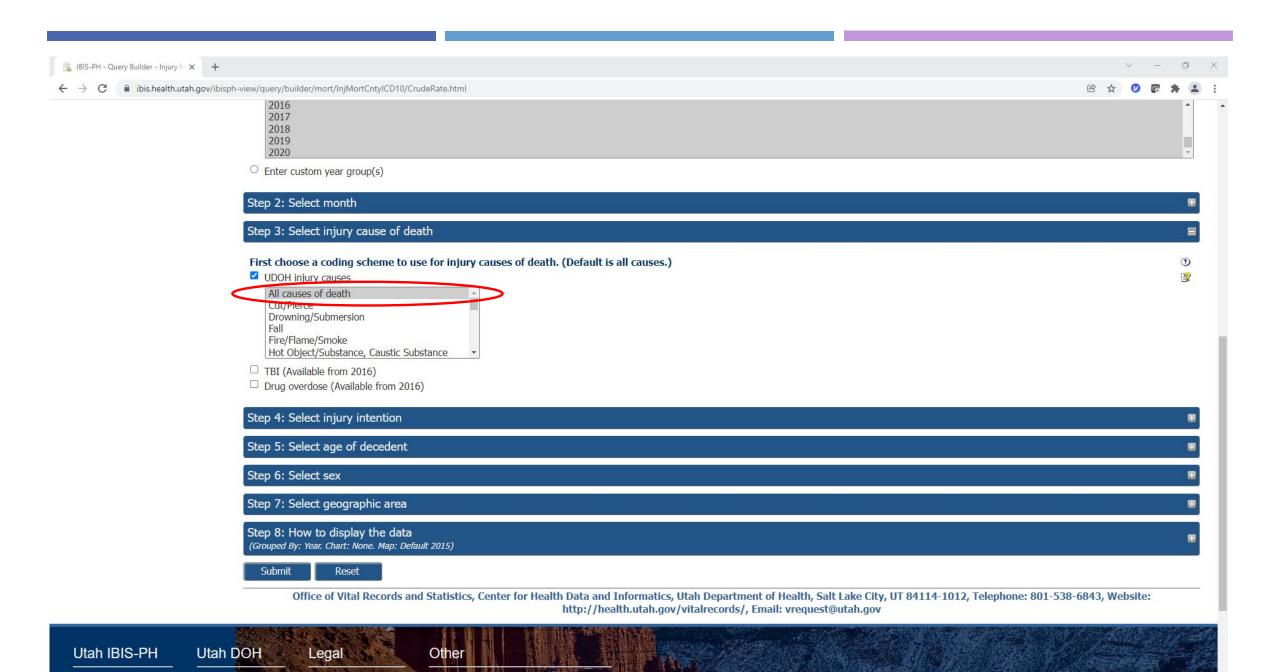






Office of Vital Records and Statistics, Center for Health Data and Informatics, Utah Department of Health, Salt Lake City, UT 84114-1012, Telephone: 801-538-6843, Website http://health.utah.gov/vitalrecords/, Email: vrequest@utah.gov



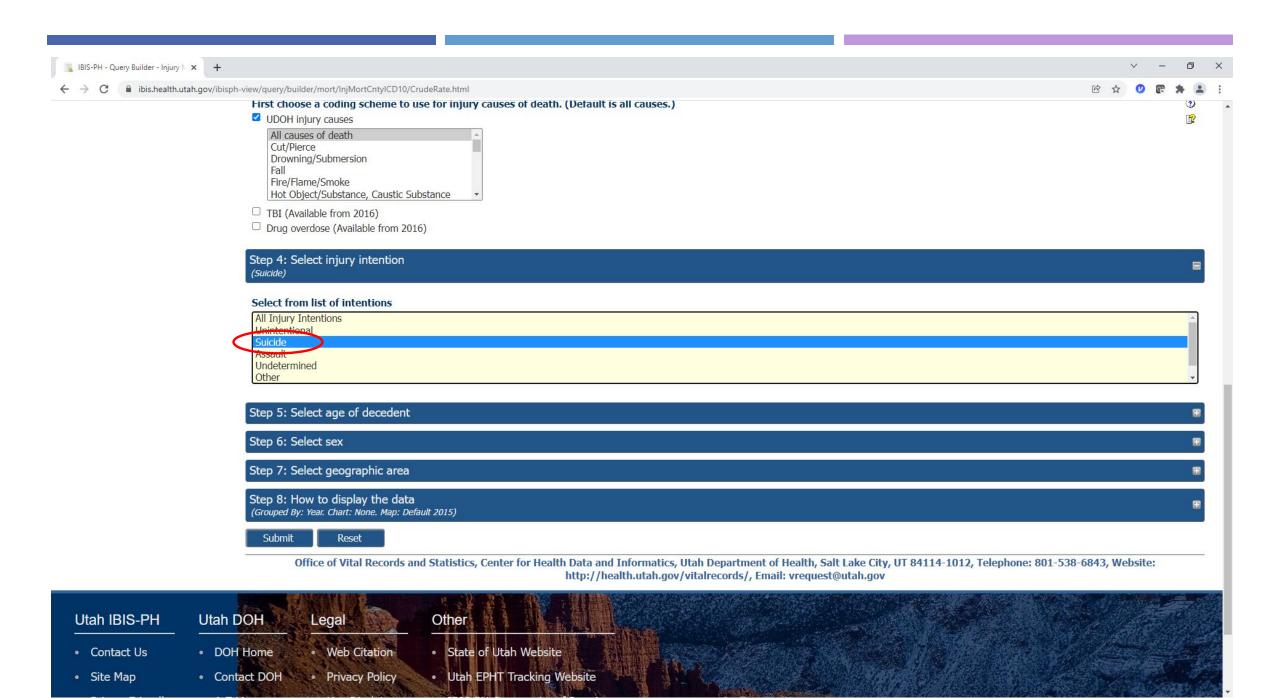


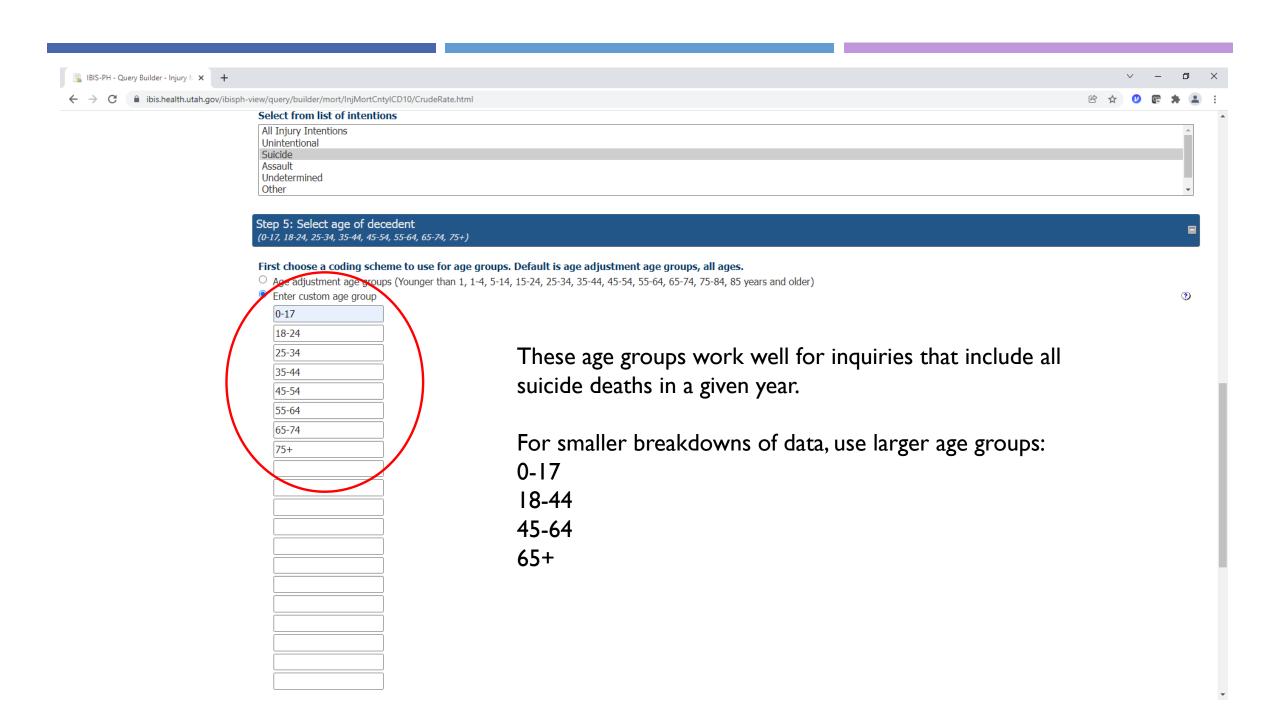
State of Utah Website

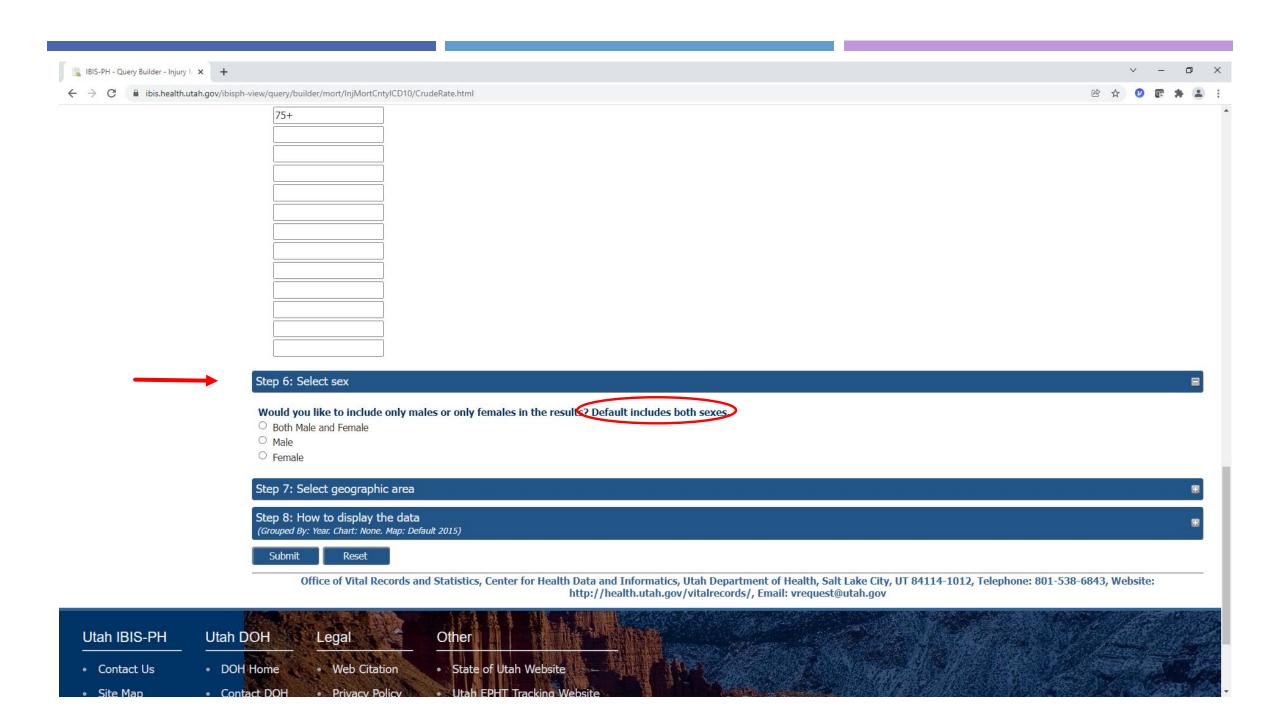
DOH Home

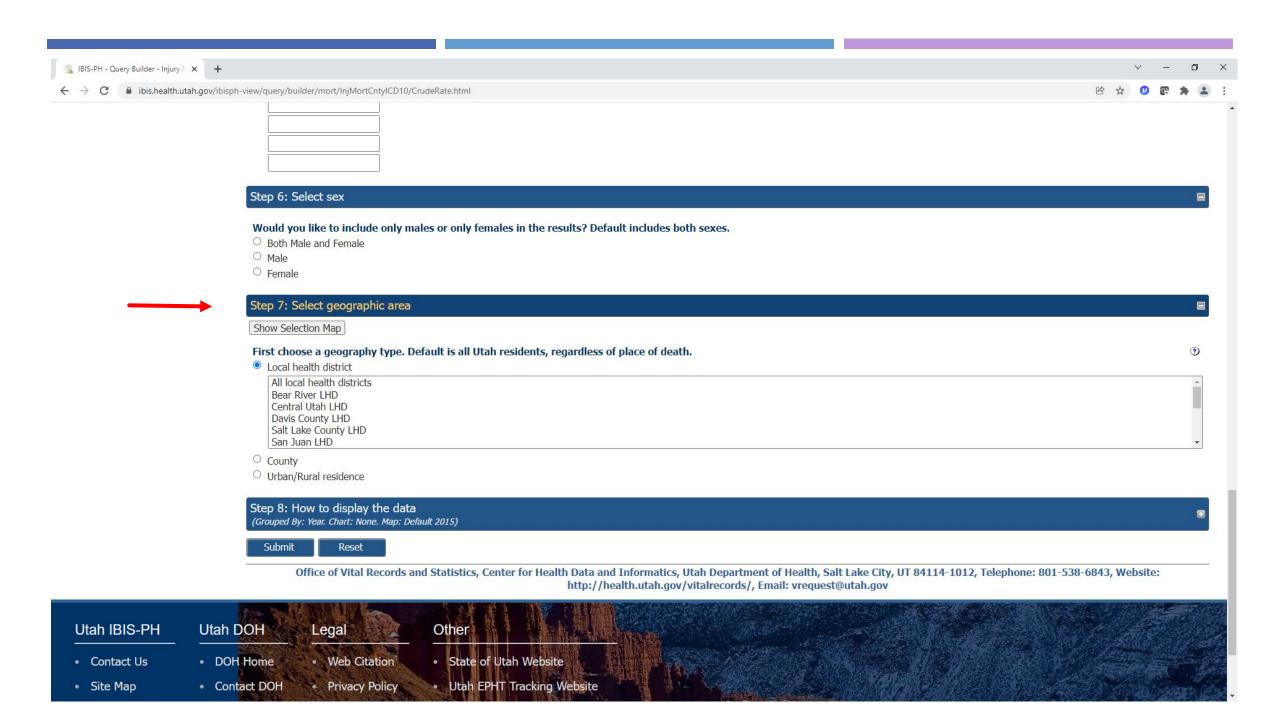
Web Citation

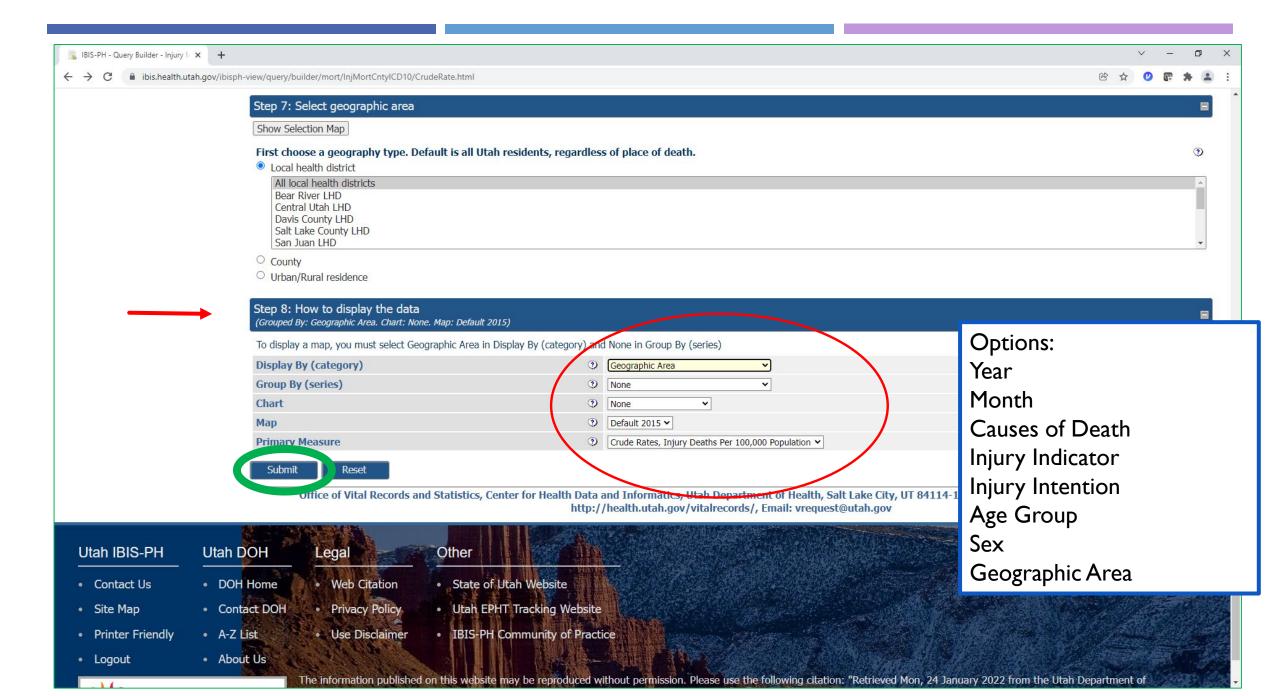
Contact Us

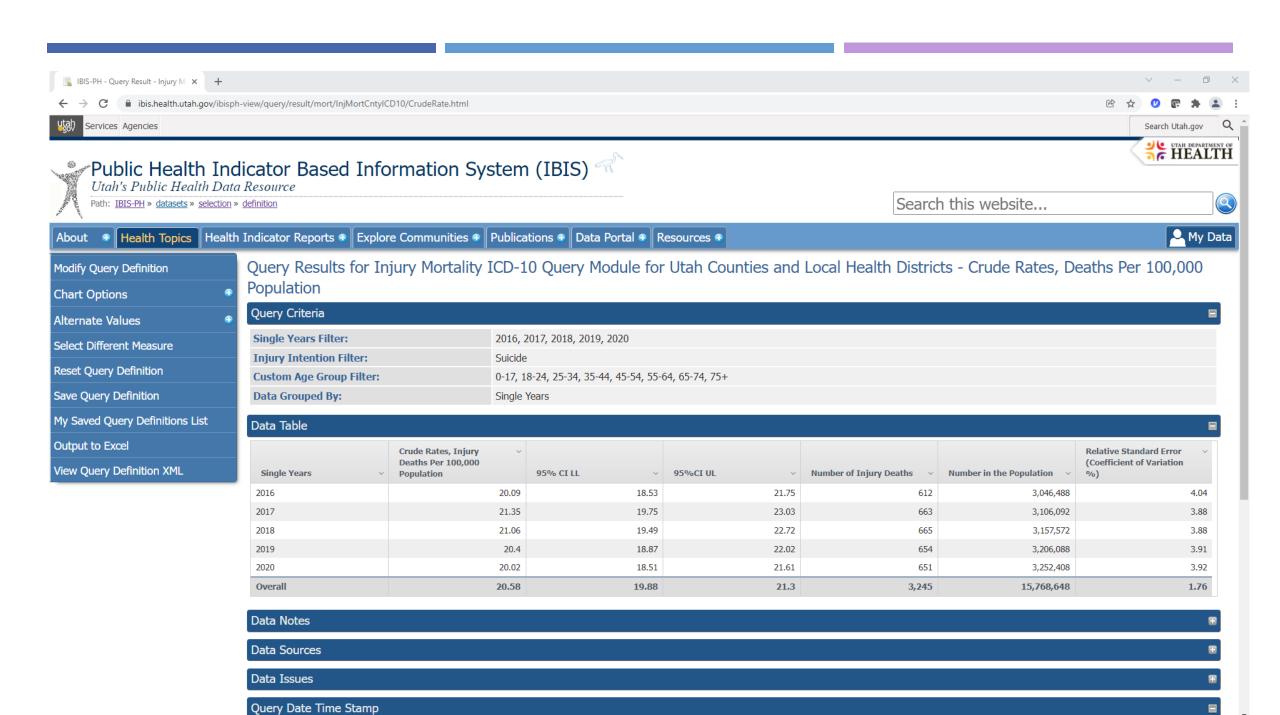












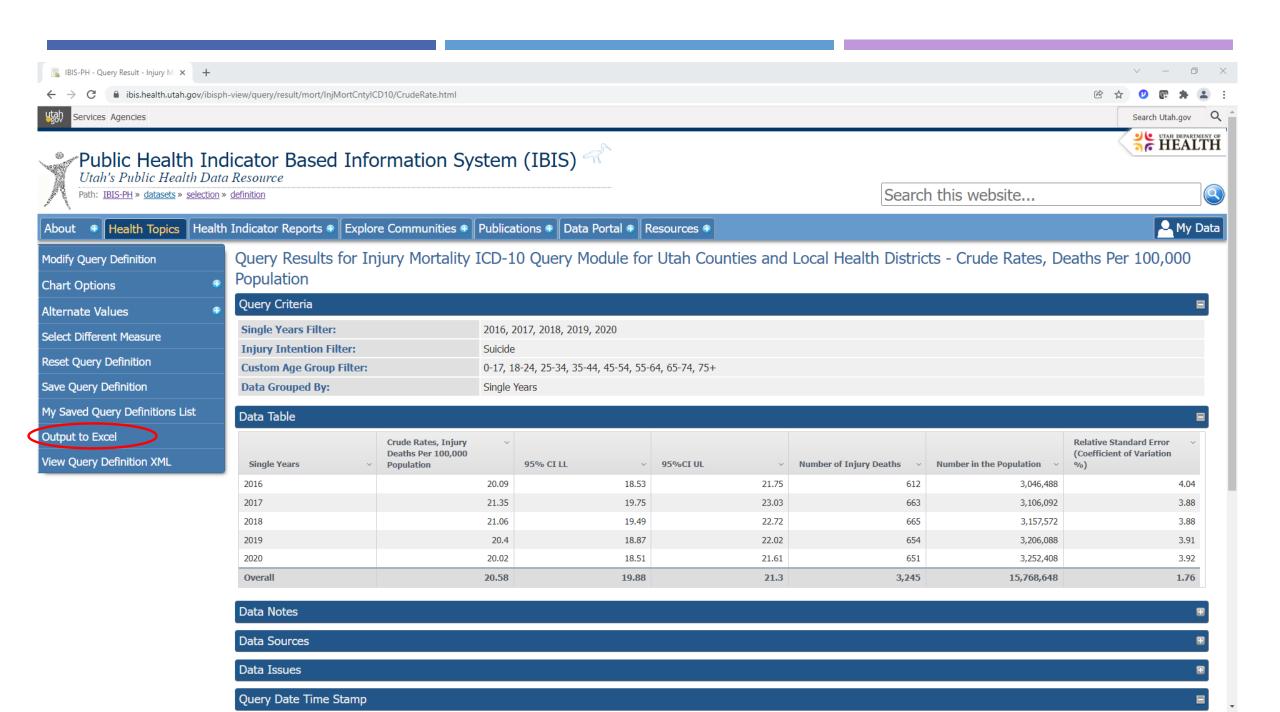
# Query Results for Injury Mortality ICD-10 Query Module for Utah Counties and Local Health Districts - Crude Rates, Deaths Per 100,000 Population

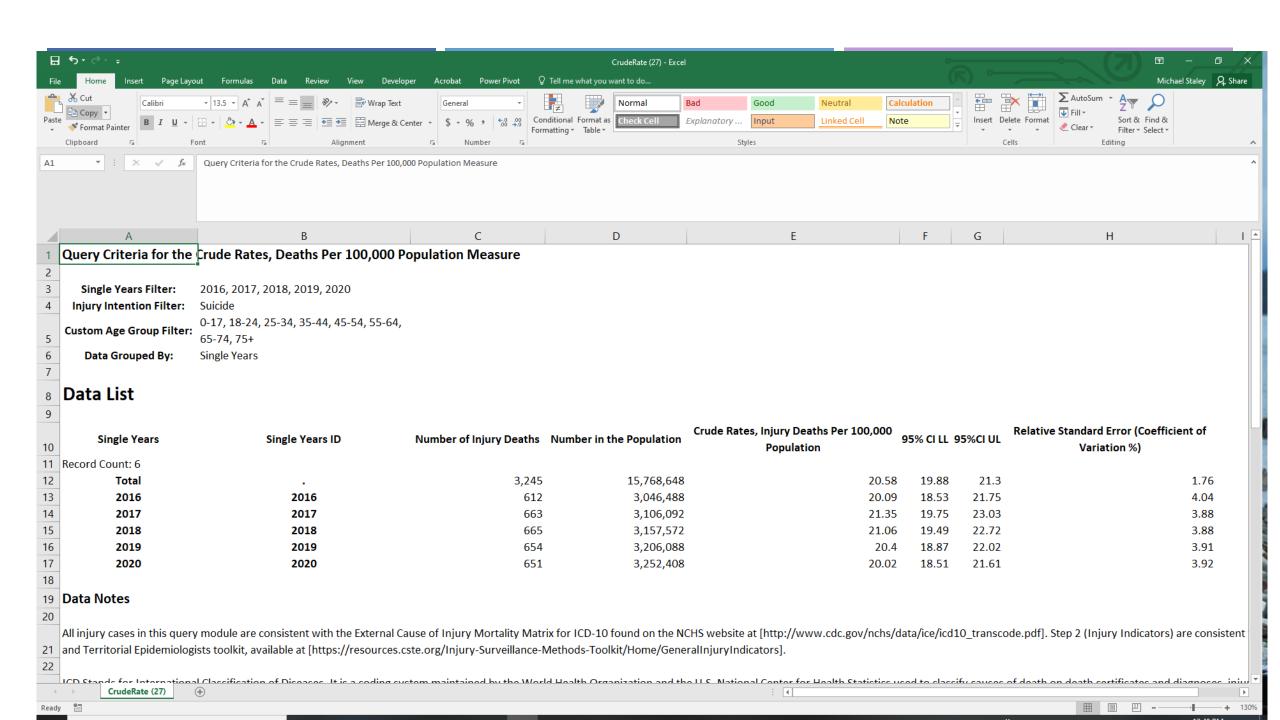
Query Criteria		
Single Years Filter:	2016, 2017, 2018, 2019, 2020	
Injury Intention Filter:	Suicide	
Custom Age Group Filter:	0-17, 18-24, 25-34, 35-44, 45-54, 55-64, 65-74, 75+	
Data Grouped By:	Single Years	

Single Years v	Crude Rates, Injury  Deaths Per 100,000  Population	95% CI LL	95%CI UL ~	Number of Injury Deaths V	Number in the Population ~	Relative Standard Error (Coefficient of Variation %)			
2016	20.09	18.53	21.75	612	3,046,488	4.04			
2017	21.35	19.75	23.03	663	3,106,092	3.88			
2018	21.06	19.49	22.72	665	3,157,572	3.88			
2019	20.4	18.87	22.02	654	3,206,088	3.91			
2020	20.02	18.51	21.61	651	3,252,408	3.92			
Overall	20.58	19.88	21.3	3,245	15,768,648	1.76			

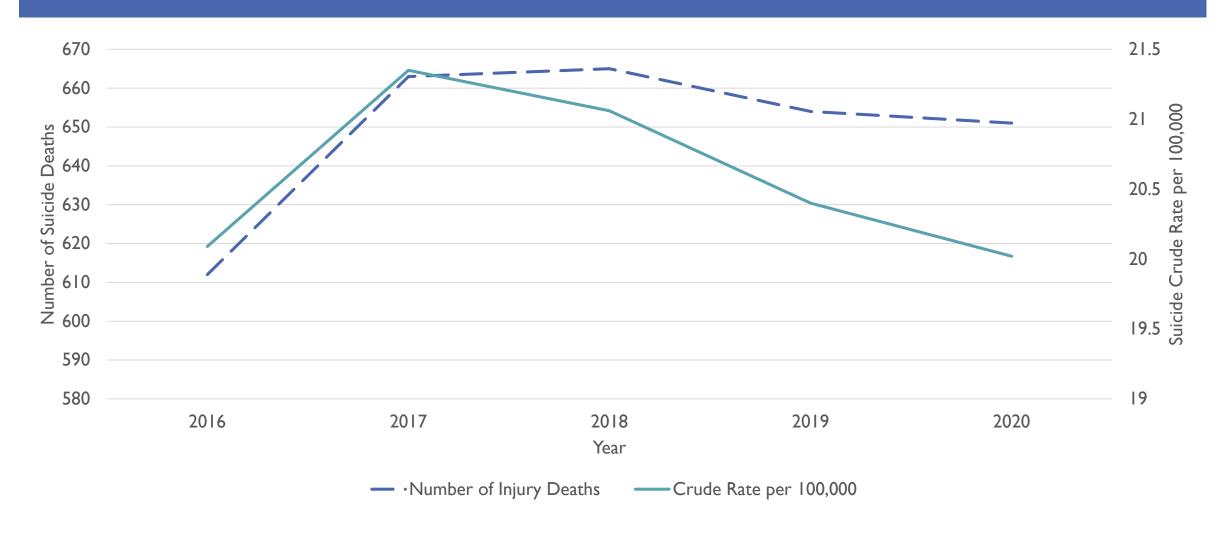
Data Notes

Data Table



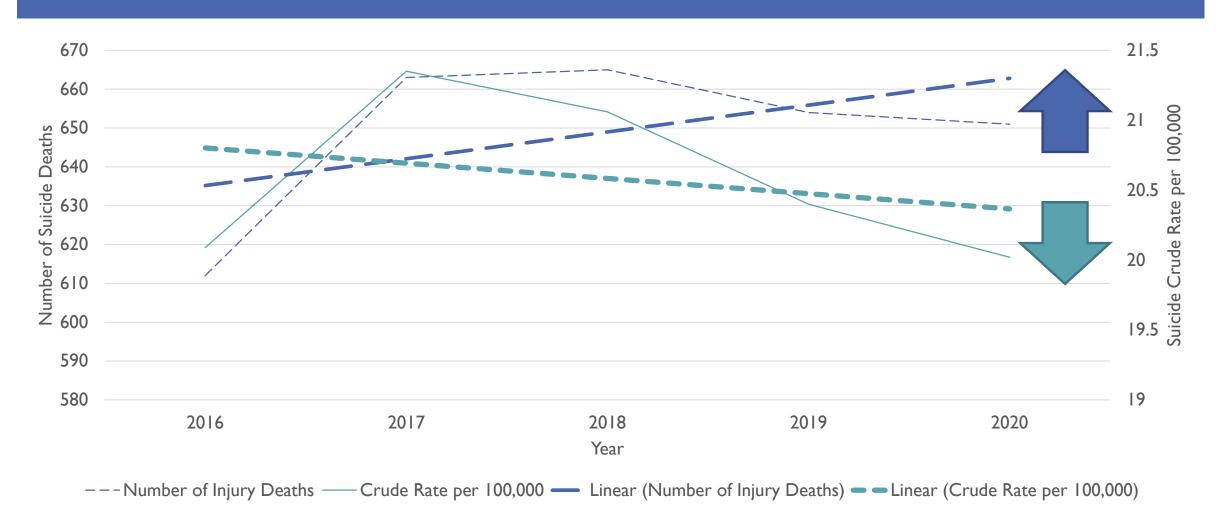


# NUMBER OF SUICIDE DEATHS AND SUICIDE DEATH RATE PER 100,000, UTAH, 2016-2020

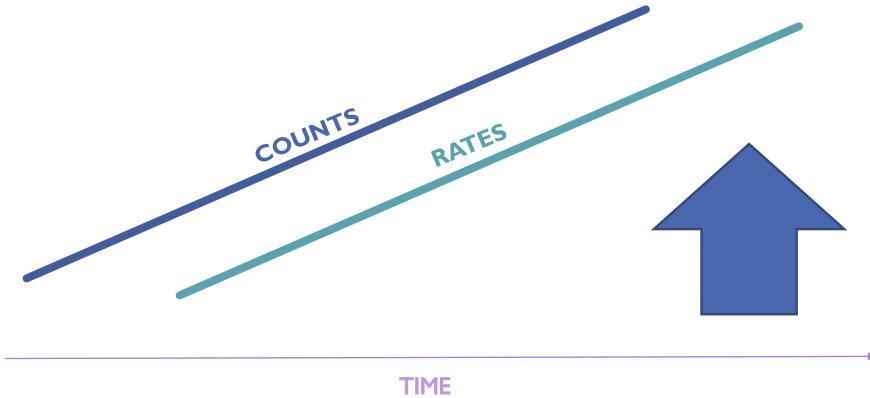


### WHAT IS A RATE?

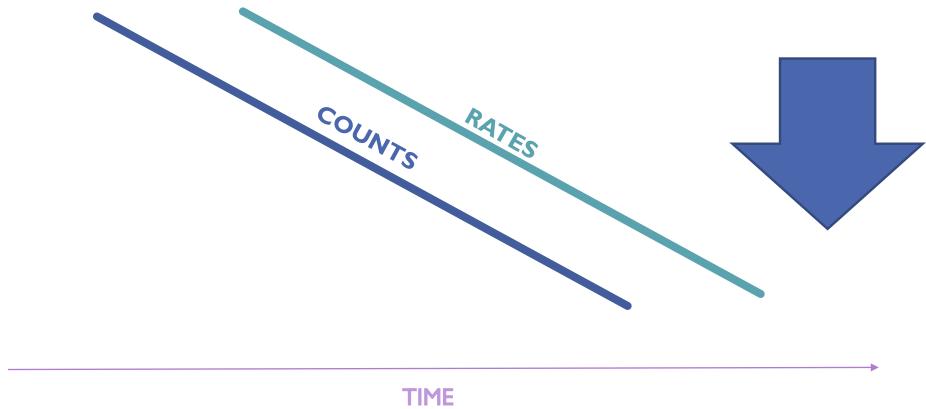
# NUMBER OF SUICIDE DEATHS AND SUICIDE DEATH RATE PER 100,000, UTAH, 2016-2020, WITH TRENDLINES



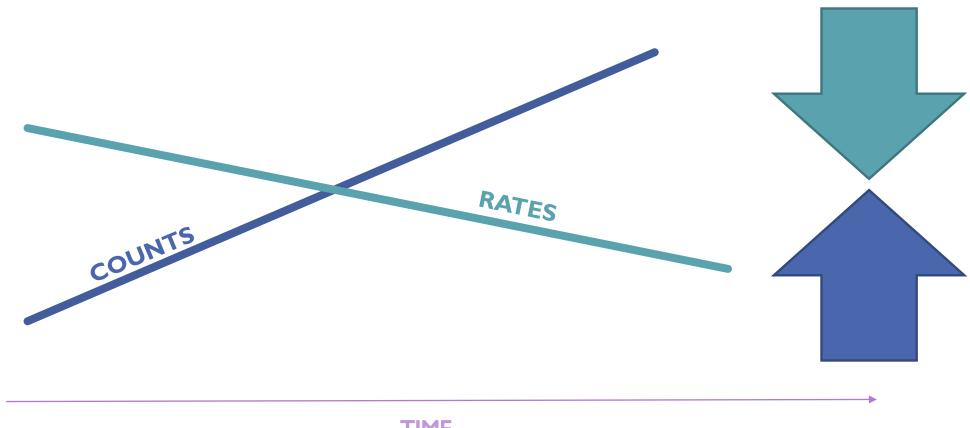
## **EXAMINING TRENDS**



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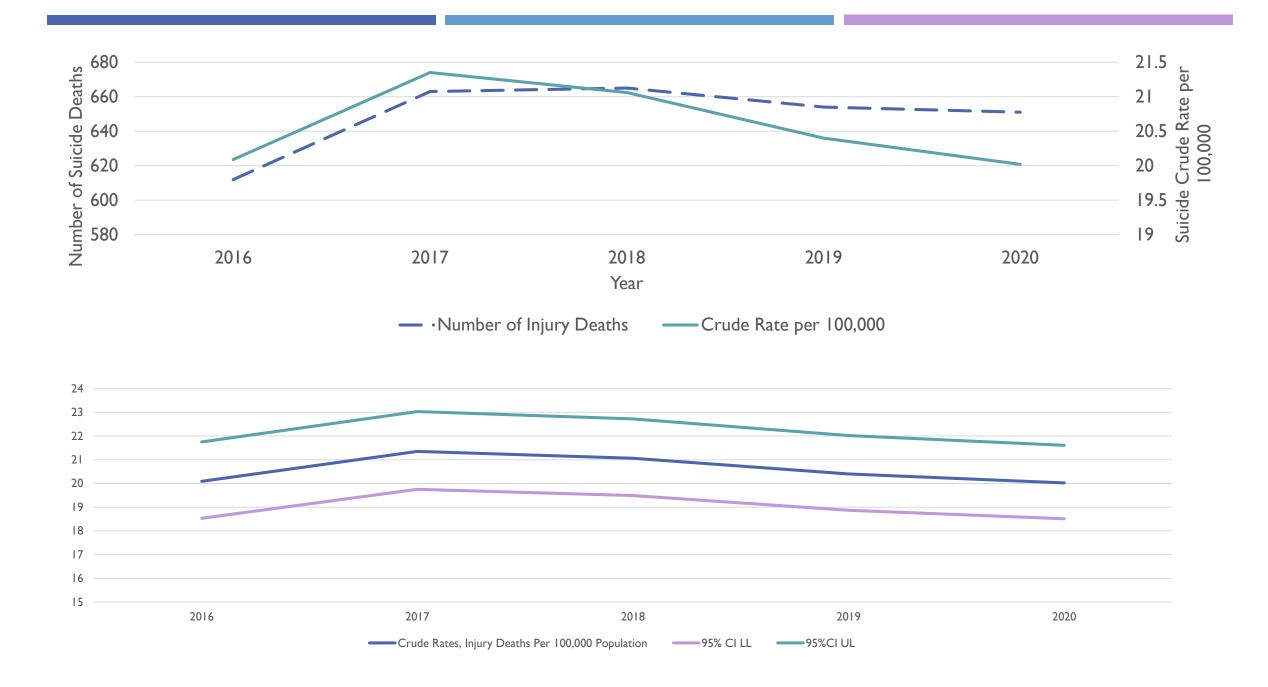


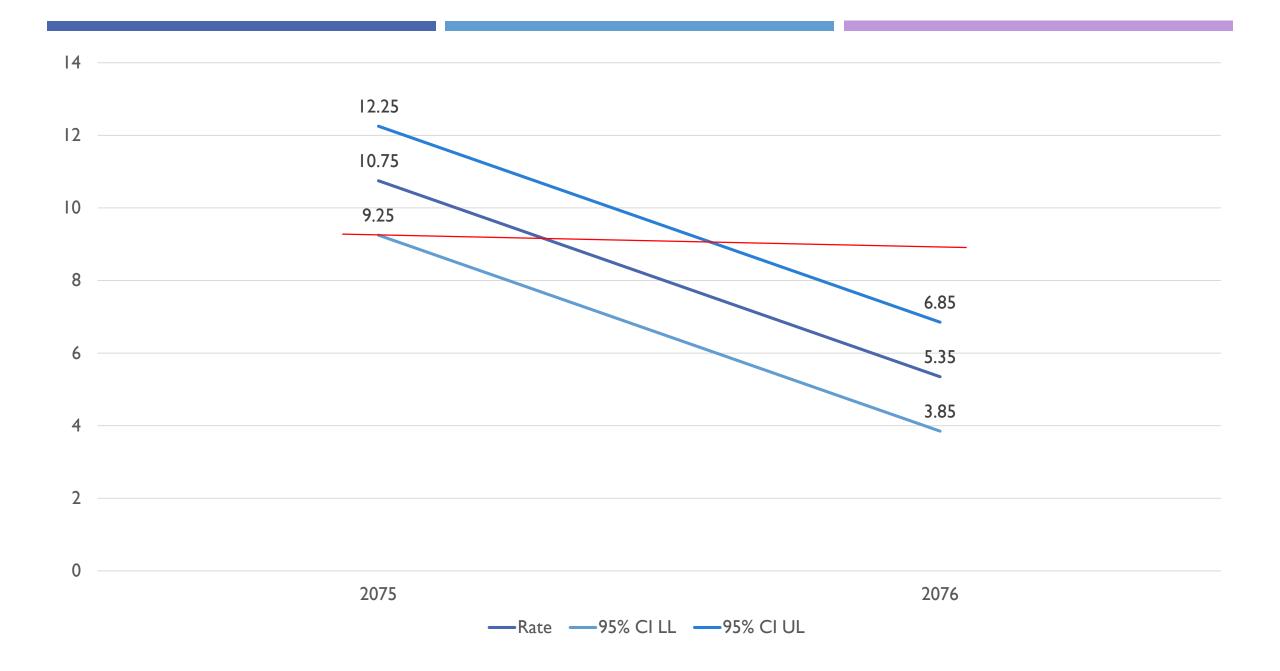
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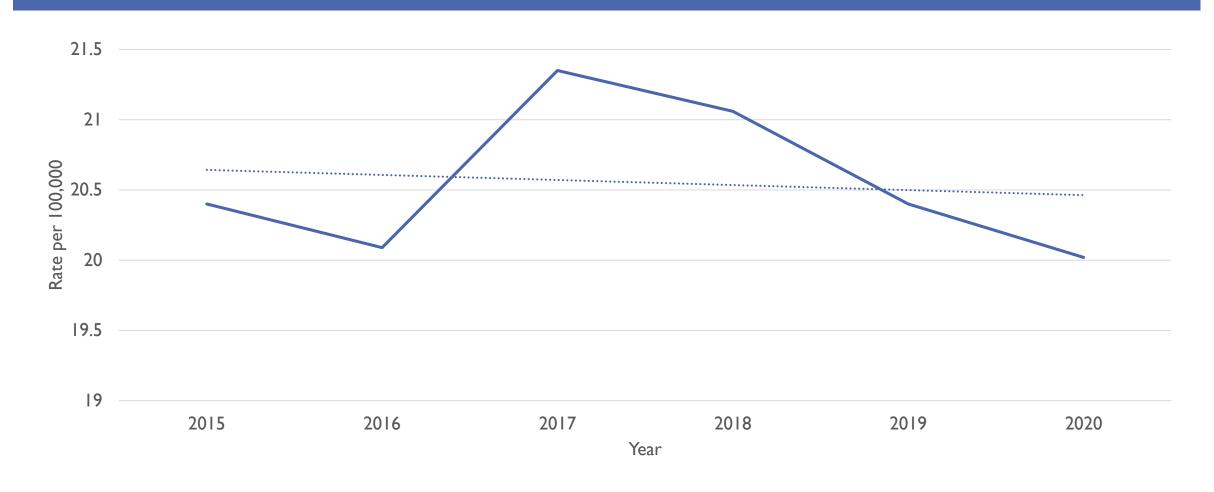
Data Table								
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Data Notes





# HOW MANY PEOPLE DIED BY SUICIDE IN UTAH IN THE PAST FIVE YEARS?



Data Table							
Single Years	Crude Rates, Injury  Deaths Per 100,000  Population	95% CI LL ~	95%CI UL ~	Number of Injury Deaths v	Number in the Population ∨	Relative Standard Error (Coefficient of Variation %)	
2016	12.36*	5.34*	24.36*	8*	64716*	35.3553*	
2017	28.11	16.93	43.9	19	67,584	22.94	
2018	24.25	14.13	38.83	17	70,092	24.25	
2019	17.99	9.58	30.77	13	72,252	27.74	
2020	20.08	11.24	33.12	15	74,688	25.82	
Overall	20.61	16.13	25.96	72	349,332	11.79	

<sup>\*</sup>Use caution in interpreting; the estimate has a coefficient of variation > 30% and is therefore deemed unreliable by Utah Department of Health standards. Consider aggregating years to decrease the relative standard error and improve the reliability of the estimate.

#### Data Table Crude Rates, Injury **Relative Standard Error** Deaths Per 100,000 (Coefficient of Variation Single Years 95% CI LL 95%CI UL **Number of Injury Deaths** Number in the Population Population 22.95\* 9.23\* 47.28\* 37.7964\* 2016 30504\* 2017 12.43\* 3.39\* 31.82\* 4\* 32184\* 50.0000\* 20.95\* 8.42\* 43.17\* 7\* 2018 33408\* 37,7964\* 2019 11.31\* 2020 3.08\* 28.97\* 4\* 35352\* 50.0000\* \*\* Overall 9.28 21.54 165,780 20.41

\*Use caution in interpreting; the estimate has a coefficient of variation > 30% and is therefore deemed unreliable by Utah Department of Health standards. Consider aggregating years to decrease the relative standard error and improve the reliability of the estimate. \*\*The estimate has been suppressed because 1) The relative standard error is greater than 50% or when the relative standard error can't be determined. Consider aggregating years to decrease the relative standard error and improve the reliability of the estimate. 2) the observed number of events is very small and not appropriate for publication, or 3) it could be used to calculate the number in a cell that has been suppressed.

Step	1:	Sel	ect	year	
(2015-	-20	16, 2	2017-	2018,	2019-2020)

What year grouping do you want to select? Default is single years, most recent year.

- Single years
- Enter custom year group(s)

2015-2016 2017-2018 2019-2020

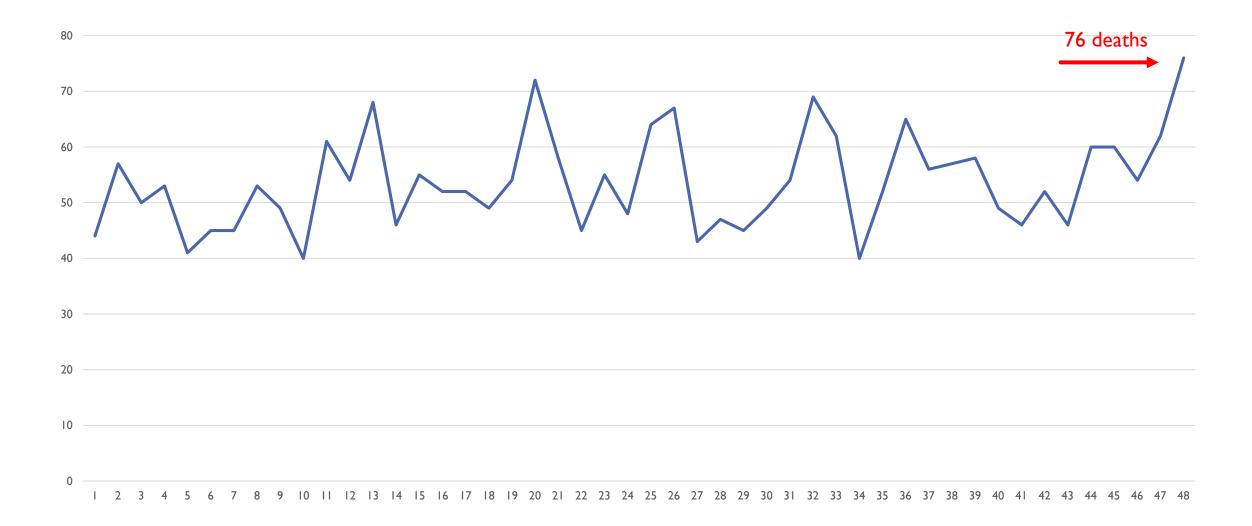
Data Table								
Custom Year Groups ~	Crude Rates, Injury Deaths Per 100,000 Population	95% CI LL ~	95%CI UL V	Number of Injury Deaths v	Number in the Population ~	Relative Standard Error (Coefficient of Variation %)		
2015-2016	23.44	12.82	39.33	14	59,724	26.73		
2017-2018	16.77*	8.37*	30.01*	11*	65592*	30.1511*		
2019-2020	8.61*	3.16*	18.74*	6*	69684*	40.8248*		
Overall	15.9	10.8	22.57	31	195,000	17.96		

<sup>\*</sup>Use caution in interpreting; the estimate has a coefficient of variation > 30% and is therefore deemed unreliable by Utah Department of Health standards. Consider aggregating years to decrease the relative standard error and improve the reliability of the estimate.

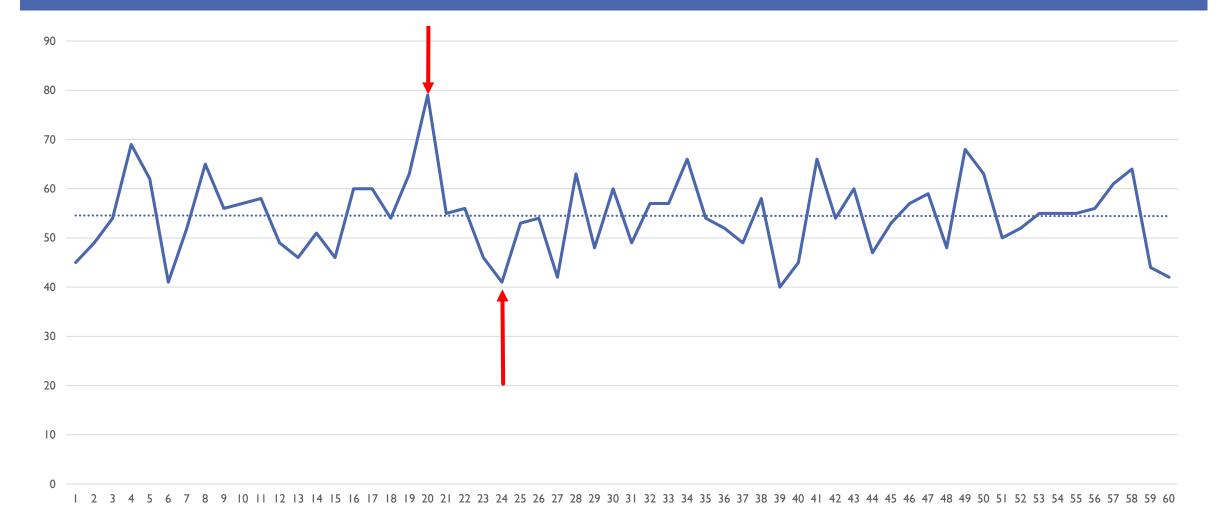
## OTHER SUICIDE RELATED QUERIES AVAILABLE ON IBIS

- Queries by race and ethnicity
- Utah Violent Death Reporting System (UTVDRS or NVDRS): Find out circumstances of suicide death by year, age, sex, race/ethnicity, and geography.
- Fatal and non-fatal suicide attempts reported to emergency departments by year, age, sex, primary payer, discharge status, and geography

## A WHOA! MOMENT



## THAT WASN'T SO WHOA



#### **SCENARIO**

The Smith County Suicide Prevention Coalition learns from the local sheriff of three suicide deaths that occurred in their county over the past two weeks and is rightfully concerned about an increase in suicide death in their county.

#### CONSIDERATIONS:

- How many suicide deaths are typical in a 12 month period in Smith County?
- Are the three people who died in Smith County socially connected to one another? For example, part of the same school, faith community or congregation, work in the same industry or for the same employer, or were friends?
- Were there any commonalities among the three deaths? For example, did they use the same method to kill themselves, injure themselves at the same location, or all a racial/ethnic minority?
- Did all three individuals who died by suicide reside in Smith County?

#### THE OME MONITORS FOR SUICIDE CLUSTERS IN REALTIME

**POINT CLUSTERS**: Three or more deaths that occur within a short period of time (typically a 12 month period) in which all of the decedents were socially connected.

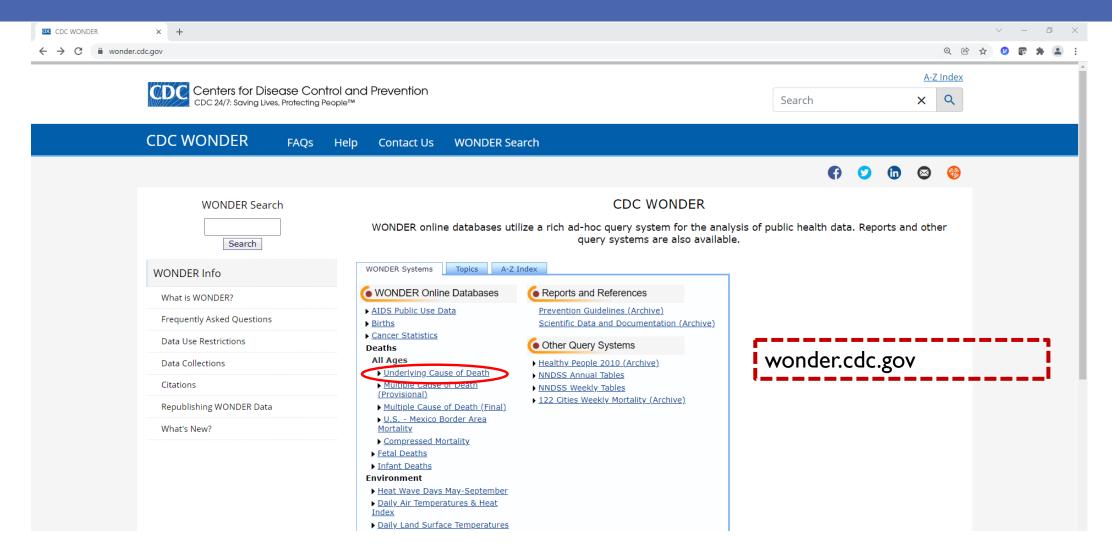
- For example, all attended the same school, worked at the same company, or were incarcerated at the same facility.
- Another example: three suicides in a Tlingit village in Southeast Alaska.
- Sometimes referred to as <u>suicide contagion</u>

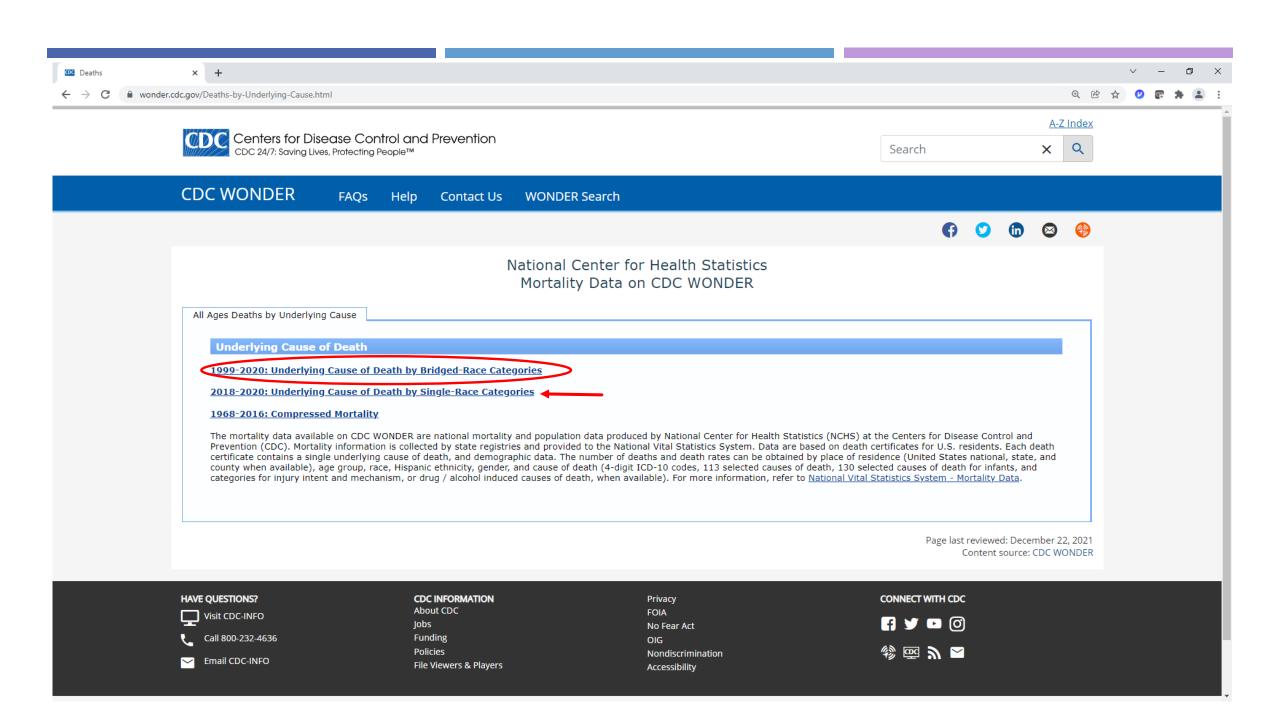
MASS CLUSTERS: An aberration typical frequency that exceeds normal variation for a period of time within a specified period of time (typically a 12 month period) in which there are commonalities, but the individuals were not socially connected.

- For example, following Robin Williams' death by suicide in 2014, there was an increase in suicide by ligature hanging nationally.
- Another example: there has been considerable research in the aftermath of Netflix's 13 Reasons Why, which showed
  increases in suicidal behavior among teens.
- Sometimes referred to as <u>suicide diffusion</u>

Clusters require specific responses that typically extend beyond a community suicide prevention plan.

### **CDC WONDER**







#### About Underlying Cause of Death, 1999-2020

Request Form Results Map Chart About Underlying Cause of Death Data Dataset Documentation Other Data Access Data Use Restrictions How to Use WONDER

**Note:** Any use of these data implies consent to abide by the terms of the data use restrictions.

The Underlying Cause of Death database contains mortality and population counts for all U.S. counties, Data are based on death certificates for U.S. residents, Each death certificate identifies a single underlying cause of death and demographic data. The number of deaths, crude death rates or age-adjusted death rates, and 95% confidence intervals and standard errors for death rates can be obtained by place of residence (total U.S., region, state and county), age group (single-year-of age, 5-year age groups, 10-year age groups and infant age groups), race, Hispanic ethnicity, gender, year, cause-of-death (4-digit ICD-10 code or group of codes), injury intent and injury mechanism, drug/alcohol induced causes and urbanization categories. Data are also available for place of death, month and week day of death, and whether an autopsy was performed.

#### Data Use Restrictions:

The Public Health Service Act (42 U.S.C. 242m(d)) provides that the data collected by the National Center for Health Statistics (NCHS) may be used only for the purpose for which they were obtained; any effort to determine the identity of any reported cases, or to use the information for any purpose other than for health statistical reporting and analysis, is against the law. Therefore users will:

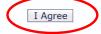
- Use these data for health statistical reporting and analysis only.
- For sub-national geography, do not present or publish death counts of 9 or fewer or death rates based on counts of nine or fewer (in figures, graphs, maps, tables, etc.).
- . Make no attempt to learn the identity of any person or establishment included in these data.
- Make no disclosure or other use of the identity of any person or establishment discovered inadvertently and advise the NCHS Confidentiality Officer of any such discovery.

Confidentiality Officer National Center for Health Statistics 3311 Toledo Road Hvattsville, MD 20782 Telephone 888-642-4159 Email: nchsconfidentiality@cdc.gov

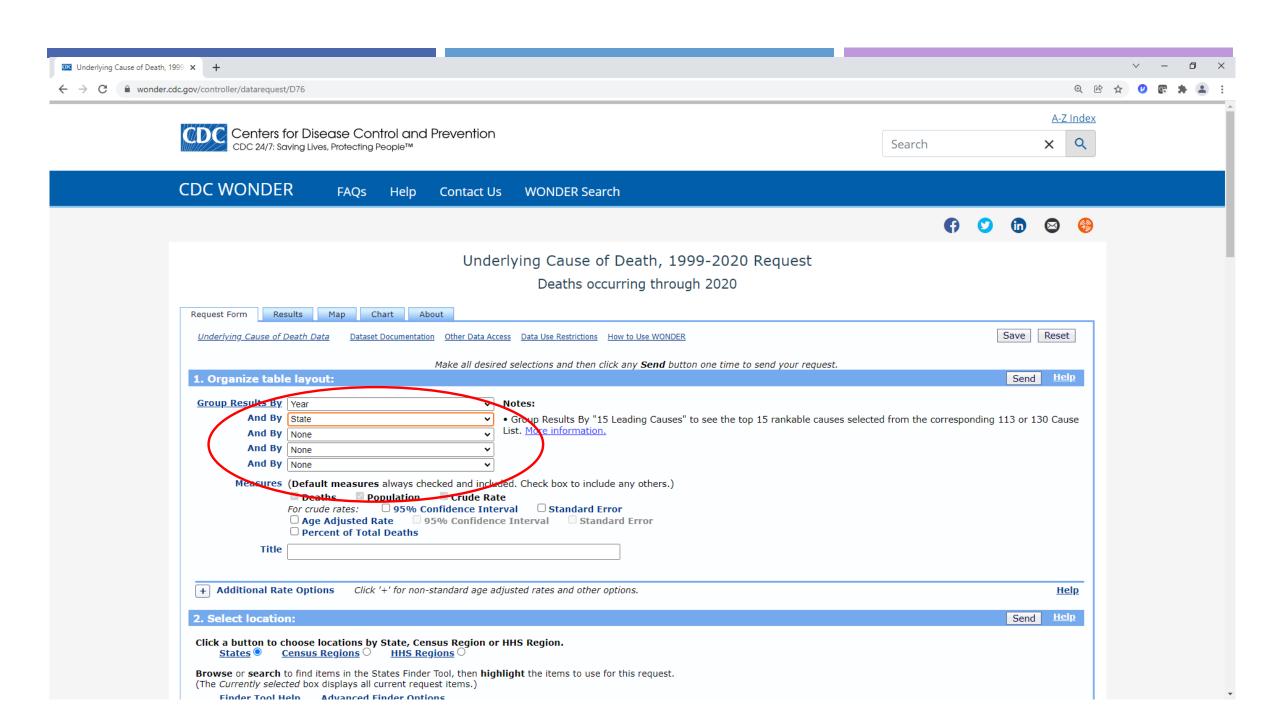
#### Sanctions for Violating Rules:

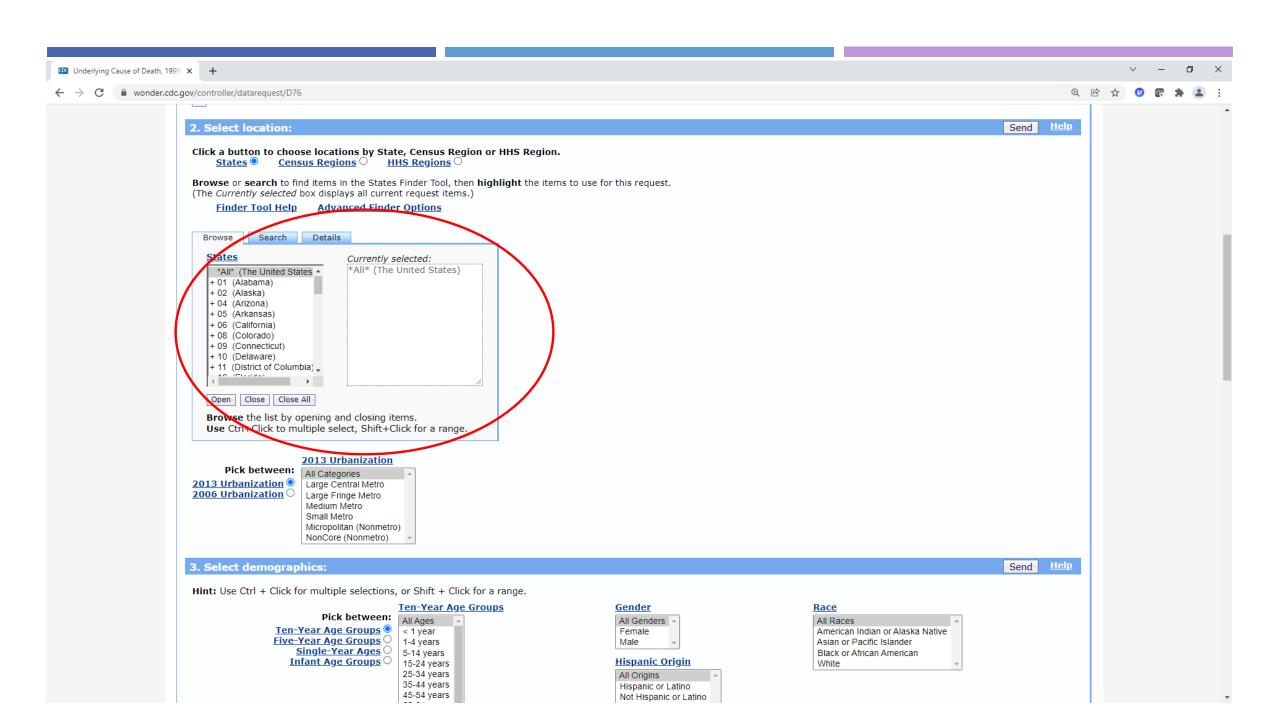
Researchers who violate the terms of the data use restrictions will lose access to WONDER and their sponsors and institutions will be notified. Researchers who are suspected of violating the rules may be prevented from using WONDER until an investigation can be completed. Deliberately making a false statement in any matter within the jurisdiction of any department or agency of the Federal government violates 18 USC 1001 and is punishable by a fine of up to \$10,000 or up to 5 years in prison, or both.

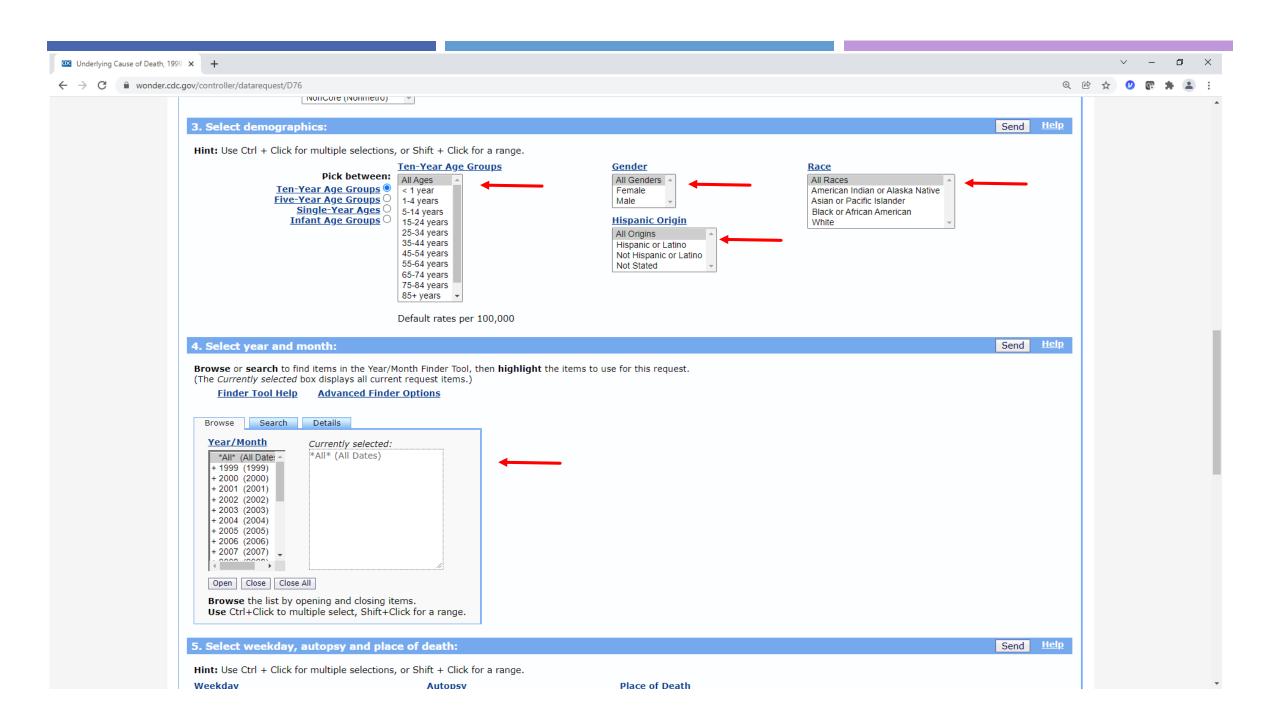
> By clicking the "I Agree" button I signify that I will abide by the terms of data use stated above and understand the sanctions and legal penalties for violation of these terms of use.

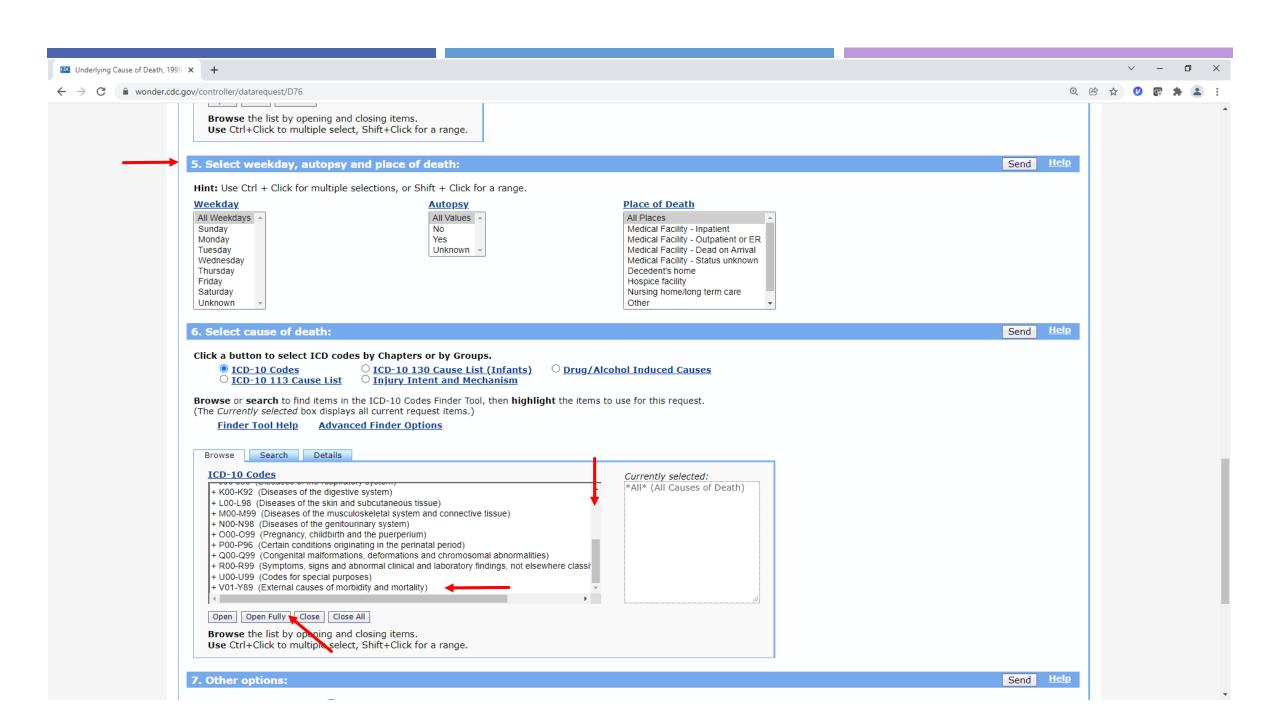


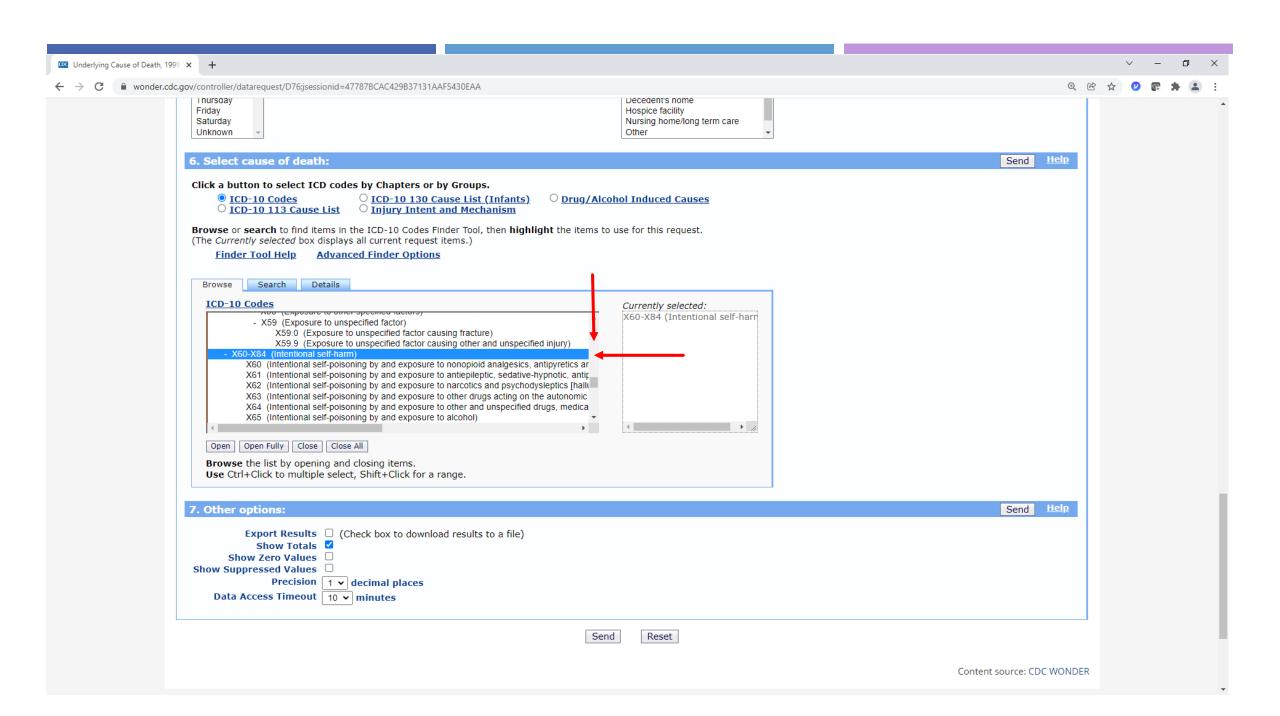
Click Dataset Documentation for complete information about this dataset.

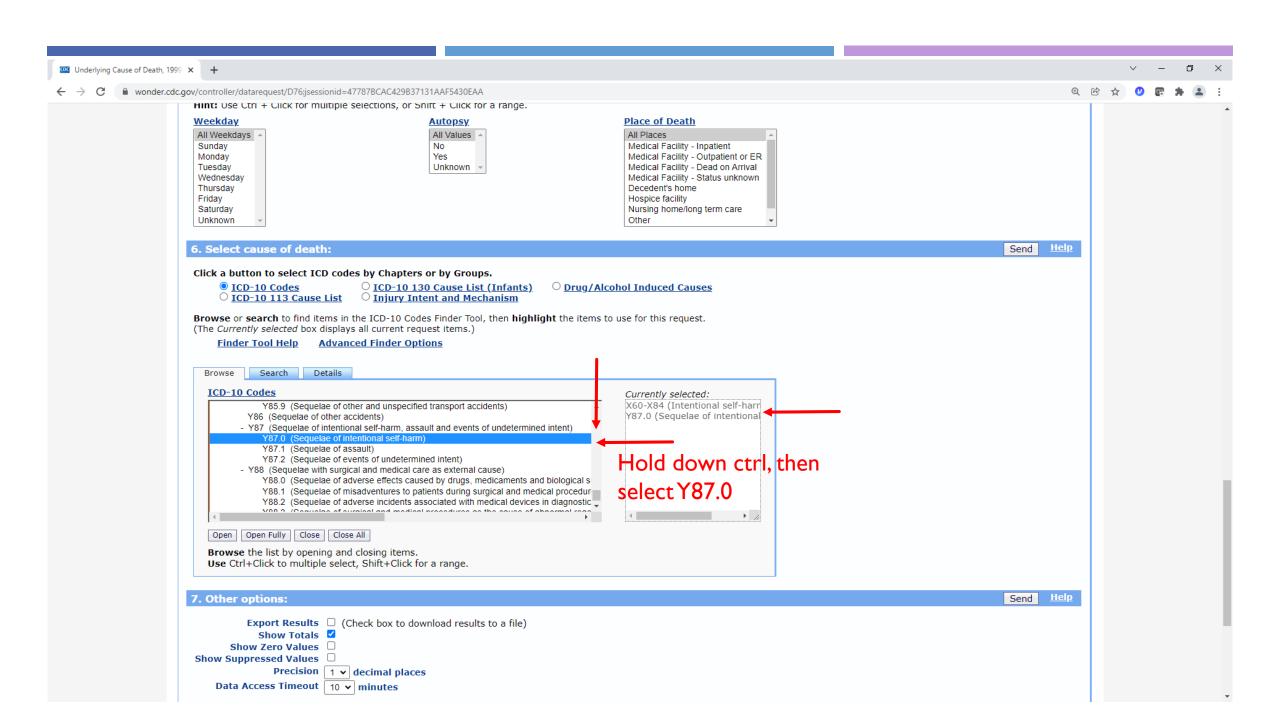


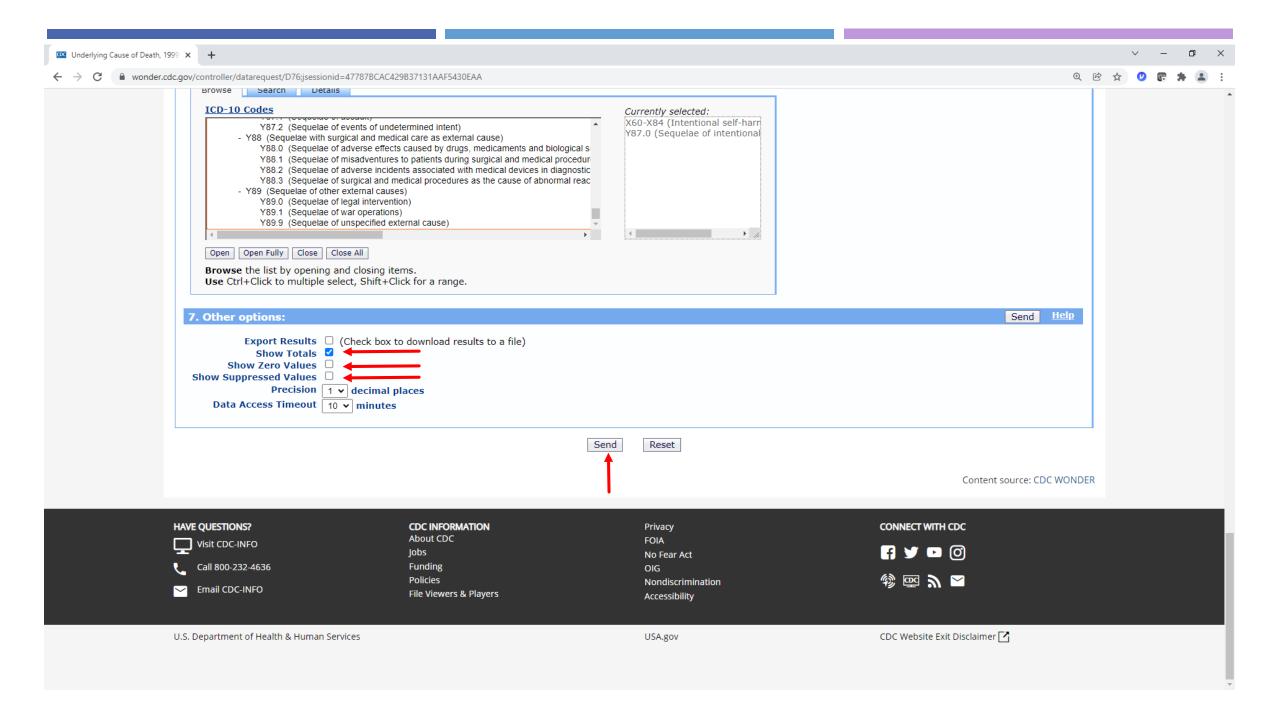


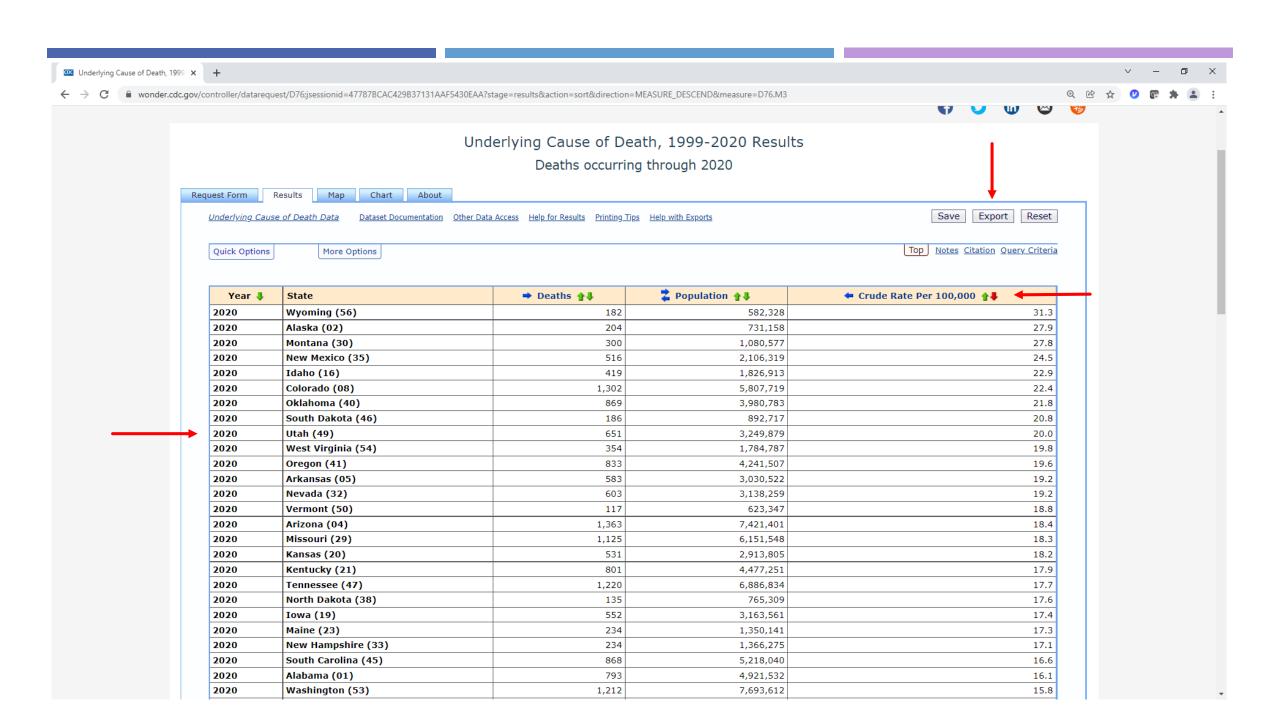












### BEHIND THE SCENES SURVEILLANCE

- Full time epidemiologists at the OME: Suicide, drug overdose
- Real time aberration detection and notification of stakeholders (LHDs, LMHAs, LEAs)
- Monthly (or more often) meeting to review recent surveillance of suicide and drug overdose
- Epidemiologic investigations in suicide deaths
- Equivocal cases (suicide vs. accident vs. other) for deaths in which intention is difficult to ascertain
- Research: Utah Youth Suicide Research Project, Utah Veterans and Service Members Suicide Research Project
- Research liaison: Utah Suicide Genetics Research Study at the University of Utah
- National leaders in epidemiological surveillance and reporting (both at OME and UDOH)

# HOW WILL THIS DATA INFORM OR CHANGE MY SUICIDE PREVENTION STRATEGY? + PARTING THOUGHTS

- Most epidemiological changes in suicide death data occur over years worth of time. I.e., What happened in your community last month or next month does not typically change your strategy.
- Why do I need this data?
  - Grants, funding, and community engagement
  - Situational awareness
- Suicide deaths do not need to be increasing to illustrate a need for prevention, intervention and postvention resources.
  - Suicide rates are relatively high in every place in Utah right now
- The episodic is not epidemic.
  - And informing a community in this manner can be dangerous

#### WHAT ARE THE APPLICATIONS?

- Suicide-related data should be used to inform prevention strategies, policies, and priorities
- Suicide can be a problem, regardless if rates are increasing
- MOST of the time, a suicide death in a community will not necessarily change the way you are doing prevention. Things to watch for that MAY mean adjusting strategies would be:
  - A suicide cluster
  - A statistically significant increase in a specific method of suicide

\*\*The OME or DSAMH would likely contact the local area's prevention coordinators and schedule a meeting if there was ever a concern about what is happening in your area

## WHEN YOU NEED HELP ...

MSTALEY@UTAH.GOV OR VIPP@UTAH.GOV