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# YEARS OF POTENTIAL LIFE LOST FROM SELECT CAUSES OF DEATH

CHAMPAIGN COUNTY, OH 2010-2020

Prepared by: Daisy Okpa, MPH  
CDC Foundation, Data Analyst

Approved by: Brenna Heinle, MPH  
Clark County Combined Health District, Epidemiologist

# 02

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# 03

## OBJECTIVE:

The purpose of this report is to quantify the burden of common causes of death in Champaign County, OH through calculating the years of potential life lost.

## METHODS:

Comparing number of deaths to the YPLL shows how deaths occurring at a younger age impact a population. Public health interventions have the potential to prevent deaths among the younger population. The select causes of death used for comparison in this report are among the top fifteen causes of death in Champaign County.

The YPLL is calculated as (80 years of age is used for COVID deaths):

$$YPLL = \sum(75 \text{ upper age limit} - X_{\text{decedent's age in years}})$$

The YPLL Rate is calculated as (< 80 years of age is used for COVID deaths):

$$YPLL \text{ Rate} = (YPLL / \text{Population}_{<75 \text{ Years of Age}}) * 1000$$

## DEFINITION:

The Years of Potential Life Lost (YPLL) measures premature mortality, which is the sum of the years of life lost annually by persons who suffered early deaths. For drug related and other common causes of death, premature death is defined as death occurring before age of 75. For COVID-19 related deaths, premature death is death occurring before age of 80 due to the older population being more affected by COVID.

Drug related deaths tend to occur at a younger age compared to other causes of death. For example, the average age at death in Champaign County in 2020 for drug poisonings = 37.1 years, and heart disease is 79.3 years. The YPLL rate represents the years of potential life lost per 1,000 population below the age of 75.

## SOURCE:

Ohio Department of Health Vital Statistics, mortality files, 2010-2020

## 04

## TABLE: NUMBER OF DEATHS

Number of Deaths, Champaign County, 2020

Cause of Death	2020	Average Age at Death (Years)
Cancer	106	73.3
Heart Disease	88	79.3
Stroke	37	82.2
COVID-19	36	75.6
CLRD	33	71.2
Alzheimer's	18	88.1
Drug Poisonings	16	37.1
Accidents	13	65.2
Diabetes Mellitus	12	70.8
Septicemia	10	71.5
Suicide	5	38.2
Influenza & Pneumonia	5	66.6

CLRD = Chronic Lower Respiratory Disease

- **Top 3 Deaths Counts:** Cancer, Heart Disease, Stroke
- The average age at death is lowest for drug poisonings (*37.1 years*) and suicide (*38.2 years*)
- The average age at death is highest for Alzheimer's (*88.1 years*) and Stroke (*82.2 years*)

## 05

## TABLE: YPLL BY CAUSE OF DEATH

Years of Potential Life Lost, Champaign County, 2020

Cause of Death	YPLL	Rate
Drug Poisonings	606 years	16.9
Cancer	577 years	16.1
Heart Disease	262 years	7.3
COVID-19	260 years	7.0
CLRD	253 years	7.1
Suicide	190 years	5.3
Accidents	185 years	5.2
Diabetes Mellitus	86 years	2.4
Stroke	79 years	2.2
Septicemia	74 years	2.1
Influenza & Pneumonia	60 years	1.7
Alzheimer's	6 years	0.2

CLRD = Chronic Lower Respiratory Disease

- **Top 3 YPLL Rates:** Drug Poisonings, Cancer, Heart Disease

## 06

## TABLE: YPLL RATE BY GENDER

Cause of Death	Female	Rate	Male	Rate
Drug Poisonings	109 years	6.1	497 years	27.4
Cancer	282 years	15.9	295 years	16.3
Heart Disease	88 years	5.0	174 years	9.6
Suicide	51 years	2.9	139 years	7.7
COVID-19	152 years	8.2	108 years	5.8
Accidents	83 years	4.7	102 years	5.6
CLRD	165 years	9.3	88 years	4.9
Stroke	11 years	0.6	68 years	3.8
Diabetes Mellitus	42 years	2.4	44 years	2.4
Septicemia	38 years	2.1	36 years	2.0
Influenza & Pneumonia	32 years	1.8	28 years	1.5

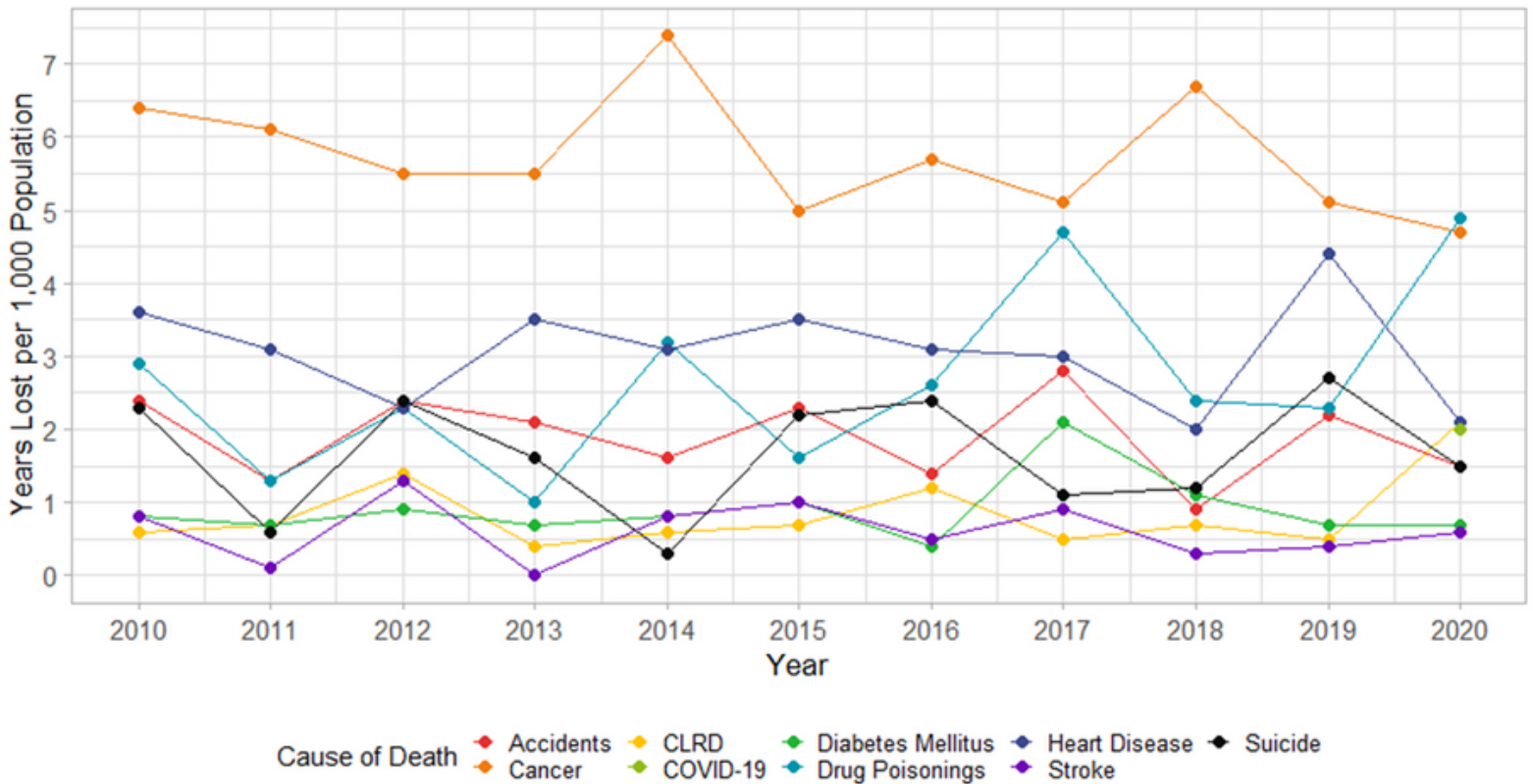
CLRD = Chronic Lower Respiratory Disease

- The highest cause of premature death for female residents is **cancer** compared to **drug poisonings** for male residents
- For every 1,000 people under the age of 75 years, male residents lose 27.4 years of potential life compared to female residents who lose 6.1 years of potential life due to **drug poisonings**
- Male residents have a higher rate for many of the causes of premature death. The greatest disparities can be seen from stroke (6.0x), drug poisonings (4.5x), suicide (2.7x), and heart disease (1.9x) compared to female residents

# 07

## GRAPH: YPLL RATE 2010-2020

Years of Potential Life Lost (YPLL) Before 75\* Years of Age by Leading Causes of Death Annually, Champaign County, OH 2010-2020

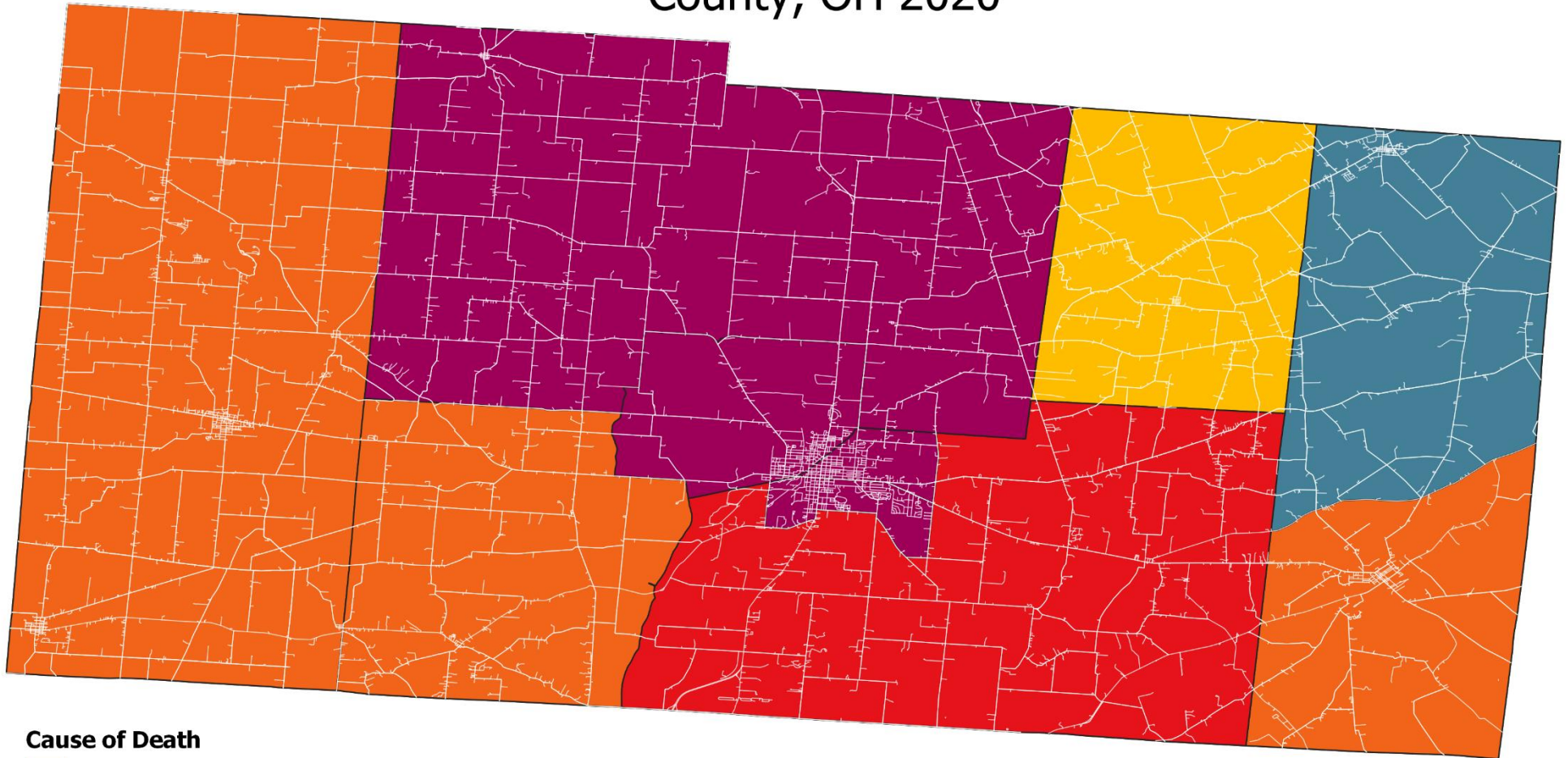


\*80 Years of Age used for COVID-19

- Between 2010-2020, **cancer** had the highest YPLL rate (7.4) in 2014
- Between 2010-2020, chronic lower respiratory disease has *increased 250%*, and drug poisonings have *increased 69.0%*. Accidents have *decreased 37.5%* and suicides have *decreased 34.8%*

# 08

## Highest Cause of Premature Death by Census Tract, Champaign County, OH 2020



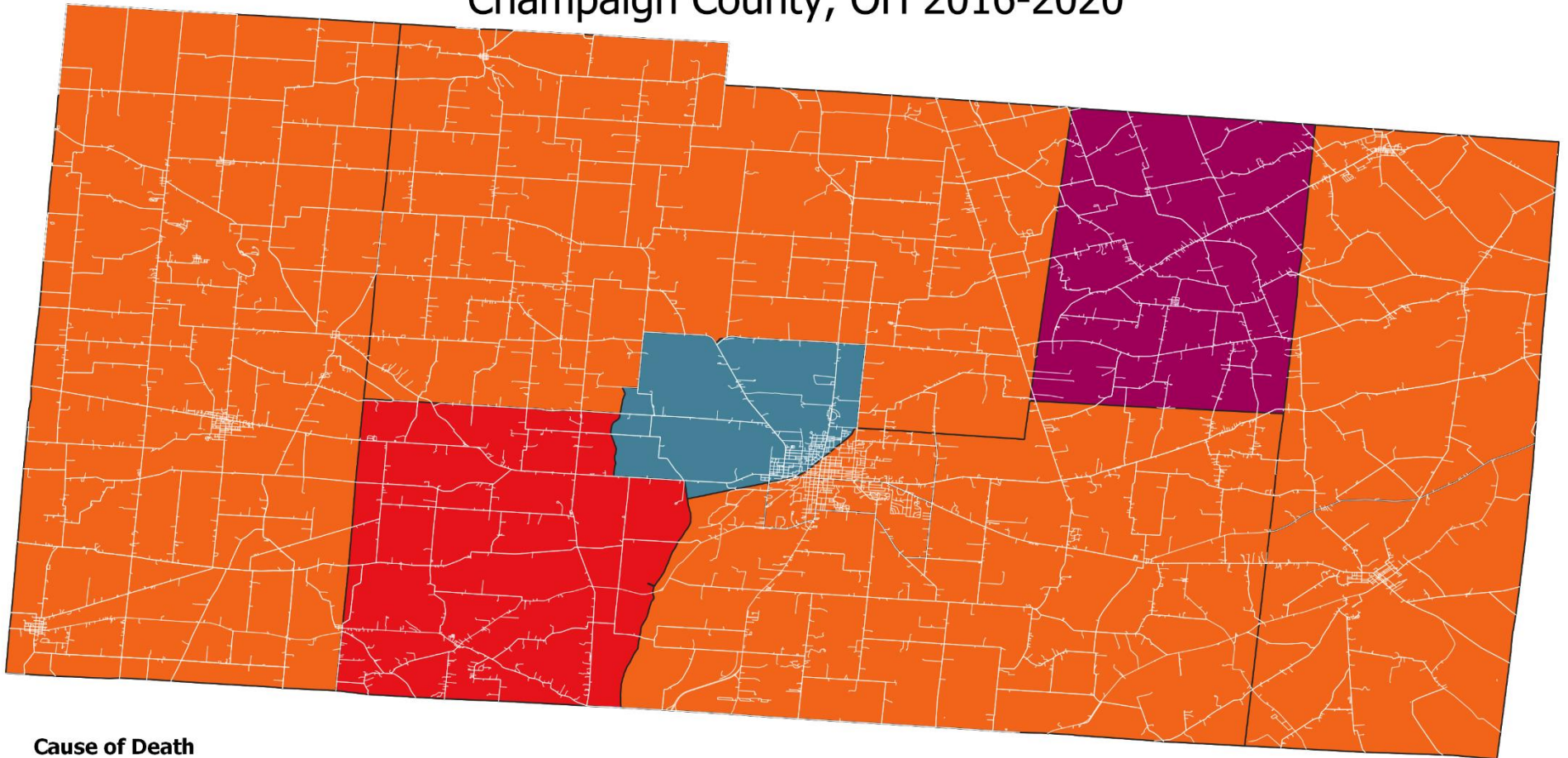
### Cause of Death

- Accidents
- Cancer
- CLRD
- COVID-19
- Drug Poisonings



# 09

## 5-Year Aggregation of Highest Cause of Premature Death by Census Tract, Champaign County, OH 2016-2020



- Cause of Death**
- Accidents
  - Cancer
  - Drug Poisonings
  - Heart Disease

Map by: Daisy Okpa, MPH

# 10

## TABLE: ICD10 CODES

Cause of Death	ICD10 Codes
Accidents	V01-X39; X50-X59; Y85-Y86
Alzheimer's	G30
Cancer	C00-C97
CLRD	J40-J47
COVID-19	U071
Diabetes Mellitus	E10-E14
Drug Poisonings	X40-X49
Heart Disease	I00-I09; I11, I13, I20-I51
Influenza & Pneumonia	J09-J18
Septicemia	A40-A41
Stroke	I60-I69
Suicide	U03; X60-X84; Y87.0

- Accidents include: transport accidents, motor vehicle accidents, falls, accidental discharge of firearms, accidental drowning and submersion, and more
  - Drug Poisonings (originally under accidents) were separated out to create their own group
- Cancer includes: breast, skin, mouth, respiratory organs, genital organs, digestive organs, eye, brain, thyroid, and more

# 11

## POTENTIAL INTERVENTIONS:

### Drug Poisonings

- Increase access to Naxolone and evidence-based treatments
- Improve awareness and share resources about the risks of prescription opioids

### Cancer

- Regular cancer screening tests
- Apply sunscreen of at least SPF 30 (skin cancer)
- Reduce tobacco use (cancer of the lung, mouth, pancreas, more)

### Heart Disease

- Increase access to healthy food options (fruits, vegetables)
- Address physical inactivity

### Chronic Lower Respiratory Disease

- Reduce quantity of cigarettes smoked
- Minimize exposure to indoor and outdoor air pollutants
- Regular doctor check ups

### Suicide

- Increase mental health services and mental health awareness
- Address risk factors (drug and alcohol misuse)

## CONCLUSIONS:

Drug poisonings, cancer, and heart disease are the top causes of premature death in Champaign County in 2020. The burden of these diseases worsen as the number of deaths increases. Addressing these health concerns through community collaboration and partnership can help reduce the number of premature deaths.