

# **U.S. Chronic Disease Mortality Trend Map**

**BMI 706 Project**

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# WHAT DATA, AND WHY?

- A publicly available dataset of the **U.S. Chronic Disease Indicators (CDI)**, sourced from **the Division of Population Health at the Centers for Disease Control and Prevention (CDC)**.
- Shows the **geographical** distributions and **temporal** trends of the population affected by **chronic diseases**, as well as the potential contributions of **relevant risk or preventative factors**.
- We choosed 9 types of disease and 4 risk/preventative factors to include in our visualization.

## Age-adjusted Mortality Rates of:

- Asthma
- Oral cavity and pharynx cancer
- Lung and bronchus cancer
- Female cervix cancer
- Melanoma
- End-stage renal disease
- Stroke
- Coronary heart disease
- Chronic liver disease

## Prevalence of:

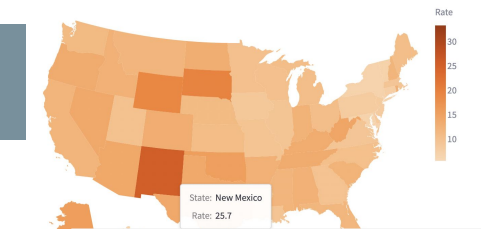
- Obesity
- Smoking
- Healthy weight
- Per capita alcohol consumption

# WHY DOING VISUALIZATION?

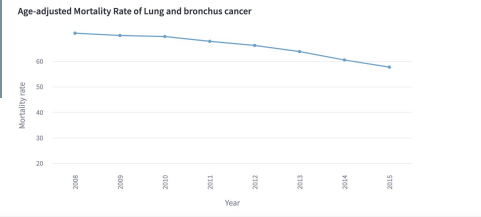
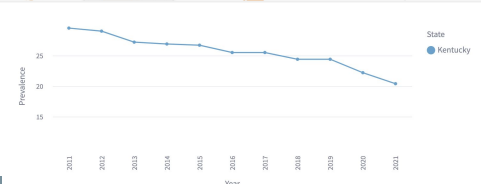
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NA	POINT (-77.03687138	NA		11 AST	AST_1	NMBR	OVERALL	OVR
NA	POINT (-83.62793045	NA		13 AST	AST_1	NMBR	GENDER	GENM
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NA	POINT (-89.816370741	NA		55 AST	AST_1	NMBR	RACE	HIS
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NA	POINT (-114.36373004	NA		16 AST	AST_1	NMBR	OVERALL	OVR
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NA	POINT (-76.609260110	NA		24 AST	AST_1	NMBR	GENDER	GENM
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NA	POINT (-99.426770205	NA		48 AST	AST_1	NMBR	RACE	HIS
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NA	POINT (-75.543970426	NA		36 CAN	CAN10_2	AVGANNMBR	GENDER	GENM
NA	POINT (-106.13361092	NA		8 CAN	CAN11_2	AVGANNMBR	OVERALL	OVR
NA	POINT (-106.13361092	NA		8 CAN	CAN11_2	AVGANNMBR	GENDER	GENM
NA	POINT (-77.03687138	NA		11 CAN	CAN11_2	AVGANNMBR	OVERALL	OVR
NA	POINT (-86.149960133	NA		18 CAN	CAN11_2	AVGANNMBR	GENDER	GENM
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NA	POINT (-106.24058098	NA		35 CAN	CAN11_2	AVGANNMBR	OVERALL	OVR
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NA	POINT (-82.404260055	NA		39 CAN	CAN5_2	AVGANNMBR	RACE	HIS
NA	POINT (-111.58713063	NA		49 CAN	CAN5_2	AVGANNMBR	GENDER	GENM
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NA	POINT (-147.22205903	NA		2 CAN	CAN6_2	AVGANNMBR	GENDER	GENM

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geographical distribution

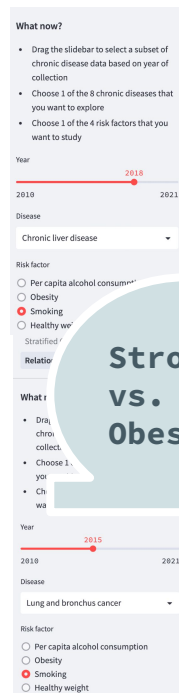
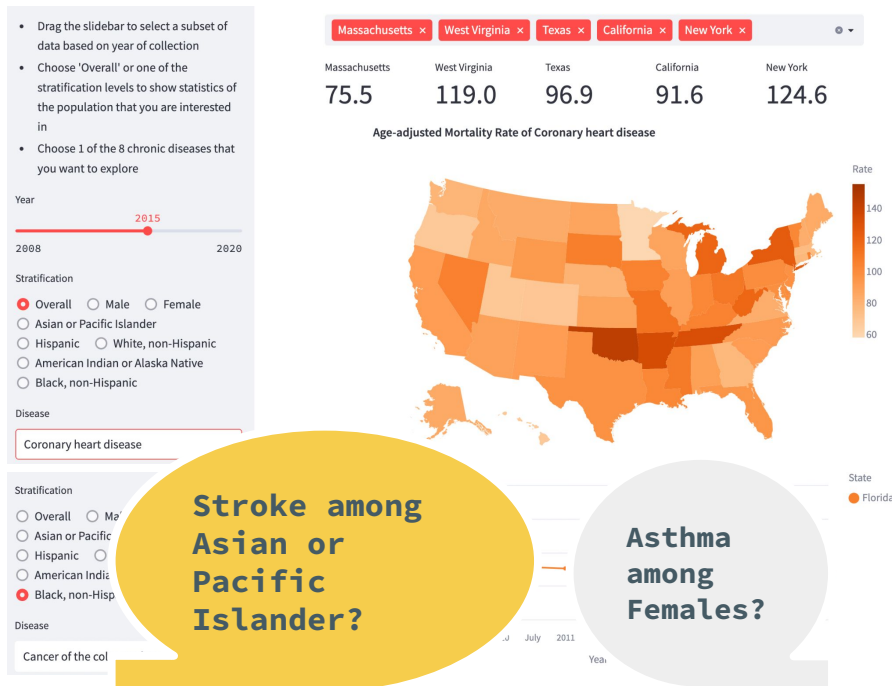


temporal trend



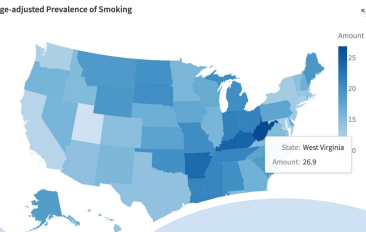
# WHAT TO EXPECT FROM IT?

## Interface I - Stratified Chronic Disease Mortality Rates

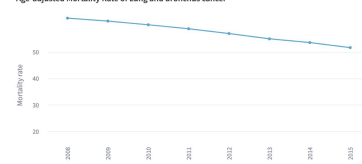


## Relationship between Chronic Disease Mortality Rates, Age-Adjusted and Risk Factors

Age-adjusted Prevalence of Smoking

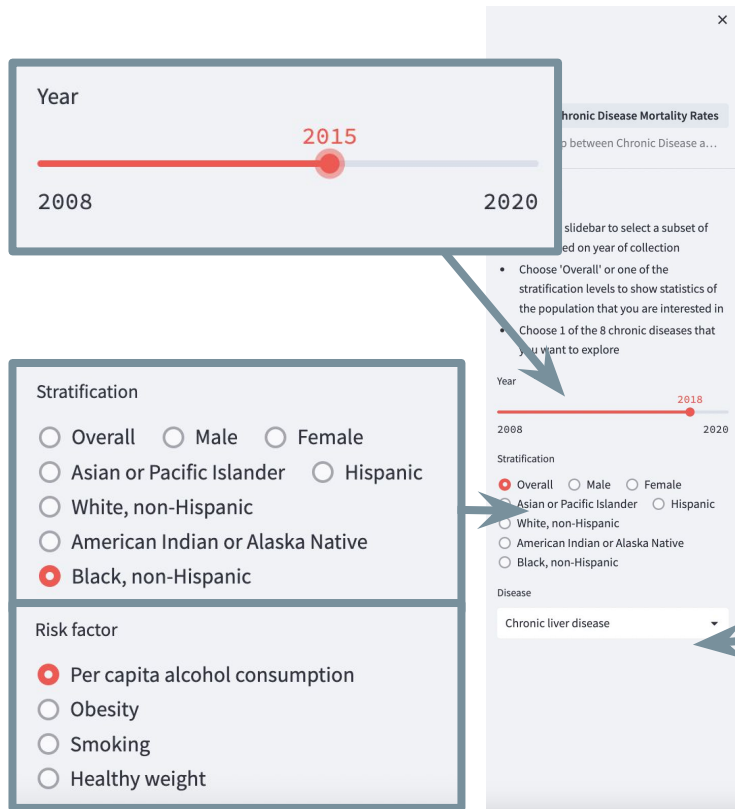


Age-adjusted Mortality Rate of Lung and bronchus cancer



## Interface II - Relationship between Chronic Disease Mortality Rates, Age-Adjusted and Risk Factors

# FINAL DESIGN



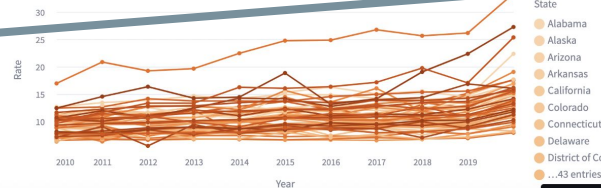
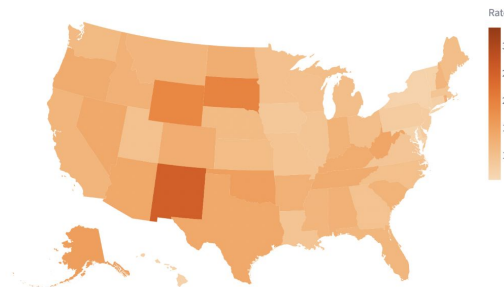
## Stratified Chronic Disease

Select up to 5 states to keep track of and compare their statistics

Massachusetts x West Virginia x Texas x

Massachusetts 9.3 West Virginia 14.4 Texas 13.9

Age-adjusted Mortality Rate of Chronic liver disease



Select up to 5 states to keep track of and compare their statistics

Massachusetts x West Virginia x

New Mexico

New York

North Carolina

North Dakota

Ohio

Oklahoma

Oregon

Pennsylvania

Oral cavity and pharynx cancer

Female cervix cancer

Colorectal cancer

Lung and bronchus cancer

Melanoma

End-stage renal disease

Coronary heart disease

Stroke

Chronic liver disease

# LET'S EXPLORE!

<https://jiaaishen-bmi706-project-home-3kj64.streamlit.app/>