A *Fresh Kitchen* way to combat the diabetes burden in Mexico

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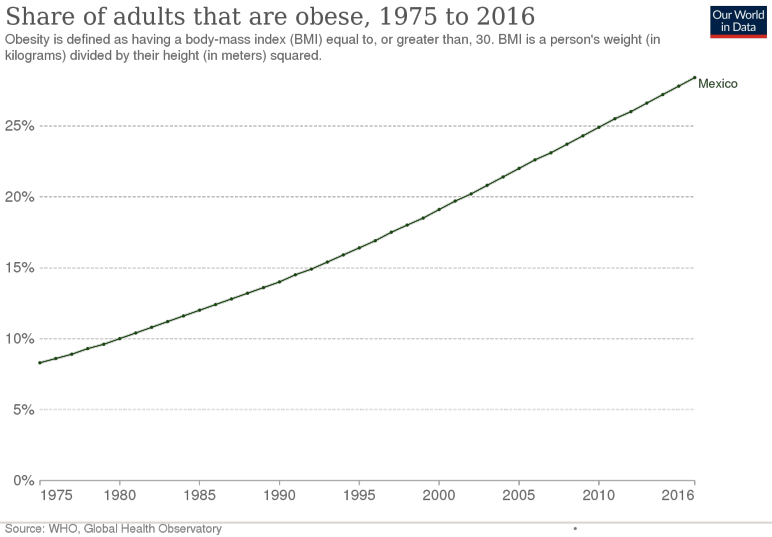
August 2022

Obesity & Diabetes in Mexican Adults

- 42.2% increase in adult obesity since 2000[1]
- Diabetes is the second leading cause of non-communicable disease death[2]



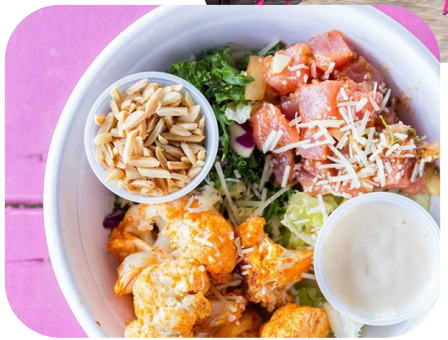
1. 2018 National health and nutrition survey (ENSANUT)
2. https://doi.org/10.1016/S0140-6736(20)30925-9

Mexican Food Landscape

- Native diet has shifted from fresh/unprocessed foods to ultra-processed
- 23.1% of the total dietary energy comes from ultra-processed food products
- Fast-food industry continues to grow

Barquera S, Rivera JA. Obesity in Mexico: rapid epidemiological transition and food industry interference in health policies. Lancet Diabetes Endocrinol. 2020 Sep;8(9):746-747. doi: 10.1016/S2213-8587(20)30269-2.

Fresh Kitchen



- Local restaurant chain in Florida (*n*=8)
- Chef inspired high quality fresh food
- Delivered as “fast as you can point”
- Passionate about creating healthy communities

https://www.eatfreshkitchen.com/

Goal

Strategically recommend locations for *Fresh Kitchen* to expand their restaurant business in Mexico based on "need".

Need will be informed by:

01

DEMOGRAPHICS

Age, sex, poverty level, education level

02

HEALTH CONDITIONS

Prevalence of obesity, hypertension, and diabetes by state

03

DEATHS DUE TO DIABETES

Mortality rates by state

Methodology

Data Sources

2018 National Survey of Health and Nutrition (ENSANUT)

2020 National Institute of Statistics, Geography and Informatics (INEGI) Population and Housing Census

INEGI Mortality Statistics

Data Cleaning

Google sheets used for all data cleaning

Exploratory Data Analysis

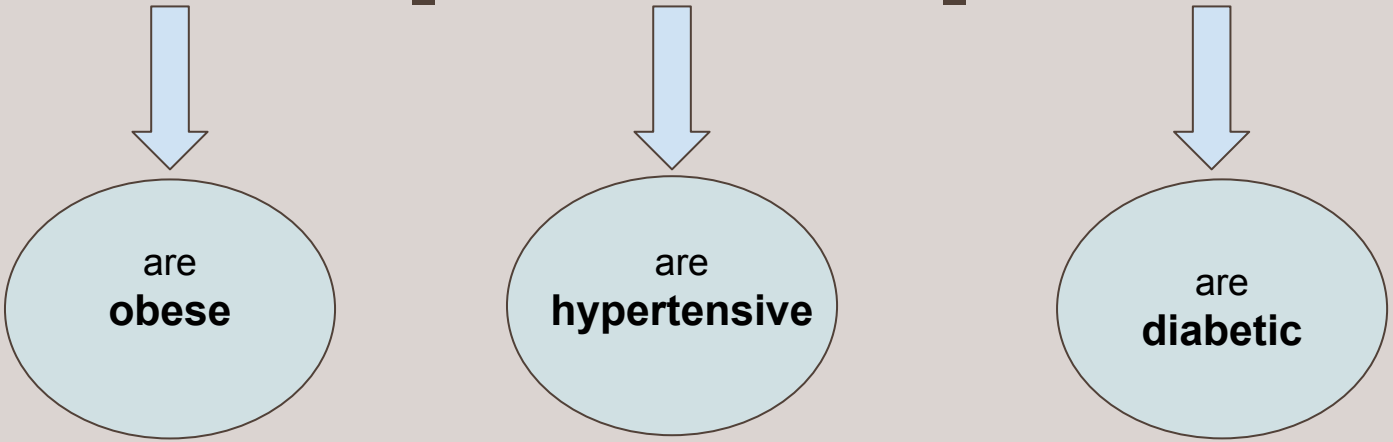
Descriptives + visuals on various demographic variables

Visual summary of health conditions by state

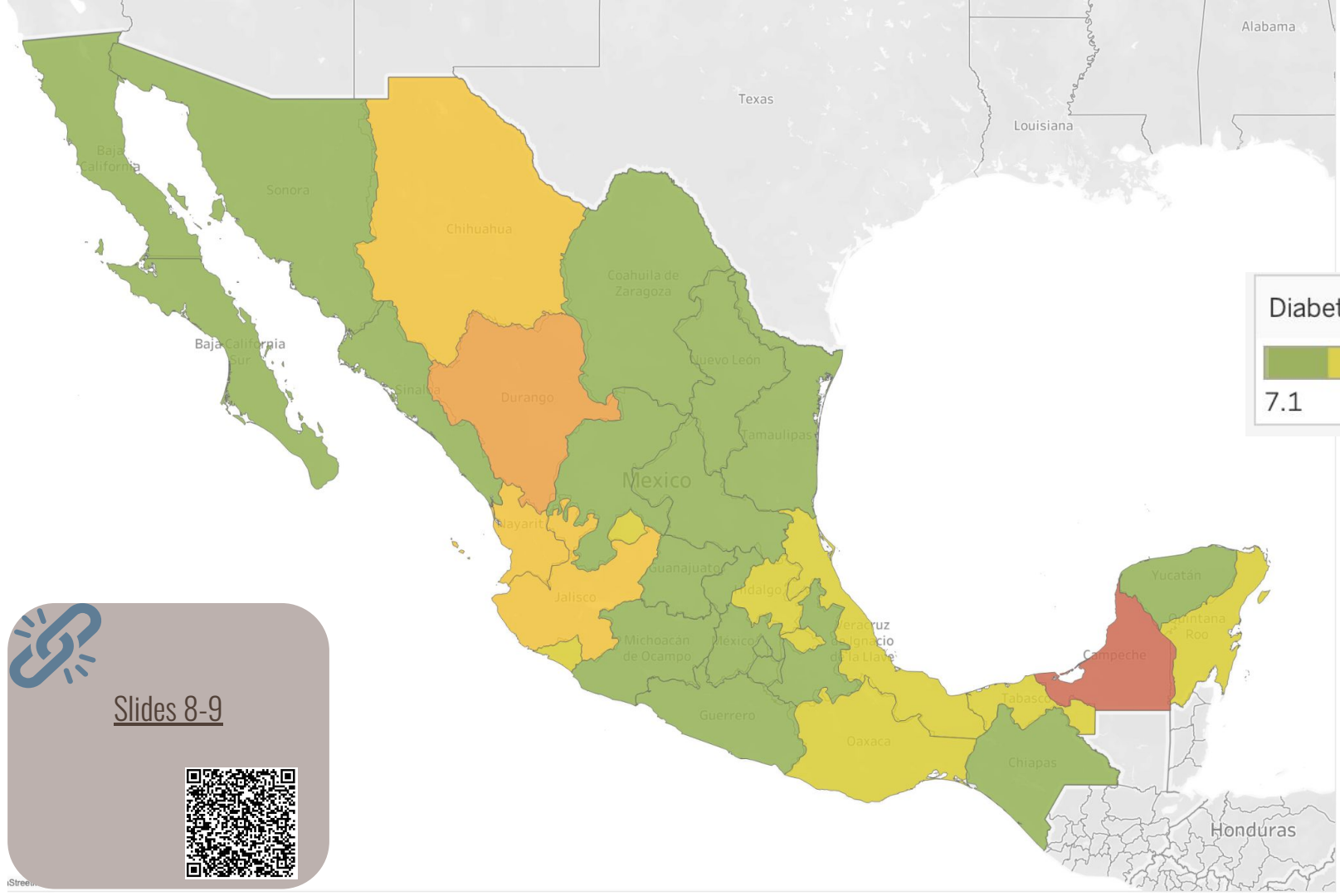
Density of diabetes death by state

HEALTH CONDITION INSIGHTS

36.1% | 18.4% | 10.3%



Rates in USA respectively: 41.9%, 47%, 11.3% (CDC, NHANES)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Chihuahua
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Mexico
Nayarit
Guanajuato
Jalisco
Michoacán de Ocampo
México
Guerrero
Oaxaca
Chiapas
Yucatán
Quintana Roo
Campeche
Tabasco
Honduras
Diabetes death per 100k
7.1
650.0

Slides 8-9

Campeche
Tamaulipas
Hidalgo
Distrito Federal
Nuevo León
Coahuila
Tabasco
Morelos
Veracruz
Sonora
Guerrero
Zacatecas
Durango
San Luis Potosí
Colima
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Sinaloa
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Baja California
Michoacán
Guanajuato
Nayarit
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Puebla
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Baja California Sur
Chiapas
Jalisco
Aguascalientes
Querétaro
Quintana Roo
50
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30
20
10
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Obesity Prevalence %
Diabetes death per 100k
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4
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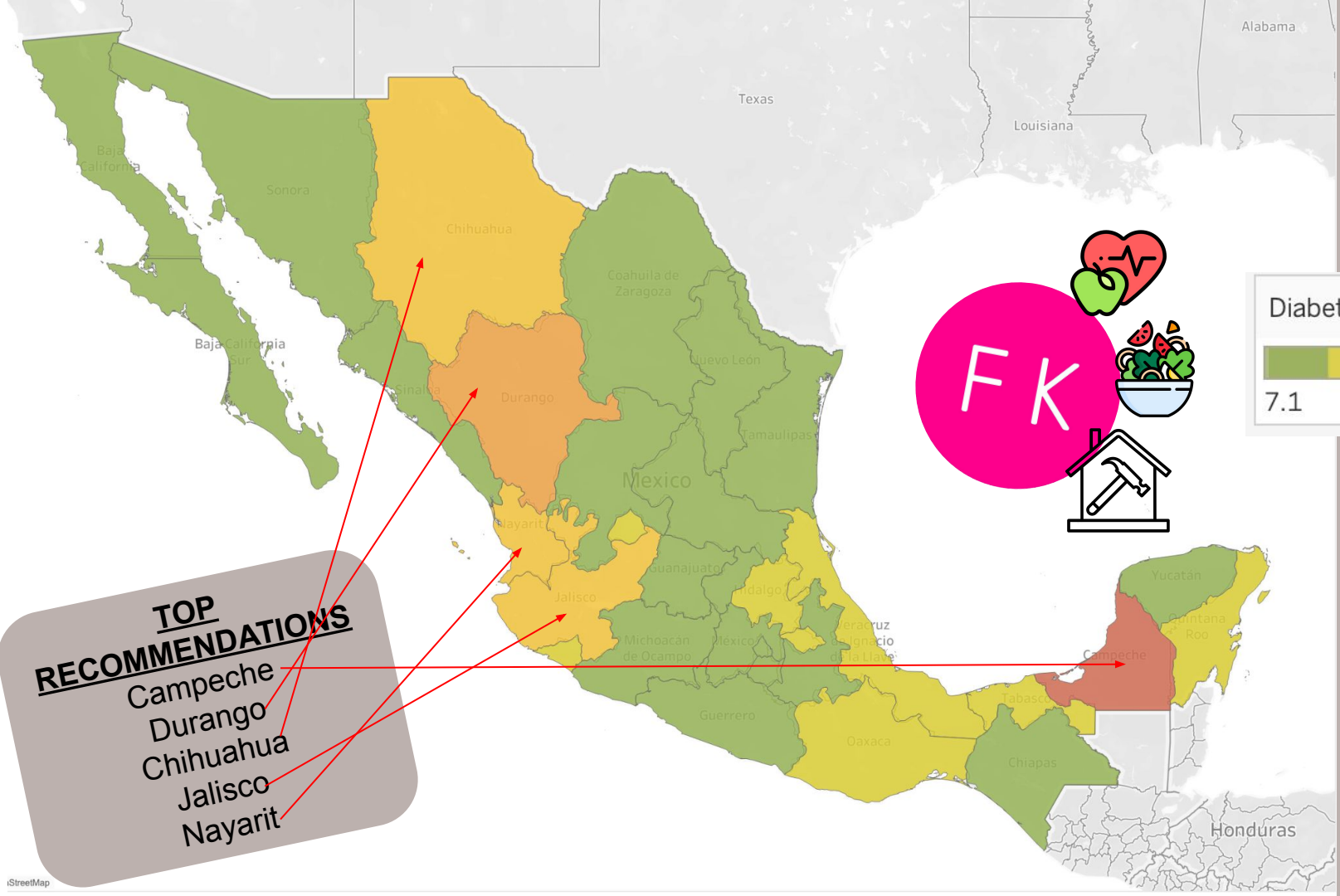
12
14
Diabetes Prevalence %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FK
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TOP RECOMMENDATIONS
Campeche
Durango
Chihuahua
Jalisco
Nayarit
StreetMap

Future Work

FOOD LANDSCAPE

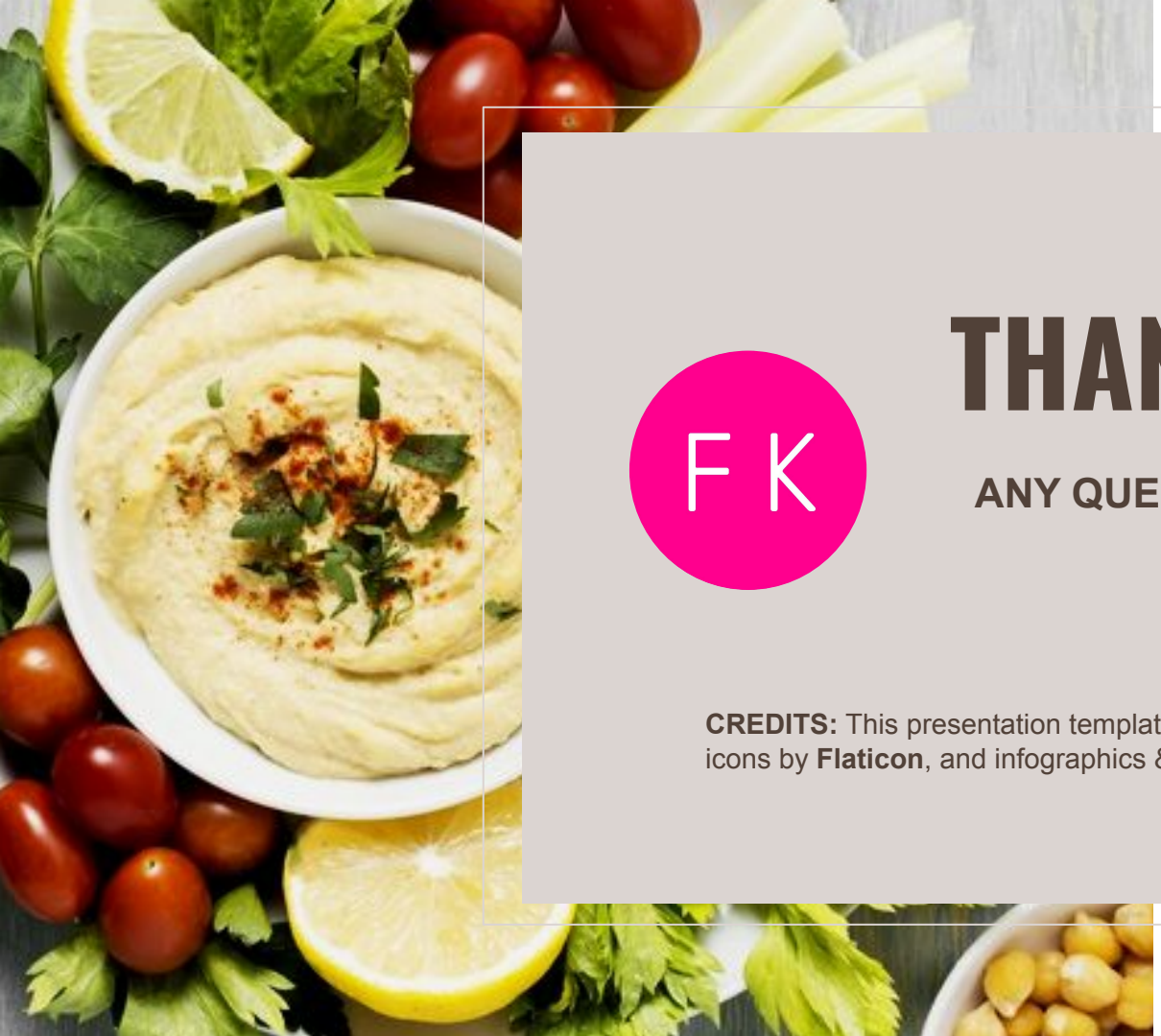
- Fast-food restaurant density by state

INCOME

- Income strata per state to inform price points
- Economics of current restaurant practices

MENU DEVELOPMENT & SUPPLIER

- Logistics of food suppliers
- Native cuisine background



THANKS!

ANY QUESTIONS?

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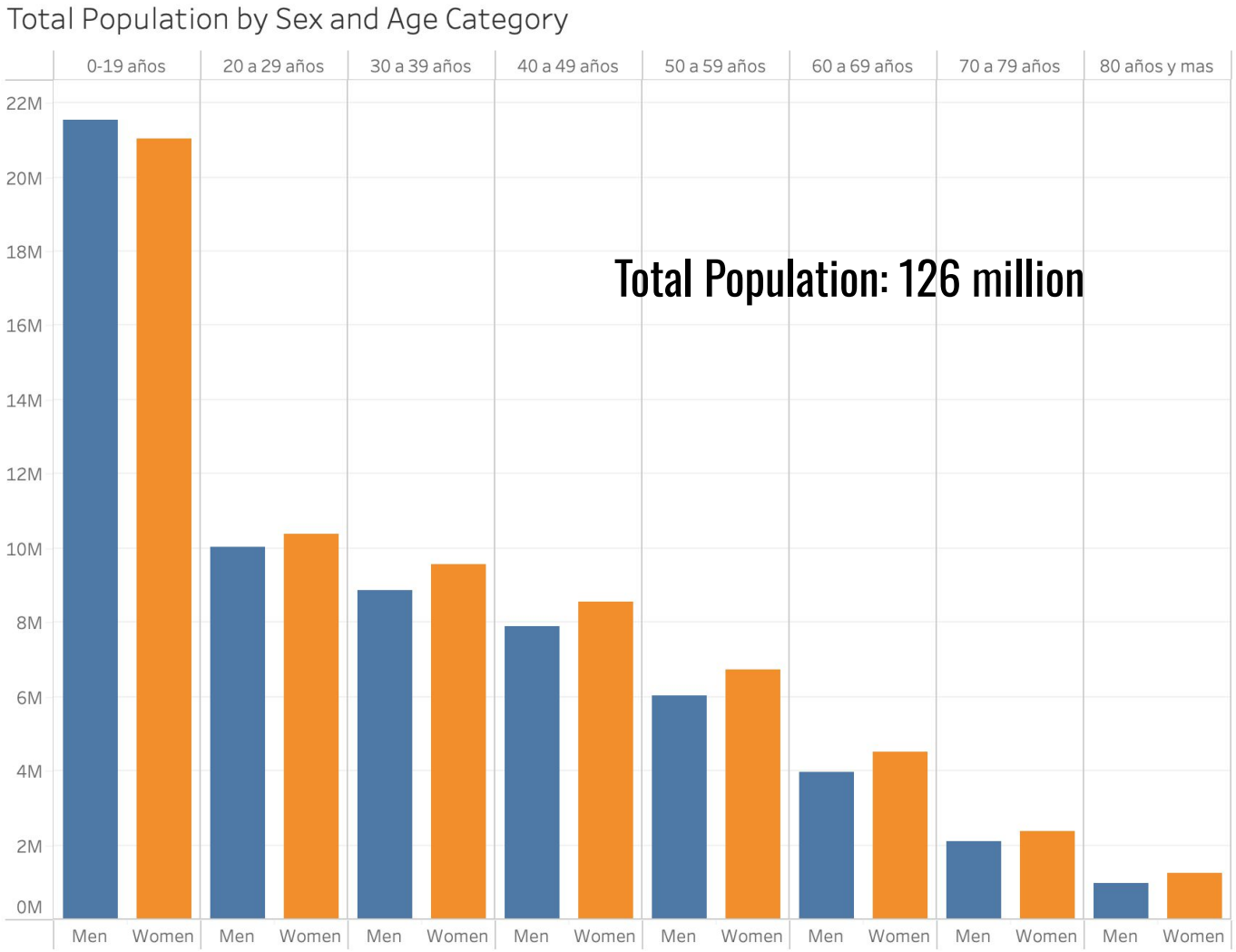
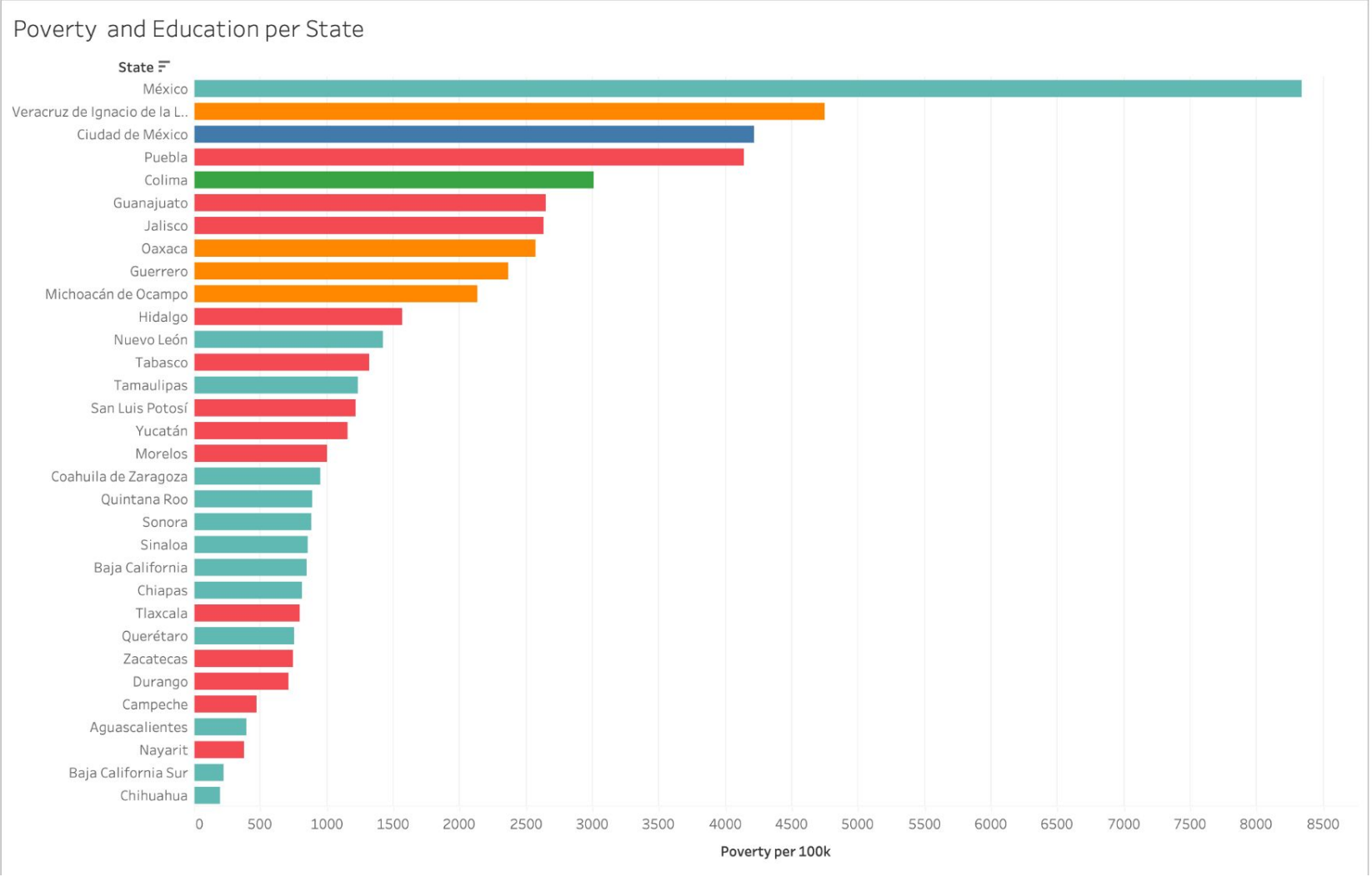
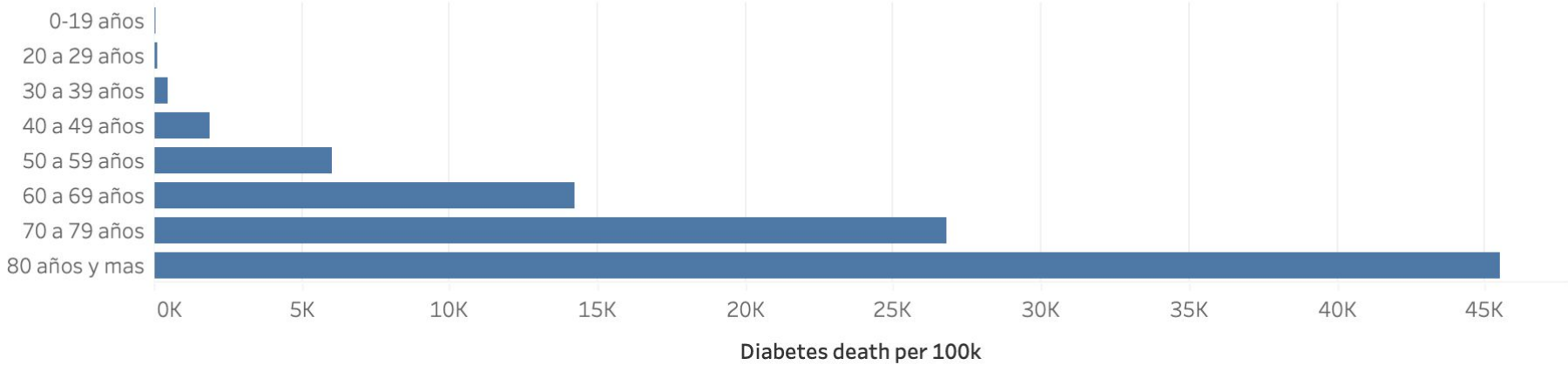
Supplemental Slides



LINK TO INTERACTIVE DASHBOARD

Slides 7-8

Poverty and Education per State



MortalityxAge