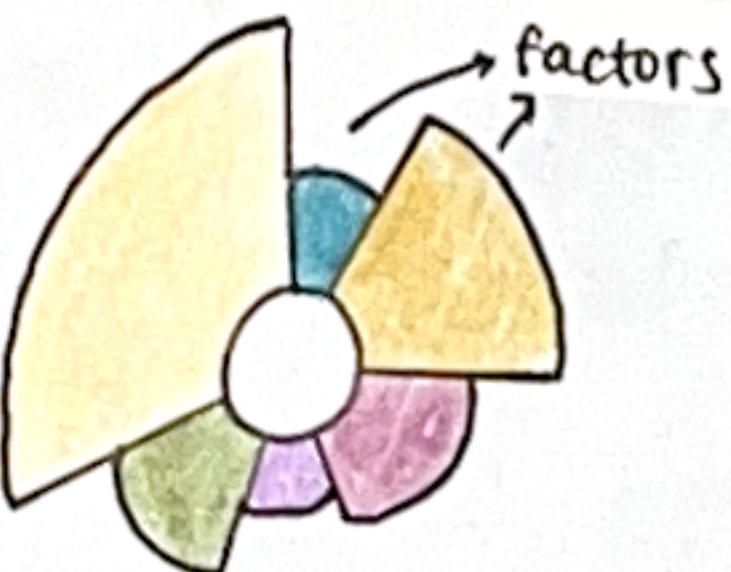
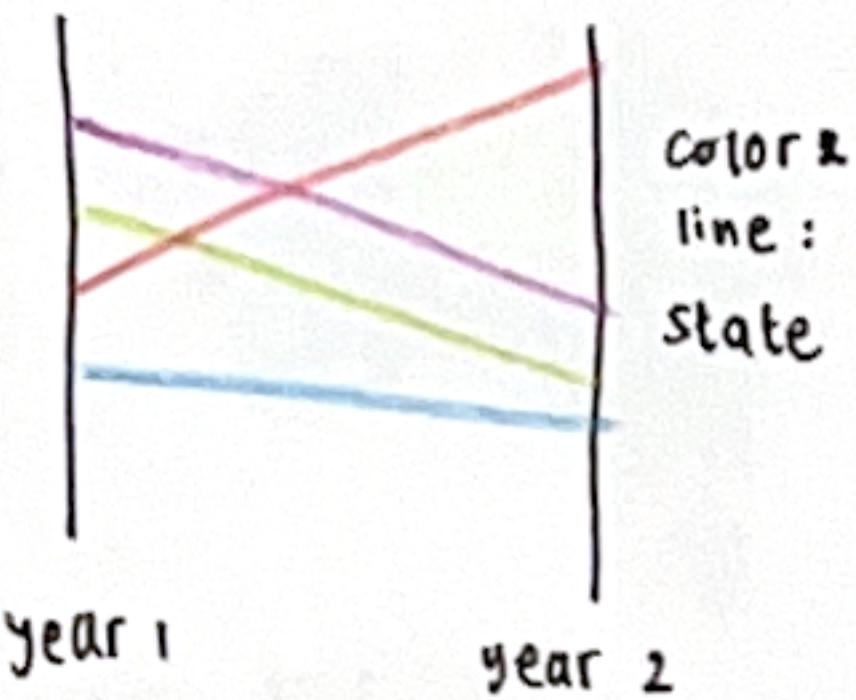
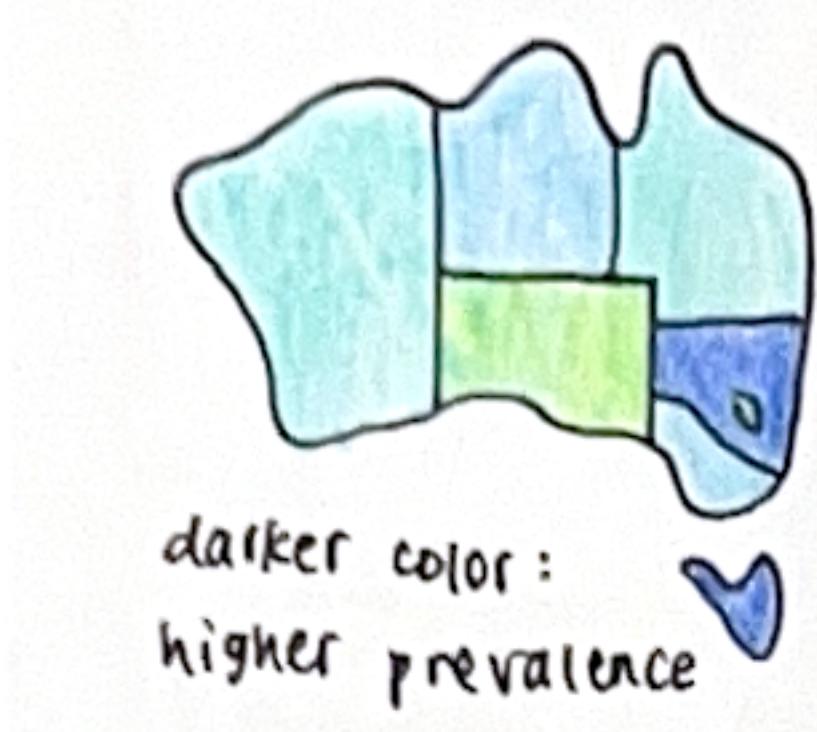
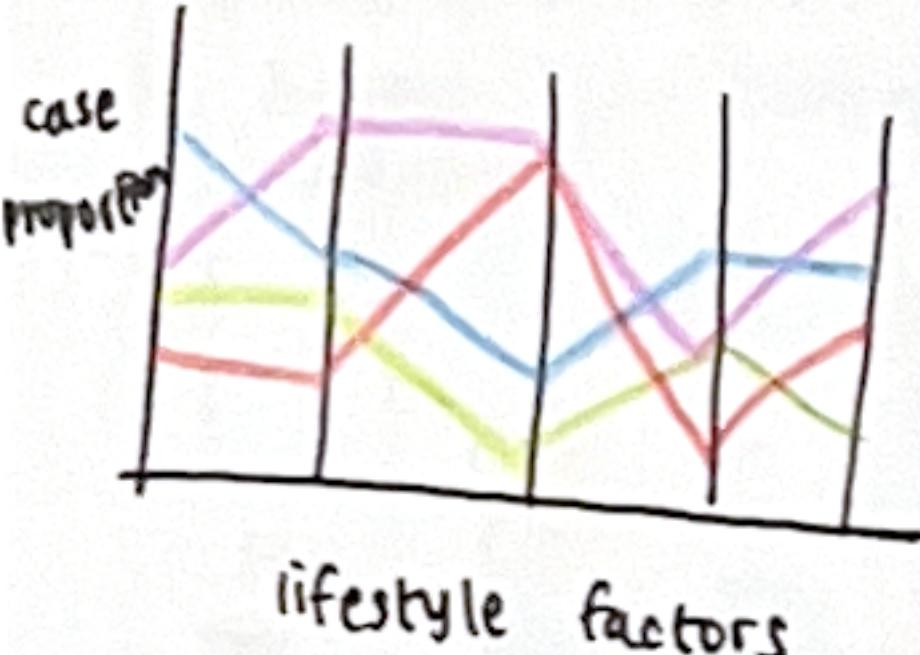
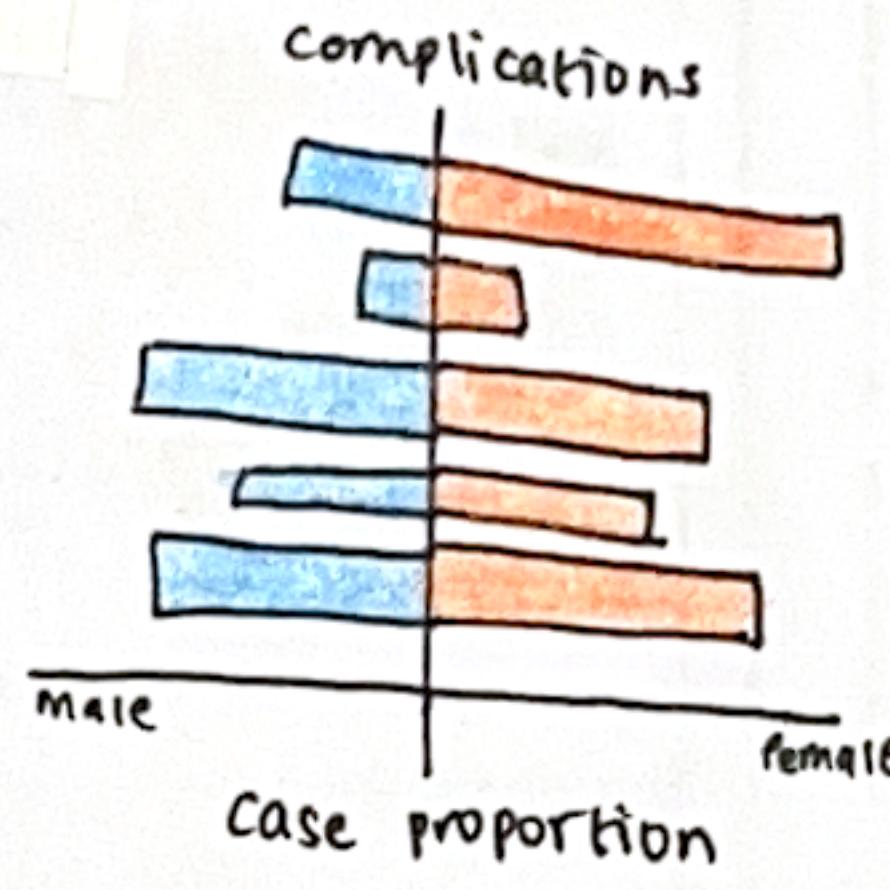


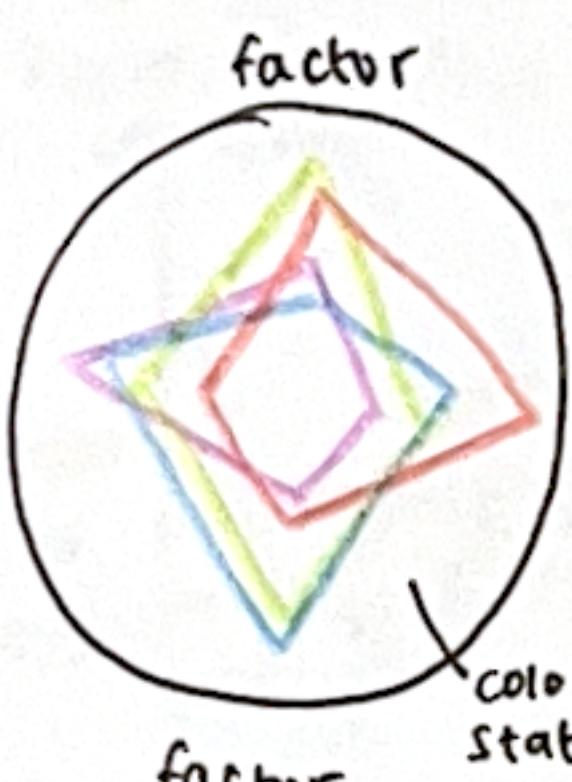
IDEAS



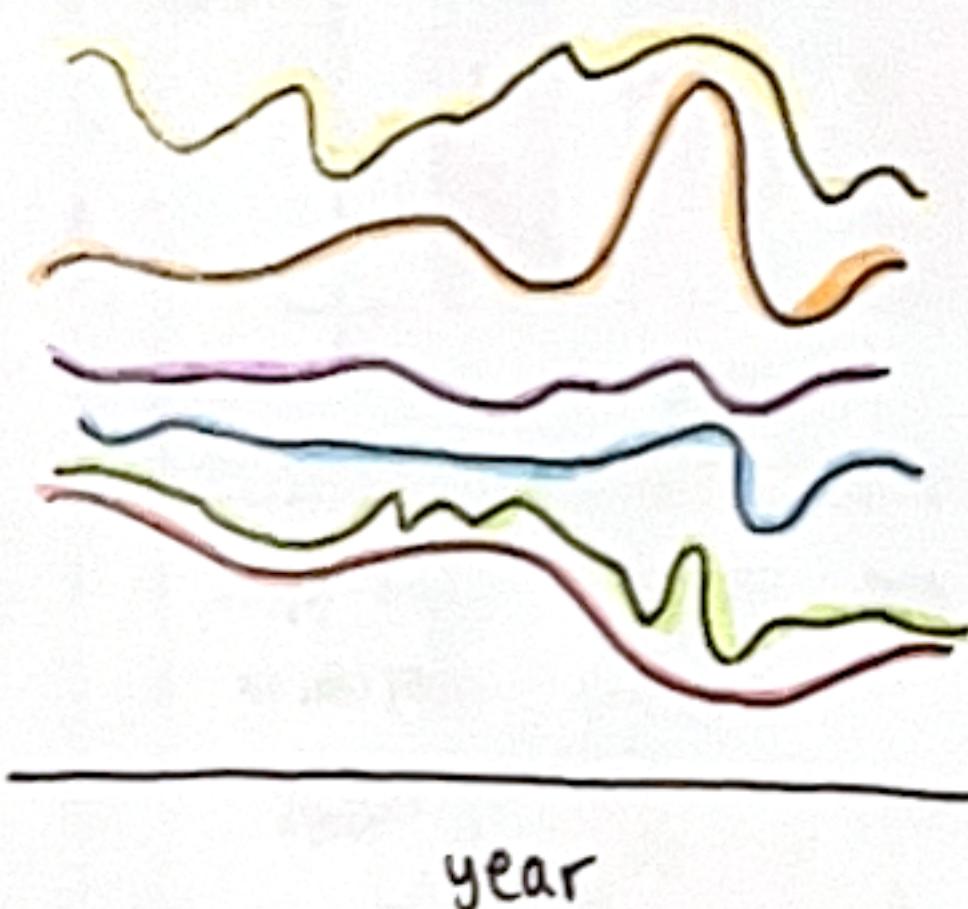
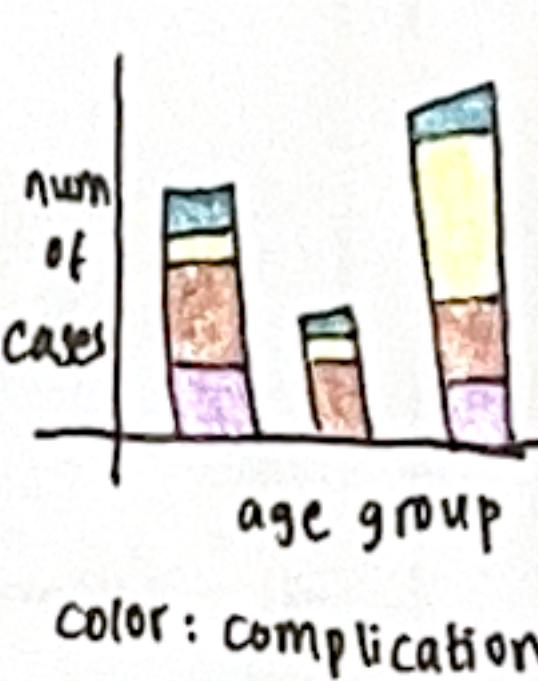
by size: number of prevalence



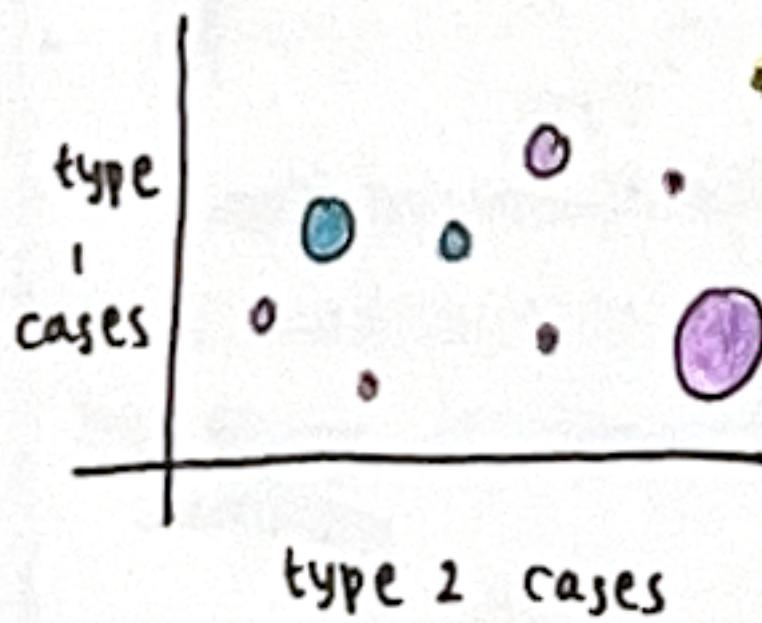
line: state factor



factor

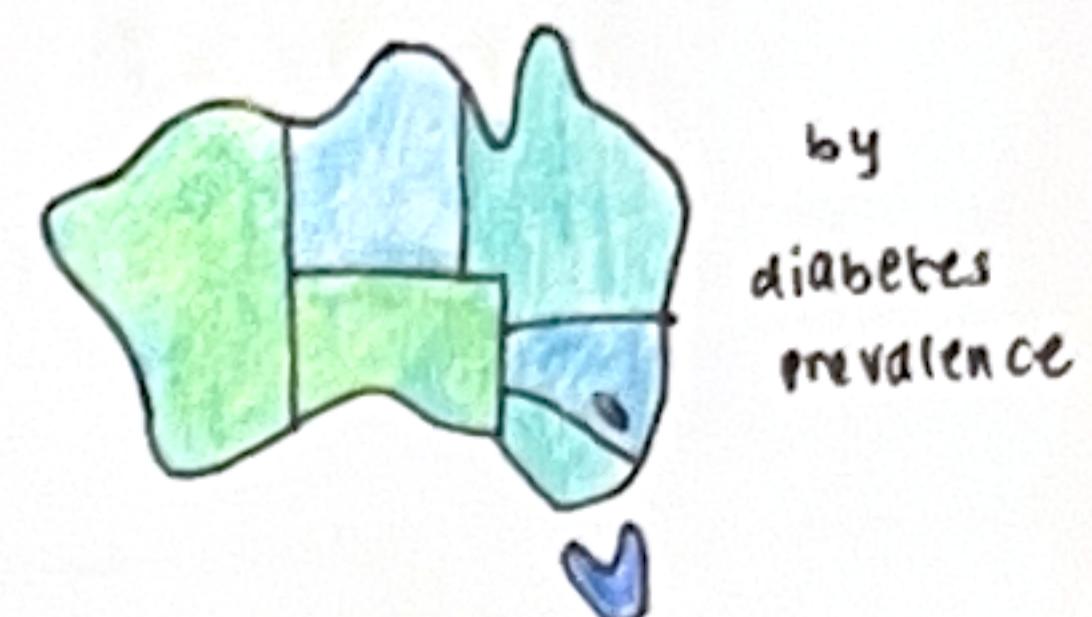


by number of cases

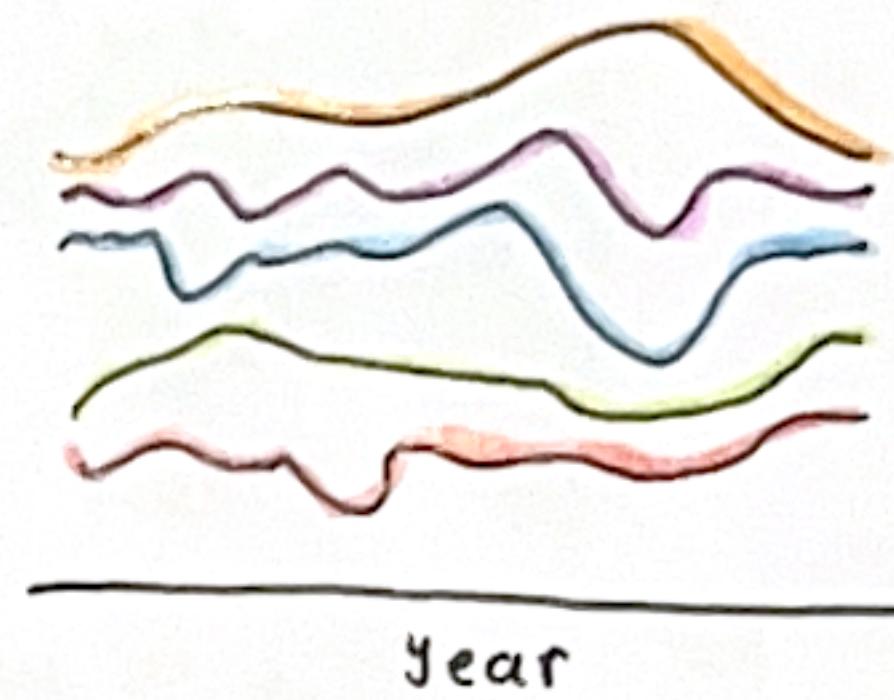


bubble size: total cases
color: complication

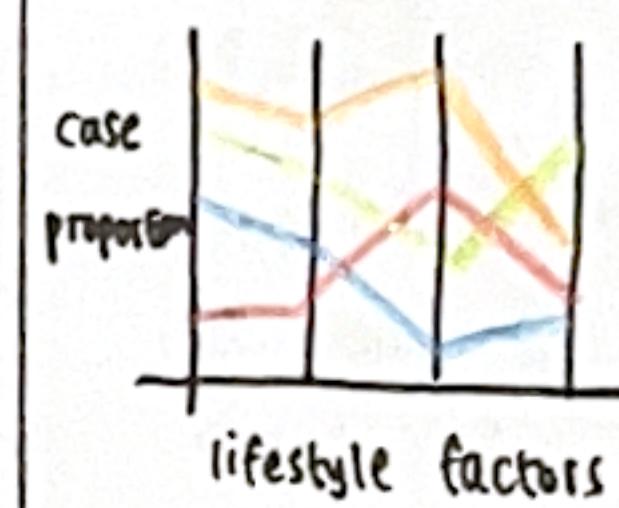
FILTER



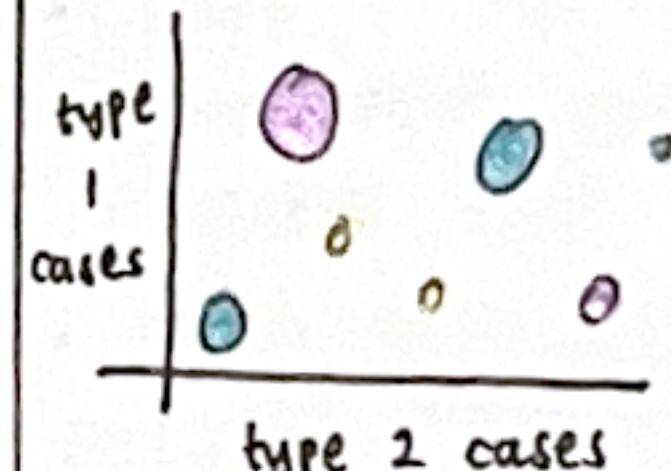
clear spatial overview of diabetes prevalence across states



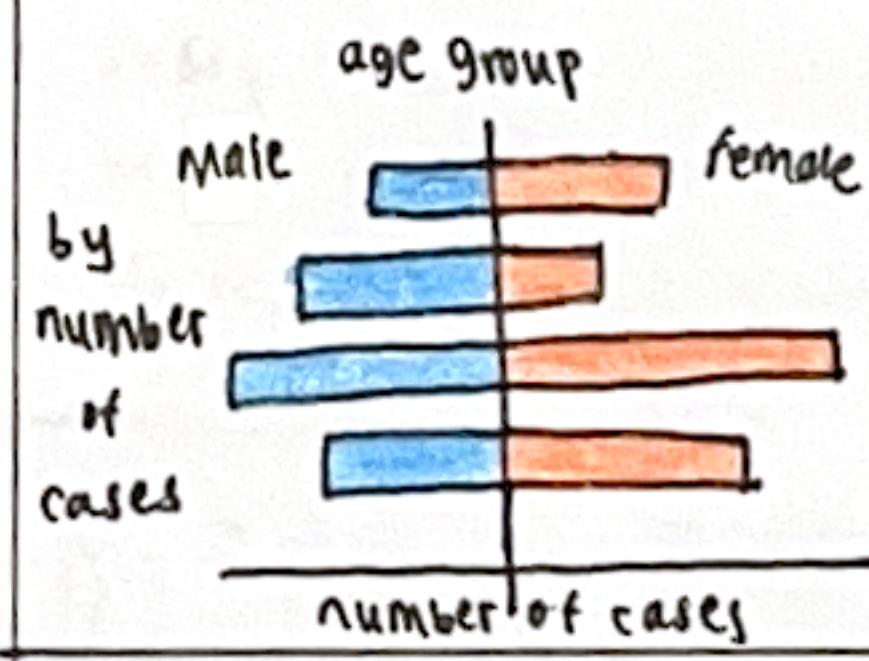
smooth and clear overall trends and growth patterns



easy to see the correlation between factors

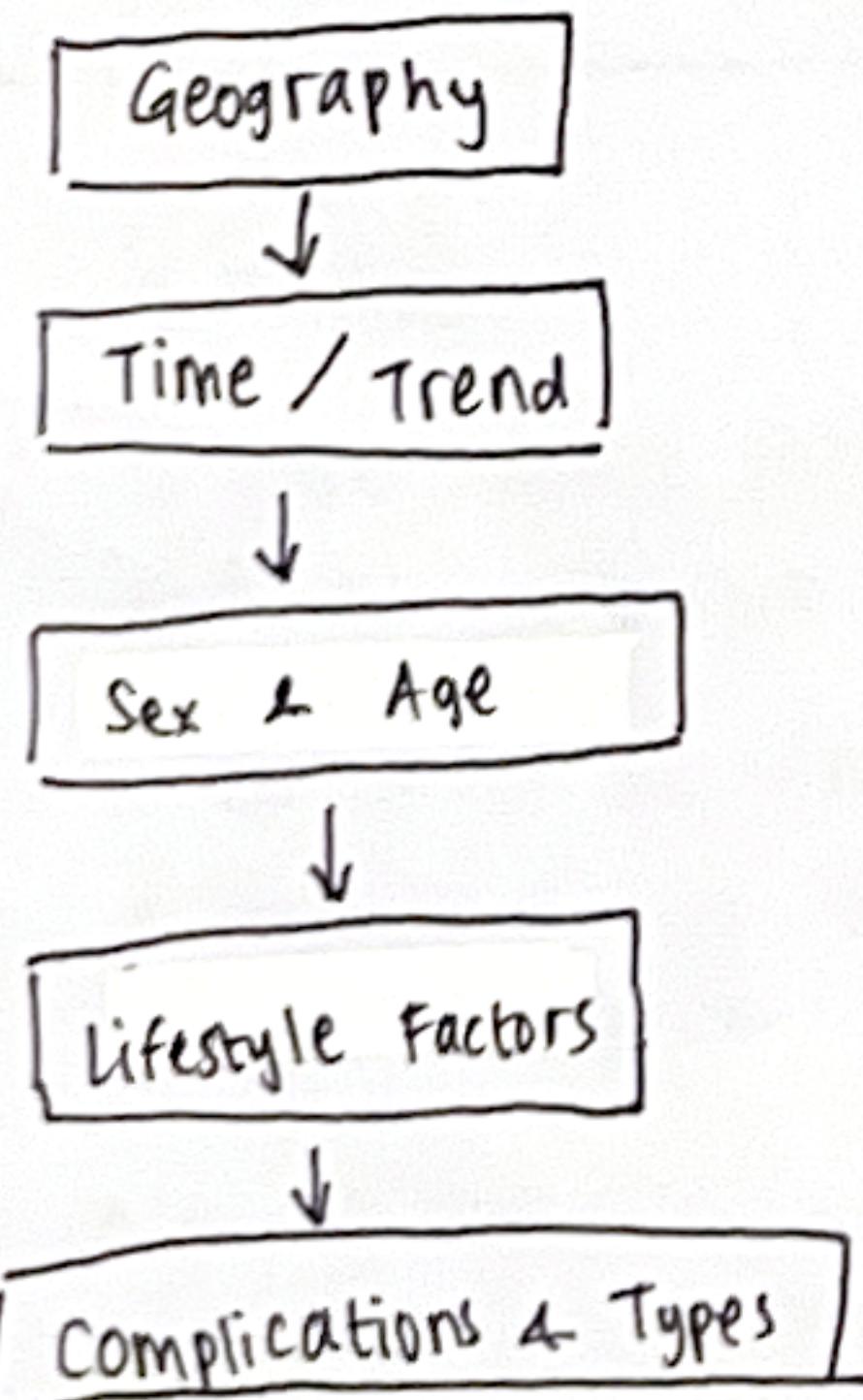


shows multi-variable relationships in simple interpretation

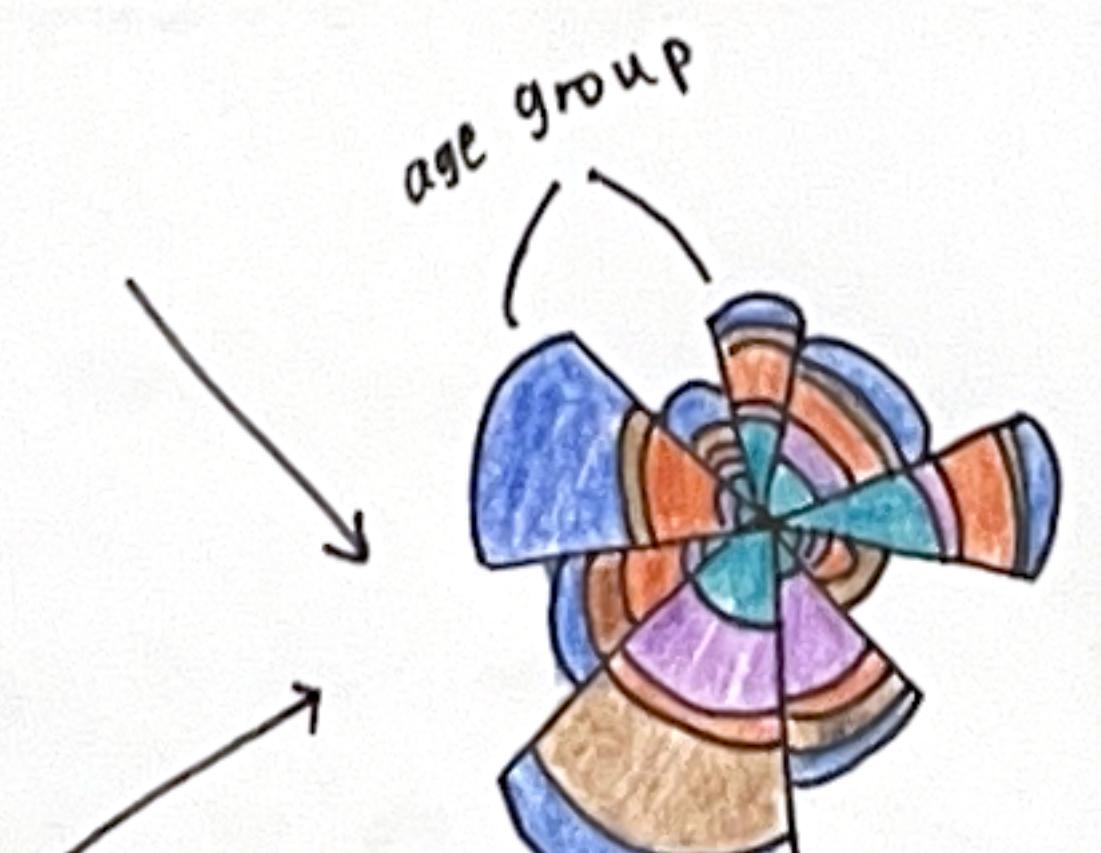
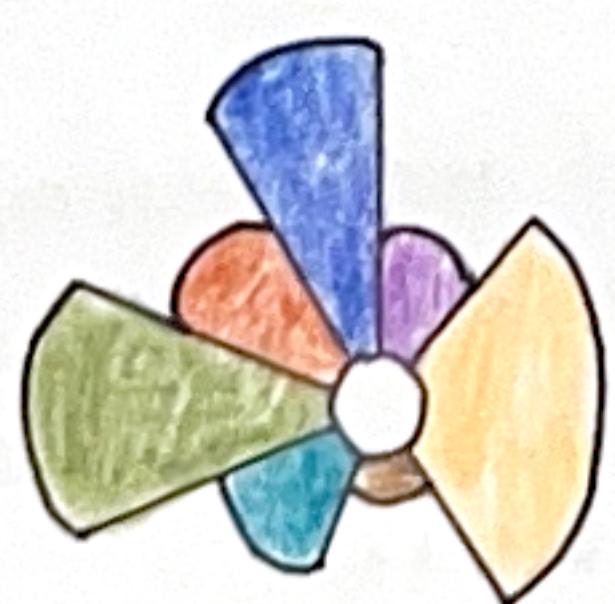
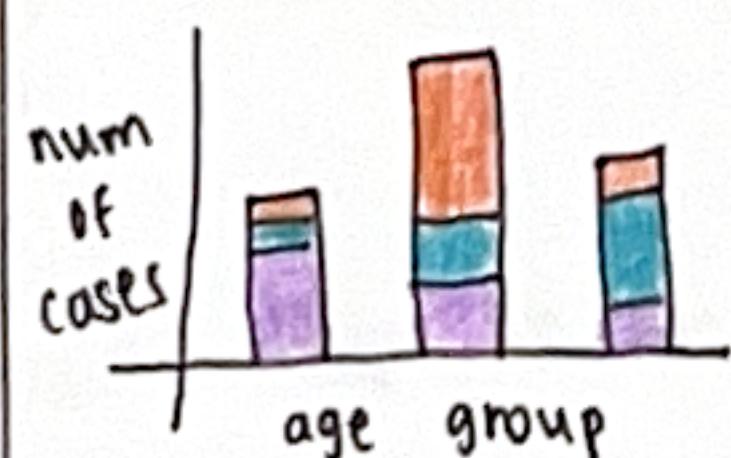


easy to read at a glance

CATEGORISE



COMBINE & REFINER



color: complications

QUESTIONS

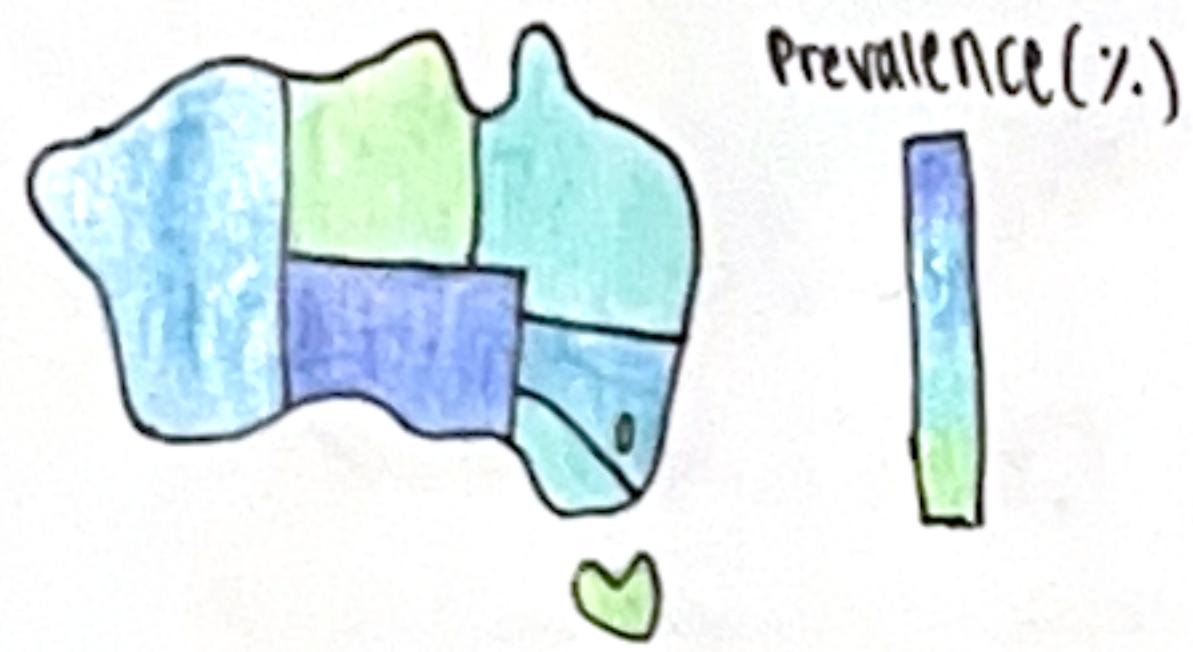
1. Is the implementation doable with the available data and tools?
2. Does this visualisation provide clear solution / insight for the audience?

LAYOUT

Diabetes in Australia

subheading

Prevalence by State (2022)
description

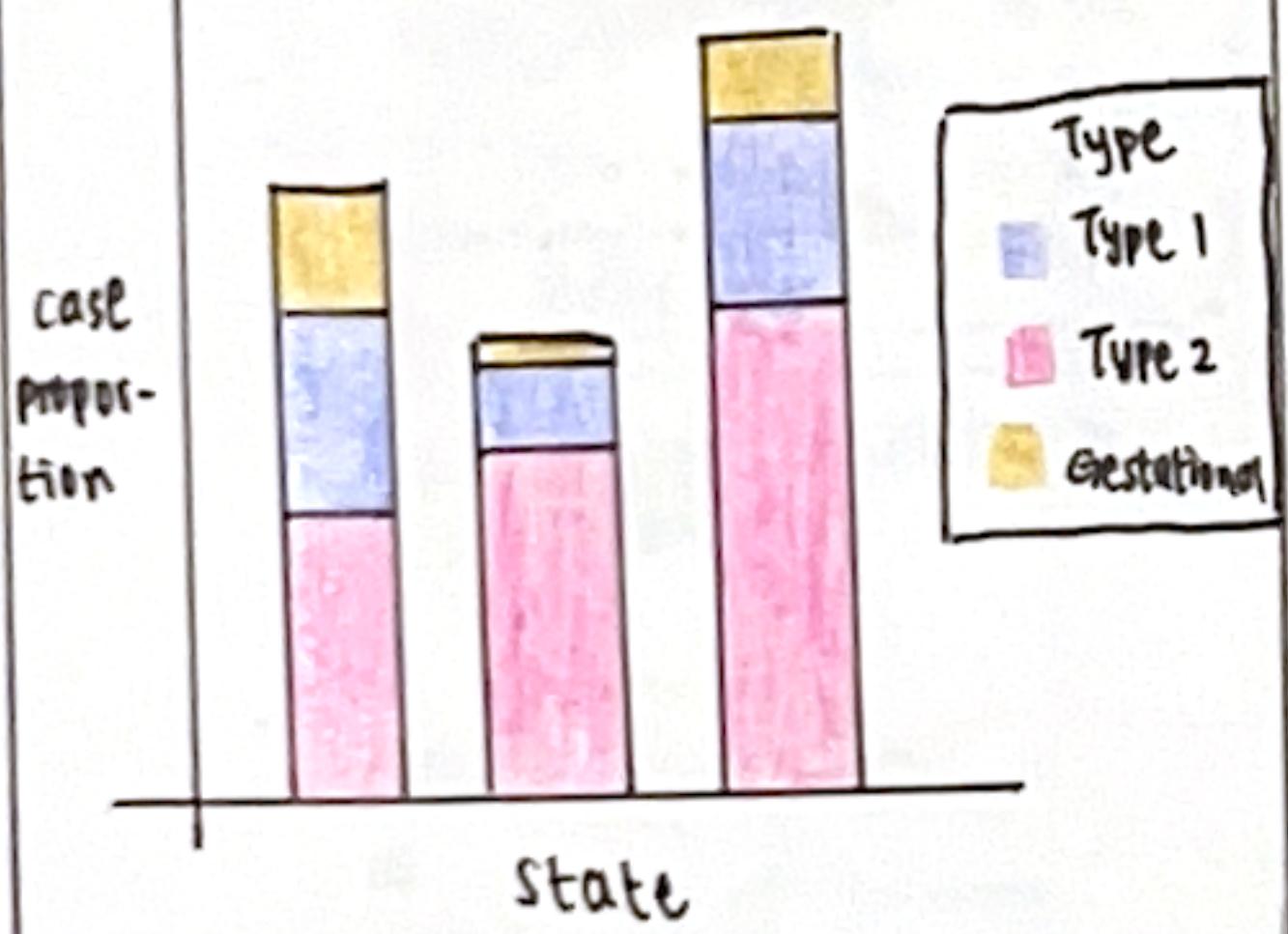


Type:

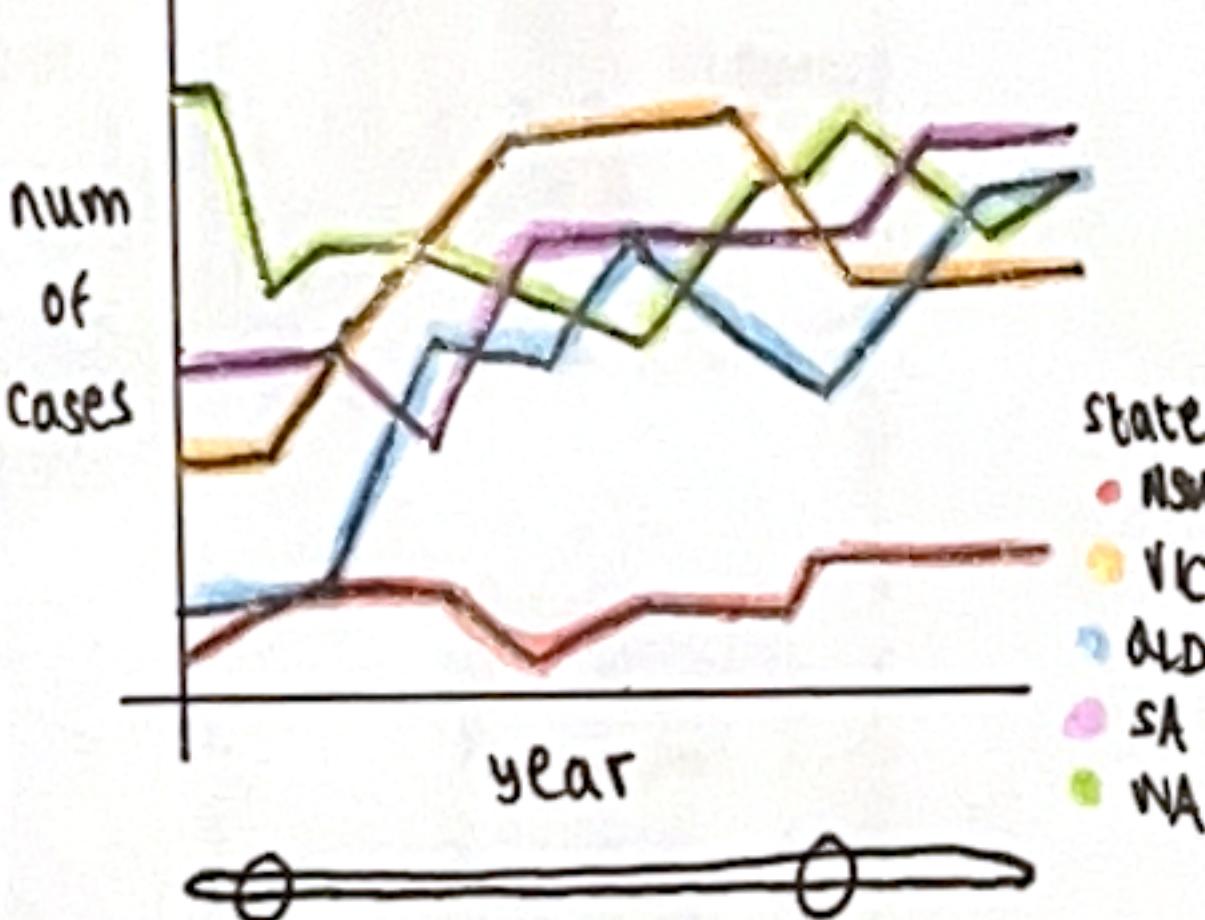
Diabetes by Sex & Age
description



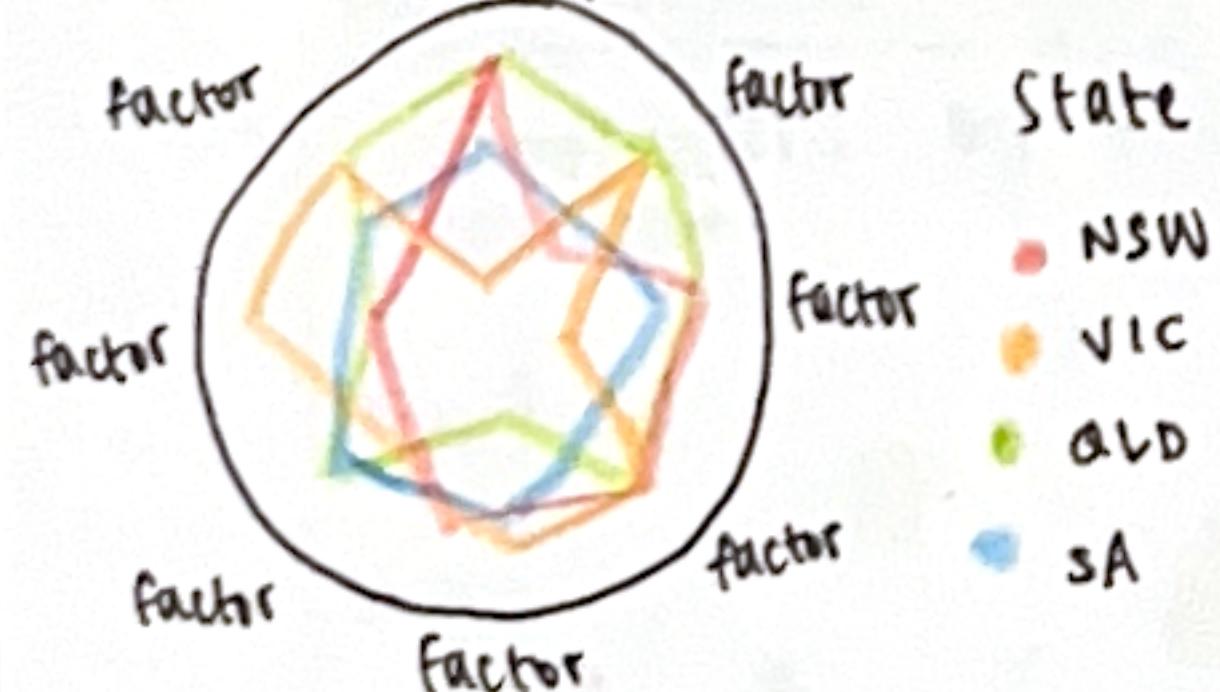
Diabetes Type Distribution per State
description



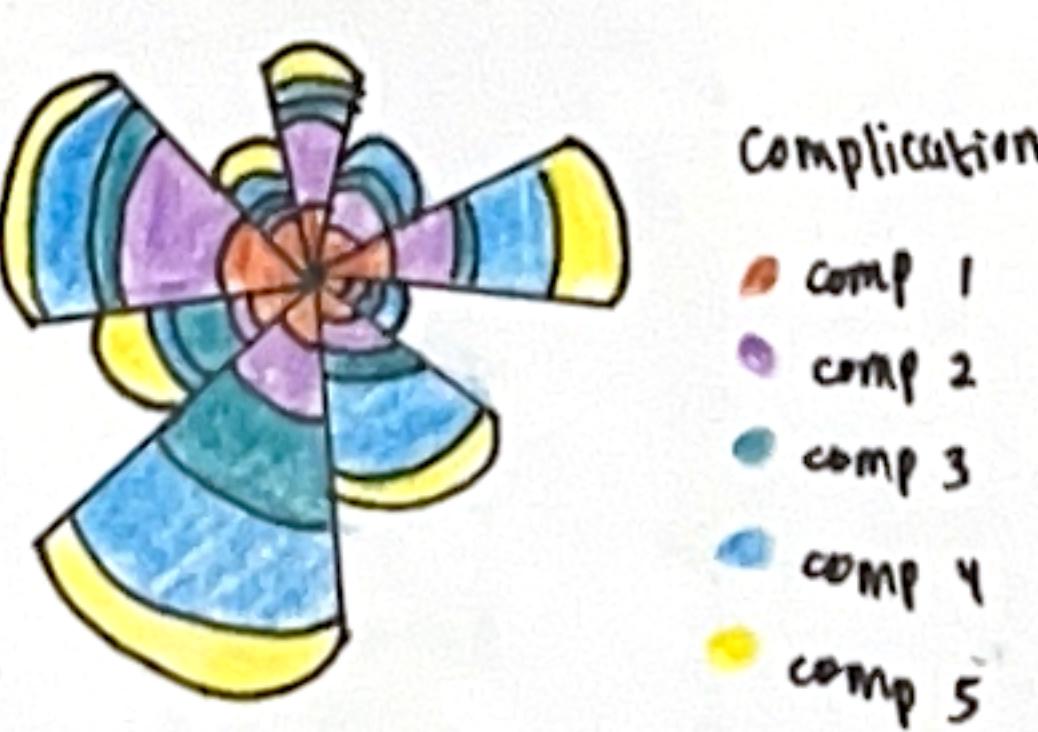
Prevalence Over Time
description



Lifestyle Factors by State
description



Prevalence of Complications by Age
description



Title : Diabetes in Australia

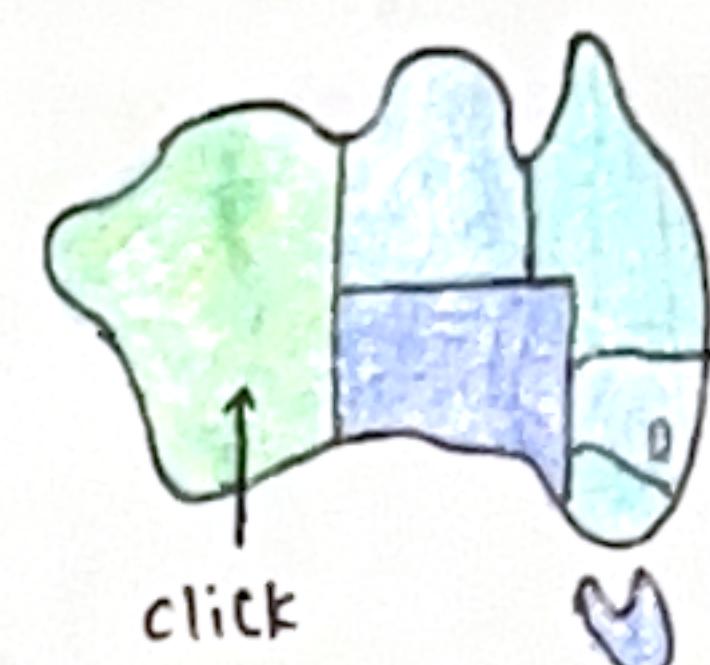
Author: Christy Evelyn Layar

Date : 19 / 10 / 2025

Sheet: 2

Task : Create exploratory dashboard

OPERATION



- click on a state in the map to filter other charts, showing data specific to that state



- time slider filter the chart to show the data between the selected years

- click on the state / type / complication legends to highlight related data

- dropdown to filter the values by diabetes type

Tooltips:
Every chart has tooltip to show exact values and other details.
Hover the mouse over map regions or data points

DISCUSSION

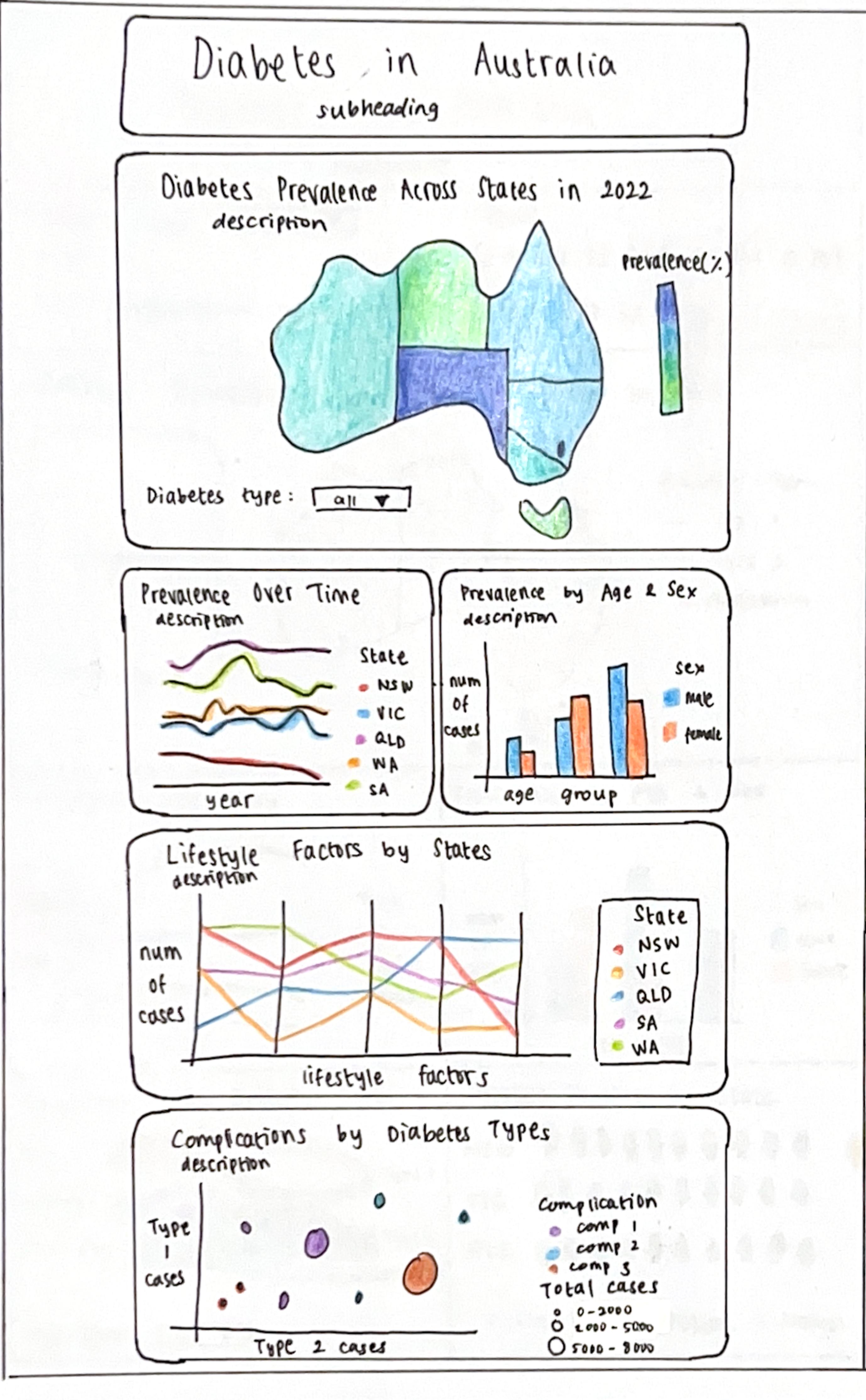
1. Does the audience understand where to start and how to explore further charts?
2. Are the color choices and legends clear enough to guide users through multiple layers of information?
3. Do the radar and polar charts effectively reveal connections between behaviour and long-term health impact?
4. Could more interactivity improve understanding?

FOCUS

The focus equally distributed across all six charts, showing different analytical perspectives.

1. spatial → the map highlights where diabetes is most common.
2. demographic → shows who is most affected by sex and age.
3. type distribution & trend → show what forms of diabetes dominate and how it evolves
4. behavioral → examines why certain regions experience higher risk and which factor dominates the most
5. clinical → visualises complications and who affected the most

LAYOUT



FOCUS

The main focus is the choropleth map. It serves as the starting point for exploration, showing the overview of which regions have the highest or lowest diabetes prevalence.



streamgraph : prevalence over time shows how prevalence shift

group bar : shows age and gender differences

parallel coordinates : links lifestyle factors to higher prevalence rates

bubble chart : reveal the relationship between diabetes types and complication types

Title : Diabetes in Australia

Author : Christy Evelyn Layar

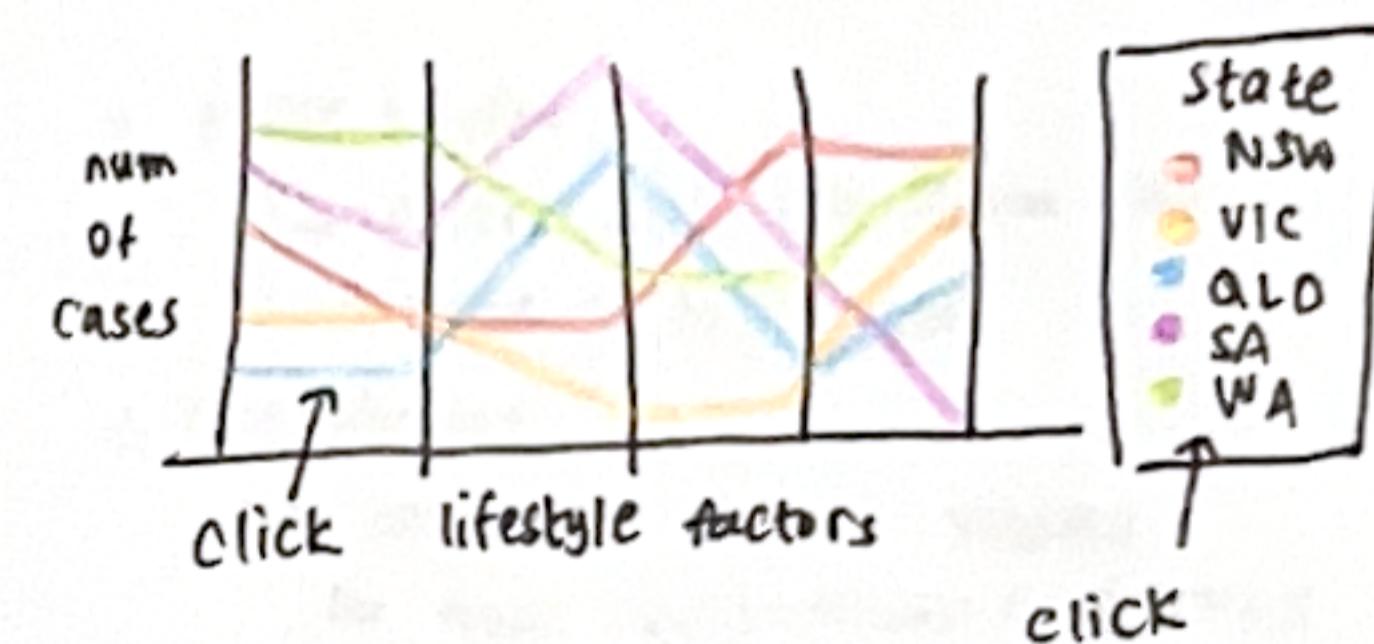
Date : 20/10/2025

Sheet : 3

Task : Design explanatory dashboard

OPERATION

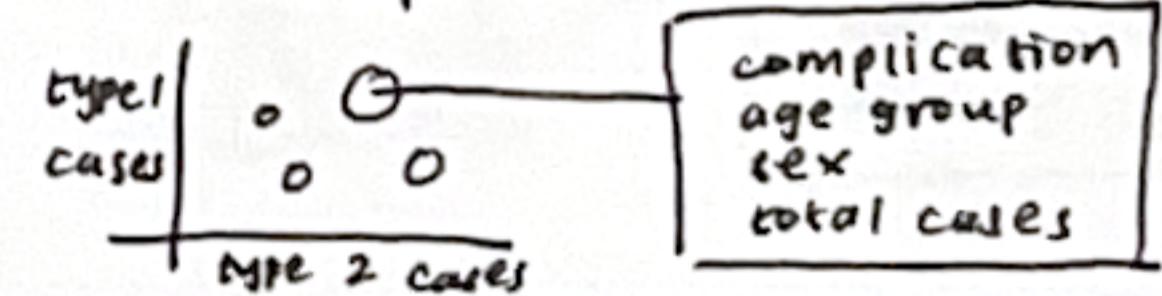
- Click on a state in the map filters the remaining charts to display only that state's data



- click on the legend or line to highlight a specific data
- dropdown filter to show the data based on the selected diabetes type

Tooltips :

Hovering over any map area or data point displays details, such as state name, prevalence, diabetes type, number of cases, or complication type.



DISCUSSION

- Does the bubble chart effectively show which diabetes type contributes most to severe outcomes?
- Is the map effectively used as the first point of interaction to guide deeper exploration?
- Does the streamgraph gives meaningful insight about the diabetes trend or it can be improved using different idiom?

LAYOUT

Diabetes in Australia

subheading

Diabetes type :

Year

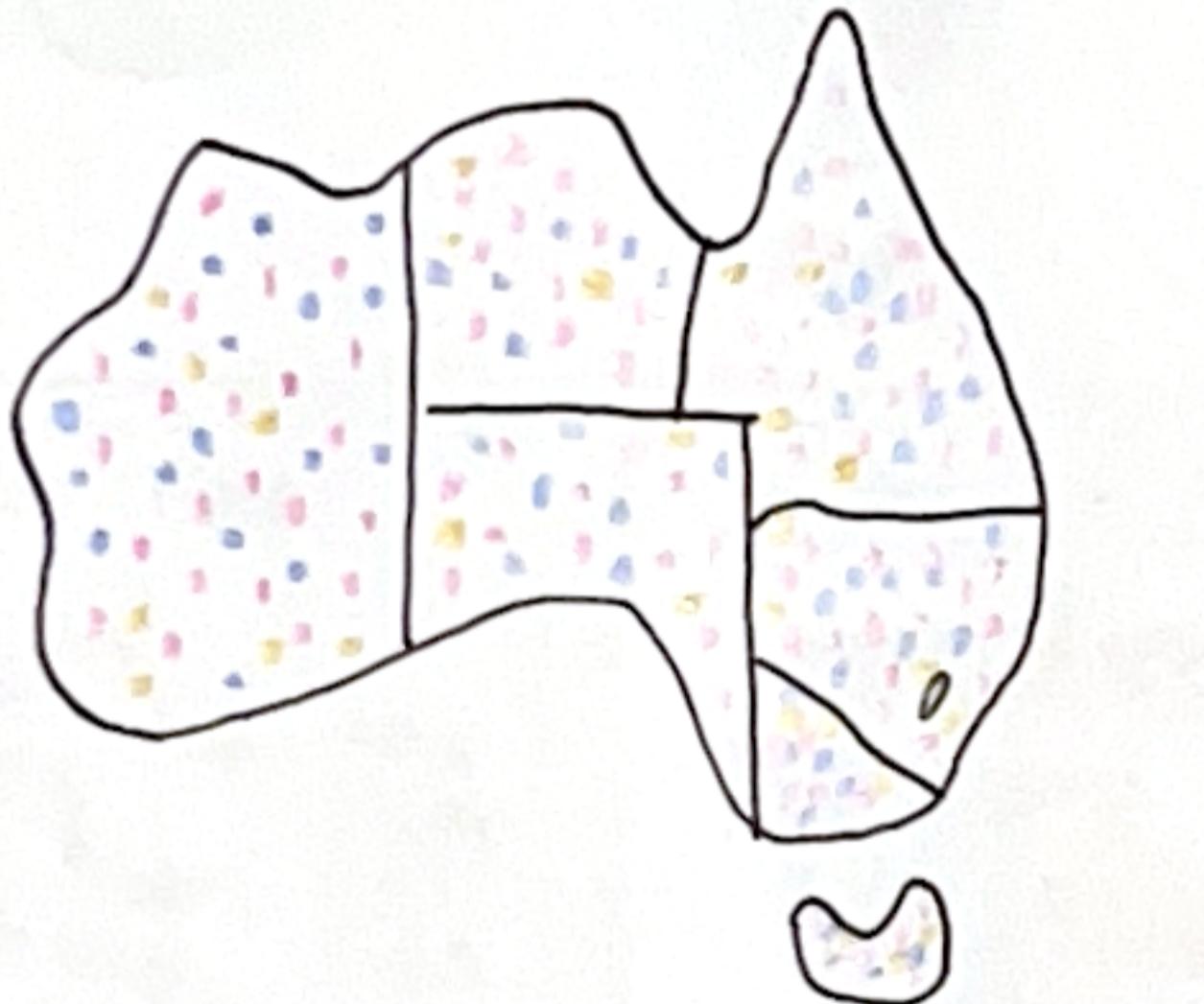
2007 2022

States

NSW QLD WA NT
 VIC SA TAS ACT

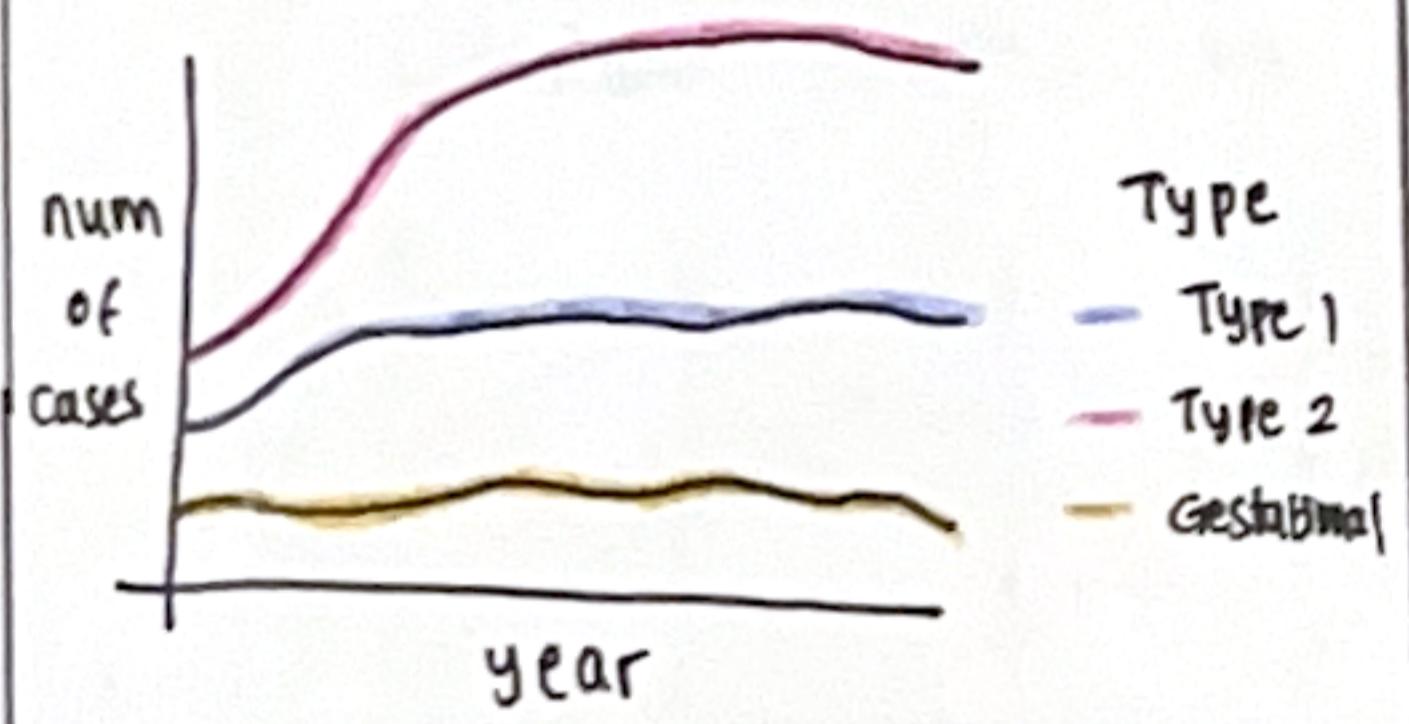
Diabetes Prevalence by Type and State in 2022

description

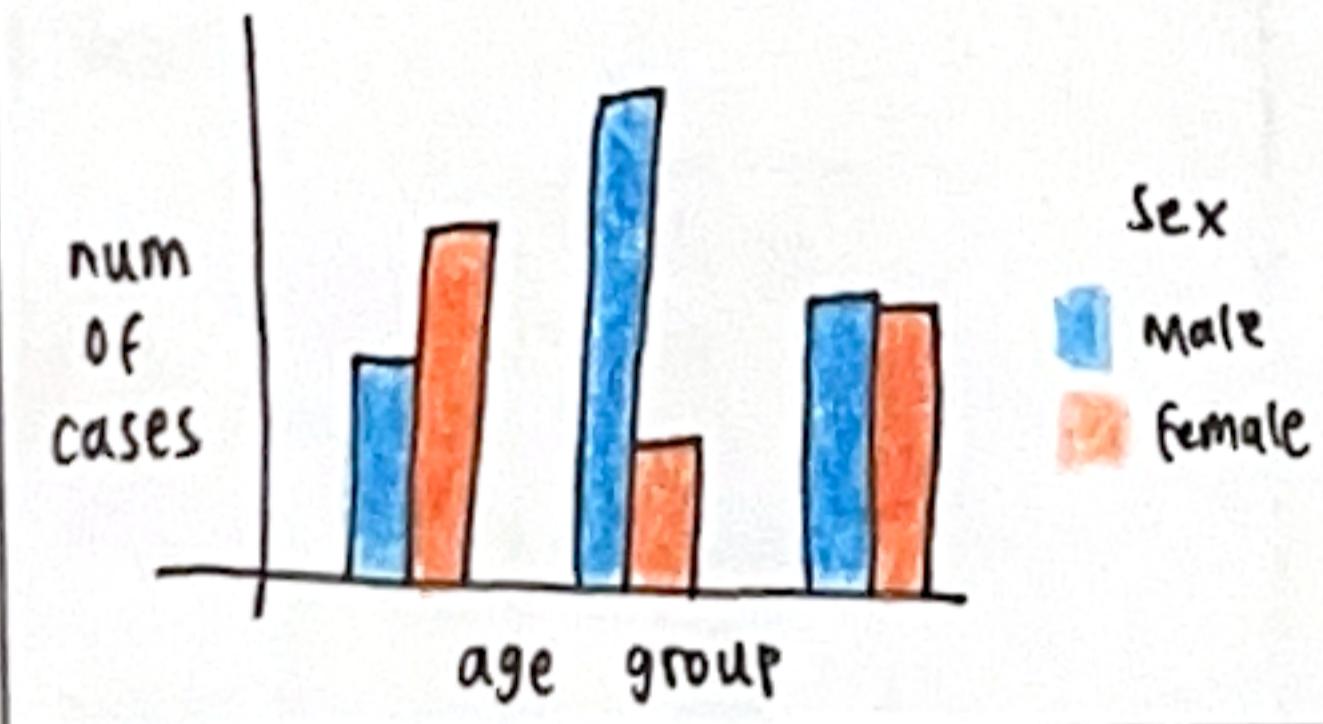


Diabetes Type
● Type 1
● Type 2
● Gestational

Incidence Over Time



Prevalence by Age & Sex



Complications by Diabetes Types



Lifestyle Factors by State



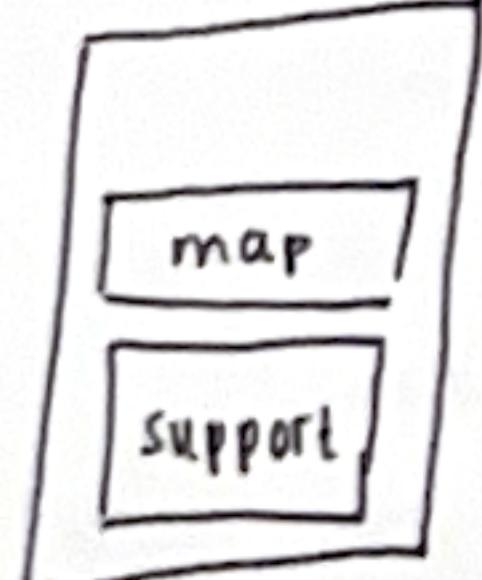
● Obesity ● Smoking ● Alcohol

FOCUS

The focus of this layout is on the dot density map. Each dot represents a number of diabetes cases, distinguish by color to show the diabetes types.

Supporting charts provide more explanation:

- multi-line chart : shows how prevalence evolved
- group bar chart : reveals demographic differences
- sankey chart : visualises complication flows to each diabetes type
- isotype chart : show lifestyle patterns that impact the diabetes prevalence



Title : Diabetes in Australia
Author : Christy Evelyn Layar

Date : 20 / 10 / 2025

Sheet: 4

Task : Refine explanatory dashboard

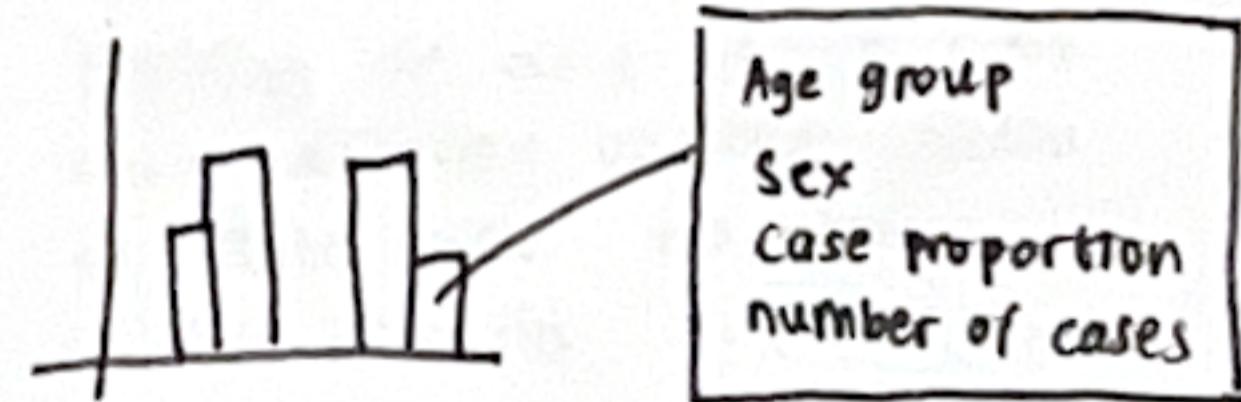
OPERATION

Filters :

- dropdown
 - ↳ select diabetes type to update all charts values
- time slider
 - ↳ filter data to show the data on that year
- checkboxes
 - ↳ tick one /more states to focus comparisons across specific regions
- highlight
 - ↳ click on a dot point, line, bar, or legend to highlight a corresponding data

Tooltips :

Hovering over data points, icons, lines, or bars displays contextual information



DISCUSSION

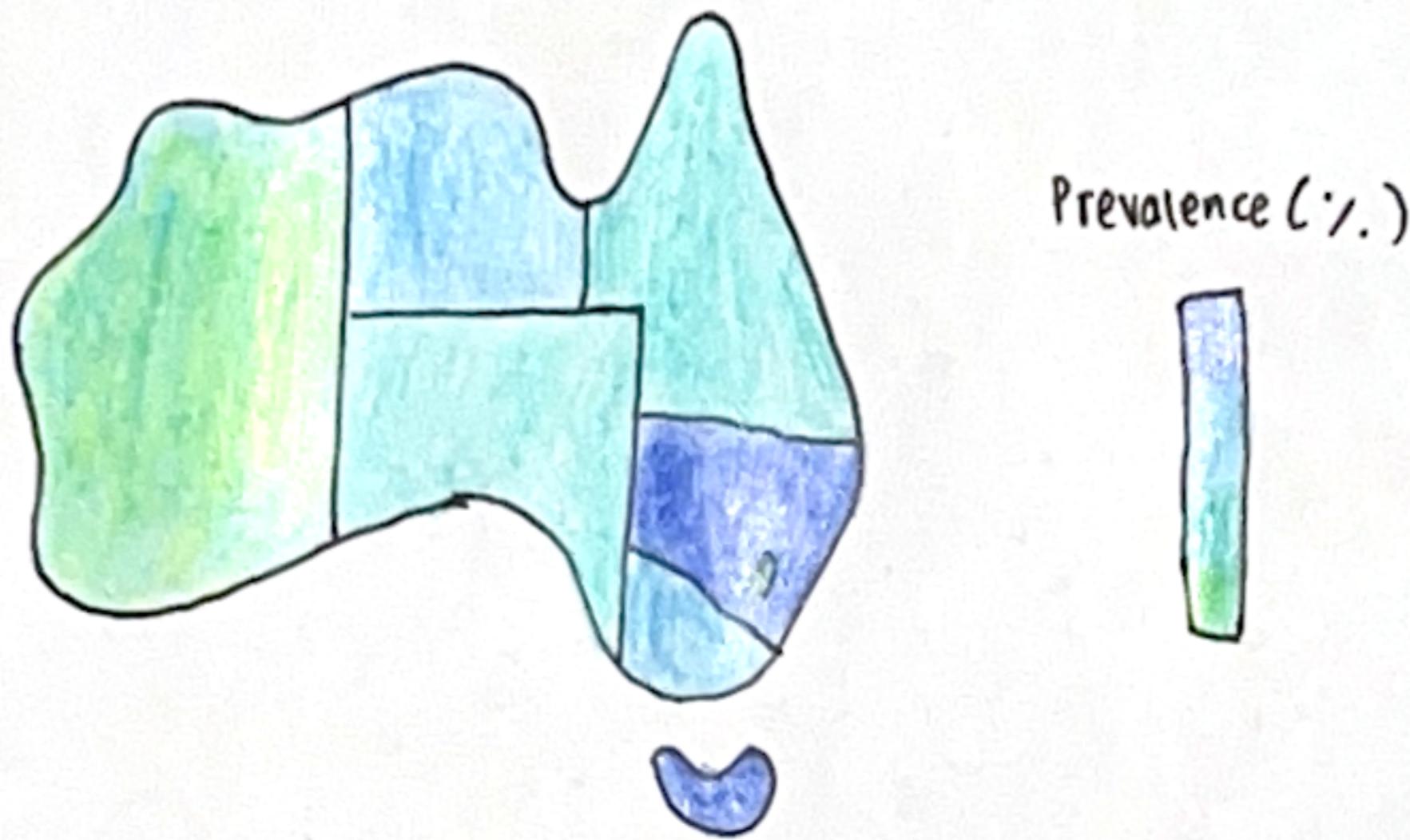
1. Does the dot density map effectively highlight regional disparities without overcrowding the states?
2. Does the sankey chart effectively show which diabetes types correspond with the complications?
3. Does the visual progression create a clear storytelling path and would additional visual cues strengthen the connection between charts?

LAYOUT

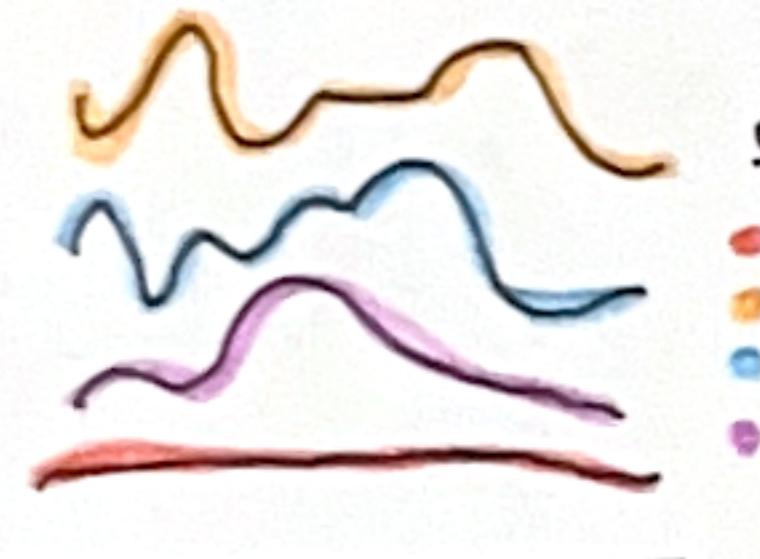
Diabetes in Australia

subheading

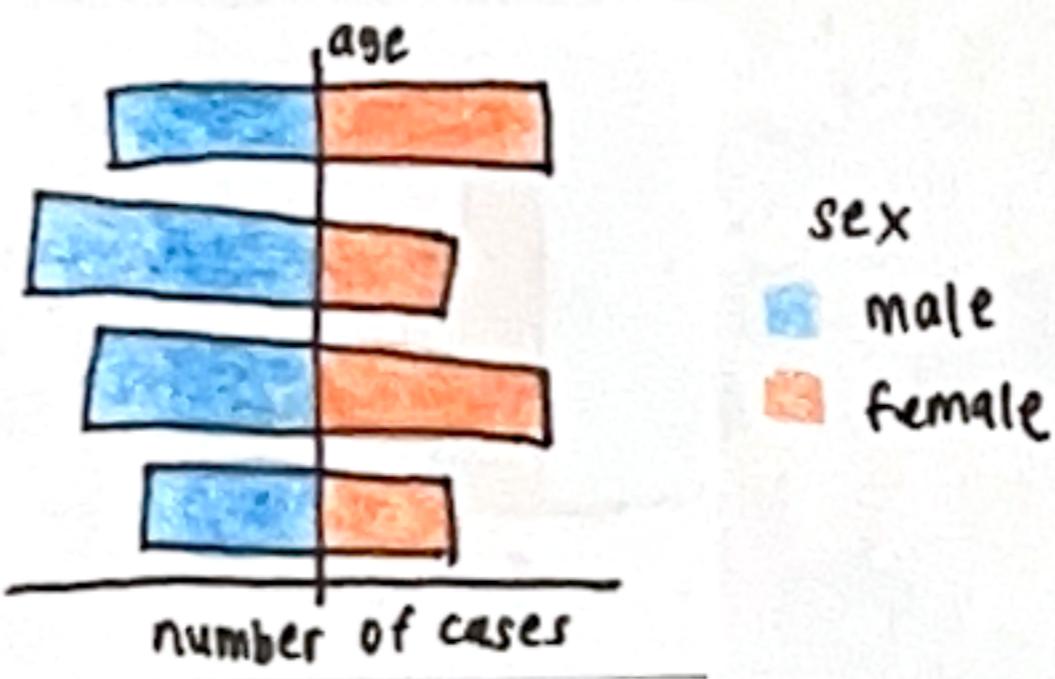
Diabetes Prevalence Across States in 2022



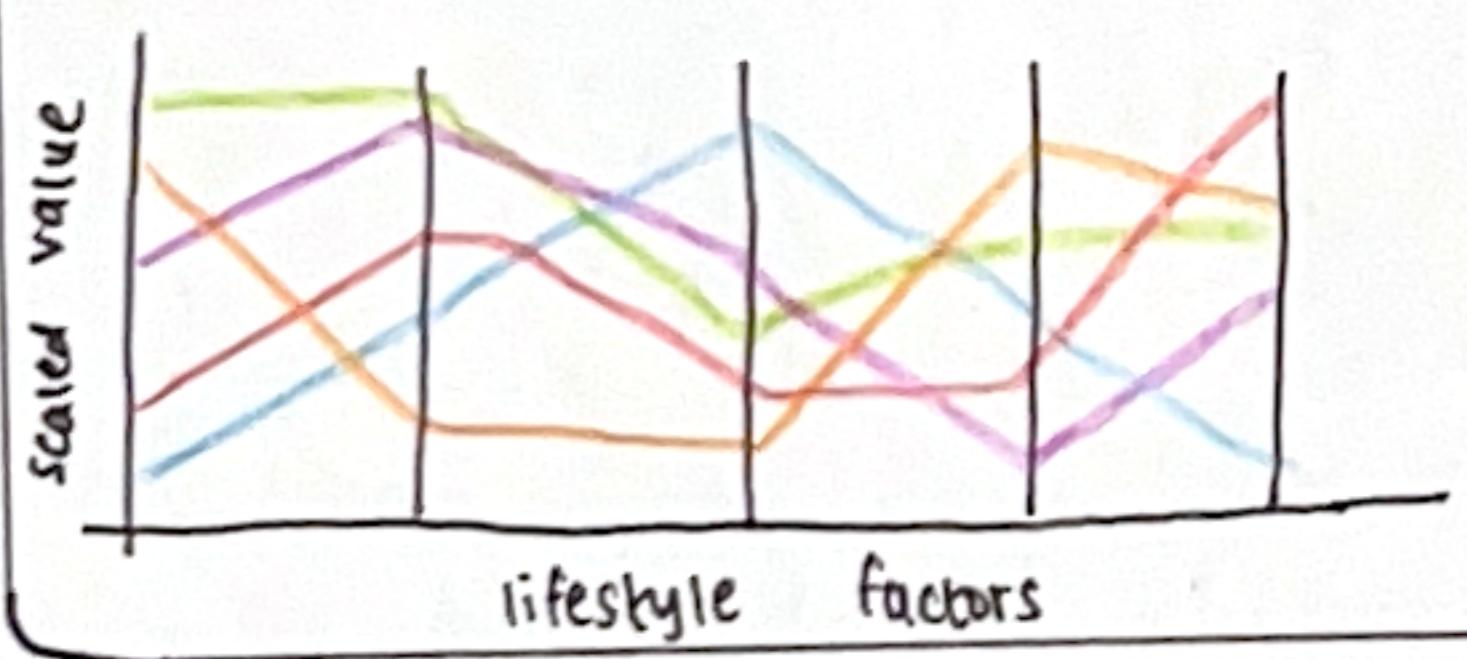
Prevalence Over Time



Prevalence by Age & Sex



Lifestyle Factors by States



Complications by Diabetes Types



FOCUS

The main focus is the choropleth map. It serves as the main point and the starting of the dashboard visualisation, showing the overview of which regions have the highest or lowest diabetes prevalence.

Other charts build supporting information, such as the prevalence shift over time, age and gender differences, lifestyle factors that affect the prevalence rate, and the relationship between diabetes types and complication types.

Title : Diabetes in Australia

Author : Christy Evelyn Layar

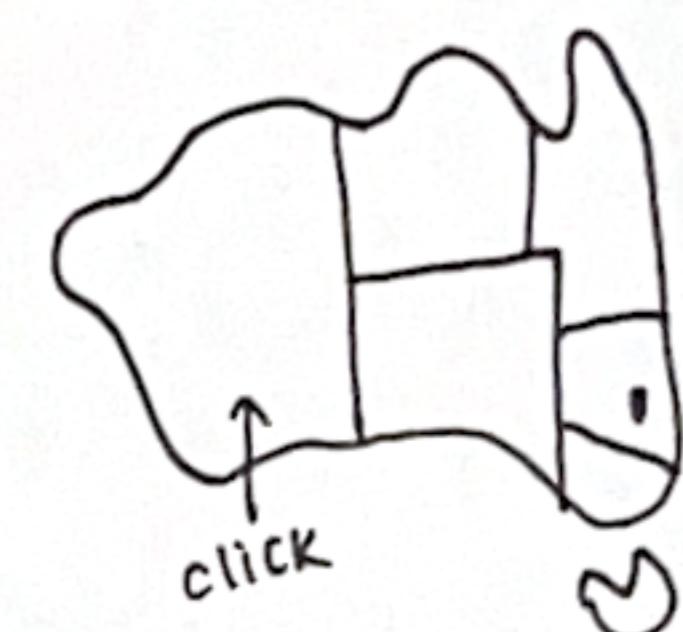
Date : 21/10/2025

Sheet : 5

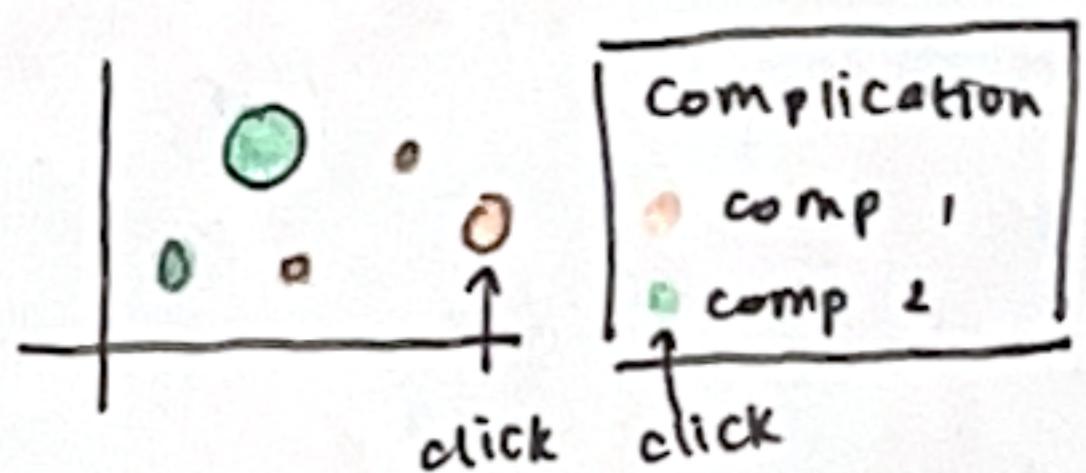
Task : Final Visualisation Design

OPERATION

Dropdown filter for age group and gender in bubble chart to show relevant comparisons.



Clickable map to filter the data based on selected region across all charts.



Clickable legends and charts to highlight a specific data type (age, complication, state)

Tooltips :

Hovering on any chart will show detailed values, such as state name, proportion, number of cases, etc.

DETAIL

- Data implemented using CSV and topojson file for map

- Using Python and Excel to clean the data and use Vega-lite via vscode to make the visualisations with embedded HTML & Javascript

- Time to build : 1 week estimation

- Create an interactive dashboard where all visualisations are seamlessly through filters, allowing users to explore clearly about diabetes in Australia.