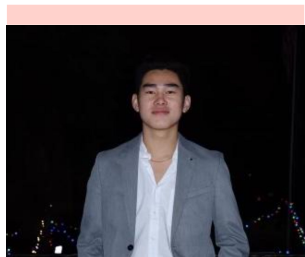


# Jeeva Health: Mapping King County Mental Health Disparities

Mindful Huskies

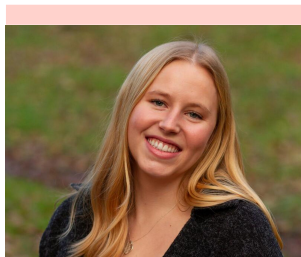
# Meet the team



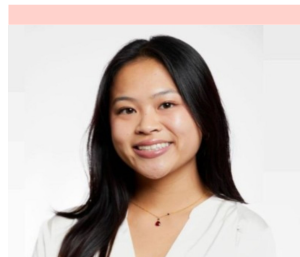
**Justin Phan**  
Project Lead and  
Data Scientist



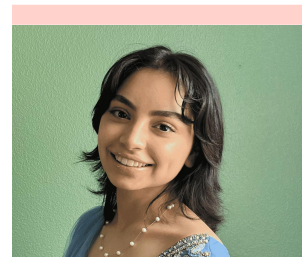
**Nicole Han**  
PM and Data  
Scientist



**Meg Balfrey**  
PM and Data  
Scientist



**Amy Chew**  
Data Scientist and  
Software Developer



**Nooha Mohammed**  
Data Scientist and  
Software Developer

# Problem Context

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## **The Focus**

- Researching the accessibility of psychiatric care in King County, WA
- Hope to contribute in creating a more equitable mental health care landscape

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## **Lack of Accessibility**

- The state of Washington is ranked towards the bottom of all states with availability of psychiatric care
  - Caused by a long history of neglect and very little public support
-

# Problem Statement

Where do **public health centers** across the state of Washington lack adequate **accessibility and resources** to effectively support **individuals hospitalized for psychiatric illnesses**?

# Research Insights

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## Demand

- WA state falls below the national average rate of care for mental health
- The demand for mental health services is stronger than ever – nearly 56% Americans seeking or wanting to seek mental health services

## Allocation

- 55% of adults and 60% of youth in the US with a mental illness receive no treatment
- POC receiving care in urban areas are particularly at risk for losing access when telemedicine is implemented

## Solution

- Service utilization, patient demographics, and access barrier data helps healthcare systems allocate resources, expand outreach, and ensure equitable access
- Increasing the proportion of racial minority providers is vital in improving health disparities

Meet our  
Personas!

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# Maria Johnson

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**Occupation:** Grocery Store Cashier at Night,  
Stay-Home Mom

- She has been experiencing symptoms of depression for several months but has been unable to seek professional help due to financial constraints
  - Limited by her neighborhood's lack of adequate mental health resources, with limited availability of psychiatric beds in nearby hospitals.
- 



# Robert Monopoly

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**Occupation:** State Senator with a background in public administration and health policy

- He is passionate about addressing systemic inequalities in psychiatric care and improving access to services for underserved populations
  - Understands the importance of data-driven decision-making and his goal is to be able to utilize data visualizations that can highlight the disparities between psychiatric departments between hospitals
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# Key Concepts

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## Visualization / Data Mapping

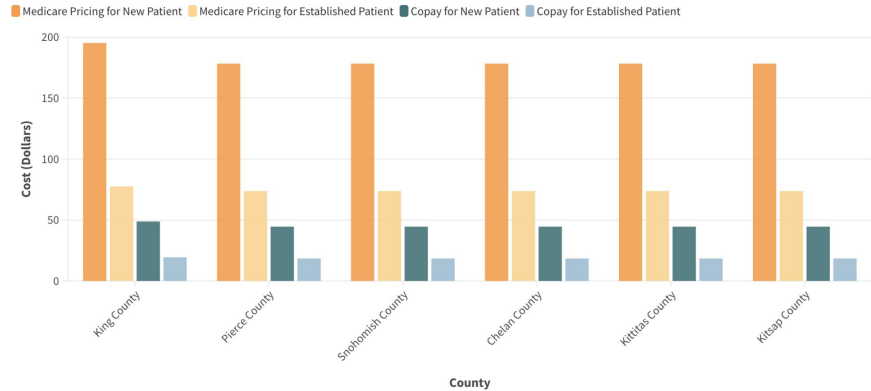
- Creating visualizations to tell a story on King County psychiatric health
  - Allow the user to quickly see and understand that there are disparities across King County
  - Mapping across King County
  - Immersive storytelling
-

# Solution Approach / Key Feature #1

## How much does it cost?

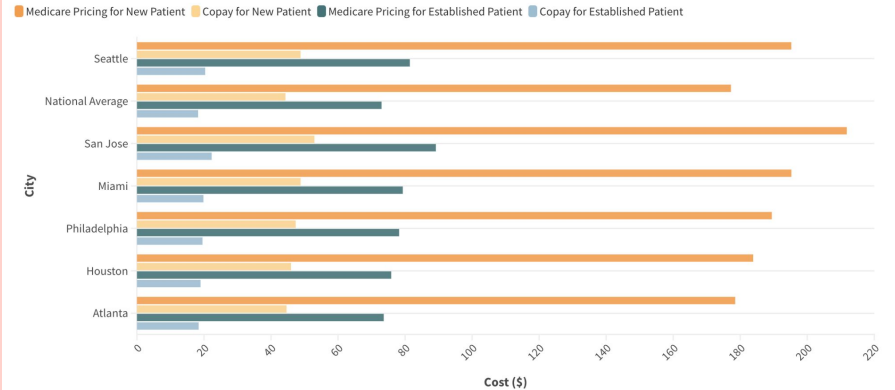
Does King County's Psychiatric Care Cost More than Surrounding Counties?

Choose which to compare



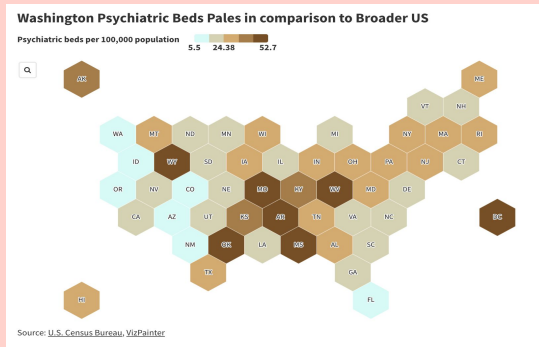
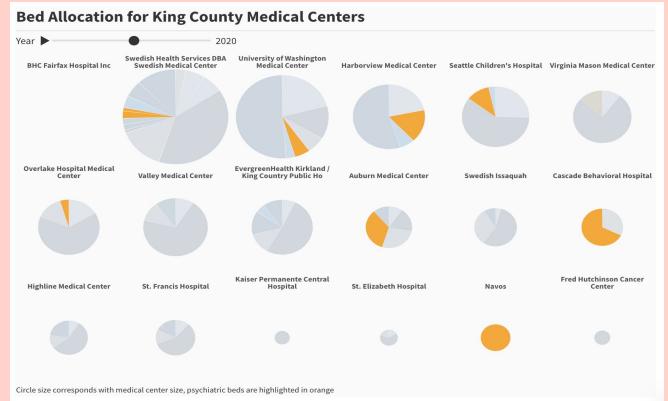
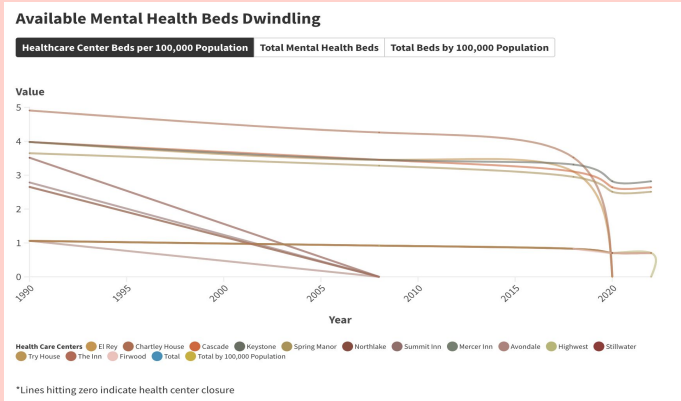
How Does Seattle's Psychiatric Pricing Compare to Other Cities?

Choose which to compare



# Solution Approach / Key Feature #2

## Is there any availability?



# Solution Approach / Key Feature #3

## How successful is the treatment?

### How do different medical centers compare in managing post-discharge outcomes for psychiatric patients?

- Percent of patients receiving follow up care within 30 days after psychiatric hospitalization
- Percent who continue medication following inpatient psychiatric discharge
- Percent of patients readmitted to any hospital within 30 days of discharge from psychiatric facility

#### NAVOS - INPATIENT SERVICES



#### BHC FAIRFAX HOSPITAL



#### OVERLAKE HOSPITAL MEDICAL CENTER



#### SWEDISH MEDICAL CENTER



#### UNIVERSITY OF WASHINGTON MEDICAL CTR



#### CASCADE BEHAVIORAL HOSPITAL



#### HARBORVIEW MEDICAL CENTER



#### MULTICARE AUBURN MEDICAL CENTER

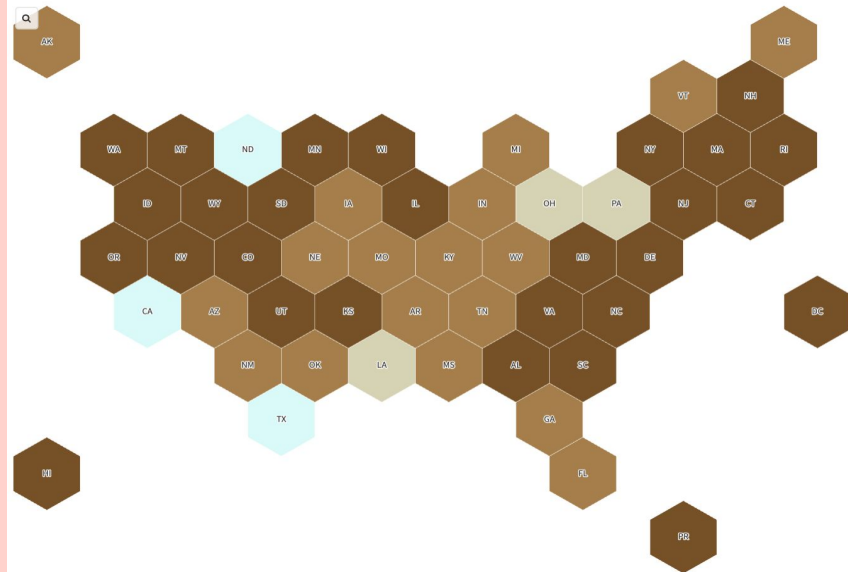


Percent

### How Does Inpatient Psychiatric Facility Quality Across States Compare?

Patients readmitted to any hospital within 30d

1 23.1 45.2 67.3 89.4



Source: U.S. Census Bureau, VizPainter

# User Testing & Validation

## Testing

- Gave user brief background context before presenting material
- Asked a series of follow up questions

## Key Questions

- Is the website effectively telling the story that we want it to?
- Are users able to quickly pick up the information that the visualizations are sharing?
- Can they answer specific questions about the visualizations?
- What is the main takeaway after reading our story?

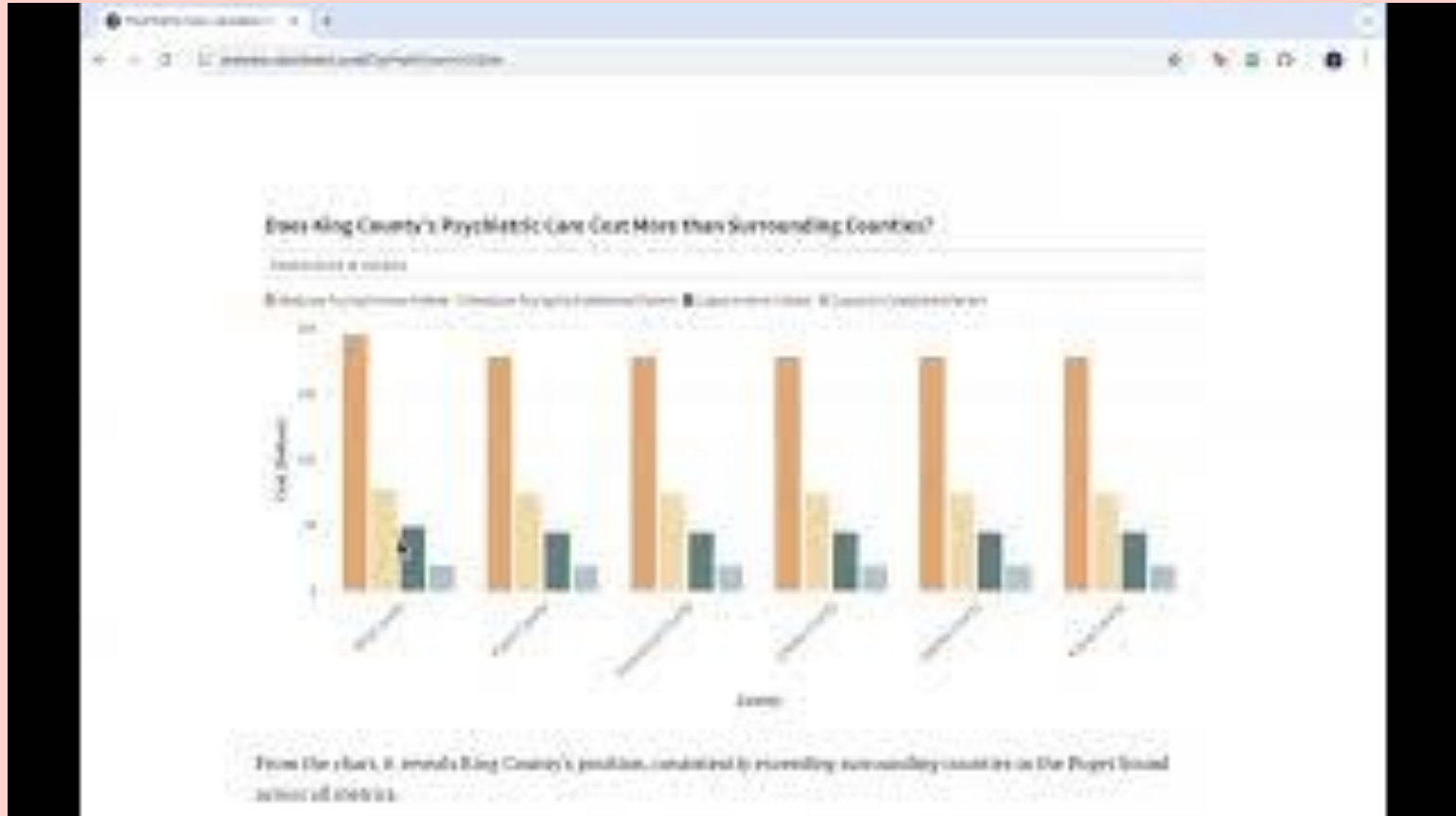
## Advice and Feedback

- The use of interactive, long-form journalism is very successful in grabbing and maintaining the user's attention.
- Ensure that there is a “unified voice” amongst the writing.
- Find specific and detailed policies that relate to our findings and the visualizations created in order to have an effective impact on law makers

# Link to our website



# Demo Video



# Ethical Considerations

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- **User privacy**
  - Using public databases from King County and all users are completely anonymous
- **Data Bias**
  - Lower economic levels are often not able to get treatment and therefore not accounted in data that is collected
- **Equity and Accessibility**
  - Address the disparity in access to psychiatric treatment by acknowledging that lower economic levels are underrepresented in the collected data.



# Next Steps

Working with Jeeva Health development team to ensure smooth handoff.

Our published story and visualizations are shared and easily to edit.

Discuss future development of our project.

Thank you for listening!

Mindful Huskies

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