

# **Improving Access to NYC Health + Hospital Centers**

Devra Alper

# Introduction

- In compliance with the Americans with Disabilities Act of 1990 (ADA), elevators must be built in newly constructed MTA stations
  - About 25% are accessible today
- NYC Health + Hospitals (H+H) is the largest public health care system in the US, serving over 1 million New Yorkers
- **Where should a new H+H center be built?**

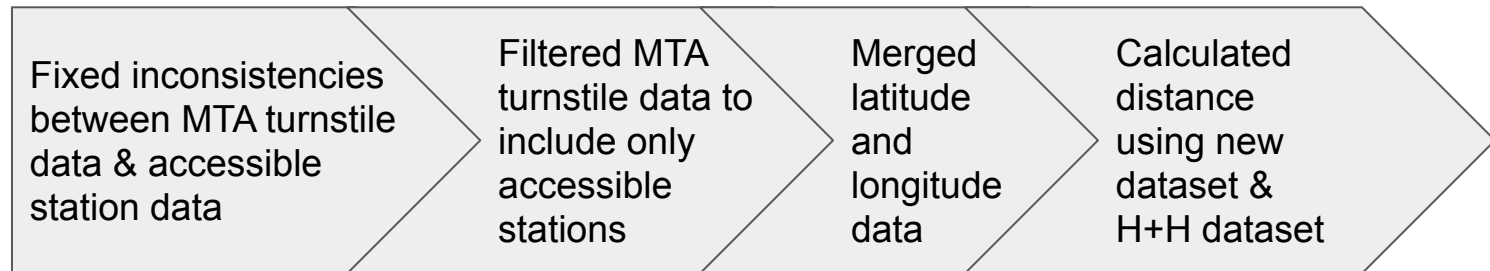
## Goal

Identify accessible, high-traffic MTA stations without nearby H+H centers

# Methodology

Three datasets were used:

1. MTA turnstile data: <http://web.mta.info/developers/turnstile.html>
  - March 2021 - June 2021
2. Accessible MTA stations, with latitude and longitude:  
[https://github.com/tsdataclinic/mta/blob/master/data/crosswalk/Master\\_crosswalk.csv](https://github.com/tsdataclinic/mta/blob/master/data/crosswalk/Master_crosswalk.csv)
3. NYC H+H patient care locations, with latitude and longitude:  
<https://data.cityofnewyork.us/Health/NYC-Health-Hospitals-patient-care-locations-2011/f7b6-v6v3>



# Methodology (cont.)

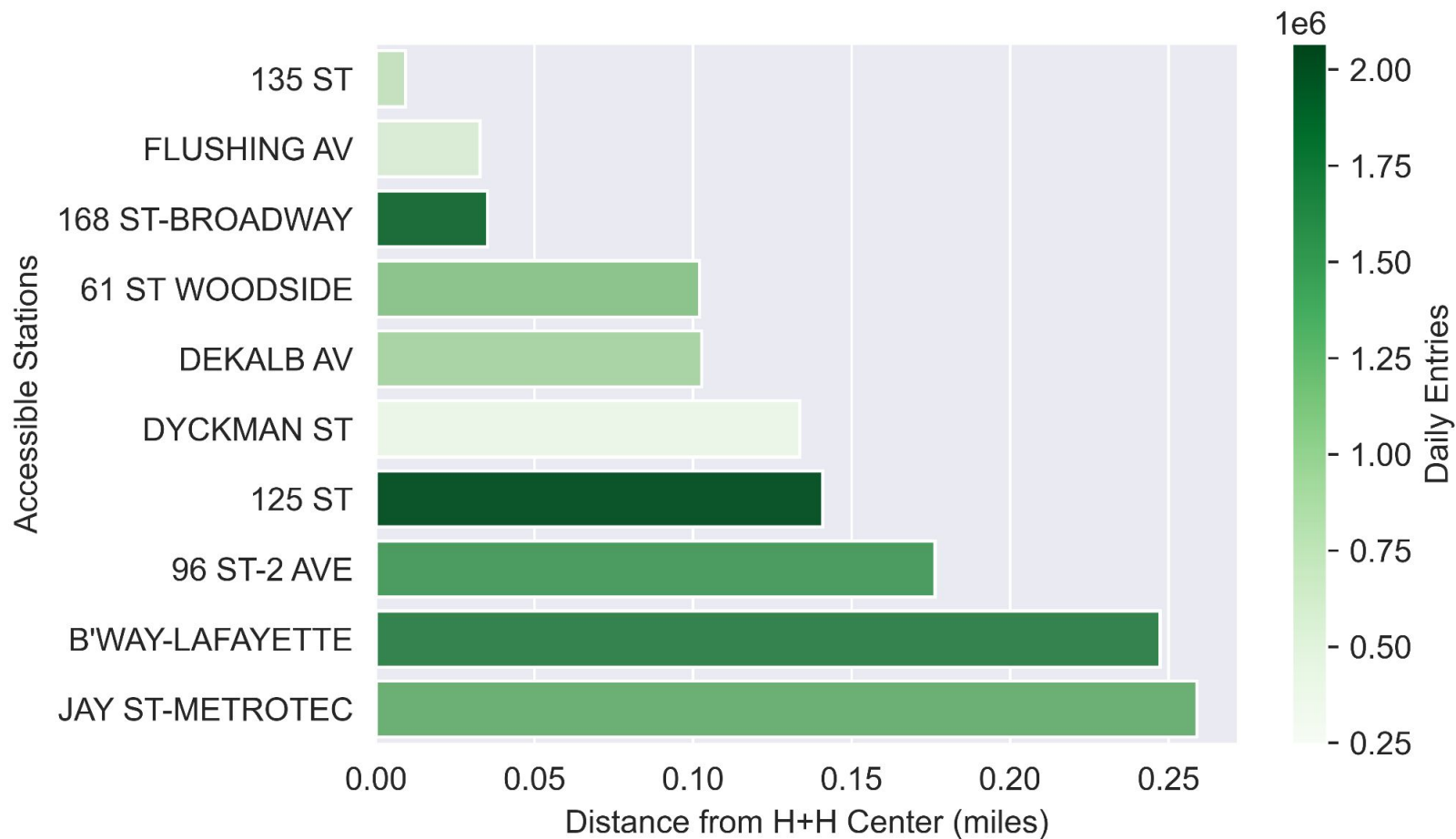
Libraries used:

- **Pandas** → analyses
- **NumPy** → analyses
- **Scikit-learn** → calculate haversine distance
- **Matplotlib** → visualizations
- **Seaborn** → visualizations
- **Plotly** → visualizations

# Results

- What mile radius am I interested in?

## Stations closest to an H+H Center



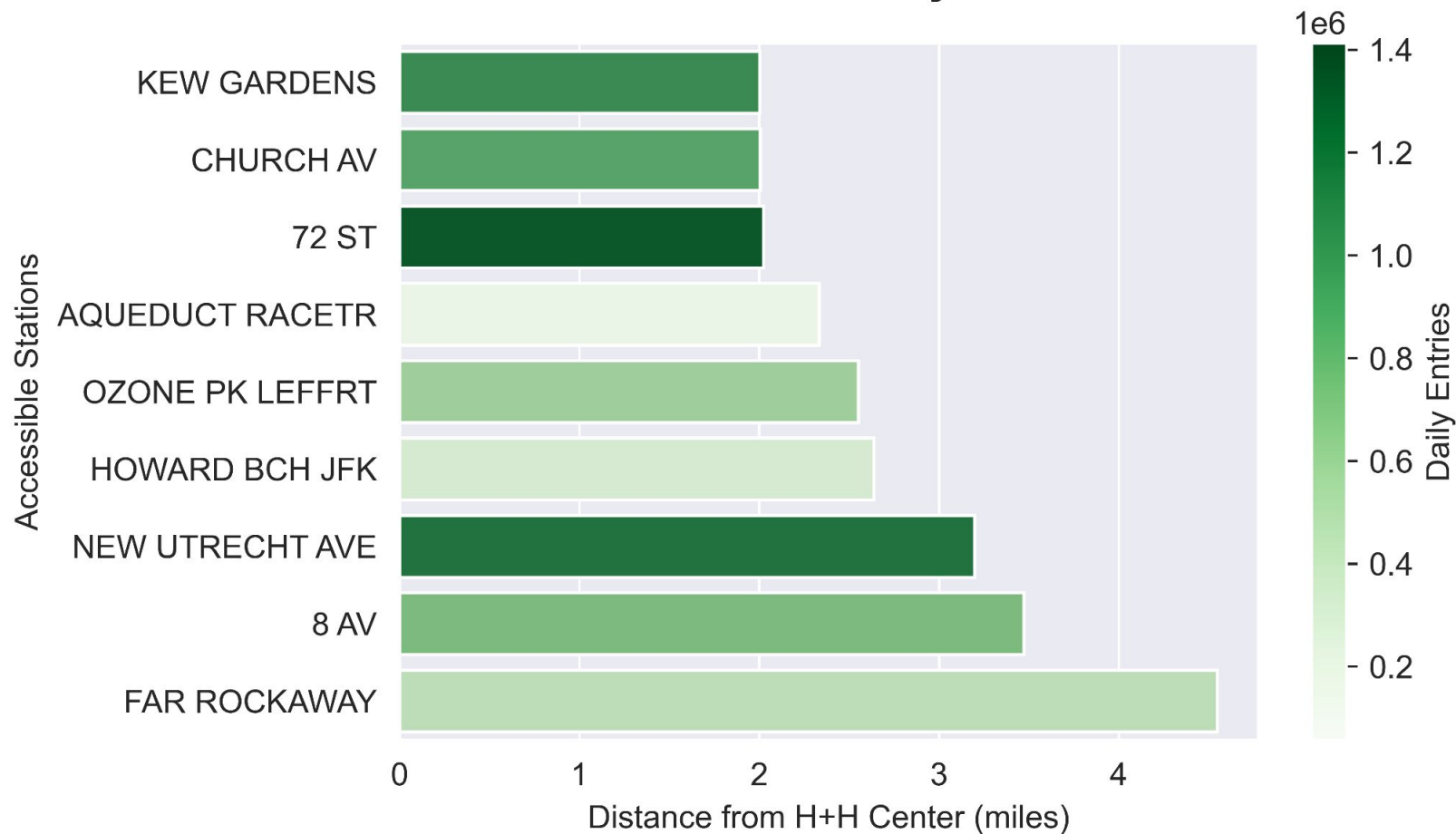
## Results (cont.)

- What mile radius am I interested in?

While  $\frac{1}{4}$  mile radius was originally presumed to be a tolerable distance to travel for those with limited mobility, one must consider that bus and other transportation options exist to fill the gap.

**Finding high-traffic stations with no H+H Centers within a larger mile radius will fulfill a greater need.**

## Stations without nearby H+H Center





## Accessible stations with nearest H+H Center (>2 miles away)



- 72 ST - Coler-Goldwater Specialty Hospital
- NEW UTRECHT AVE - Coney Island Hospital
- KEW GARDENS - Parsons Communicare Clinic
- OZONE PK LEFFERT - Parsons Communicare Clinic
- CHURCH AV - Kings County Hospital Center
- 8 AV - Stapleton Child Health Clinic
- FAR ROCKAWAY - Springfield Gardens Medical Center
- HOWARD BCH JFK - Sutter Avenue Child Health Clinic
- AQUEDUCT RACETR - Sutter Avenue Child Health Clinic

# Conclusions

## Goal

Identify accessible, high-traffic MTA stations without nearby H+H centers

- **New Utrecht Avenue** and **Church Avenue** are fairly high-traffic stations, and with **8 Avenue** in the trifecta, H+H may benefit from building a center between those stations
- **72nd Street** station is high-traffic, and with the closest H+H center on Roosevelt Island, H+H may also benefit from building a center there

# Future Work

What should we ask next?

- With MTA bus service & proximity to accessible stations considered, which stations are least accessible?
  - H+H may consider this when choosing new location for H+H center.
- What MTA stations are close to H+H centers and are not currently accessible?
  - This may be insightful for MTA when allocating funds for construction & renovations.

**Thank you!**

**Any questions?**

