



CBD Store Potential in Manhattan NY

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CBD is an emerging treatment for medical conditions

- CBD (cannabidiol) is one of 113 identified cannabinoids in cannabis (hemp, marijuana) plants. *
- Clinical research underway has identified CBD as a potential treatment for anxiety, cognition, movement disorders, and pain.*
- CBD is available without a prescription and may be sold nationally (within the United States) as it is a derivative of Hemp, recently legalized as part of the US Senate bill - 2018 Farm Act.
- A fast-growing market for CBD products has emerged and presents opportunities to open & operate specialty retail stores.



How to determine where might we open a specialty CBD retail store (or two) in Manhattan, NY?



Which neighborhoods have high potential demand for CBD products and few competitors in the form of pharmacies?



Who might use it? Neighborhoods have different demographics, and the odds of use of CBD for medical purposes varies by demographic (age) per an NIH study [\(click here\)](#).



The competition for CBD products are likely existing treatments (over the counter and prescription medications) available at pharmacies. Pharmacies, therefore, are our primary competition.

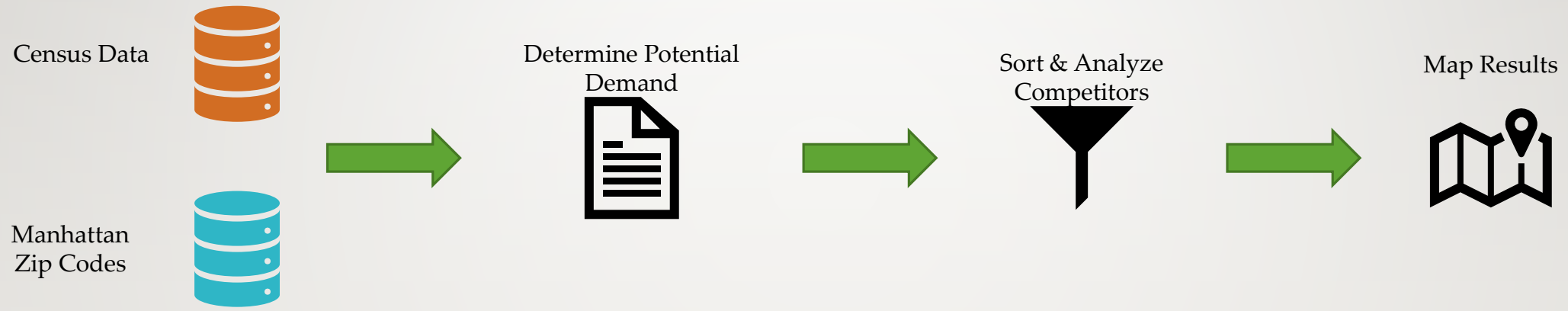


The “best” neighborhoods will be those with the highest potential CBD usage potential combined with the lowest competition (e.g. fewest pharmacies)

We can leverage the following data sources to make a determination:

- US Census Data
 - <https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>
- Manhattan NYC Zip code Mapping
 - <https://www.health.ny.gov/statistics/cancer/registry/appendix/neighborhoods.htm>
- NIH Study indicating usage odds by demographic
 - <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6043845/>
- Pharmacy Information
 - www.foursquare.com

How the data & analysis comes together



- Gather US Census Data for NY state
- Combine age-range based Census data into groups that match NIH report
- Filter results for Manhattan only

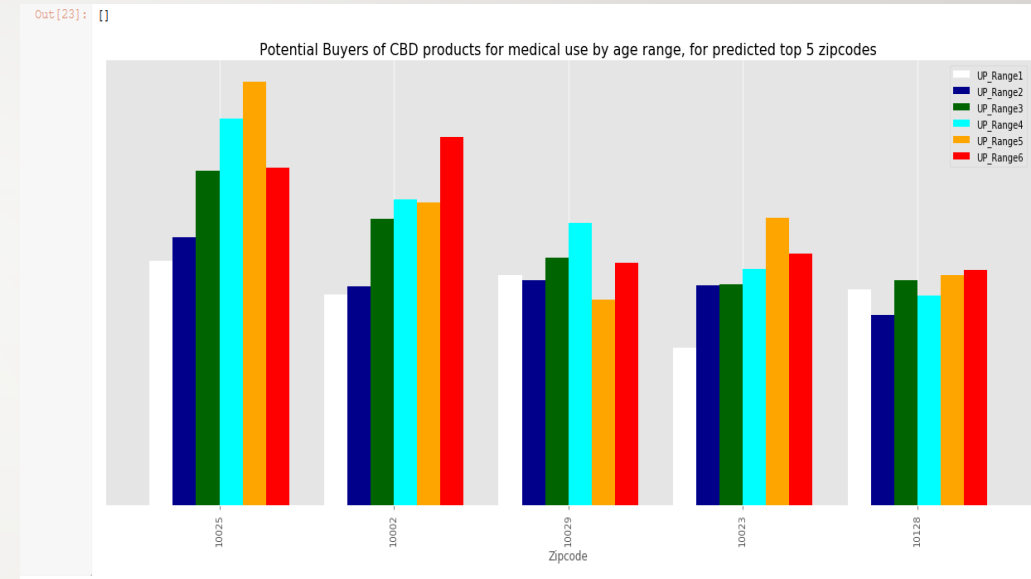
- Apply odds of use to age groups to determine potential demand for each age range, by zip code
- Determine total potential demand by zip code

- Visualize data to understand drivers of demand & demographic influences
- Acquire competitor density information from Foursquare
- Sort results to a list of highest-potential neighborhoods

- Determine best zip code, and if possible explore a 2nd favorable zipcode
- Produce map of starting locations for CBD retail stores, with markers for competitors

Top 5 zip codes & observations

- Total population is not necessarily the key driver of potential demand
- Because of probability of older age ranges to use CBD products, combination of total population + population distribution is what drives our total potential demand



Range Name	Grouping
Range 0	Less than 24
Range 1	25 - 34
Range 2	35 - 44
Range 3	45 - 54
Range 4	55 - 64
Range 5	65 - 74
Range 6	older than 75

Grouping of Age Ranges

Out[9]:

	Range	Odds
0	Range1	0.99
1	Range2	1.48
2	Range3	1.85
3	Range4	2.13
4	Range5	2.68
5	Range6	3.16

Odds of CBD use
By age range

Ranking & Competitor Analysis

- Two zip codes in our top 5 have relatively fewer pharmacies
- These two zip codes also happen to be in the same neighborhood, Upper West Side

Out[55]:

	Zipcode	Competitors
0	10025	9
1	10002	50
2	10029	31
3	10023	16
4	10128	20

Fewest Competitors

Out[16]:

	Borough	Neighborhood	Zipcode	UP_Range1	UP_Range2	UP_Range3	UP_Range4	UP_Range5	UP_Range6	R1PCT	R2PCT	R3PCT	R4PCT	R5PCT	R6PCT	Total Pop	Total_UP
0	Manhattan	Upper West Side	10025	16780.50	18400.84	22951.10	26529.15	29027.08	23156.48	0.179589	0.131731	0.131445	0.131964	0.114757	0.077642	94382	136845.15
1	Manhattan	Lower East Side	10002	14458.95	15004.24	19610.00	20997.54	20767.32	25242.08	0.187424	0.130099	0.136028	0.126506	0.099442	0.102509	77925	116080.13
2	Manhattan	East Harlem	10029	15805.35	15424.56	16951.55	19376.61	14115.56	16637.40	0.197425	0.128880	0.113311	0.112495	0.065132	0.065108	80866	98311.03
3	Manhattan	Upper West Side	10023	10829.61	15084.16	15136.70	16194.39	19719.44	17275.72	0.177829	0.165686	0.133010	0.123598	0.119615	0.088874	61514	94240.02
4	Manhattan	Upper East Side	10128	14786.64	13044.72	15453.05	14396.67	15801.28	16153.92	0.238050	0.140478	0.133130	0.107725	0.093971	0.081475	62743	89636.28

Same Neighborhood!

Total Potential Demand

The winner is: Two Zip Codes in the Upper West Side

- Zip code 10025 has a heavy population weighting towards the older end of the spectrum, vaulting it to the top of the list of total potential demand.
- The 4th place finisher (Zip code 10023) happens to be in the same neighborhood as our first-place finisher: Upper West Side.
 - For the sake of making logistics easier (shipping, stocking, staffing, etc.) we'll assume that having our first two CBD retail stores located within a reasonable proximity makes sense.
- Our competitor search indicates that these two zip codes also have the fewest existing pharmacies, which may lower the barrier to success for us when we open our stores.

Here are the resulting locations

- Our analysis indicates the Upper West Side is our top target neighborhood
- Blue Circles represent starting locations from which to perform research re: local zoning laws, available real estate, etc.
- Red Circles are competitors (pharmacies)

