TABLEAU PROJECT

Topic Name: Homelessness and Access to Care

Computer Information Systems, Cal State LA

CIS 5270 – Business Intelligence

Dr. Shilpa Balan

Presented By

Sirisha Mahesh

Christopher Lee

Additional Link/URL(s) to the data set(s)

http://publichealth.lacounty.gov/ha/docs/2022LACHS/MDT_Trend/Adult/Insurance,%20Reg%20Source%20Care,%20Access%20to%20Care/Health%20Insurance/LACHS_AdultTrend_INSType18to64.xlsx

http://publichealth.lacounty.gov/ha/docs/2022LACHS/MDT_Trend/Adult/Insurance,%20Reg%20Source%20Care,%20Access%20to%20Care/Health%20Insurance/LACHS_AdultTrend_Uninsured18to64.xlsx

http://publichealth.lacounty.gov/ha/docs/2022LACHS/MDT_Trend/Adult/Insurance,%20Reg%20Source%20Care,%20Access%20to%20Care/Health%20Insurance/LACHS_AdultTrend_INSType65Plus.xlsx

Screenshot(s) of "Additional" Data (showing column/field names and some rows)

Type of Insurance for Adults (Ages 18 to 64 Years).'

Los Angeles County Health Survey.

		2023			2018		2015	
		Percent	95% CI	Estimated #	Percent	95% CI	Percent	95% CI
LA County	Public	33.1%	31.5 - 34.6	2,111,000	36.9%	35.2 - 38.7	33.6%	31.9 - 35.3
	Private	59.9%	58.3 - 61.5	3,824,000	53.1%	51.3 - 55.0	54.7%	52.9 - 56.5
	No Insurance	7.0%	6.2 - 7.9	448,000	9.9%	8.8 - 11.0	11.7%	10.5 - 12.9
Gender								
Male	Public	31.2%	28.9 - 33.5	963,000	32.3%	29.8 - 34.7	30.1%	27.7 - 32.6
	Private	61.3%	58.9 - 63.7	1,892,000	56.4%	53.7 - 59.1	56.4%	53.7 - 59.0
	No Insurance	7.5%	6.1 - 8.8	230,000	11.3%	9.7 - 13.0	13.5%	11.5 - 15.5
Female	Public	35.1%	33.0 - 37.2	1,064,000	41.7%	39.2 - 44.1	37.0%	34.8 - 39.3
	Private	58.4%	56.2 - 60.5	1,767,000	50.1%	47.6 - 52.6	53.0%	50.7 - 55.4
	No Insurance	6.5%	5.4 - 7.7	198,000	8.2%	6.8 - 9.6	9.9%	8.4 - 11.4
Age Group								
18-24	Public	46.3%	41.4 - 51.2	428,000	48.1%	43.0 - 53.2	43.0%	38.2 - 47.7
	Private	47.7%	42.8 - 52.6	441,000	42.4%	37.3 - 47.5	45.6%	40.7 - 50.5
	No Insurance	6.0%	3.7 - 8.2	55,000	9.5%	6.3 - 12.7	11.4%	8.4 - 14.4
25-29	Public	35.9%	31.2 - 40.7	253,000	37.9%	32.3 - 43.5	39.0%	33.1 - 44.9
	Private	53.1%	48.3 - 57.9	374,000	46.9%	40.9 - 52.8	42.2%	36.2 - 48.3
	No Insurance	11.0%	7.7 - 14.3	78,000	15.2%	11.0 - 19.5	18.8%	13.8 - 23.8
30-39	Public	30.0%	27.0 - 32.9	433,000	36.8%	33.0 - 40.6	32.5%	28.9 - 36.2
	Private	60.6%	57.4 - 63.7	875,000	51.4%	47.3 - 55.4	52.7%	48.8 - 56.6
	No Insurance	9.4%	7.3 - 11.6	137,000	11.9%	9.3 - 14.4	14.8%	11.8 - 17.8
40-49	Public	29.7%	26.4 - 32.9	379,000	31.0%	27.3 - 34.7	27.3%	24.0 - 30.6

Type of Health Insurance for Adults (Ages 65 and Older).[1]

Los Angeles County Health Survey.

		2023			2018		
		Percent	95% CI	Estimated #	Percent	95% CI	
LA County	Public	59.1%	56.4 - 61.8	848,000	64.0%	61.1	- 66.9
	Private	12.3%	10.4 - 14.2	177,000	8.8%	7.2	- 10.4
	Private & Public	28.2%	25.8 - 30.6	405,000	26.2%	23.6	- 28.9
	No Insurance	* 0.3%	0.1 - 0.6	5,000	* 1.0%	0.3	- 1.7
Gender							
Male	Public	58.2%	54.0 - 62.4	406,000	64.0%	59.6	- 68.4
	Private	14.1%	11.0 - 17.2	99,000	9.9%	7.3	- 12.4
	Private & Public	27.2%	23.6 - 30.9	190,000	25.8%	21.8	- 29.7
	No Insurance	* 0.5%	0.0 - 1.0	3,000	-	-	-
Female	Public	60.2%	56.7 - 63.8	430,000	64.0%	60.1	- 67.9
	Private	10.6%	8.4 - 12.8	76,000	7.9%	5.9	- 9.9
	Private & Public	28.9%	25.7 - 32.2	207,000	26.6%	23.0	- 30.3
	No Insurance	* 0.2%	0.0 - 0.4	2,000	* 1.5%	0.3	- 2.6
3 **Race and Ethnicity**							
Latinx	Public	66.7%	60.5 - 72.9	247,000	76.6%	71.8	- 81.3
	Private	11.5%	7.3 - 15.8	43,000	8.2%	5.2	- 11.1
	Private & Public	21.3%	15.9 - 26.8	79,000	13.2%	9.5	- 17.0
	No Insurance	-	- - -	-	* 2.0%	0.4	- 3.6
NH White	Public	57.1%	53.4 - 60.8	369,000	57.7%	53.9	- 61.4
	Private	10.4%	8.0 - 12.8	67,000	8.4%	6.4	- 10.5
	Private & Public	32.2%	28.8 - 35.8	208,000	33.3%	29.7	- 36.8

Type of Insurance for Adults (Ages 18 to 64 Years).[1]

Los Angeles County Health Survey.

		2023			2018		
		Percent	95% CI	Estimated #	Percent	95% CI	
LA County	Public	33.1%	31.5 - 34.6	2,111,000	36.9%	35.2	- 38.7
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	No Insurance	7.0%	6.2 - 7.9	448,000	9.9%	8.8	- 11.0
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	No Insurance	6.5%	5.4 - 7.7	198,000	8.2%	6.8	- 9.6
Age Group							
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30-39	Public	30.0%	27.0 - 32.9	433,000	36.8%	33.0	- 40.6
	Private	60.6%	57.4 - 63.7	875,000	51.4%	47.3	- 55.4
	No Insurance	9.4%	7.3 - 11.6	137,000	11.9%	9.3	- 14.4
40-49	Public	29.7%	26.4 - 32.9	379,000	31.0%	27.3	- 34.7

Describe the project theme.

We will be reviewing the concerning intersection between homelessness and access to healthcare in Los Angeles County. We believe that the survey responses will indicate that a significant portion of the population lacks adequate access to essential healthcare services, including dental, vision, and mental health care. The uninsured rate among adults aged 18-64 remains a persistent challenge, with disparities observed across different demographics. We believe these gaps in coverage and care contribute to a cycle where individuals experiencing homelessness face greater health risks but have limited means to address them. Additionally, our hypothesis is that client satisfaction and assessment surveys will reveal that many individuals seek more information and services related to nutrition, fitness, and substance abuse recovery, possibly indicating an unmet need for comprehensive support systems.

Furthermore, the increasing difficulty in securing stable healthcare coverage exacerbates the vulnerabilities faced by those on the brink of or already experiencing homelessness. We will show with the data from the Los Angeles County Health Survey that disparities in healthcare access are largely driven by socioeconomic inequities, which disproportionately affect lower-income and marginalized communities. Without targeted interventions to expand healthcare access—such as increased coverage options, outreach efforts, and affordable healthcare solutions—homeless individuals will continue to struggle with both immediate and long-term health concerns. Addressing this issue requires a multi-faceted approach that integrates housing stability with accessible, community-based healthcare services to break the cycle of homelessness and improve overall public health outcomes.

Questions of Analysis

1. Did health outcomes improve after receiving housing support?
2. What kind of insurance support do residents receive?
3. How frequently did residents visit the doctor after receiving housing support?
4. Have residents' emotional status changed after receiving housing support?
5. What positive health habits have impacted residents lives?
6. What negative health habits do residents practice?
7. What diseases do residents experience and how has insurance coverage supported the resident?
8. How have insurance coverages change amongst different groups?
9. Do residents participate in support services after being housed?
10. Do residents receive appropriate case management services and treatment?

Data Description

The dataset represents information collected through a health survey. It includes detailed profiles of individuals—residents of the different AOCF Building's—covering a range of variables such as demographic details (e.g., age, gender, ethnicity), diagnosed health conditions (e.g., chronic illnesses or disabilities), access to healthcare services (e.g., insurance status, frequency of medical visits), and behavioral health indicators (e.g., substance use, mental health status, or lifestyle habits). This comprehensive data can be valuable for assessing community health trends, identifying care gaps, and supporting targeted health interventions.

Source	Target	Description	Files
Response ID	ID	The unique ID that defines the individual submission of a survey.	California Hotel
Calculated field	Number of Records	Conversion of ID string to INT	Figueroa

Time Started	Time	Time survey was started	Fox Normandie
Date Submitted	Date	Date survey was submitted	Gower
Status	Status	Status of survey submission	Las Flores
Legacy Comments	Legacy	Comments from legacy system	Las Palomas
Comments	Comments	System comments	Willow
Language	Language	Language survey was performed	
Referer	Referer	System reference 01	
Extended Referer	Ext Referer	System reference 02	
SessionID	SessionID	Unique system generated session ID	
User Agent	User Agent	System Information 01	
Extended User Agent	Ext User Agent	System Information 02	
Tags	Tags	System generated tags	
Which ACOF building do you reside in?	Building Name	The name of the individual property	
What is your age?	Age	Age of the individual submitting a survey	
Which is your gender?	Gender	Gender of the individual submitting a survey	
Which race/ethnicity best describes you? (Please choose only one.)	Ethnicity	Ethnicity or race of individual submitting survey	
What is your height?	Height	Height of individual submitting survey	
Calculated field	Meter Height	Conversion of height from imperial into metric	
What is your weight?	Weight	Weight of individual submitting survey	
Calculated field	Weight KG	Conversion of weight from imperial into metric	
Calculated field	BMI	Calculated BMI for based on metric values	
Calculated field	BMI Status	BMI status based on BMI ranges	
Is there a place you usually go to when you are sick or need advice about your health?	Seeks Out Care	Confirmation wether resident seeks out medical care	
If yes, which of the following are you most likely to use?	Doctor Type	Type of care that resident seeks out	
Are you covered by Medi-CAL?	Medi-Cal Coverage	Confimation if resident has Medi-Cal Coverage	
Calculated field	Medi-Cal Coverage Score	Score confirming status of Medi-Cal coversage	
If yes, is your Medi-Cal coverage provided through an HMO?	Medi-Cal HMO	Confirmation of whether Medi-Cal is provided through an HMO	

Calculated field	Medi-Cal HMO Score	Score confirming status of Medi-Cal HMO coverage	
Are you covered by MediCARE? (health insurance program for people 65 years and older OR persons with certain disabilities)	MediCARE Coverage	Confimation if resident has MediCARE Coverage	
Calculated field	MediCARE Coverage Score	Score confirming status of MediCARE coverage	
If yes, is your MediCARE coverage provided through an HMO?	MediCARE HMO	Confirmation of whether MediCARE is provided through an HMO	
Calculated field	MediCARE HMO Score	Score confirming status of MediCARE HMO coverage	
Calculated field	Insurance Score	Score confirming status of breadth of medical insurance coversage	
Calculated field	Concat	Calculated field cofirming possibility of insurance coverage	
Calculated field	Insurance Validation	Validaion of insurance coverage	
Calculated field	No Insurance	Confirmation of insurance coverage	
Do you visit a doctor on a regular basis?	Routine Dr Visit	Confirmation on whether the resident routinely visits a doctor	
Would you say that in general your health is:	Personal Health Valuation	Resident's personal valuation on the state of their health	
Calculated field	General Health	Scorecard of personal health valuation	
Little interest or pleasure in doing things	Engagement	Degree of which resident has interest in engaging in activities	
Feeling down, depressed, or hopeless	Depression	Confirmation on whether resident experiences depression	
Calculated field	Depression Score	Scorecard of state of depression	
Trouble falling or staying asleep, or sleeping too much	Sleep	Resident's ability to fall asleep	
Feeling tired or having little energy	Energy	Resident's energy level	
Poor appetite or overeating	Appetite	Resident's relationship with food	
Feeling bad about yourself - or that you are a failure or have let yourself or your family down	Self-Esteem	Resident's self-esteem level	
Trouble concentrating on things, such as reading the newspaper or watching television	Focus	Resident's ability to focus on activities	
Calculated field	Focus Score	Scorecard of capacity to focus	

Moving or speaking so slowly that other people could have noticed? Or the opposite - being so fidgety or restless that you have been moving around a lot more than usual	Movement	Resident's ability to manage their movement and speech whether too fast or too slow.	
Thoughts that you would be better off dead or of hurting yourself in some way	Self Harm	Resident's self perception of potential self harm	
If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along well with other people?	Personal Capacity	Resident's ability to work or take care of themselves based on their personal wellness.	
How would you rate your health now compared to not being housed?	Health Valuation with Support	Resident's valuation of their personal health after receiving housing support	
Do you see the eye doctor at least once every two years?	Eye Exam	Confirmation on whether the resident receives an eye exam every two year	
Do you see the dentist at least once a year?	Dentist	Confirmation on whether the resident receives a dental appointment every year	
Do you eat fruits and vegetables at least twice a week?	Produce	Confirmation on whether the resident eats fresh produce at least twice a week	
Calculated field	Produce Score	Score confirming value of produce consumption	
How often can you find fresh fruits and vegetables in your neighborhood?	Produce Access	Frequency on resident's ability to find produce in neighborhood	
Calculated field	Produce Access Score	Score confirming accessibility of produce	
Do you know of any healthy recipes?	Recipes	Residents awareness of healthy recipes	
Calculated field	Recipes Score	Score confirming awareness of recipes	
Do you try to limit the amount of fried or fast foods that you eat?	Processed Food	Residents capacity to limit their consumption both fast and fried food	
Calculated field	Processed Food Score	Score confirming level of consumption processed foods	
Calculated field	Eating Score	Combined score of all food consumption	
Do you smoke cigarettes or cigars or use any other kinds of tobacco?	Tobacco	Resident's use of tobacco prodcuts	
Do you use any drugs or medicines to go to sleep, relax, calm down, feel better, or lose weight?	Medication Assistance	Resident's use of medication for sleep, mood, and weight loss	

How many times in the past year have you used an illegal drug or used a prescription medication for non-medical reasons?	Drug Use	Resident's use of illegal substances or abusing medication	
Do you often have more than 2 drinks containing alcohol in one day?	Alcohol	Confirmation on whether resident's consume more than 2 alcoholic drinks per day	
High Blood Pressure:Below is a list of common health issues one may have. Please check any of the following if you think you may have these issues or are being treated for them:	High Blood Pressure	Confirmation of symptoms of high blood pressure	
High Cholesterol:Below is a list of common health issues one may have. Please check any of the following if you think you may have these issues or are being treated for them:	High Cholestrol	Confirmation of symptoms of high cholestrol	
Diabetes:Below is a list of common health issues one may have. Please check any of the following if you think you may have these issues or are being treated for them:	Diabetes	Confirmation of symptoms of diabetes	
Chronic Obstructive Pulmonary Disease (lung disease):Below is a list of common health issues one may have. Please check any of the following if you think you may have these issues or are being treated for them:	COPD	Confirmation of symptoms of COPD	
Arthritis (painful inflammation and stiffness of the joints):Below is a list of common health issues one may have. Please check any of the following if you think you may have these issues or are being treated for them:	Arthritis	Confirmation of symptoms of arthritis	
Gum disease:Below is a list of common health issues one may have. Please check any of the following if you think you may have these issues or are being treated for them:	Gum Disease	Confirmation of symptoms of gum disease	
All of the above:Below is a list of common health issues one may have. Please check any of the following if you think you may have these issues or are being treated for them:	All Diseases	Confirmation of symptoms of all diseases listed	

None of the above:Below is a list of common health issues one may have. Please check any of the following if you think you may have these issues or are being treated for them:	No Diseases	Confirmation of symptoms of no diseases	
Behavioral Health:Is there any type of service you would like more information about? Please check any of the following:	Behavioral Health Request	Resident request for behavioral health services	
Medical:Is there any type of service you would like more information about? Please check any of the following:	Medical Request	Resident request for medical services	
Dental:Is there any type of service you would like more information about? Please check any of the following:	Dental Request	Resident request for dental services	
Vision:Is there any type of service you would like more information about? Please check any of the following:	Vision Request	Resident request for vision services	
Nutrition:Is there any type of service you would like more information about? Please check any of the following:	Nutrition Request	Resident request for nutrition services	
Fitness:Is there any type of service you would like more information about? Please check any of the following:	Fitness Request	Resident request for fitness services	
Substance Abuse Recovery:Is there any type of service you would like more information about? Please check any of the following:	Substance Abuse Recovery Request	Resident request for substance abuse recovery services	
All of the above:Is there any type of service you would like more information about? Please check any of the following:	All Programs Request	Resident request for all programs services	
None of the above:Is there any type of service you would like more information about? Please check any of the following:	No Programs Request	Resident request for no program services	

Data Wrangling

The dataset has been preprocessed to include calculated values, allowing string (text) responses to be converted into corresponding integer values. This transformation enables the assignment of

quantitative scores to specific dimensions or criteria within the data—such as health risk levels, access to care, or behavioral patterns. These numeric scores facilitate more accurate analysis, comparison, and modeling by making the data suitable for statistical analysis.

R	S	T	U	V	W	
Height	Meter Height	Weight	Weight KG	BMI	BMI Status	See
5'4.5	1.6383	252	114.305184	42.587198	Obese	Yes
5'3	1.6002		0	0	Underweight	Yes
5'3	1.6002	189	85.72888802	33.479476	Obese	Yes
5'9	1.7526	250	113.398	36.918137	Obese	Yes
	0		0	#DIV/0!	#DIV/0!	Yes
6'3	1.905	300	136.0776	37.497014	Obese	Yes
5'7	1.7018	120	54.43104001	18.794449	Healthy	Yes
5'4	1.6256	250	113.398	42.911927	Obese	Yes
5'3	1.6002	265	120.20188	46.942123	Obese	Yes
5'2	1.5748	189	85.72888802	34.568169	Obese	Yes
5'8.5	1.7399	273	123.830616	40.905288	Obese	No
5'5	1.651	204	92.53276802	33.947001	Obese	Yes
5'2	1.5748	235	106.59412	42.981586	Obese	Yes
5'7	1.7018	300	136.0776	46.986122	Obese	Yes
5'2	1.5748		0	0	Underweight	Yes

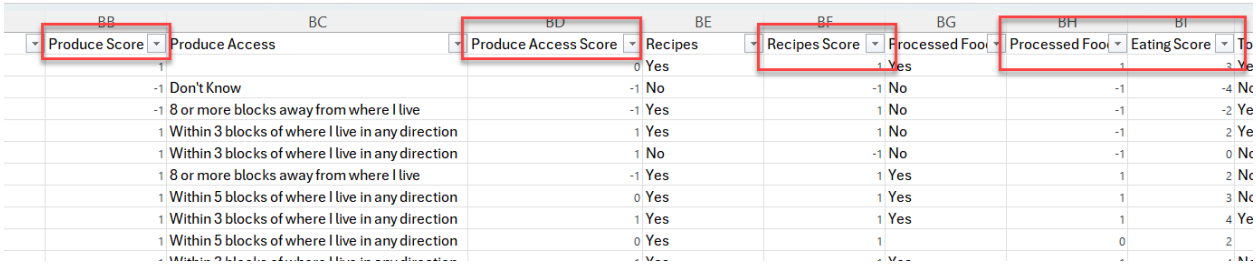
1. Height converted from imperial to metric
2. Weight converted from imperial to metric
3. BMI was calculated value

Z	AA	AB	AC	AD	AE	AF	AG
Medi-Cal Covera	Medi-Cal Covera	Medi-Cal HM	Medi-Cal HM	MediCARE Covera	MediCARE Covera	MediCARE HM	MediCARE HM
Yes	1		0		0		0
Yes	1	Don't Know	0	No	-1		0
No	-1	No	-1	No	-1	No	-1
Yes	1	Don't Know	0	No	-1		0
Yes	1	Yes	1	No	-1		0
No	-1		0	Yes	1	No	-1
Yes	1	Yes	1	No	-1		0
Yes	1	No	-1	No	-1	No	-1
Yes	1	Don't Know	0	No	-1		0
Yes	1	No	-1	Yes	1	No	-1
Yes	1	Don't Know	0	No	-1		0
Yes	1	No	-1	No	-1		0
Yes	1	Don't Know	0	No	-1		0
Yes	1	Don't Know	0	Yes	1	Don't Know	0
Yes	1	No	-1	No	-1	No	-1
Yes	1	Yes	1	Yes	1	Yes	1
Yes	1	Yes	1	No	-1		0
Yes	1	Yes	1	No	-1	No	-1
Yes	1	Yes	1	Don't Know	0	Don't Know	0
Yes	1	Don't Know	0	Yes	1	Don't Know	0
Yes	1	Yes	1	No	-1	No	-1

1. Insurance scorecard converted based on string values

AH	AI	AJ	AK	
Insurance Sco	Insurance Cor	Insurance Va	No Insuranc	Routin
0	1 Yes	TRUE	Yes	Yes
0	0 YesDon't KnowNo	TRUE	Yes	No
-1	-4 NoNoNoNo	FALSE	No	No
0	0 YesDon't KnowNo	TRUE	Yes	No
0	1 YesYesNo	TRUE	Yes	Yes
-1	-1 NoYesNo	TRUE	Yes	Yes
0	1 YesYesNo	TRUE	Yes	Yes
-1	-2 YesNoNoNo	TRUE	Yes	Yes
0	0 YesDon't KnowNo	TRUE	Yes	Yes
-1	0 YesNoYesNo	TRUE	Yes	Yes
0	0 YesDon't KnowNo	TRUE	Yes	No
0	-1 YesNoNo	TRUE	Yes	No

1. Insurance Score = Combined score
2. Concat = Concatenated
3. Insurance Validation = Validation if insurance is provided
4. No Insurance = Confirmation that resident has some type of insurance



BB	BC	BD	BE	BF	BG	BH	BI
Produce Score	Produce Access	Produce Access Score	Recipes	Recipes Score	Processed Foo	Processed Foo	Eating Score
1		0	Yes	1	Yes	1	3
-1	Don't Know	-1	No	-1	No	-1	-4
-1	8 or more blocks away from where I live	-1	Yes	1	No	-1	-2
1	Within 3 blocks of where I live in any direction	1	Yes	1	No	-1	2
1	Within 3 blocks of where I live in any direction	1	No	-1	No	-1	0
1	8 or more blocks away from where I live	-1	Yes	1	Yes	1	2
1	Within 5 blocks of where I live in any direction	0	Yes	1	Yes	1	3
1	Within 3 blocks of where I live in any direction	1	Yes	1	Yes	1	4
1	Within 5 blocks of where I live in any direction	0	Yes	1		0	2

1. Produce Score = Score that confirms if resident consumes produce
2. Produce Access Score = Score that confirms if resident has relative ease of access to produce
3. Recipes Score = Score that confirms that resident has knowledge of healthy recipes
4. Processed Food Score = Score that determines level of consumption of processed food

Dimension Header Conversion

All column headers corresponding to each dimension were reformatted from the original source files. In the source data, headers were phrased as full survey questions, many of which exceeded 160 characters in length. To improve readability and usability, these lengthy headers were transformed into concise, meaningful descriptions that accurately reflect each dimension's content. This refinement not only enhances clarity but also significantly improves the manageability of dimensions and measures within Tableau, making it easier to navigate, analyze, and visualize the data efficiently.

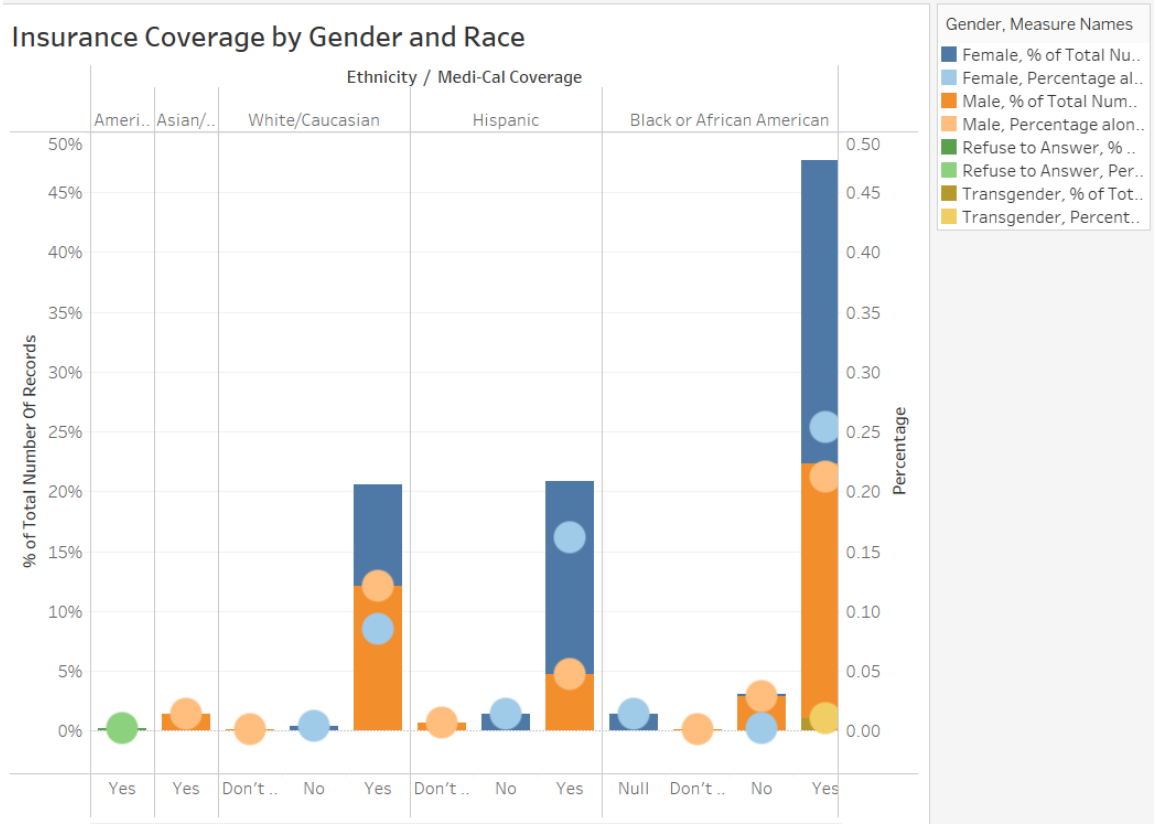
Data Wrangling Objective

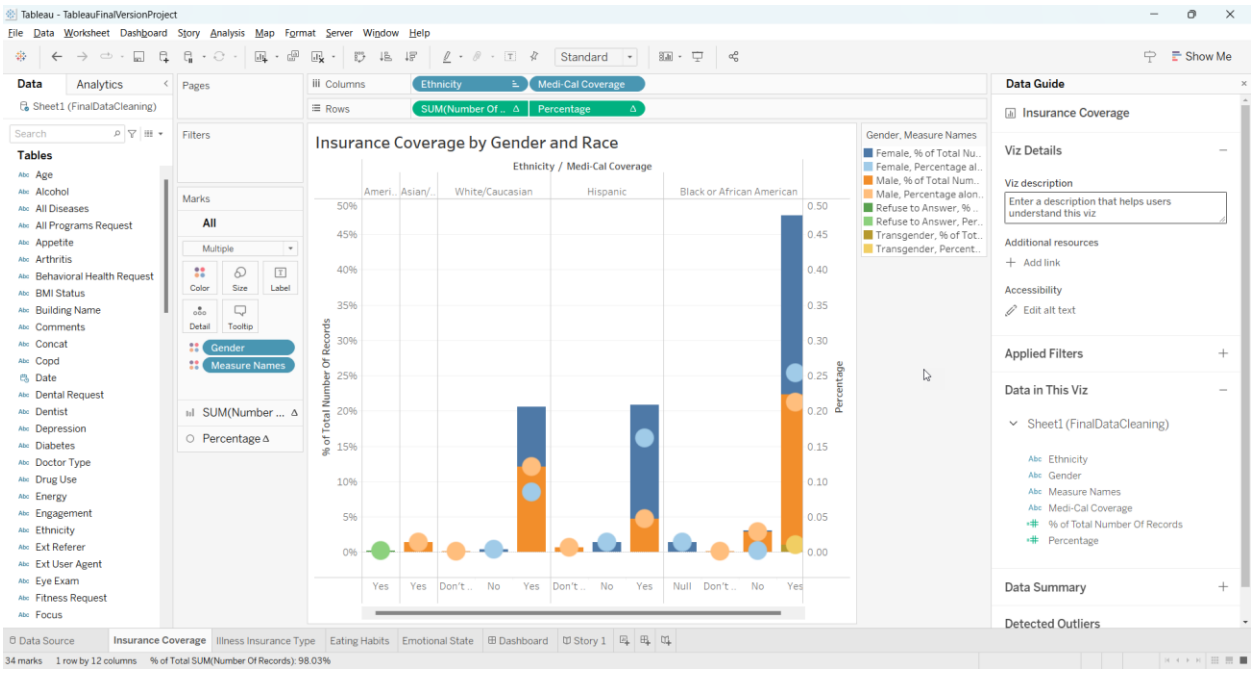
The majority of the data provided is in string format, which cannot be directly quantified or used for numerical analysis. However, these string values represent clearly defined categorical levels

(e.g., "Yes," "No," "Refuse to Answer") within various dimensions. Additionally, several of these dimensions are interrelated, allowing for the development of scoring systems where values can be assigned to each level. By converting these string responses into numeric scores, it becomes possible to sum values across multiple related dimensions, enabling more meaningful comparisons and the identification of key trends or risk factors. Without this conversion, analysis would be limited to simple frequency counts of string values, rather than allowing for the aggregation and scoring needed to assess overall conditions or performance across dimensions.

Data Visualizations

How have insurance coverages change amongst different groups?





This visualization, titled **"Insurance Coverage by Gender and Race,"** offers a multi-dimensional view of Medi-Cal insurance coverage segmented by ethnicity and gender. It uses a combination of bar charts and bubble overlays to present both the overall and gender-specific distribution of responses to Medi-Cal coverage, such as "Yes," "No," and "Don't know." The data reveals significant disparities in health coverage across different racial and ethnic groups. Notably, Black or African American respondents—particularly females—show the highest proportion of coverage, with nearly 50% of the total number of records indicating a “Yes” response. In contrast, White/Caucasian and Hispanic populations show moderate levels of coverage, while Asian/Other and American Indian categories appear less prominently, likely due to smaller sample sizes or incomplete data.

Gender plays a key role in these disparities. Across all ethnic groups, females are more likely to report having Medi-Cal coverage, whereas males consistently show lower percentages. Transgender individuals and those who refused to disclose their gender are represented in the

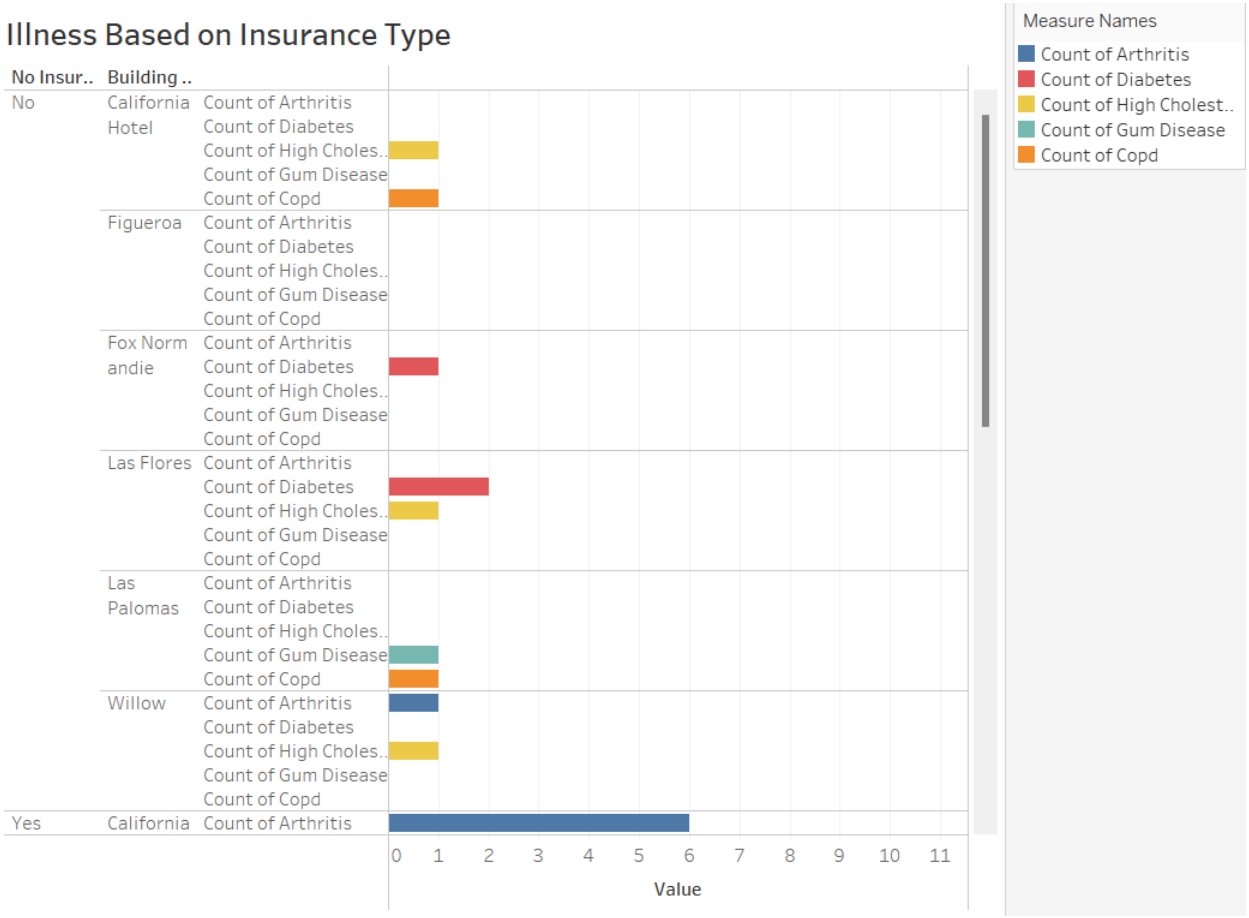
dataset but constitute a smaller portion of the overall responses. The inclusion of “Don’t know” and “Null” responses across all groups suggests potential gaps in health literacy or awareness about available coverage options.

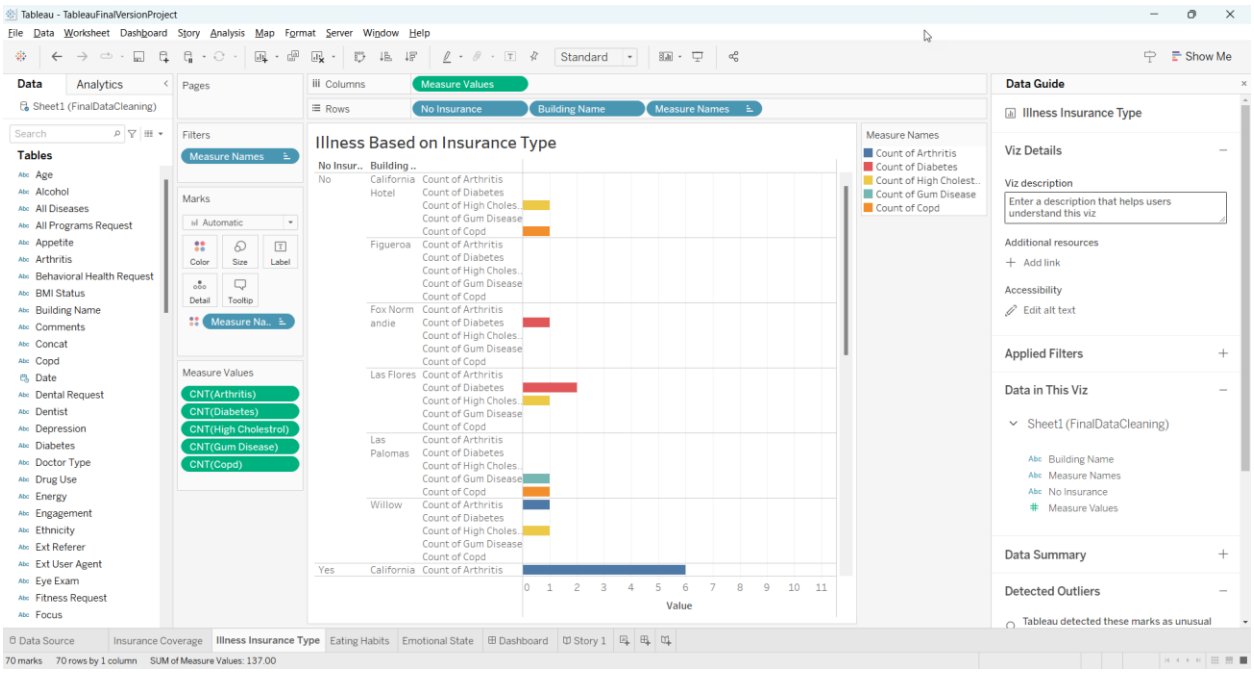
This visualization is particularly effective due to its layered approach—using color-coded bars and bubbles to allow viewers to analyze both total and relative values at a glance. It also leverages Tableau’s calculated fields, such as "% of Total Number of Records" and "Percentage," to support proportionate comparisons that are crucial for equity-focused analysis.

Findings from this visualization align closely with national research. According to the Center on Budget and Policy Priorities (CBPP), health coverage rates vary widely across racial and ethnic groups, with Black and Hispanic populations facing higher barriers to coverage access (Center on Budget and Policy Priorities). Further research published in PubMed Central highlights the role of systemic inequities in shaping these disparities, particularly among underrepresented communities (Williams, David R., and Michelle Sternthal). Additionally, studies in the International Journal for Equity in Health emphasize how race, gender, and other social factors intersect to influence healthcare access and outcomes (Mude, William, et al).

Altogether, this visualization serves as a compelling and data-driven lens through which to examine healthcare inequities, underscoring the need for targeted policy and outreach efforts to ensure equitable access to health coverage.

What diseases do residents experience and how has insurance coverage supported the resident?





The visualization titled "Illness Based on Insurance Type" offers a detailed comparison of chronic illness prevalence across multiple housing sites, segmented by whether individuals have health insurance. This bar chart, enhanced with color-coded measures, displays the count of five major chronic conditions—arthritis, diabetes, high cholesterol, gum disease, and COPD—across buildings such as California Hotel, Figueroa, Fox Normandie, Las Flores, Las Palomas, Willow, and others. The chart divides individuals into two primary groups: those who reported having insurance and those who do not.

From the visualization, a clear pattern emerges: individuals without insurance tend to report a higher variety and count of chronic illnesses across multiple buildings. For instance, buildings like Las Flores and California Hotel show elevated counts of diabetes, COPD, and high cholesterol among uninsured residents. In contrast, insured individuals are mostly concentrated in a few buildings and typically report a more limited range of conditions, with arthritis being the most frequently reported. This discrepancy suggests that uninsured individuals are not only more

vulnerable to multiple health conditions but may also represent populations with reduced access to preventive care and timely medical interventions.

This visual analysis is strongly supported by existing public health research. According to a recent study published by *PubMed Central* (Gomberg-Maitland, Mardi, et al), lack of health insurance is consistently associated with delayed diagnoses and poorer management of chronic diseases. The study reinforces the idea that uninsured individuals are more likely to experience uncontrolled illness progression, which aligns with the broader distribution and frequency of illnesses seen in this dataset.

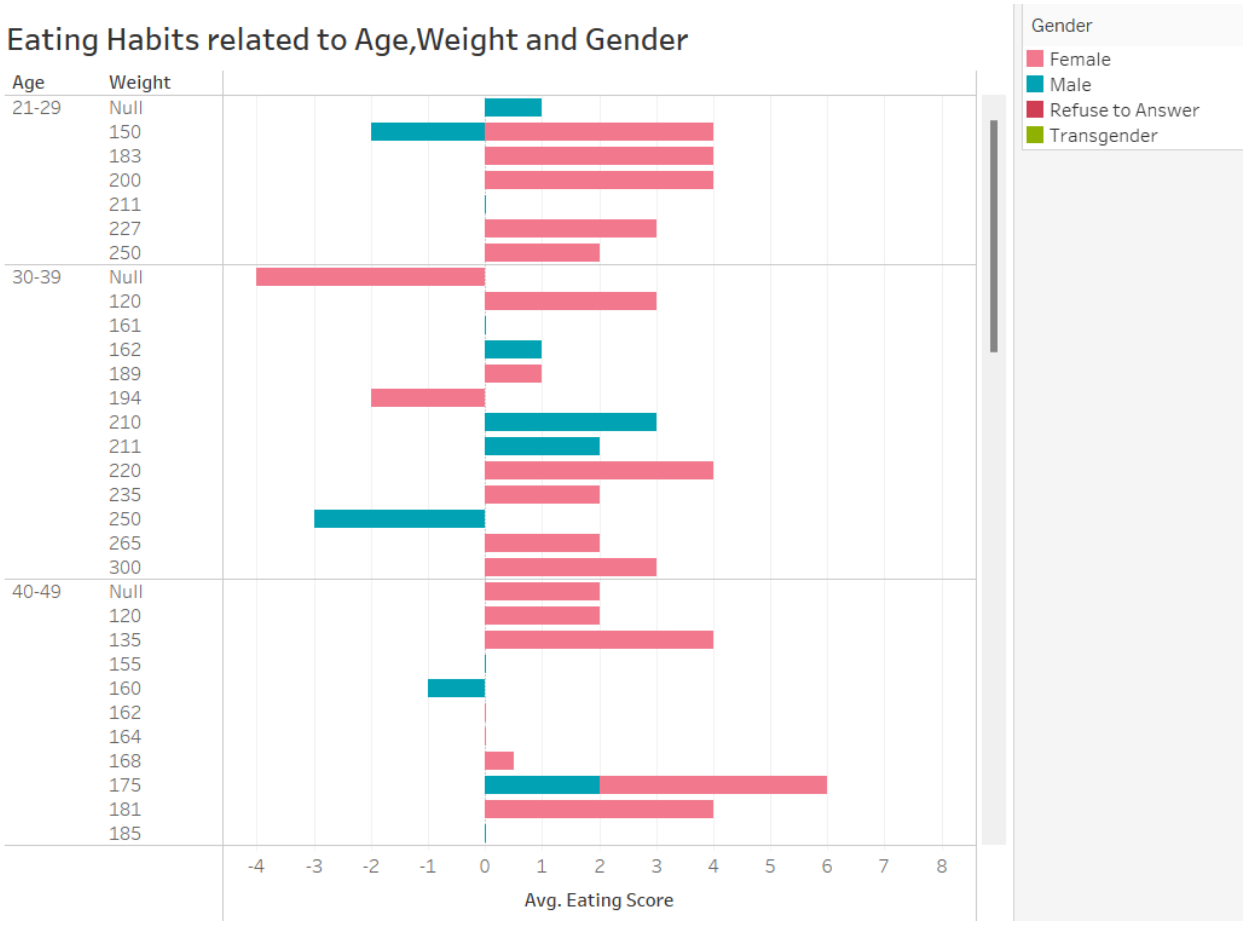
Furthermore, insights from the *National Academies Press* (Institute of Medicine (US) Committee on the Consequences of Uninsurance) underscore how the absence of insurance disrupts continuity of care, often leading to increased emergency room visits and late-stage interventions. This creates systemic pressure and worsens outcomes, especially in low-income or housing-insecure populations like those reflected in the visualization.

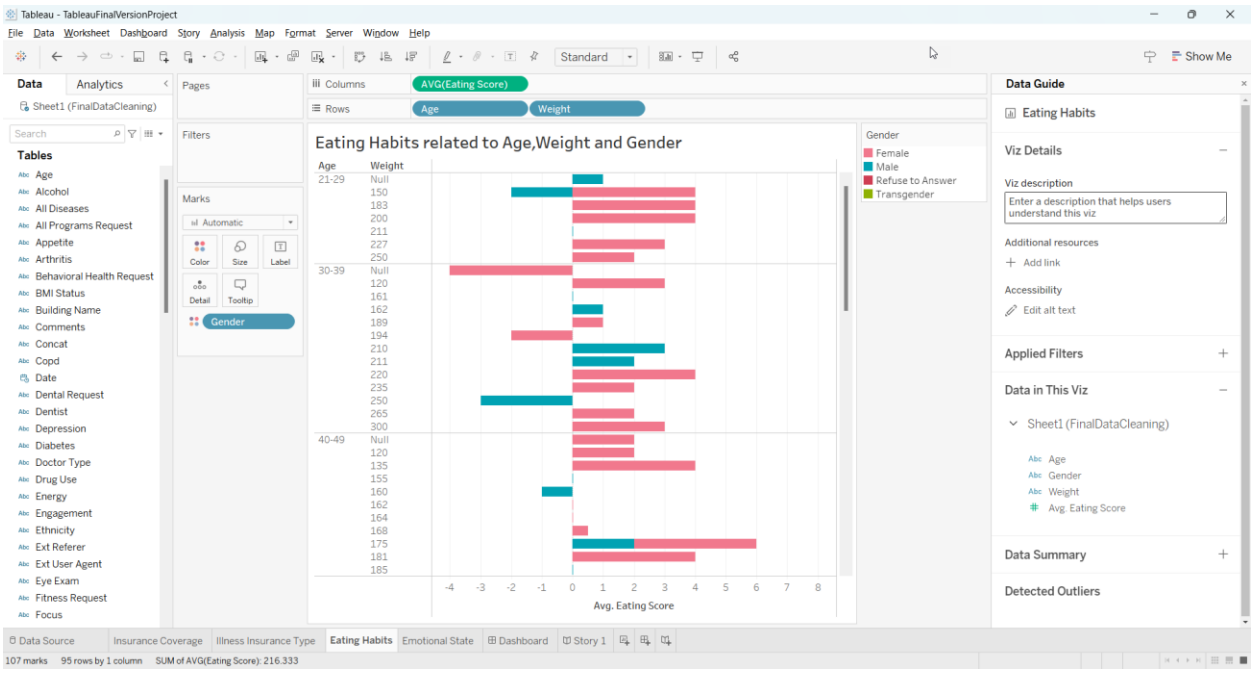
Additionally, research published in *Preventive Medicine* (Bailey, Steven R., et al) concludes that preventive screenings, medication adherence, and health literacy are all significantly lower among the uninsured, making them more susceptible to complications from common chronic conditions—exactly the types highlighted in the Tableau visualization.

In summary, this visualization not only showcases data patterns effectively through a clear, building-level breakdown of chronic illness counts by insurance status, but it also visualizes a broader public health issue. It supports the case for targeted health interventions, expanded access to care, and community outreach programs, particularly in buildings or populations

identified as high-risk due to lack of insurance. The data and supporting literature together underscore a critical health equity gap that warrants urgent attention.

What negative health habits do residents practice?





The visualization titled “Eating Habits related to Age, Weight, and Gender” provides a multidimensional view of average eating behavior scores across various age and weight ranges, broken down by gender identity. Utilizing a horizontal bar chart in Tableau, this visualization maps the average eating score across age brackets (e.g., 21–29, 30–39, up to 60+) and corresponding weight values. The color encoding represents different gender groups: Female, Male, Transgender, and Refused to Answer, allowing for a nuanced understanding of behavioral patterns.

From the chart, several insights emerge. In the 21–29 and 30–39 age groups, female participants consistently show higher average eating scores, with multiple weights in these age bands recording scores above 2 and some reaching beyond 6. Male participants, in contrast, often exhibit lower or even negative average scores within the same weight ranges, indicating potentially unhealthier or inconsistent eating behaviors. This trend continues in the 40–49 and 50–59 age groups, where males again demonstrate lower eating scores compared to females at

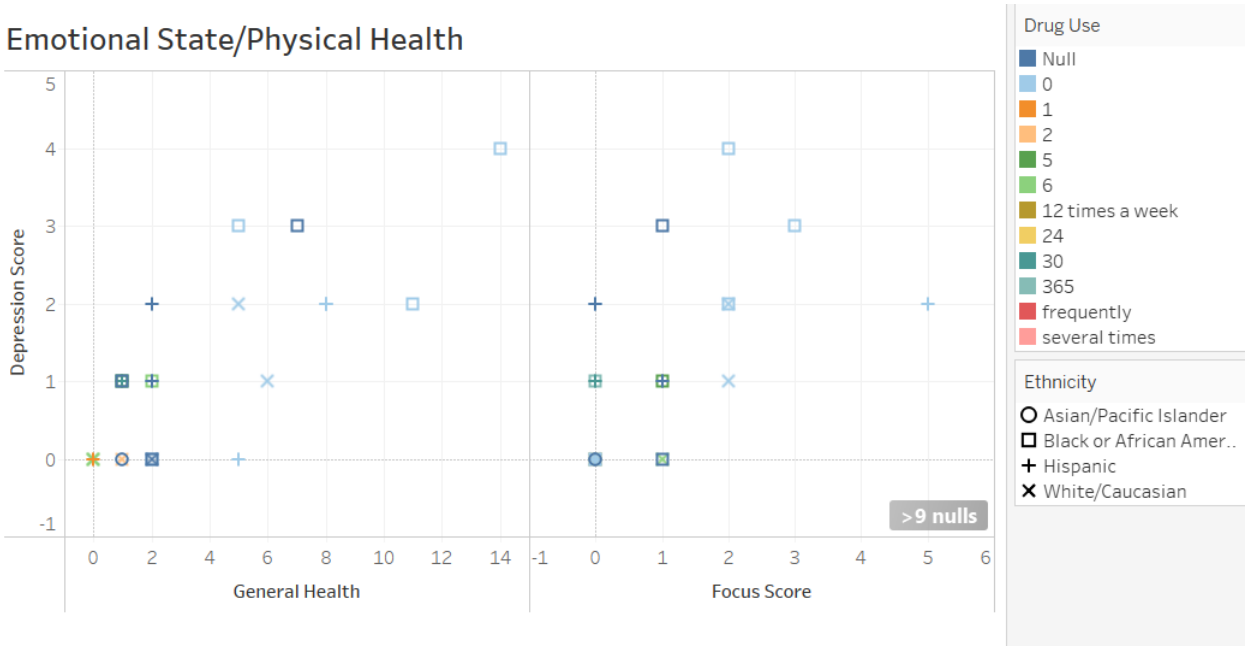
similar weights. Some transgender respondents and those who refused to answer are also represented, though with fewer data points—suggesting either limited sample size or incomplete demographic reporting in those groups.

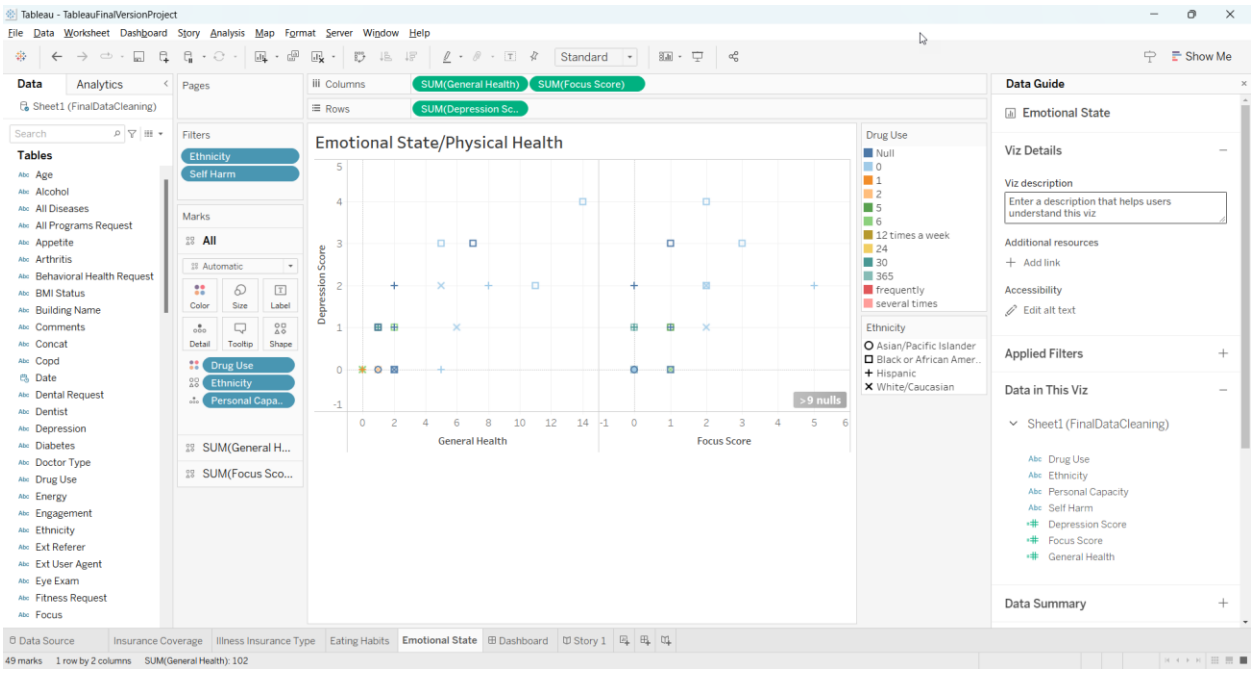
This visualization is supported by several studies exploring the intersections of age, gender, weight, and dietary habits. A recent article in the journal *Nutrients* highlights that young adult women are more likely to adopt health-conscious eating behaviors, often influenced by body image, media, and peer culture, while men may lag in nutritional awareness and meal planning strategies (Yang, Chia-Lin, et al). Similarly, a study in *The Journal of Nutrition in Gerontology and Geriatrics* emphasizes that age-related shifts in eating habits are not uniform across genders, and interventions targeting nutrition must account for gender-specific motivations and barriers (Grigsby-Toussaint, Diana S., et al).

Additionally, earlier research from *PubMed* suggests that behavioral patterns related to food intake begin to diverge significantly by gender in adolescence and continue to widen into adulthood, particularly when it comes to caloric awareness, emotional eating, and meal timing practices (Rosen, David H). These findings resonate with the data seen in the visualization, where female participants appear to consistently maintain healthier eating scores across nearly all age and weight groups.

In summary, this visualization effectively combines demographic variables (age and gender) with health-related metrics (eating scores and weight) to surface meaningful patterns that reflect broader societal and psychological influences on dietary behavior. The trends shown here reinforce the importance of targeted nutrition education and gender-sensitive public health strategies to address eating behaviors across life stages.

Have residents' emotional status changed after receiving housing support?





The visualization titled “Emotional State / Physical Health” presents a multidimensional scatter plot examining the intersection of emotional and physical well-being among individuals from diverse ethnic backgrounds. The X-axes display two measures—General Health and Focus Score, while the Y-axis represents the Depression Score. Each data point is colored by frequency of drug use, shaped by ethnicity, and filtered by self-harm and personal capacity indicators, giving the visualization a rich context for understanding mental and physical health correlations.

From the plot, one notable pattern is the cluster of higher depression scores among individuals with low general health or poor focus scores, many of whom also reported drug use at varying frequencies. In contrast, individuals with higher general health and better focus scores generally reflect lower depression scores, even among those with some reported substance use. The frequency and intensity of drug use, indicated through a gradient of colors from light blue (low/null usage) to red and pink (frequent/severe use), appears to play a role in both mental and

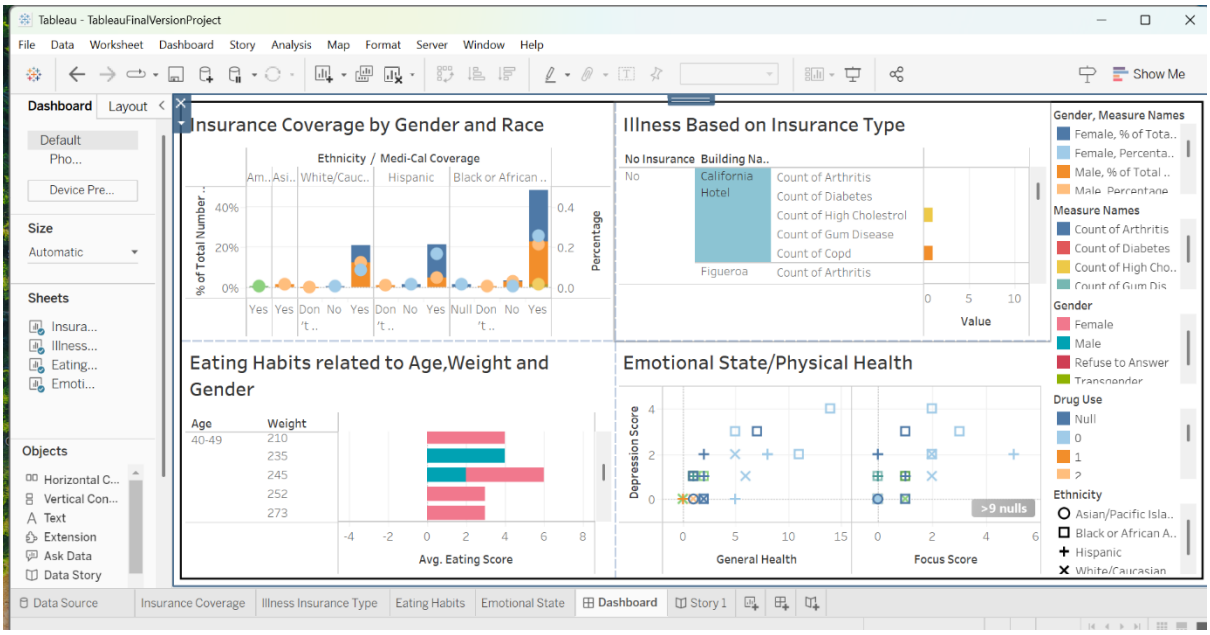
physical health performance. While there is some variability across ethnic groups, as represented by different point shapes, the scatter plot suggests that drug use and depression often co-occur, particularly among those reporting low physical well-being and cognitive focus.

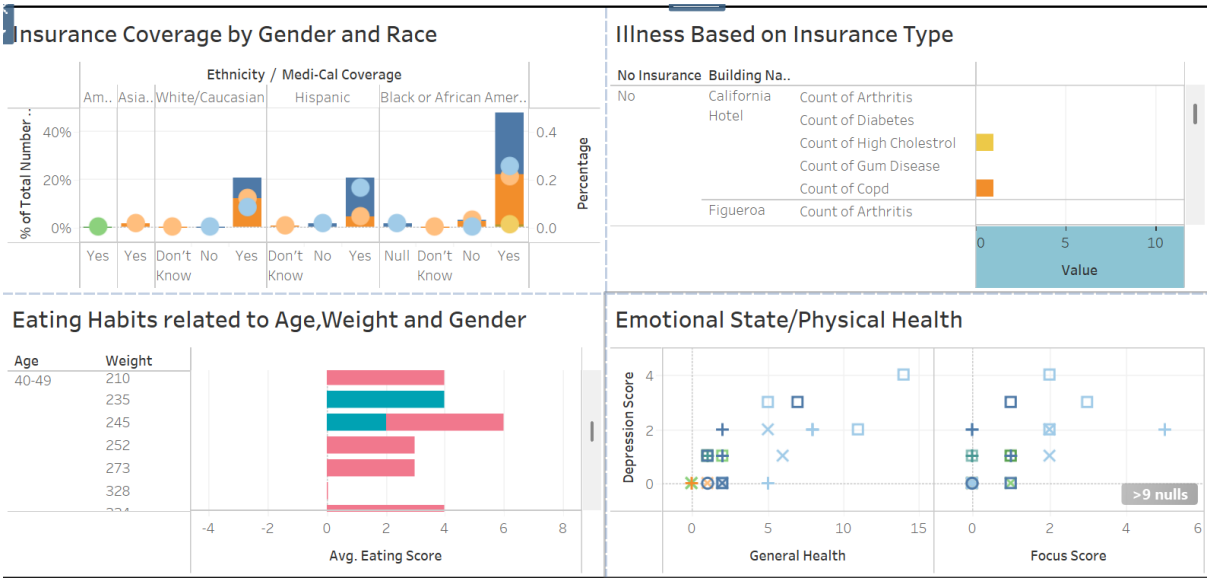
This visualization is supported by a growing body of public health literature. For instance, research published in *Frontiers in Psychiatry* explains the cyclical relationship between substance use, depression, and poor physical health, emphasizing how self-medication behaviors can worsen both mental and physical states (López-Castro, Tammy, et al). Moreover, the American Psychological Association highlights the disproportionate mental health burden faced by unhoused individuals or those with unstable housing, noting that socioeconomic hardship often leads to compounding emotional and substance-related struggles (American Psychological Association).

The California Budget & Policy Center further contextualizes this issue, pointing out that California's homeless population faces immense challenges in accessing integrated care services, which can delay diagnoses and compound health problems—trends reflected in the observed patterns of low general health and high depression in this dataset (California Budget & Policy Center).

In summary, this visualization effectively captures the interplay between emotional well-being, cognitive focus, and physical health, all while surfacing crucial indicators like ethnicity and substance use. It underlines the urgent need for holistic healthcare models that address both mental health and physical wellness, especially within vulnerable or marginalized communities. The clear patterns in this dataset, supported by leading research, emphasize the importance of comprehensive, culturally informed, and accessible care interventions.

Dashboard





The Tableau dashboard presented in the screenshots offers a comprehensive, interactive overview of the complex relationships between health status, insurance coverage, emotional well-being, and behavioral factors within a population. The dashboard is divided into four main

visualizations, each addressing a specific theme while collectively painting a holistic picture of individual and community health.

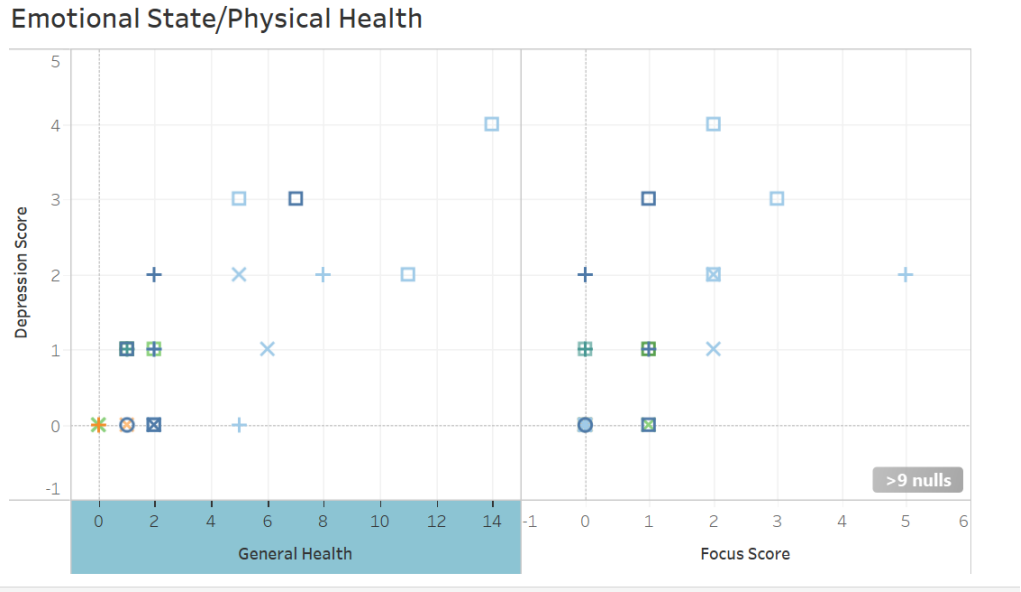
The first visualization, titled "Insurance Coverage by Gender and Race," categorizes individuals based on their insurance status (yes, no, don’t know) and their ethnicity. The bar and bubble combination chart visualizes the percentage of individuals within each race and gender group who reported having Medi-Cal coverage. Notably, Black or African American females appear to have the highest proportion of Medi-Cal enrollment, while males across all ethnic groups show lower coverage levels. This view is particularly helpful for identifying disparities in access to insurance along racial and gender lines.

The second visualization, "Illness Based on Insurance Type," focuses on individuals who do not have insurance, with a detailed breakdown of chronic illnesses—such as arthritis, diabetes, high cholesterol, gum disease, and COPD—by building name. This chart reveals that uninsured individuals tend to have a broader distribution of chronic illnesses across various residential buildings. The inclusion of building-level granularity allows for targeted insights into geographic or housing-related trends in chronic disease burden.

In the third visualization, "Eating Habits Related to Age, Weight, and Gender," average eating scores are displayed along weight ranges and categorized by age and gender. The horizontal bar chart reveals significant variation in eating habits. Females, across most age groups and weight levels, consistently exhibit healthier eating scores compared to males, whose scores are more likely to dip into negative or lower ranges. This visualization helps identify dietary behavior patterns that could guide interventions by age or gender groups.

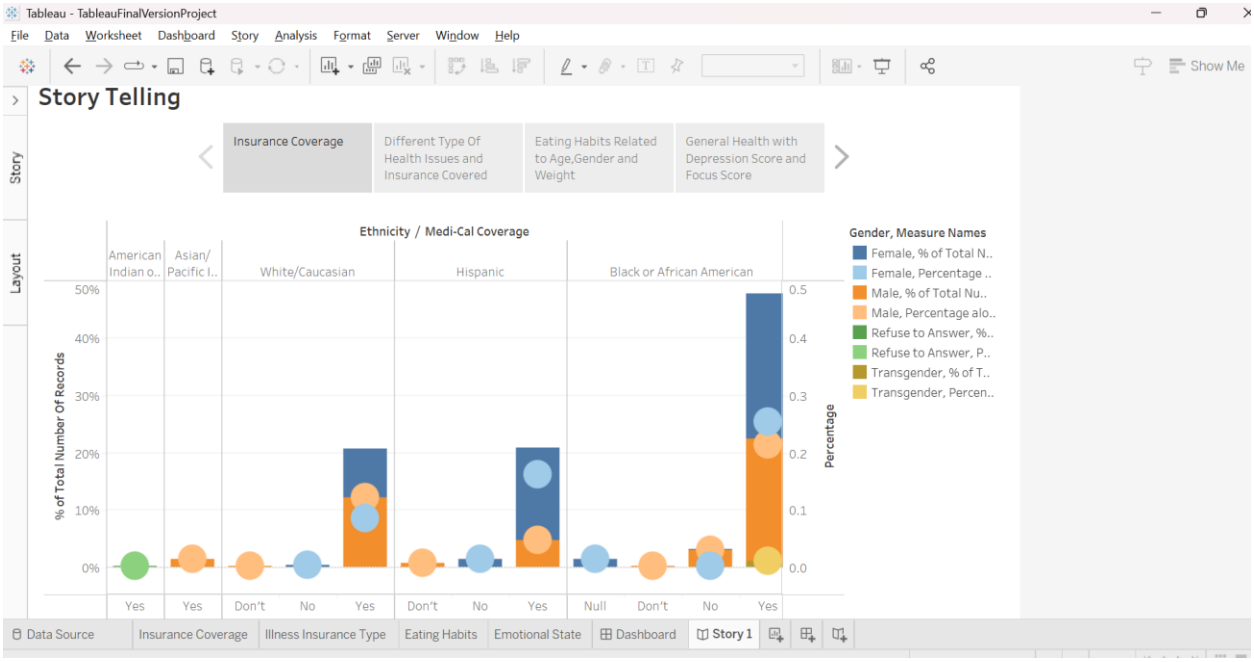
The final visualization, a scatter plot titled "Emotional State / Physical Health," explores the intersection of mental health and physical well-being. The X-axes show general health and focus scores, while the Y-axis represents depression scores. Each point is colored according to drug use frequency and shaped by ethnicity, with additional filters for self-harm and personal care capacity. This visualization is particularly valuable for examining how substance use and ethnic background relate to emotional distress and physical function. It visually reinforces the complex interplay between mental health, cognitive ability, and broader social determinants such as homelessness and healthcare access.

The scatter plot was constructed using SUM(General Health) and SUM(Focus Score) for the X-axes, and SUM(Depression Score) for the Y-axis. Additional fields—such as Drug Use, Ethnicity, and Personal Care—are integrated into color, shape, and detail, respectively, enhancing the ability to detect multi-layered trends within the data. This design supports a nuanced analysis of individuals experiencing both emotional and physical challenges, especially among marginalized groups.



Overall, this dashboard integrates several dynamic data visualizations that, when viewed together, allow for meaningful cross-sectional insights. It highlights inequities in insurance coverage, health outcomes, emotional well-being, and behavioral patterns—critical for informing public health strategies and community-based interventions. Each visualization is designed to empower data-driven decision-making through interactive, inclusive, and intersectional health analytics.

Story Telling




Story Telling
Story
Layout
Insurance Coverage
Different Type Of Health Issues and Insurance Covered
Eating Habits Related to Age,Gender and Weight
General Health with Depression Score and Focus Score
No Insurance
Building Na..
No
Yes
Willow
California Hotel
Figueroa
Fox Normandie
Gower
Count of Copd
Count of Arthritis
Count of Diabetes
Count of High Cholestrol
Count of Gum Disease
Measure Names
Count of Arthritis
Count of Diabetes
Count of High Choles..
Count of Gum Disease
Count of Copd
0 1 2 3 4 5 6 7 8 9 10 11
Data Source
Insurance Coverage
Illness Insurance Type
Eating Habits
Emotional State
Dashboard
Story 1


Story Telling
Story
Layout
Insurance Coverage
Different Type Of Health Issues and Insurance Covered
Eating Habits Related to Age,Gender and Weight
General Health with Depression Score and Focus Score
Age
Weight
21-29
30-39
Null
150
183
200
211
227
250
120
161
162
189
194
210
220
235
Age: 21-29
Gender: Female
Weight: 200
Avg. Eating Score: 4.000
Gender
Female
Male
Refuse to Answer
Transgender
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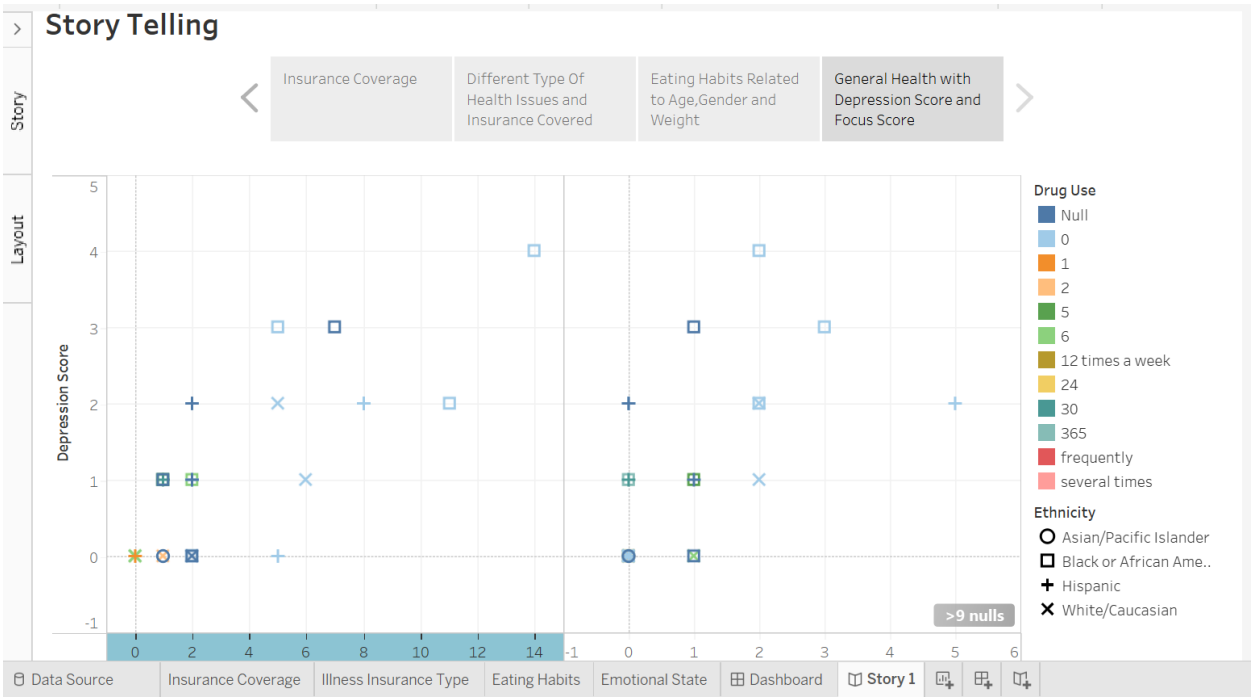
Data Source
Insurance Coverage
Illness Insurance Type
Eating Habits
Emotional State
Dashboard
Story 1



Our story begins with a fundamental question: Who truly has access to healthcare?

In the vast and diverse city of Los Angeles, Medi-Cal coverage acts as both a lifeline and a lens, revealing patterns of equity, disparity, and systemic need. As we examine the data, a clear trend surfaces: Black or African American and Hispanic communities exhibit significantly higher enrollment in Medi-Cal than other racial or ethnic groups. Among these communities, women are more likely than men to be insured, which reflects not just demographic variation, but deeper systemic inequalities shaped by employment, income, and caregiving responsibilities. These findings align with research from the Center and Budget Policy Priorities institute (Center on Budget and Policy Priorities) and supported by Williams and Sternthal's analysis (Williams, David R., and Michelle Sternthal) on the intersection of race and health access. In contrast, White and Asian/Pacific Islander populations appear less connected to Medi-Cal, suggesting either broader access to private insurance or a worrying disconnect from public health resources.

Race and gender intertwine to shape healthcare accessibility, revealing who gets covered and who risks being left behind.

Once individuals secure coverage, the effects become visible through diagnosis trends. In housing sites like California Hotel and Figueroa, individuals with insurance are more frequently diagnosed with chronic illnesses such as arthritis, diabetes, and high cholesterol. This may initially raise concern—why are insured individuals "sicker"? However, the more meaningful insight lies in access to care. Insurance increases engagement with the healthcare system, leading to more screenings, appointments, and diagnoses. This reflects not a decline in health, but an increase in medical visibility and treatment opportunities, as emphasized in the National Academies' findings (Institute of Medicine (US) Committee on the Consequences of Uninsurance) and reinforced by more recent public health research (Gomberg-Maitland, Mardi, et al).

The story then moves from clinical care to the kitchen table. Eating behavior data among individuals aged 40–49 shows that heavier men tend to have lower average eating scores, suggesting inconsistent or nutritionally poor eating habits. In contrast, women of similar age and weight show higher average scores, indicating more balanced dietary behaviors. These trends align with gender-based nutritional research (Yang, Chia-Lin, et al, Grigsby-Toussaint, Diana S., et al) and serve as early indicators for long-term risks such as obesity, diabetes, and heart disease. Food access, eating routines, and cultural norms all converge to shape long-term health—particularly for individuals facing economic or housing insecurity, where food options are limited and health-conscious choices are not always feasible.

Finally, the data turns inward, exploring emotional and mental well-being. A scatterplot comparing general health, depression, and focus scores paints a vivid picture of the mental health

landscape in these communities. Individuals with low general health scores often experience higher depression and reduced focus, underscoring the tight interdependence between mental and physical wellness. Layered over this are variables like drug use, gender, and ethnicity, which further influence emotional outcomes. These findings echo the conclusions of mental health studies such as presented by López-Castro, Tammy, (López-Castro, Tammy, et al) and are supported by the American Psychological Association's analysis (American Psychological Association) of how homelessness, mental illness, and substance use often reinforce one another. It becomes clear that when physical health declines, mental health often follows—and vice versa.

This dashboard does more than present data; it tells the story of individuals navigating systems of care, disparity, and resilience. Insurance status shapes who gets seen and treated. Eating habits, influenced by access and routine, lay the foundation for future health. And mental well-being mirrors the cumulative toll of stress, illness, and survival in marginalized communities. For those experiencing homelessness or housing instability, these data points represent real, urgent challenges. As noted by the California Budget & Policy Center (California Budget & Policy Center), addressing homelessness requires more than shelter—it requires integrated access to care, nutrition, and support.

Altogether, this isn't just a story about health systems—it's a portrait of human experience, shaped by race, gender, socioeconomic barriers, and the courage to keep going despite the odds.

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