SLS Call Data Assessment

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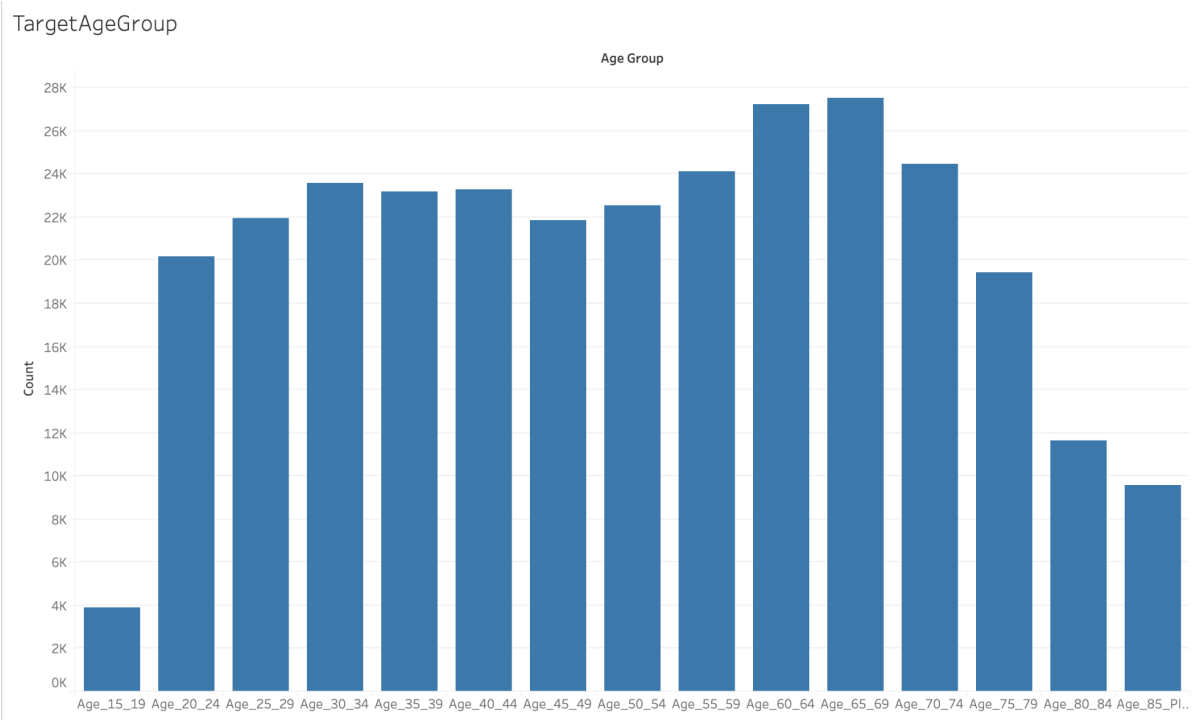
Summary:

This report outlines the process used to analyze a dataset containing demographic information such as age, gender, and ethnicity, with the goal of developing a focused and inclusive outreach strategy. The first step involved cleaning the data to ensure it was accurate and consistent. This included addressing missing or unclear entries, removing duplicate records, and standardizing the values so that all information followed the same format. Once cleaned, the data was organized and grouped in ways that made it easier to understand overall patterns, such as how different age groups or demographic categories were represented. Care was taken to include all relevant groups, even those with little or no data, to ensure that the analysis was fair and complete.

The primary goal of this analysis was to support a more effective outreach strategy by identifying where efforts should be concentrated. Instead of applying a one-size-fits-all approach, the insights gained from the data allow for more targeted messaging that considers the unique characteristics of different communities. By using clear charts and summaries, we made it easy to spot which groups may already be well-engaged and which may need additional attention. This allows decision-makers to allocate resources more strategically and reach people in a way that feels personalized and meaningful. Ultimately, the process ensures that outreach efforts are thoughtful, inclusive, and impactful.

1. Age Target Strategy -

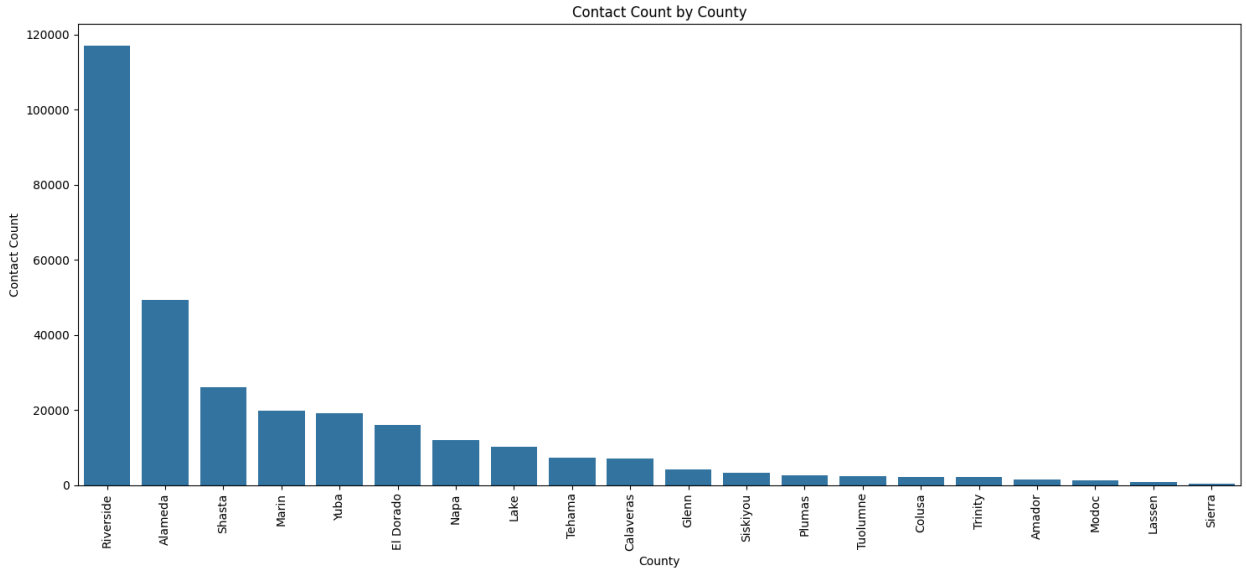
The outreach strategy was designed by dividing people into age groups—such as children, young adults, middle-aged adults, and seniors—to better understand how different age ranges respond to emergency preparedness efforts. By analyzing response patterns, it became clear which groups were more engaged and which needed more support or information.



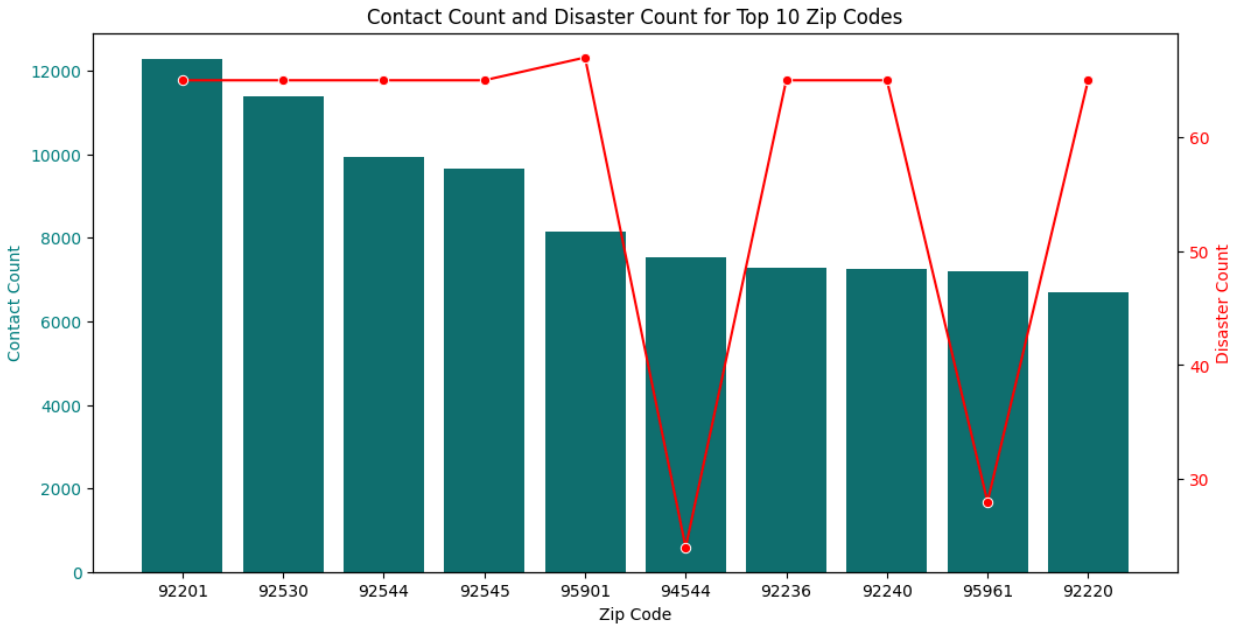
A key focus was on the senior population, particularly those aged 65 and older, who made up 30.43% of all contacts. This group was heavily targeted because older adults are often more vulnerable during emergencies and may require additional help to prepare. Prioritizing this age group helped ensure their health and safety by offering timely alerts, resources, and support tailored to their needs. This age-based approach made the outreach more effective, inclusive, and aligned with the goal of protecting at-risk communities.

2. Target Strategy 2 - Geographic Specific

Several counties, particularly Riverside, Alameda, Shasta, Marin, and Yuba, were heavily targeted for contact efforts due to their location in disaster-prone zones. Riverside County, for example, has the highest contact count with 116,878, and many of its zip codes, such as 92201, 92530, and 92544, rank among the top in contact frequency. This focus aligns with external data that identifies Riverside and its surrounding areas as vulnerable to wildfires, floods, and other natural disasters, necessitating increased outreach to ensure residents are prepared and informed. Similarly, Alameda and Shasta counties, with significant contact counts, also face risks from earthquakes, wildfires, and flooding, justifying targeted communication efforts to enhance community preparedness.



The data further reflects targeted outreach to residents aged 65 and above within these counties, who represent a substantial proportion of contacts, recognizing their increased vulnerability during disasters. Zip codes like 92276, 92518, and 92544 in Riverside County show a consistent count of older adults contacted, emphasizing a strategic focus on protecting these high-risk groups. By prioritizing counties in known disaster zones with vulnerable populations, the outreach efforts aim to reduce risk, improve safety awareness, and support community resilience during emergency events.

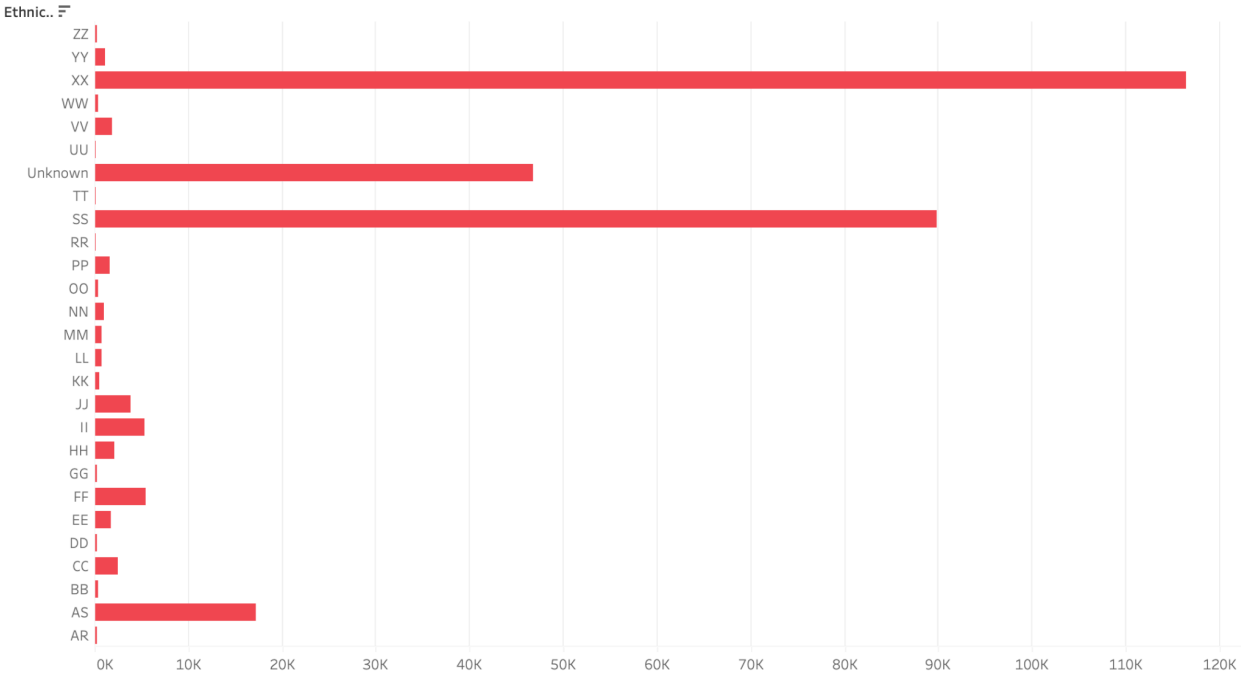


3. Target Strategy 3: Ethnicity and Preparedness

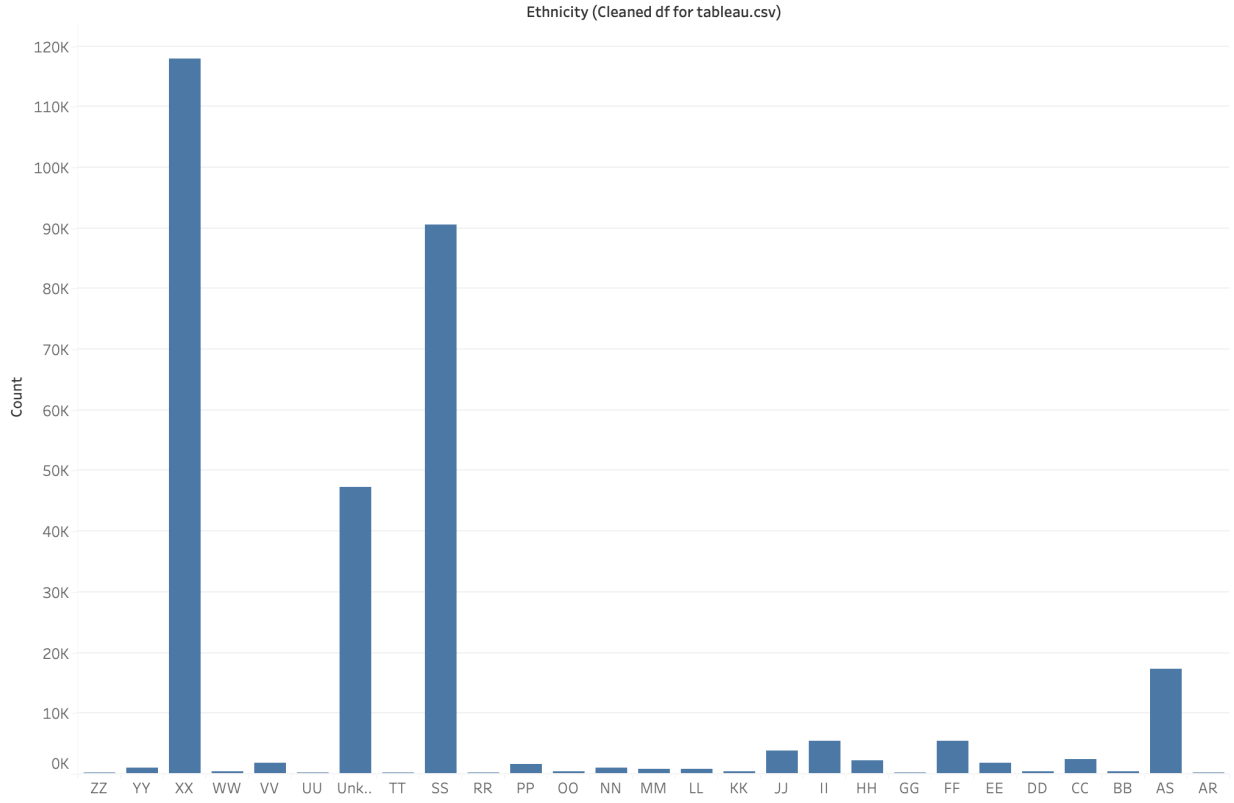
The outreach strategy prioritized specific ethnic groups—namely **XX**, **SS**, **Unknown**, **AS**, and **FF**—due to their significant representation among contacts exhibiting low preparedness scores (≤ 3). These five groups collectively constitute the majority of the low preparedness population, with **XX** and **SS** alone accounting for a substantial portion. This indicates that individuals within these ethnicities may face heightened barriers to disaster readiness, such as limited access to resources, language challenges, or other socio-cultural factors influencing their engagement and preparedness levels.

Correspondingly, the reach counts demonstrate focused efforts on these groups, with **XX** and **SS** receiving the highest levels of contact. This targeted approach is supported by data-driven insights and aims to address the specific needs of populations at greater risk. By concentrating outreach on ethnic groups with lower preparedness, the strategy enhances the effectiveness of communication campaigns and contributes to improving community resilience through equitable resource allocation and support.

Ethnicity vs Low_Prepareness



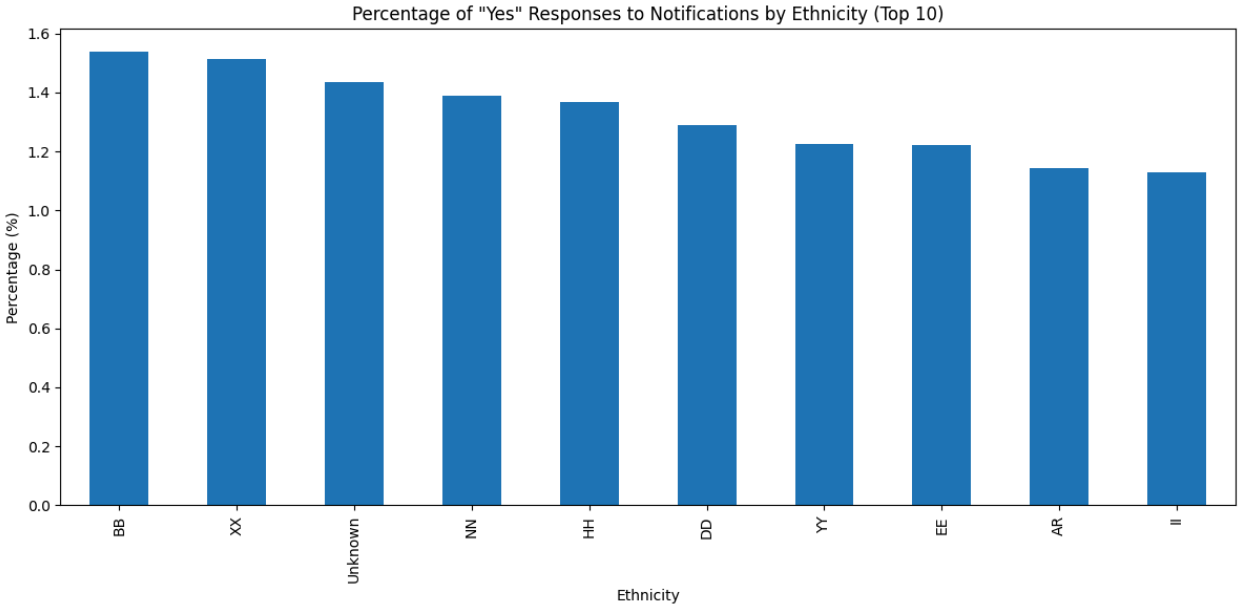
Ethnicity_Targeted



Recommendations -

A. Reaching out to communities with better sign up rate as well

The data on emergency service notification sign-up rates shows that the percentage of individuals who responded "Yes" varies across ethnic groups, with generally low overall rates. Even the highest percentages, such as **BB** (1.54%) and **XX** (1.51%), represent only a small fraction of their respective populations. Many other groups, including **SS** (0.98%), **AS** (0.73%), and **FF** (0.44%), have even lower affirmative response rates, while some ethnicities show no recorded sign-ups at all.



This indicates a clear opportunity to broaden outreach efforts beyond the currently targeted groups. To increase the overall sign-up rate for emergency service notifications, it is important to engage a wider range of ethnic communities, especially those with low participation or zero recorded affirmative responses. Expanding culturally tailored communication and engagement strategies will help improve awareness, trust, and responsiveness across diverse populations, ultimately enhancing community preparedness and safety.

B. Zip Codes for better Sign Up Rate

According to FEMA guidelines, zip codes experiencing 10 or more disasters are classified as disaster-prone zones. The data highlights several such zip codes, including 95221, 95232, 95629, and 95910, with disaster counts ranging from 16 to 27. These areas also show varying levels of low preparedness percentages and signup rates for emergency notifications.

To enhance overall emergency service signup rates, it is recommended to focus outreach efforts on these disaster-prone zip codes, especially those with comparatively higher signup rates such as 95221 (7.83%) and 95910 (8.61%). Targeting these areas leverages existing engagement to further increase preparedness and communication effectiveness. Simultaneously, efforts should be made to improve outreach in zones with lower signup rates but high disaster frequency, such as 95232 and 95629, to ensure broader coverage and community resilience in the most vulnerable locations.

Executive Summary

The strategy emphasizes reaching vulnerable populations particularly seniors, residents in disaster-prone counties, and ethnic groups with low preparedness to enhance emergency readiness and engagement. Key findings include a focused approach on older adults (65+), who represent over 30% of contacts and are more vulnerable during emergencies; concentrated outreach in high-risk counties like Riverside and Alameda identified through disaster frequency data; and targeting specific ethnic groups with notably low preparedness scores, such as XX and SS, to address barriers to engagement. Recommendations highlight expanding outreach to additional ethnic communities to improve sign-up rates for emergency notifications and prioritizing disaster-prone zip codes with both high disaster counts and varying preparedness levels. This data-driven strategy aims to maximize resource effectiveness and foster resilient, well-informed communities.

Part 2 -

Whether in healthcare, education, finance, or disaster management, data enables us to make informed decisions, predict outcomes, and improve the quality of life for individuals and communities. The ability to extract meaningful knowledge from raw information is what drives innovation and progress across almost every sector.

The true value of data lies in uncovering all the possible patterns and connections that may not be immediately obvious. It's like solving a puzzle where each piece of data contributes to a larger picture. By analyzing these patterns, we can anticipate, optimize processes, and design better strategies. Importantly, decision-making based on data doesn't always require large leaps, even small changes guided by consistent pattern recognition can, over time, lead to significant and lasting impact. This cumulative effect of incremental improvements ensures that systems and communities steadily evolve in a positive direction.

Working with data presents an incredible opportunity to influence positive change. As data becomes more accessible and technologies advance, there is potential to democratize information, empower communities, and foster collaboration across disciplines. By bridging the gap between data science and real-world applications, we can help organizations and individuals make smarter decisions that lead to better health, safety, education, and sustainability outcomes. At the same time, working with data today comes with significant responsibility. Data is powerful but also sensitive. There are ethical considerations around privacy, consent, and bias that can deeply affect people's lives. We as data professionals must uphold transparency about methods and limitations is essential to maintain trust and accountability.

I believe my job is not just to analyze data but also to explain what the numbers really mean. I try to turn complex information into clear and useful insights that people can understand and act on. This means using my technical skills along with care and understanding of the situation behind the data. My goal is to help make decisions that truly meet the needs and values of the communities involved.Data has many possibilities, but it also comes with the responsibility to use it in a fair, honest, and careful way. By keeping this mindset and making steady, thoughtful decisions even small ones we can unlock the full power of data to build smarter, fairer, and stronger communities over time.