**Mental Health and Substance Use Analytic Team**

**Summary of Analysis**

**Introduction:**

The Mental Health and Substance Use (MSHU) Bed database analysis has provided valuable insights into the distribution of beds, population, category of healthcare, and the number of facilities in British Columbia. By analyzing the data from the MSHU across local health areas, authority areas, and the province. This analysis provides a detailed analysis useful for healthcare providers, and other stakeholders to develop strategies to improve access to mental health and substance use services for all British Columbians.

**Discussion:**

The data was merged, manipulated, and categorized to conduct a detailed analysis. Due to the large number of beds not allocated to local health areas (LHA), the data was analyzed considering the beds in known LHAs, with a total of 11,040 beds (751 facilities), both with and without the 11,643 beds (51.3%) in unknown LHAs (16 facilities). However, the proportion of beds in unknown LHAs is distributed proportionally to the beds in known LHAs for each authority area.

Based on the number of beds per 100,000 population, residents of Vancouver Coastal have the highest chance of finding a bed per person, considering the number of beds in known and unknown LHAs. Despite being the second most populated authority area, it has the most facilities. On the other hand, Fraser, the most populous authority, ranks fourth in terms of the number of beds per 100K population.

Regarding the categories of healthcare facilities, community facilities are 66.63% of the total facilities, followed by Supported with 16.43%, Tertiary with 9%, and lastly, Acute with 8.21% and 864 beds. The higher the number of facilities, the higher the number of beds. All categories are similarly distributed in the five authority areas.

A total of 17,931 beds (79.05%) in 472 facilities are not targeted at the general population, and 20.95% of beds in 295 facilities to other priority populations, such as the homeless, pregnant women, indigenous people, and rural areas.

Overall, the facilities are mostly targeted at the general public, including both males and females. A total of 53 facilities (540 beds) are allocated to males and 41 facilities (398 beds) to females. Similarly, 14 facilities (64 beds) are targeted at women and children. It is pertinent to note that facilities are not evenly distributed across all health areas.

The occupancy rate at 48.63% of facilities is between 80% and 100%, while 23.5% of facilities have beds available to provide care. On the other hand, 27.9% of facilities do not have information on their occupancy.

**Recommendation:**

* Based on these findings, it is advisable to prioritize access to mental health and substance abuse in areas with limited resources, where the occupancy has reached 100% or is over its capacity.
* Increase investment in acute care facilities to improve the availability of beds for patients who require intensive medical care. For instance, 32 acute facilities have a 100% occupancy rate. Additionally, increase the number of beds in the Fraser authority area to address the lower availability of beds per 100,000 population compared to other areas.
* Develop a plan to allocate beds in unknown LHA to specific LHA to improve the distribution of resources. Maintain data on occupancy rates for all facilities to monitor and manage bed availability effectively.

1. Define the problem: The first step in data analysis is to define the problem that needs to be solved.
2. Collect the data: from various sources, such as surveys, experiments, or existing databases.
3. Clean the data: Data collected may contain errors or inconsistencies.
4. Explore the data: Exploring the data involves examining the data to identify patterns, trends, and relationships.
5. Analyze the data: After exploring the data, the next step is to analyze the data to extract insights and make informed decisions. algorithms, or other analytical techniques to identify patterns and relationships in the data.
6. Interpret the results: Once the data has been analyzed, the next step is to interpret the results. This involves understanding what the data is telling us.
7. Communicate the findings: The final step in data analysis is to communicate the findings to stakeholders.

Charact of data quality  
Completeness (missing values, outliers)

Validity (Consistent range)

Accuracy (Units, Errors)

Consistency ( format)

Timeliness (up-to-date)

Uniqueness

Relevance (to the problem)

1. You created an interactive dashboard report as part of this job application. Please present this

dashboard report by providing an overview of the report, key information/findings, and

demonstrating how to use the dashboard tool. You have 10-minutes to deliver your

presentation and to answer follow up questions from the panel.

General

Specific

2. Tell us about a time when you integrated seemingly unrelated information to analyze a situation

or anticipate a problem.

Create a database including information with empty register sand non-used information and analyzed them independently. --- > With this we could anticipate and prioritize transport lines that require attention.

3. Tell us about a time you had to handle multiple responsibilities. How did you organize the work

you needed to do?

had to oversee multiple projects simultaneously  
Project management tools to manage my workload  
set deadlines,   
Prioritize, Creating charts, making appropriate notes.  
Delegate,

4. Describe a situation where others you were working with on a project disagreed with your ideas.

What did you do?

5. Tell us about a time when you had to adapt to a wide variety of people by accepting and

understanding their perspective. In answering this question, please describe:

a. How did you go about this?

b. What challenged you about accepting and understanding?

c. What did you learn and how will you bring this learning to this position?  
  
To adapt to their perspectives, I actively listened to their concerns, asked open-ended questions, and adjusted my communication style to best fit their needs.