DevHealthOrg

A. Districts have beneficiaries that are not receiving enough healthcare can be found in "insufficient_per_district.csv" file with their level of risk.
B. Code is in under "DevHealthOrg.py"
C. Assumptions:
    a. More meetings are assumed to reflect a higher level of engagement and, potentially, more complete healthcare services delivered. The minimum number of visits required to be considered as sufficient health care provided beneficiary is set to 12 in the code. As a result, the code estimates that beneficiaries must have at least 12 meetings with a user in order to receive adequate healthcare. This number is set at 12 because beneficiaries should meet at least once a month as a minimum degree of engagement with users. This threshold number is an assumed that can be adjusted based on the program's requirements.
    b. Insufficient beneficiary risk levels are classified based on a predefined count range. Therefore, code assign risk categories (e.g., 'Extremely High,' 'High,' 'Moderate,' 'Low,' 'Extremely Low') to the number of insufficient beneficiaries in each district based on count these ranges. The severity of insufficient healthcare is determined by these ranges. Specific ranges and risk level labels are assumed and can be changed based on programme requirements.
D. Explanations and Recommendations:

Case 1: Beneficiaries in some districts (e.g., 'Extremely High,' 'High') are not obtaining enough healthcare since the number of meetings between users and beneficiaries falls below a certain threshold.

Recommendation 1: Identify districts where the number of meetings falls below the expected level and address the underlying reason to increase healthcare access. It is essential to maintain and improve the quality of healthcare service.

Case 2: The location of healthcare services (at home vs. clinic) can influence the number of meetings and the perceived sufficiency of treatment obtained. Limited transportation or geographical barriers may also reduce the number of meetings.

Recommendation 2: Evaluation of the meeting locations of beneficiaries and beneficiaries' needs can be helpful to increase the number of meetings. Home visits are a more convenient choice for people who have mobility challenges or specific healthcare needs. Providing transportation support for beneficiaries can be one of the solutions for this case.

Case 3: Beneficiary lifestyle have an effect on the number of meetings beneficiary attends in the same area.

Recommendation 3: Investigation the reason behind differences in the number of meetings among beneficiaries within the same district can give an opinion about factors such as age, language, socioeconomic situation, or cultural preferences of beneficiary. Implementing tactics to target awareness of importance of healthcare and ensuring cultural sensitivity can aid in tailoring healthcare services.

Case 4: If certain users have much more or fewer meetings than others, this may cause inequalities in beneficiary examination as well as insufficient number of resources.

Recommendation 4: Equalising workload among users can help to ensure that beneficiaries receive comparable levels of service. Improving resource allocation and increasing the staffing levels can also increase the number of beneficiaries who can access to healthcare services.

Case 5: The visualisation provides an overview of districts with beneficiaries who do not have access to adequate healthcare, making it easy to identify high-risk locations.

Recommendation 5: Visual representations can be used in data-driven decision-making. Stakeholders such as policymakers, healthcare providers, and community health workers can understand the data easier and clear for efficient collaboration to identify obstacles.

E. It took 30-35 minutes to write the code since I had very similar project before. It took another 25 minutes to write answers for the questions.