Analytics for Hospital's Health Care-data

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PROBLEM STATEMENTS

1. Data analysis is the next step in the evolution of health care, and it uses datadriven insights to predict and solve health problems. Applying data analytics to health care can have life-saving results, as it can use data on a subset of specific individuals to prevent potential epidemics, cure diseases, and reduce healthcare costs. The main objective is to accurately predict the Length of Stay for each patient on case by case basis so that the Hospitals can use this information for optimal resource allocation and better functioning. The length of stay is divided into 11 different classes ranging from 0-10 days to more than 100 days.

2. Medicare and Medicaid are government healthcare programs that provide healthcare coverage to patients. Their repayment structures vary significantly and need to maintain an orchestrated management process. The procedures for filing and receiving Medicare and Medicaid are very different and are an extra task on the to-do list of healthcare professionals. The regulations also need them to store and record patient records in a particular format for the services rendered. Whenever treatment is availed under Medicare, the doctors need to fill out the prescribed electronic forms as proof that the patient has, in fact, received the healthcare service. The rules and regulations have made it mandatory for healthcare pros to follow the process to get paid, adding significantly to the problems.

3. Hospitals have limited preventive health care and services to promote optimal health and wellness, and avert worsening of squeal for children and adults with disabilities. Doctors interact with multiple patients on a everyday basis so its hard to keep track of the parameters of each patient and its time-consuming so they need a way to visualize the severity of illness of each patient so that they can make quick and better decisions on the treatment that is needed to be given.

4. Across the healthcare continuum, integrated approaches are needed to simultaneously address the many risk factors and conditions, as well as the medical, functional and societal limitations including determinants that influences the health and wellbeing of persons with disabilities.

5. Patient-related data is one of the most overwhelming aspects of healthcare. With each new addition to the patient database, the existing pool of data becomes still bigger. Consequently, it becomes even tougher to manage this data. As much as we may expect the existing traditional infrastructure to manage and secure the data, it is only an unrealistic expectation. The storage and the retrieval of this patient data, when needed, is a challenge that the hospitals need to address. Data overload and mismanagement often lead to wrong diagnoses, compromise in data security, improper treatment, lapsed appointments, and failure to keep up with the changes in progress or regression of the patient's condition, etc. The implications can be catastrophic for both doctors as well as patients.