Case Study Essay: Using Health Analytics in healthcare setting.

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The organization

The organization of interest in our case study today is the King Faisal Specialist Hospital and Research Center in Jeddah, Saudi Arabia. The organization serves as a healthcare institution that focuses on providing specialized medical services and conducting research. In the spirit of looking within themselves as to identify areas of improvement on the supplied healthcare services, the institution identified a significant predicament within its Emergency Room (ER). The core issue stemmed from overcrowding and resulted in inefficient functioning of the ER. Patients encountered prolonged waiting times and delays in receiving their much-needed medical attention. There are a few factors identified as key contributors to this problem, namely, understaffing, not enough physicians and nurses available, low productivity, and suboptimal resource utilization within the ER.

How Data was utilized

It then became necessary to strategize and innovative solutions to lessen the impact of this problem and increase performance once again. As an attempt to effectively reduce the impact of this challenge, the hospital employed health analytics methodologies, which included diagnostic, and prescriptive analytics. They used data to look at patient acuity levels, mode of arrival, and age group, and then came up with strategic ways to improve admission rates and thus increase the overall ER effectiveness. Patients with lower acuity levels were found to frequent the ER due to difficulties in accessing primary care or exceptionally long waiting times for outpatient appointments.

Fixing the problem

Using their understanding of the inner workings of the ER, the hospital strategically revised its workflow. This overhaul included the creation of a designated "Fast -Track" area for less acute patients, at the same time establishing an internal waiting area for patients who can stand for long. Moreover, two consultant family physicians were dedicated to managing lower acuity patients, and this allowed the primary ER physicians to focus on the higher acuity patients. They considered the following two variables as performance indicators: ER length of stay (LOS) and the percentage of patients leaving ER without treatment. After studying the time it takes for patients in the ER, they found that waiting to get a bed in the ER, the time spent waiting overall, and the time from seeing the doctor to leaving the ER improved significantly.

This study at King Faisal Hospital shows how using health analysis can make healthcare work better. By carefully making changes and watching important signs, the hospital made the emergency room much more efficient. This example proves how efficient use of data can make healthcare better, making patients happier with their care.