Geographic Variations and The Utilization of Health Care Resources

TREO Talk Paper

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Abstract

Improving the utilization of existing health care resources such as patient portals (MyChart), emergency departments (ED), and urgent care centers (UCC) requires healthcare organizations to examine the patient population, utilization reasons, and the distribution of EDs and UCCs within communities. On the other hand, information technologies have completely transformed the healthcare industry, reduced the associated costs, and improved the quality of care. MyChart has the potential to improve the utilization of EDs and UCCs, as well as reduce the associated costs. Furthermore, spatial access to medical services is considered an important factor that affects resource utilization. This study examines demographic and geographic factors associated with healthcare resource utilization and use. More specifically, this study aims at studying how spatial access to clinics, urgent care centers, or hospital, along with non-spatial access to the same resources, influences the utilization of MyChart, EDs, and UCCs.

A review of the literature revealed that there is insufficient evidence that MyChart have any impact on patient health outcomes and utilization of other health care services. Previous studies do not assess the effects of individual portal functions, such as, requesting an E-Visit using a patient portal. The literature review on the utilization of MyChart, EDs, and UCCs is lacking. Most studies have addressed the demographic and geographic factors on the utilization of EDs and UCCs without taking the role of technology into consideration.

The dataset for this study consists of combined patients’ information extracted from different resources including the patients’ portal, patients’ medical records, and urgent care centers, resulting in a total of 1,143,028 records. This is a limited dataset that was stripped of PHI and reviewed by a privacy board as well as receiving IRB approval. The data consists of 26 variables that describe patients’ demographics, location information, MyChart usage, emergency department visits, urgent care center visits, primary care provider information, insurance provider, diagnosis-related problems identified, and diseases.

The preliminary findings from the data reveal interesting insight about the number of EDs and UCCs visits based on geographic locations. The number of EDs visits and UCCs visits for male and female are similar with an approximate percentage of males (~57%) and females (~43%) for both resources. However, for MyChart, the number of visits for males (~76%) is higher than females (~24%). The number of EDs visits and UCCs visits are highest for patients with ages 20 to 29.

This study contributes implications for practice. The most important one is to understand the factors that lead to increased utilization of MyChart. Another important implication is to determine spatial and non-spatial factors that could lead to the identification of areas with poor access to health care facilities. Studying geographic variation will help healthcare providers improve their policies and processes when it comes to selecting a location for new health care facility, whether it is a primary care, clinic, UCC, or a hospital. Finally, costs saving is a potential outcome. Increasing the utilization of MyChart has potential to reduce costs, especially those costs associated with emergency departments. Other cost savings may occur on the patients’ side who could save the costs of travel to obtain services by utilizing the MyChart.