

Mount Sinai hospital's modern take on disease management through the aid offered ...

[Health & Medicine](#), [Hospital](#)



Modern technology has positively influenced the management of chronic diseases in terms of cost and quality. With the availability of the internet and portable devices, medical practitioners can reach out to their patients remotely and help these patients manage their conditions (Zwar et al., 2017). With integrated systems, patients can use applications and software in assessing the risk related to their various chronic conditions such as cardiovascular disease and respiratory conditions. One of the medical fields that has integrated with technology is disease management. Disease management is the ideology of reducing costs associated with healthcare and at the same time improving the quality of life of people suffering from chronic conditions with the help of integrated care. To Monroe, Monroe, & Consulting (2016), through the help of disease management programs, health costs are reduced. More importantly, this service has helped in enhancing the quality of health of people suffering from chronic conditions through the avoidance of complications by identifying and treating these conditions more quickly and effectively (Monroe, Monroe, & Consulting, 2016). Some of the disease management programs are designed to manage chronic conditions such as chronic obstructive pulmonary disease, asthma, breast cancer, type 1 and type 2 diabetes, and coronary heart disease. In managing these chronic conditions remotely, some hospitals with the collaboration of information technology companies, have designed some disease management programs for their patients (Piette et al., 2015).

The Mount Sinai Hospital is one of the institutions that has taken collaborative measures in providing disease management programs for its patients, both locally and internationally towards helping people suffering

from chronic conditions such as diabetes minimize the risk associated with their conditions. The Mount Sinai Hospital has designed two disease management integrative tools namely the Circle of Health and the Cahero Platform.

The Circle of Health app

In developed countries, cardiovascular diseases remain the number one killer disease. In the US alone, over 600, 000 people die every year because of cardiovascular diseases with coronary heart disease being the common condition that kills more amounting to over 350, 000 deaths annually (Piette et al., 2015). In averting the number of deaths, the Mount Sinai Hospital through the Fundación Pro CNIC in Spain in partnership with the director of the Mount Sinai Heart and the Icahn School of Medicine, Mr. Fuster, at Mount Sinai have designed a mobile application (Mount Sinai Hospital, 2015). The developed disease management tool is a mobile app that focuses on educating people on the risk factors of heart disease by encouraging people globally to adopt better lifestyles. The Circle of health is a free app that can be downloaded from Google Play store and Apple Store.

The Circle of Health application is a unique and innovative digital platform designed in a circular manner that has creative audio, video, and educational graphics. In getting to know patients, the engine of the platform has questionnaires that get to know their patient's information such as age, genders, weight, and height, which are used to measure the baseline of a person's cardiovascular health (Mount Sinai Hospital, 2015).

The Circle of Health is a mobile phone application designed specifically for those suffering from cardiovascular conditions. The application has focused on the risk factors of heart-related issues. As a result, it focuses on 6 major risk factors for heart conditions. Each of these risk factors (obesity, blood pressure, inactivity, cholesterol levels, diabetes, and smoking) has been discussed at length to give consumers more knowledge pertaining to each risk factor. For example, if a patient has obesity as a risk factor, he/she will download the application, click on "Start", proceed to "Information", then click on "Obesity". Under "Obesity", one will find a video that is integrated with YouTube featuring Dr. Valentin Fuster, who elaborates on how obesity is connected to heart disease. Below the video, more information is provided about obesity, such as ways of overcoming obesity and the treatment of obesity (Mount Sinai Hospital, 2015).

The Circle of Health is a new disease management tool that was launched in 2015 with over 500 downloads globally. No literature is available to indicate the cost and the impact it has had on the population suffering from heart conditions. Additionally, the application is more of an educative disease management tool that aims at educating people on overcoming the risk factors of heart diseases. The Circle of Health has not been integrated with disease management programs such as EMR. However, the Circle of Health remains beneficial in educating the masses, reducing costs associated with heart diseases, and improving the quality of life of the people. The application can be downloaded for free and more importantly, the users can

acquire information on how to be healthy by avoiding risk factors associated with cardiovascular diseases (Mount Sinai Hospital, 2015).

The Cohero platform

Respiratory diseases also present a list of chronic diseases such as occupational lung diseases, asthma, chronic obstructive pulmonary disease (COPD), and pulmonary hypertension,. In the US, conditions such as the COPD has ranked the third killer disease with an average of 46. 1 deaths per 100, 000. Various measures have been taken in managing these chronic conditions (Piette et al., 2015). Mount Sinai Hospital, under the Department of Health Science and Policy, is developing a pilot respiratory management platform for the pediatric asthmatic patients (Mount Sinai Hospital, 2014). The Cahero platform will allow the patients to increase and monitor the condition through connected devices.

The Cohero platforms contain a Hero Tracker, which is a sensor that attaches to an inhaler that helps in tracking medication usage and synchronizes wirelessly to the Cohero's AsthmaHero which is a mobile application. The Cohero's AsthmaHero, which is used by the client is vital as it helps patients in ensuring they adhere to medication over time, avail tailored notifiers and generates a game experience that offers its clients in-application and financial rewards for constantly adhering to their medicine as recommended by their doctors (Megan, 2015). Apart from these services, the Cohero's AsthmaHero platform also provides the caregivers and the parents with updates on an occasional basis of the patient's medication usage both on a weekly and monthly basis. Apart from the Cohero's AsthmaHero, the Cohero

platform also integrates a mobile spirometer that helps in tracking any clinically relevant lung function between the stipulated clinical visits (Mount Sinai Hospital, 2014).

In addition to the Cohero's platform gathering data and helping in adherence to medication for asthma, the same disease management tool is able to provide predictive analytics in new dimensions. With the patient provided with the Cohero's AsthmaHero, the whole platform facilitates the notification of exacerbations and their causes before they can happen. Additionally, the Cohero's platform on a macro level can perform analysis how the population of asthmatic patients uses respiratory medication and the resulting effect of using the prescribed medication (Mount Sinai Hospital, 2014).

Unlike the Circle of Health, the Cohero's Platform supports electronic medical record (EMR) integration which allows the data of the patients to be transmitted electronically, automatically and securely into a client's record. As a result of EMR integration, the doctors of these patients can have ready access to the adherence and spirometry data of their patients, which creates a clear picture of the patient's conditions. This will help the doctors to make sound clinical decisions that can be useful in the management of asthma among the patients (Megan, 2015).

The Cohero's Platform was launched in 2016 to assist over 26 million Americans combat asthma. There is little information the cost the disease management platform has saved. Being a new product in the market that costs around \$20, 000, no information has been provided to indicate how

many people are using this product. At the moment, the Cohero's Platform is a B2B sales distribution platform, meaning that it has plans of collaborating with other interested insurance companies and pharmaceutical firms towards improving the health of asthmatic patients and more importantly reduce the costs associated with the management of asthma.

The cost of managing chronic conditions such as cardiovascular and respiratory diseases is expensive. However, with modern technology, facilities such as disease management programs have been devised towards reducing the health costs of chronic disease management and towards improving the health chronic disease suffers. The Mount Sinai Hospital with other collaborative institutions has invested in designing disease management programs that seeks to cut health costs on the part of the consumers. Circle of Health and the Cohero's Platform are two disease management programs that the hospital has developed. Due to lack of literature and enough data, the impact of these two programs can be assessed to determine its influence on health costs and towards improving the well-being.