**Expansion of Remote Patient Monitoring in Rural Areas for Chronic Disease Management**

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**Key Points**

* An estimated 133 million Americans suffer from a chronic disease.
* Patients residing within rural areas experience reduced access to healthcare, resulting in poor health outcomes and avoidable hospitalization.
* Involvement of remote patient monitoring devices in a patient’s care routine can increase patient access to healthcare and improve health outcomes.

**Introduction (what’s the issue?)**

Despite major advancements in the management of chronic diseases, chronic illnesses affect about half of the population within the United States, making it one of the most prevalent conditions to exist (Raghupathi, W., & Raghupathi, V, 2018). With the increase of growing technology in the healthcare field, digital intervention has shown to assist both care providers and patients in the management of chronic diseases. According to multiple reports, patients residing within rural areas within the United States have experienced countless barriers when trying to receive healthcare, resulting in higher risk of poor health outcomes and health disparities (RHIhub, 2021).

Studies have found that barriers that threaten patient access to healthcare have been lessened by the incorporation of remote patient monitoring in a patient’s care routine. Through the use of remote patient monitoring, which consists of use of electronic tools to record and monitor patient vitals and symptoms, the management of chronic diseases has become significantly easier and cheaper. With its implementation, patients will be allotted around the clock health care access, allowing themselves to have consistent monitoring and care through asynchronous means. This, in return, provides great benefits to the patient, resulting in improved treatment outcomes and slowed symptom progression.

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**What is Remote Patient Monitoring?**

Remote Patient Monitoring is a branch of telehealth that focuses on the collection and analysis of patient vitals and symptoms through use of technological devices outside of a hospital or clinical setting. These devices include, but are not limited to, glucometers, pulse oximeters, activity tracking wearables, and blood pressure monitors. Unlike the majority of telehealth technologies, which involve interactive virtual visits through use of audio and visual means, remote patient monitoring devices collect and communicate patient data to and from the care provider without need for extensive knowledge of technology, as well as additional costs in maintaining computers, laptops, tablets, etc., in order to sustain proper contact with their care provider virtually (NEJM Catalyst, 2018).

* Reduce CMS device restrictions for remote patient monitoring.
  + This would allow for additional types of monitoring devices to be used in remote patient care routines for different chronic conditions.
  + This would allow for greater amounts of patient information to be collected, reducing risk of progressing conditions.

**Previous Efforts to Increase RPM Access**

According to the Center for Connected Health Policy (CCHP), within the United States, only thirty states contain some form of Medicaid reimbursement for remote patient monitoring. Along with this, many restrictions are in place, differing in each state, limiting the type of monitoring devices that can be used, as well as restricting certain information that can be collected. Additionally, of the states who do have some sort of reimbursement, many only allow reimbursement for home health agencies (2022).

Unfortunately, states with a higher percentage of rural areas and who experience a lack of healthcare access, such as Montana, South Dakota, Wyoming, Kentucky, West Virginia, etc., have no Medicaid reimbursement for remote patient monitoring, severely limiting patients’ access to healthcare residing in these areas.

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**Policy Considerations**

* Expand Centers for Medicaid & Medicare Services (CMS) coverage to include remote patient monitoring as a covered telehealth modality.
  + This expansion would reimburse remote patient monitoring services in all fifty states within the United States.
  + This expansion would reimburse for the collection and analysis of patient data, as well as clinical staff communication with a patient or caregiver.
* Expand eligibility to participate in remote patient monitoring for chronic care management.
* This expansion would allow individuals who do not currently meet eligibility requirements to participate in remote patient monitoring services.
* This expansion would lower the requirement of multiple chronic conditions to at least one chronic condition in order to participate.

*Telehealth policy trend maps*. CCHP. (2021, April 15). Retrieved August 4, 2022, from https://www.cchpca.org/policy-trends/

**Ethical concern**

While the use of remote patient monitoring has shown to provide benefits for chronic disease management, few potential harms have created ethical concern for its complete implementation. According to the PHG Foundation, overreliance on data could result in the overestimation of the technology’s capabilities, potentially creating an issue if the technology were to incorrectly detect and/or miss a problem (2019). Additionally, the Centers for Medicare & Medicaid Services has been reluctant to cover remote monitoring due to fear of overutilization of services.

Another ethical concern of remote patient monitoring use includes the possibility of compromised patient data. Since remote patient monitoring technologies collect and analyze mass amounts of data, there is a concern for a breach of privacy.

According to HealthcareIT News, it is estimated that for every 500 high-risk Medicare patients who have more than one chronic condition, health systems can realize $5.2 million in annual cost savings (2022).

**Who is involved?**

There are many key stakeholders in the implementation of remote patient monitoring devices for chronic care management. These stakeholders are those who are impacted by the implementation and outcome of a project. Stakeholders can either be internal or external, meaning their interest in the project comes through a direct or indirect relationship. The internal stakeholders are the hospital owners who adopt remote patient monitoring, along with its residing physicians, nurses and employees. In addition, the external stakeholders would include suppliers, those of which provide the remote patient monitoring technology, regulators, who create and enforce the laws and policies surrounding remote patient monitoring, shareholders, and most importantly the end-users who benefit from the technology.

**Conclusion**

Remote patient monitoring has created an opportunity for chronic patients to receive consistent access to healthcare, despite geographic isolation. Individuals residing in rural areas are faced with endless barriers when trying to receive appropriate healthcare. When these geographically isolated individuals are diagnosed with a chronic condition, their need for continuous healthcare greatly increases, but unfortunately many risk unfavorable disease progression due to failure to obtain needed care. With the growth of technology, remote patient monitoring has made it possible to receive healthcare from the comfort and accessibility of their own home. The number of patients with chronic diseases is continuing to grow, but with CMS expansion and decreased restrictions, we could see a reduction in preventable hospitalizations as well as an increase in patient health outcomes.

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**Costs Surrounding Chronic Disease Management**

Due to its prevalence, the cost of managing chronic diseases has skyrocketed. According to the Centers for Disease Control and Prevention, chronic disease is a leading driver in the nation’s $4.1 trillion in annual health care cost (2022). Many organizations continue to rely on costly in-office appointments resulting in increased costs for both the patient and the healthcare clinic.

In one study conducted by Hummel et al. that analyzed the costs of remote patient monitoring among patients with cardiac defibrillators, a decrease in the total number of scheduled and unscheduled outpatient visits was found. In addition to decreased visits, a reduction in hospitalizations, as well as shorter lengths of stay was discovered, resulting in lower inpatient costs. Furthermore, the study revealed that remote patient monitoring was, in fact, cost effective as compared to traditional in-person follow-ups (2019).

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