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Evaluating the Impact of KardiaMobile on Healthcare Expenditures

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Title: Evaluating the Impact of KardiaMobile on Healthcare Expenditures

Christopher Gerace MPH, Daniel Frisch MD

Background:

KardiaMobile is a mobile ECG device, with smartphone connectivity, that is able to detect atrial fibrillation (a-fib). The device captures a 30 second reading and an algorithm differentiates a-fib from sinus rhythm. The mobile application can alert the user to an a-fib reading and also send the ECG output to their personal physician. By monitoring a-fib without accessing traditional care, KardiaMobile has the potential to reduce healthcare costs for patients with a-fib. This study looked to evaluate the effect of KardiaMobile on healthcare utilization for patients with suspected or diagnosed a-fib and who see a clinical cardiac electrophysiologist.

Methods:

To measure utilization, we conducted a retrospective chart review. A database was created documenting the number of times patients went to office visits, the emergency department, were admitted to the hospital, had a cardiac procedure done, called/messaged the office, used cardiac monitors, and had cardiac imaging conducted. Each of these events were counted for one year prior to the first time the patient used KardiaMobile, and up to one year after they began using KardiaMobile.

Results:

Comparing the pre-Kardia and current-Kardia timeframes, we observed a minor overall difference in healthcare utilization. Looking at individual points of contact with the healthcare system, there was a reduction in emergency department visits.

Conclusion:

The use of KardiaMobile in patients with diagnosed or suspected a-fib was not associated with any difference in overall healthcare utilization. The data show that there was a significant reduction in higher acuity points of care--notably emergency department visits.