Remote Physiological Monitoring
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Abstract—Remote physiological monitoring is a rapidly growing technology that is used to monitor a patient that has had recent health problems, to ensure that they are remaining healthy, and if not signals are sent off that alert them of the ailment.

I. INTRODUCTION
Remote Physiological Monitoring, also called remote patient monitoring is a method of monitoring the body’s vital signs. It is a highly useful in aiding patients from a distance and allowing them to receive supervision from the comfort of their own home. This ultimately minimizes personal costs and hospital visits. Remote physiological monitoring is used to monitor a patient’s blood pressure, diabetes or patients who suffer from dementia and are at risk of falling, and this is done through use of sensors on the body that take the data from the body’s readings and transfer it through a telecommunication device to a third party or healthcare professional who then can assess the issues with the patient.

II. METHODS
Most Remote Physiological machines follow a basic architecture that consists of 4 technological components. The first part is the sensors that are connected to the patient’s body, and they are enabled by wireless communications that measure physiological parameters. The second component is the local data storage with the patient that interconnects with the sensors and the healthcare providers. The third component is the centralized repository which stores the data sent from the receptors. Lastly there is diagnostic application software that sends off treatment recommendations based off the diagnosis of the disease that the patient has.

III. RESULTS
The most highly advanced RPM machine right now is the Equivital™ machine which has received approval from CE which is a company that maintains the safety standards for medical machines. This machine was developed by the Jaltek group and is a wearable physiological monitoring system providing real time visibility of a patient’s vital signs such as heart rate, temperature and blood-oxygen saturation.

IV. DISCUSSION
Remote physiological monitoring is a highly effective method to monitor patients from a distance, and makes for more effective use of time by health care providers. This allows for hospitals to run smoother and ultimately patients have less hospital visits that they need to attend. This will lead to a lower mortality rate, a lower rate of bed days spent in the hospital, and less emergency room visits. Unfortunately there are some downsides to this treatment. To get the full benefit of this technology the patient must be highly compliant with the state of their health, and pay attention to the machinery. Without the patient’s willingness to manage their health, remote physiological monitoring will likely fail. Furthermore, RPM is a highly expensive technology that would make it unlikely to be heavily desired in the medical world. The total cost for standard care with one of these machines is between $3,000-5,000. For this system to be more demandable in the medical market the price to deploy one of these machines must drop drastically. Lastly, because Remote Physiological Monitoring employs wireless technology, it would be highly difficult to manage one of these systems in a rural area.

REFERENCES