

Readmission and Penalty- Saving Analysis for Rural Areas Hospitals through Remote Patient Monitoring. A Case Study of St Peters Hospital, St Vincent, and Benefis Hospitals

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Abstract

According to Association of American Medical Colleges, Rural American make up at least 15 to 20% of the U.S. population face inequities that result in worse health care than that of urban and suburban residents. Most of the rural healthcare facilities can now switch to RPM for them to be saved from CMS penalties if hospitals provide free broad band internet service. GPA will convince the hospitals to invest on broad band internet to be able to connect with patients living in rural areas more efficiently and have better access to healthcare through remote patient monitoring. GPA has reached out to an accountable care organization that have provided enough data showing the effectiveness of RPM on Heart failure patient's readmission rates in rural areas hospitals. GPA aim to use remote patient monitoring based on modern technology to collect data and help heart failure patients manage their health without visiting the healthcare setting in rural areas.

Keywords: RPM; CMS Penalties; GPA; Rural Healthcare programs

Definition of Terms

GPA- (Griffin Population Analytic)

RPM- (remote patient monitoring)

CMS- Center for Medicare and Medicaid

FCC-Federal Communications Commission

Chapter One: Introduction

Background of the study

The need to improve health outcomes and improve the quality of healthcare has called hospitals to turn to using telecommunication technologies. We are in the era where healthcare services are delivered through videoconferencing, remote monitoring, electronic consults, and wireless communication. One of the widely used technologies in the healthcare sector is the Remote Patient Monitoring. According to Klein, remote patient monitoring entails the use of technological devices such as wearable heart monitors, Bluetooth enabled scales, glucose monitors, and maternity care trackers to diagnose and monitor patients. Remote patient monitoring has become of the most used programs to deliver quality healthcare even in the remote areas. Remote patient monitoring present numerous benefits to healthcare providers and the patients including; improving the quality of healthcare, reducing the cost of healthcare, it gives the patients the peace of mind and daily assurance, and it enables physicians to provide more support to the patients and give constant feedback to the patients about their conditions. Additionally, RPM saves time of the patients as the patients do not have to visit the hospitals every time for diagnosis and examination.

The use of technology to connect with the patients remotely is gaining momentum in the US report that over 50% of U.S hospitals examine patients through the use of video conferencing or other technology tools. However, many patients cannot take the advantage of RPM due to lack of internet connectivity. Tuckson et al. report that 40% of the American population lives in the rural areas and a significant percentage of the criticized are not connected to the broadband internet. There has been high prevalence of chronic conditions in the

United States and the cases are predicted to increase by 2020. Klein, reports that, 51% of US adult population is living with at least one chronic condition and 27% have multiple chronic conditions such as chronic obstructive pulmonary disease (COPD), cancer, and stroke and this number is expected to grow by half by 2030.

The chronic conditions have been among the leading causes of readmissions to hospitals and Heart Failure (HF) has been one of the leading causes of readmissions in hospitals. Many hospitals have reduced the HF readmissions significantly by the use of remote patient monitoring. Almost every other Medicaid program has some form of coverage for telehealth services and the private payers are enjoying the coverage for many telehealth services. However, other hospitals especially those in the remote areas cannot monitor heart failure patients through RPM because most of the patients are not connected to the broadband internet.

It is a major challenge for most of the rural hospitals to do constant follow-up for all discharged HF patients since the patients do not have internet connection at home. This limits the implementation of remote patient monitoring to which can yield good results in reducing readmission rates and save hospitals from CMS penalties. It is disheartening to note that many hospitals are registering high rates of readmissions within thirty days of discharge and hence are penalized heavily by CMS. The failure by rural hospitals to use technology to monitor the HF patients has increased the cases of readmissions within thirty days of discharge. The increased HF readmissions have

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increased the penalties charged by Centre for Medicaid & Medicare to the hospitals for the failure to keep the readmissions down. According to Federal Communication Commission, the US wants to increase the internet coverage to at least 80% of the population by 2030. However, this may take longer and many hospitals will be continue to penalized heavily by CMS for failure to use appropriate programs such as RPM to chronic patients readmissions that occur within 30 days of discharge. One of the most brilliant ideas which can be utilized by rural hospitals to increase the use of RPM is by paying the broadband internet for the discharged patients to help reduce readmissions. The challenge is whether the hospitals can make enough savings from the reduced readmissions to pay for satellite internet for the discharged rural patients.

Statement of the problem

Technology is changing the way healthcare is delivered. Remote patient monitoring is becoming an option for many hospitals to do value-based care for their patients. This is made possible by technology since connecting with patients and sharing information is quite very efficient. Nevertheless, there is huge gap in broadband access in most of the rural areas in the United States. According to Association of American Medical Colleges, at least 20% of the U.S. population live in rural areas and face inequities that result in worse health care than that of urban and suburban residents and the one of the inequalities is the digital divide whereby most the rural citizens are not connected to the broadband internet. The FCC's Rural Health Care Program supports broadband adoption, but it is administratively burdensome and provides an insufficient level of subsidy for remote health care providers. This limits them from implementing effective RPM programs.

The failure to use digital technologies makes it difficult for rural hospitals to do effective follow up for all patients discharged from the hospitals and this results to high readmission rate within 30 days of discharge a situation that is highly penalized by CMS. Under programs set up by the Affordable Care Act, the federal penalizes hospitals that have high rates of readmissions and those with the highest numbers of infections and patient injuries. Medicare penalizes hospitals up to three percent for each patient readmitted within 30 days of discharge.

Heart Failure is among the leading causes of readmissions for the hospitals and using RPM can help the hospitals to reduce the readmissions significantly [1]. GPA seeks to study on whether hospitals can register significant reductions in readmissions enough cater for internet expenses if the hospitals pay for broadband internet for the remote HF patients in RPM program. The study will focus on three rural hospitals in Montana which usually register high levels of readmissions within thirty days of discharge of chronic hence ending up being penalized by CMS. The three hospitals include; St Peters Hospitals, St Vincent Hospital, and Benefis Hospital.

Research Hypothesis

The hypothesis is of this study is that if the hospitals pay for internet connection to support RPM in homes of rural HF patients, the hospitals will register enough readmission reduction enabling the hospitals to make significant savings on CMS penalties be enough to pay cater for the cost of internet services [2].

Research Questions

This research seeks to answer the following questions.

Can hospitals reduce HF readmissions by implementing RPM?

Can hospitals reduce CMS penalties by paying satellite broadband internet for rural HF patients on RPM?

Is it financially viable for hospitals to pay for broadband internet for rural HF patients on RPM?

Scope of the study

The study will focus on rural hospitals that register high CMS penalties every year due to high levels of readmissions on HF patients that occur within 30 days of discharge [3]. The main agenda of the study will be to show the hospitals how to save through reduction of HF patient's readmission rate through paying for broadband internet in HF patients' homes to facilitate the remote patient monitoring program. Paying for the broadband internet for the HF patients will enable the hospitals to follow up and monitor the discharged patients closely through RPM program hence enabling the hospitals to reduce the rate of readmissions. The reduction in readmissions will enable the hospitals to make enough savings to pay for the broadband internet [4].

Significance of the study

GPA penalty-saving analysis model will demonstrate how paying for broadband by hospitals in rural areas can lead to reduction of readmission rate and yield in decreased Medicare penalization for Heart failure in hospitals located in rural areas in the United States.

Limitation of the Study

The data analysis will be based on unpublished work due to lack of enough literature in the topic of the study.

Chapter Two: Literature Review

Introduction

The use of digital technologies to collect medical and other forms of data from individuals from one location and transmit the data electronically to healthcare professionals in other locations for assessment and recommendations is a growing field that has been widely accepted [5]. According to Klein, 60% of the patients feel RPM is safe and are ready to be monitored remotely from their homes. However, some patients still have the notion that being examined through telecommunication devices is not as effective as an examination on one-one basis. Other patients believe that RPM services increases the healthcare costs. However, this myth has been disqualified by the several studies that have been conducted to determine the benefits of using Remote Patient Monitoring program. According to Meyer (2011), RPM improves patient engagement and health outcomes hence thereby reducing readmissions and lowering healthcare cost. Meyer reports that Remote patient monitoring can improve the health outcomes of six in every ten patients and therefore it is a program worth to invest in.

Malasinghe et al. argue that the RPM technologies are user friendly and cost effective and hospitals should implement them to improve the patients' outcomes and to save significant costs. Many hospitals are turning to RPM to reduce the high rates of hospital readmissions and reduce the high CMS penalties that arise as a result of high hospitals readmissions that occur within 30 days of discharge. According to Hjelm CMS readmission penalties and length of stay are the key contributors to the high increased hospital bills. Healthcare spending has increased by 4.2% between 2016 and 2017 to \$ 3.5 trillion or what is termed as \$ 10,730 per person. In 2016, there were over 35 million hospitals stays which amounted to 104.2 stays per 100, 000 population. Nevertheless,

the average cost per hospital stay was \$ 11,700 making hospitalization one of the most expensive types of healthcare utilization. In 2017, the aggregate hospital costs for 35.8 million hospital stays totaled \$ 434.2 billion [6]. The reported statistics are discouraging but the spending by hospitals can be brought down significant if hospitals embrace remote patient monitoring.

Interestingly, the new healthcare legislation allows physicians to bill for the service. CMS covers the RPM services under the following CPT codes; 99453, 99454, 99457 and 99458. The CPT code 99453 covers initial set of RPM services and patient education, and CPT code 99454 covers supply of devices and collection, transmission, and summary the services. On the other hand, the CPT code 99457 covers the first 20 minutes of remote physiologic monitoring by clinical staff whereas CPT codes 99458 covers additional 20 minutes of remote physiologic monitoring by clinical staff above the 20 minutes covered by CPT 99457 (CMS, 2020). Importance of RPM after Discharge of HF Patients

Many scholars have researched to determine whether monitoring heart failure patients through remote monitoring program that can have any significant impacts on discharged patients. One of the studies which sought to determine the effectiveness of RPM after discharge of hospitalized HF patients was conducted by Ong et al. The authors monitored 737 patients out sample size of 1437 HF patients for 180 days on RPM after the patient were discharged from different hospitals. The other 700 patients were not put under any RPM program. The patients under the RPM program were monitored through mobile phones were the physicians collected data weekly on the progress of the patients and advised the patients according on to manage the situation. Readmissions were reported on the patient in the RPM programs and those not in the RPM and therefore the scholars concluded that RPM do not have significant impact in reducing readmissions after discharge for the HF patients [7].

Hale et al. also sought to determine whether monitoring HF patients under the RPM can help to reduce hospitals readmissions. The scholars compared Med Sentry remote patient monitoring and usual in older HF patients. The scholars found that the use of RPM reduced the all risks including lack of medical adherence that caused hospitalizations after discharges. Hale et al. concluded that, Med sentry hospital monitoring system was effective in reducing readmissions and recommended the use of RPM programs to improve health outcomes and to ensure quality care to the HF patients.

Another study to show the effectiveness of RPM was conducted by Mount Sinai Hospital. The hospital put 380 patients on specialized care from September 2015 to June 2018 to compare their rates of readmissions. Among these patients, 28 HF patients were put on RPM program. The hospital noted that the 30-day readmissions for the HF patients reduced from 22% to 9%, which represent a 40% reduction [8]. This shows the monitoring HF patients through RPM program can help to lower the readmissions rate after hospitals significant hence avoiding the CMS penalties that can arise due to high rates of readmissions after 30 days of discharges (CMS, 2020).

The Digital Divide in United States

United States struggles to reduce the big digital divide across the country. There is a large population who has no broadband internet connectivity which Federal Communication Commission estimates to be more than by 20 million people. According to FCC, 39% of rural

dwellers lack broadband access which is relatively an extremely high number compared to 4% of urban Americans The rural areas account for the largest percentage of the areas that are not connected to the broadband internet and this is devastating since the rural populations are denied to enjoy the fruits of internet connectivity and modern technology. For instance, the rural population cannot receive healthcare services remotely through technological devices due to lack of internet connectivity to facilitate the process. Rural residents have few choices of internet services providers or none. Those internet providers available charge higher prices for very lower quality services. This explains why only few rural Americans use internet to get services online or do their activities remotely compared to urban residents (FCC, 2020) [9].

The increasing use of remote patient monitoring and other types of telehealth services is increasing the urgent to have internet connectivity in the rural areas. However, due to lack of broadband internet connectivity in the rural areas, the hospitals and patients are turning to private internet providers to get internet connectivity. The Satellite broadband is one of the most widely available type of internet delivery in the U.S. Satellite broadband is one way to get to get internet delivery anywhere in the rural areas. The most widely satellite provider recognized by Federal communications commission is HughesNet whose download speed 150% faster than the other providers and upload speed is about 200% better than the other satellite broadband internet providers. Nevertheless, the installation and the monthly subscriptions can cost the rural hospitals and the patients significant amount money. Comparatively, HughesNet is averagely cheaper and efficient as the installation is free and the monthly subscription is \$ 4.99 per month. Figure one shows the rural digital divide in the US whereas figure 2 shows the broadband internet connectivity in all US states [figure 1,2].

Chapter Three: Research Methodology

Research design and methodology

Quantitative data was collected from Center for Medicaid & Medicare services database, Hospital Readmission Reduction Program. These data include the number of discharges and readmissions patients with the 6 DRGs including Heart Failure. Data on penalties on three hospitals was collected and calculated using the payment adjustment factor. Descriptive design was the most appropriate for Saving Cost Analysis. The significance of the descriptive research design made it possible to integrate the quantitative and qualitative methods of data collection.

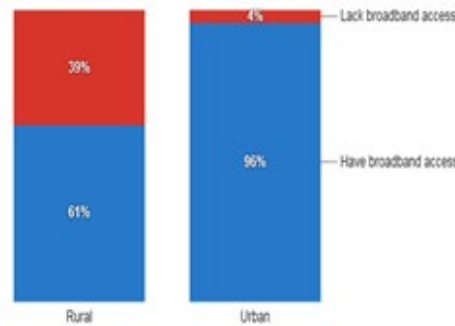
Data Collection

Hospital readmissions reduction program (HRRP)

- CMS calculates the payment reduction and component results for each hospital based on its performance during a rolling three-year performance period.
- The payment adjustment factor is the form of the payment reduction CMS uses to reduce hospital payments.
- Payment reductions are applied to all Medicare fee-for-service base operating diagnosis-related group payments during the FY (October 1 to September 30).
- The payment reduction is capped at 3 percent (that is, a payment adjustment factor of 0.97).
- All the calculations are based on the unpublished model developed by Zupec J. and Lucado G [10].

The rural digital divide in the US

Nearly all urban residents have access to true high-speed internet (25 Mbps download/3 Mbps upload), while less than two-thirds of rural Americans have the chance to use the internet at speeds like that.



The Conversation, CC-BY-ND
Source: Federal Communications Commission

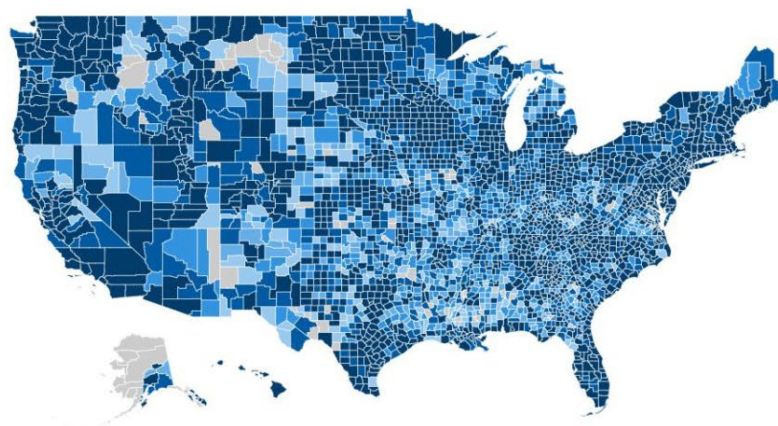
Building a nationwide internet structure

The basic problem is that high-speed internet has not yet reached huge swathes of rural America. There are two main ways to fix this problem: with wires, and without wires.

Smaller towns in rural areas typically have two options for wired connectivity. About 59 percent of all fixed broadband customers use

Figure 1: Rural Digital divide.

FCC indicates broadband is not available to 24.7M people



* FCC broadband has or "could" provide greater than or equal to 25Mbps / 3Mbps

Data sources: FCC 2018 Broadband Report based on Form 477 data from December 2016 and Microsoft data from September 2018
Form 477 sample data format: 0000000000000000.DBAName.0.0.0.0.0.0

To assist with additional broadband mapping analysis, [click here](#) to request an Excel version of this chart



FCC broadband map

FCC and Microsoft

Congressional districts

State - filter

- Select all
- Alabama
- Alaska
- Arizona
- Arkansas
- California
- Colorado
- Connecticut
- Delaware
- District of Columbia
- Florida
- Georgia
- Hawaii
- Idaho
- Illinois
- Indiana
- Iowa
- Kansas
- Kentucky
- Louisiana
- Maine
- Maryland
- Massachusetts
- Michigan

Figure 2: Broadband availability in U.S.

Total CMS payment for St Peters Hospital

DRG Definition	Total Discharges	Average Covered Charges	Average Total Payments	Average Medicare Payments	Total CMS payments
003 - ECMO OR TRACH W MV >96 HRS OR PDX EXC FACE, MOUTH & NECK W MAJOR.	11	\$444,819.09	\$114,243.64	\$112,500.64	\$1,237,507.00
025 - CRANIOTOMY & ENDOVASCULAR INTRACRANIAL PROCEDURES W MCC	23	\$130,271.48	\$31,924.52	\$28,833.26	\$663,165.00
026 - CRANIOTOMY & ENDOVASCULAR INTRACRANIAL PROCEDURES W CC	12	\$69,015.00	\$19,433.33	\$18,236.50	\$218,838.00
027 - CRANIOTOMY & ENDOVASCULAR INTRACRANIAL PROCEDURES W/O CC/MCC	20	\$66,091.75	\$15,440.30	\$14,064.45	\$281,289.00
039 - EXTRACRANIAL PROCEDURES W/O CC/MCC	28	\$30,949.46	\$8,077.25	\$6,185.86	\$173,204.00
057 - DEGENERATIVE NERVOUS SYSTEM DISORDERS W/O MCC	11	\$20,956.09	\$8,054.91	\$6,068.00	\$66,748.00
064 - INTRACRANIAL HEMORRHAGE OR CEREBRAL INFARCTION W MCC	47	\$39,359.15	\$12,085.89	\$10,820.57	\$508,567.00
065 - INTRACRANIAL HEMORRHAGE OR CEREBRAL INFARCTION W CC OR TPA IN 24 HRS	45	\$27,386.07	\$7,194.33	\$5,789.47	\$260,526.00
066 - INTRACRANIAL HEMORRHAGE OR CEREBRAL INFARCTION W/O CC/MCC	16	\$16,548.56	\$6,691.69	\$3,655.50	\$58,488.00
069 - TRANSIENT ISCHEMIA W/O THROMBOLYTIC	20	\$19,050.85	\$5,416.80	\$4,216.80	\$84,336.00
101 - SEIZURES W/O MCC	21	\$21,121.86	\$5,989.76	\$4,660.14	\$97,863.00
164 - MAJOR CHEST PROCEDURES W CC	11	\$60,656.27	\$19,543.00	\$14,363.91	\$158,003.00
166 - OTHER RESP SYSTEM O.R. PROCEDURES W MCC	12	\$130,045.92	\$31,799.50	\$30,780.33	\$369,364.00
167 - OTHER RESP SYSTEM O.R. PROCEDURES W CC	11	\$40,368.27	\$14,085.00	\$9,981.64	\$109,798.00
175 - PULMONARY EMBOLISM W MCC	28	\$33,209.04	\$9,895.68	\$8,685.57	\$243,196.00
176 - PULMONARY EMBOLISM W/O MCC	14	\$17,103.36	\$6,319.57	\$5,098.57	\$71,380.00
177 - RESPIRATORY INFECTIONS & INFLAMMATIONS W MCC	17	\$33,119.82	\$11,721.65	\$9,894.06	\$168,199.00
189 - PULMONARY EDEMA & RESPIRATORY FAILURE	124	\$26,709.94	\$8,792.56	\$7,182.62	\$890,645.00
193 - SIMPLE PNEUMONIA & PLEURISY W MCC	82	\$28,352.85	\$9,436.11	\$7,889.66	\$646,952.00
194 - SIMPLE PNEUMONIA & PLEURISY W CC	28	\$18,790.39	\$6,328.96	\$5,100.79	\$142,822.00
208 - RESPIRATORY SYSTEM DIAGNOSIS W VENTILATOR SUPPORT <=96 HOURS	15	\$61,933.60	\$15,576.13	\$14,614.53	\$219,218.00
219 - CARDIAC VALVE & OTH MAJ CARDIOTHORACIC PROC W/O CARD CATH W MCC	16	\$257,987.75	\$60,600.94	\$59,415.88	\$950,654.00
233 - CORONARY BYPASS W CARDIAC CATH W MCC	13	\$276,349.85	\$62,260.38	\$60,906.77	\$791,788.00
234 - CORONARY BYPASS W CARDIAC CATH W/O MCC	17	\$195,526.59	\$39,370.35	\$32,799.41	\$557,590.00
235 - CORONARY BYPASS W/O CARDIAC CATH W MCC	18	\$223,393.06	\$43,258.22	\$42,197.78	\$759,560.00
236 - CORONARY BYPASS W/O CARDIAC CATH W/O MCC	24	\$167,304.54	\$26,794.13	\$25,530.08	\$612,722.00
244 - PERMANENT CARDIAC PACEMAKER IMPLANT W/O CC/MCC	11	\$70,143.45	\$14,056.09	\$12,776.73	\$140,544.00
246 - PERCUTANEOUS CARDIOVASCULAR PROCEDURES W DRUG-ELUTING STENT W MCC OR	28	\$109,566.50	\$22,485.89	\$21,365.75	\$598,241.00
247 - PERC CARDIOVASC PROC W DRUG-ELUTING STENT W/O MCC	63	\$83,150.13	\$14,522.19	\$12,661.71	\$797,688.00
254 - OTHER VASCULAR PROCEDURES W/O CC/MCC	11	\$64,956.82	\$12,108.55	\$10,842.27	\$119,265.00
266 - ENDOVASCULAR CARDIAC VALVE REPLACEMENT W MCC	22	\$186,064.05	\$48,580.14	\$47,858.14	\$1,052,879.00
267 - ENDOVASCULAR CARDIAC VALVE REPLACEMENT W/O MCC	18	\$183,460.44	\$38,763.11	\$37,533.00	\$675,594.00
269 - AORTIC AND HEART ASSIST PROCEDURES EXCEPT PULSATION BALLOON W/O MCC	11	\$123,375.45	\$29,911.45	\$28,661.45	\$315,276.00
271 - OTHER MAJOR CARDIOVASCULAR PROCEDURES W CC	13	\$92,589.46	\$22,031.23	\$20,784.85	\$270,203.00
272 - OTHER MAJOR CARDIOVASCULAR PROCEDURES W/O CC/MCC	11	\$94,198.00	\$17,569.82	\$16,185.27	\$178,038.00
280 - ACUTE MYOCARDIAL INFARCTION, DISCHARGED ALIVE W MCC	18	\$41,712.89	\$11,362.00	\$10,350.89	\$186,316.00
281 - ACUTE MYOCARDIAL INFARCTION, DISCHARGED ALIVE W CC	16	\$30,874.63	\$6,871.69	\$5,775.06	\$92,401.00
286 - CIRCULATORY DISORDERS EXCEPT AMI, W CARD CATH W MCC	22	\$49,560.86	\$14,766.41	\$13,855.82	\$304,828.00
287 - CIRCULATORY DISORDERS EXCEPT AMI, W CARD CATH W/O MCC	27	\$39,620.44	\$8,876.41	\$6,759.56	\$182,508.00
291 - HEART FAILURE & SHOCK W MCC	165	\$29,680.48	\$9,807.66	\$8,840.27	\$1,458,644.00
292 - HEART FAILURE & SHOCK W CC	33	\$22,269.12	\$7,200.03	\$5,388.00	\$177,804.00
293 - HEART FAILURE & SHOCK W/O CC/MCC	11	\$13,871.64	\$4,479.00	\$3,572.73	\$39,300.00
308 - CARDIAC ARRHYTHMIA & CONDUCTION DISORDERS W MCC	36	\$30,306.58	\$8,490.31	\$7,342.69	\$264,337.00
309 - CARDIAC ARRHYTHMIA & CONDUCTION DISORDERS W CC	41	\$19,669.54	\$5,525.73	\$4,339.37	\$177,914.00
310 - CARDIAC ARRHYTHMIA & CONDUCTION DISORDERS W/O CC/MCC	16	\$15,323.88	\$4,222.00	\$3,171.06	\$50,737.00
312 - SYNCOPE & COLLAPSE	12	\$18,846.50	\$6,397.50	\$4,261.58	\$51,139.00

314 - OTHER CIRCULATORY SYSTEM DIAGNOSES W MCC	18	\$37,182.83	\$12,924.06	\$11,872.83	\$213,711.00
329 - MAJOR SMALL & LARGE BOWEL PROCEDURES W MCC	16	\$63,982.00	\$27,892.50	\$26,562.44	\$424,999.00
330 - MAJOR SMALL & LARGE BOWEL PROCEDURES W CC	22	\$58,293.18	\$17,762.91	\$13,867.77	\$305,091.00
331 - MAJOR SMALL & LARGE BOWEL PROCEDURES W/O CC/MCC	27	\$39,567.26	\$11,861.15	\$9,453.96	\$255,257.00
377 - G.I. HEMORRHAGE W MCC	24	\$40,321.29	\$11,937.96	\$10,755.17	\$258,124.00
378 - G.I. HEMORRHAGE W CC	64	\$23,593.27	\$6,834.44	\$5,573.50	\$356,704.00
389 - G.I. OBSTRUCTION W CC	21	\$22,061.95	\$6,089.00	\$5,088.86	\$106,866.00
391 - ESOPHAGITIS, GASTROENT & MISC DIGEST DISORDERS W MCC	18	\$35,915.00	\$8,478.17	\$7,757.83	\$139,641.00
392 - "ESOPHAGITIS, GASTROENT & MISC DIGEST DISORDERS W/O MCC"	30	\$23,670.13	\$5,505.63	\$4,458.10	\$133,743.00
417 - LAPAROSCOPIC CHOLECYSTECTOMY W/O C.D.E. W MCC	13	\$51,854.46	\$15,717.92	\$14,539.08	\$189,008.00
418 - LAPAROSCOPIC CHOLECYSTECTOMY W/O C.D.E. W CC	13	\$41,955.62	\$11,183.23	\$9,904.23	\$128,755.00
441 - "DISORDERS OF LIVER EXCEPT MALIG, CIRRH, ALCHHEPA W MCC"	13	\$34,538.15	\$11,994.31	\$11,006.92	\$143,090.00
442 - DISORDERS OF LIVER EXCEPT MALIG, CIRRH, ALCHHEPA W CC	11	\$22,053.00	\$7,525.55	\$5,077.09	\$55,848.00
454 - COMBINED ANTERIOR/POSTERIOR SPINAL FUSION W CC	24	\$129,404.04	\$45,786.96	\$39,308.79	\$943,411.00
455 - COMBINED ANTERIOR/POSTERIOR SPINAL FUSION W/O CC/MCC	32	\$118,528.69	\$32,952.22	\$29,025.00	\$928,800.00
460 - SPINAL FUSION EXCEPT CERVICAL W/O MCC	67	\$90,417.03	\$25,642.21	\$24,125.84	\$1,616,431.00
464 - WND DEBRID & SKN GRFT EXC HAND, FOR MUSCULO-CONN TISS DIS W CC	11	\$56,530.27	\$18,558.18	\$17,623.91	\$193,863.00
467 - REVISION OF HIP OR KNEE REPLACEMENT W CC	21	\$66,839.48	\$22,997.05	\$20,152.29	\$423,198.00
468 - REVISION OF HIP OR KNEE REPLACEMENT W/O CC/MCC	36	\$68,639.03	\$19,394.56	\$16,147.19	\$581,299.00
469 - MAJOR HIP AND KNEE JOINT REPLACEMENT OR REATTACHMENT OF LOWER EXTREM	29	\$69,757.21	\$21,792.90	\$18,624.03	\$540,097.00
470 - MAJOR HIP AND KNEE JOINT REPLACEMENT OR REATTACHMENT OF LOWER EXTREM	565	\$47,402.06	\$14,174.14	\$11,826.81	\$6,682,146.00
473 - CERVICAL SPINAL FUSION W/O CC/MCC	11	\$49,133.18	\$14,992.55	\$13,602.82	\$149,631.00
480 - HIP & FEMUR PROCEDURES EXCEPT MAJOR JOINT W MCC	34	\$68,032.12	\$18,927.26	\$17,537.38	\$596,271.00
481 - HIP & FEMUR PROCEDURES EXCEPT MAJOR JOINT W CC	45	\$59,796.96	\$13,592.33	\$12,331.98	\$554,939.00
482 - HIP & FEMUR PROCEDURES EXCEPT MAJOR JOINT W/O CC/MCC	17	\$37,286.88	\$11,104.18	\$9,754.18	\$165,821.00
483 - MAJOR JOINT/LIMB REATTACHMENT PROCEDURE OF UPPER EXTREMITIES	91	\$53,250.65	\$15,833.95	\$14,478.90	\$1,317,580.00
552 - MEDICAL BACK PROBLEMS W/O MCC	24	\$21,535.96	\$6,341.58	\$5,123.50	\$122,964.00
602 - CELLULITIS W MCC	11	\$27,570.00	\$9,573.45	\$8,464.82	\$93,113.00
603 - CELLULITIS W/O MCC	24	\$17,805.92	\$5,996.88	\$4,710.67	\$113,056.00
638 - DIABETES W CC	17	\$16,973.24	\$6,064.65	\$4,948.06	\$84,117.00
640 - MISC DISORDERS OF NUTRITION, METABOLISM, FLUIDS/ELECTROLYTES W MCC	23	\$28,394.70	\$8,533.00	\$6,771.96	\$155,755.00
641 - "MISC DISORDERS OF NUTRITION, METABOLISM, FLUIDS/ELECTROLYTES W/O MCC"	27	\$16,994.93	\$5,655.26	\$4,172.48	\$112,657.00
682 - RENAL FAILURE W MCC	58	\$31,708.52	\$10,250.84	\$9,205.47	\$533,917.00
683 - RENAL FAILURE W CC	56	\$19,995.68	\$6,717.48	\$5,491.16	\$307,505.00
689 - KIDNEY & URINARY TRACT INFECTIONS W MCC	11	\$29,590.36	\$8,467.73	\$7,332.45	\$80,657.00
690 - KIDNEY & URINARY TRACT INFECTIONS W/O MCC	27	\$17,216.33	\$5,705.26	\$4,579.04	\$123,634.00
698 - OTHER KIDNEY & URINARY TRACT DIAGNOSES W MCC	26	\$24,562.96	\$10,527.62	\$9,554.77	\$248,424.00
812 - RED BLOOD CELL DISORDERS W/O MCC	15	\$25,588.60	\$6,243.53	\$5,095.93	\$76,439.00
813 - COAGULATION DISORDERS	16	\$34,332.25	\$12,440.19	\$11,225.38	\$179,606.00
853 - INFECTIOUS & PARASITIC DISEASES W O.R. PROCEDURE W MCC	71	\$142,142.94	\$38,994.34	\$37,921.39	\$2,692,419.00
854 - INFECTIOUS & PARASITIC DISEASES W O.R. PROCEDURE W CC	15	\$51,216.87	\$15,514.87	\$14,277.80	\$214,167.00
871 - SEPTICEMIA OR SEVERE SEPSIS W/O MV >96 HOURS W MCC	384	\$39,785.17	\$12,447.88	\$11,136.64	\$4,276,469.00
872 - SEPTICEMIA OR SEVERE SEPSIS W/O MV >96 HOURS W/O MCC	101	\$24,222.53	\$7,575.01	\$5,985.45	\$604,530.00
917 - POISONING & TOXIC EFFECTS OF DRUGS W MCC	12	\$25,589.50	\$9,500.75	\$8,272.50	\$99,270.00
981 - EXTENSIVE O.R. PROCEDURE UNRELATED TO PRINCIPAL DIAGNOSIS W MCC	14	\$85,839.43	\$27,618.86	\$26,269.64	\$367,775.00
				Total	\$45,366,876.00

DRG Definition	Total Discharges	Average Covered Charges	Average Total Payments	Average Medicare Payments	Total CMS
025 - CRANIOTOMY & ENDOVASCULAR INTRACRANIAL PROCEDURES W MCC	13	\$65,779.85	\$29,789.85	\$28,766.15	\$373,960.00
038 - EXTRACRANIAL PROCEDURES W CC	22	\$43,313.45	\$10,899.59	\$9,889.50	\$217,569.00
039 - EXTRACRANIAL PROCEDURES W/O CC/MCC	28	\$35,284.21	\$7,757.50	\$6,635.46	\$185,793.00
057 - DEGENERATIVE NERVOUS SYSTEM DISORDERS W/O MCC	14	\$18,612.21	\$8,007.43	\$6,830.36	\$95,625.00
064 - INTRACRANIAL HEMORRHAGE OR CEREBRAL INFARCTION W MCC	37	\$28,537.73	\$12,318.76	\$11,282.57	\$417,455.00
065 - INTRACRANIAL HEMORRHAGE OR CEREBRAL INFARCTION W CC OR TPA IN 24 HRS	51	\$23,356.82	\$7,223.88	\$6,076.63	\$309,908.00
163 - MAJOR CHEST PROCEDURES W MCC	12	\$141,338.17	\$35,708.83	\$34,382.83	\$412,594.00
166 - OTHER RESP SYSTEM O.R. PROCEDURES W MCC	17	\$64,015.94	\$25,548.65	\$24,400.65	\$414,811.00
175 - PULMONARY EMBOLISM W MCC	19	\$25,680.84	\$10,331.79	\$8,832.16	\$167,811.00
177 - RESPIRATORY INFECTIONS & INFLAMMATIONS W MCC	30	\$30,442.83	\$12,930.37	\$11,880.87	\$356,426.00
189 - PULMONARY EDEMA & RESPIRATORY FAILURE	46	\$25,038.54	\$8,568.30	\$7,361.13	\$338,612.00
190 - CHRONIC OBSTRUCTIVE PULMONARY DISEASE W MCC	62	\$24,597.85	\$8,077.02	\$6,997.19	\$433,826.00
191 - CHRONIC OBSTRUCTIVE PULMONARY DISEASE W CC	23	\$21,167.00	\$6,443.91	\$5,274.52	\$121,314.00
193 - SIMPLE PNEUMONIA & PLEURISY W MCC	69	\$26,610.19	\$9,947.28	\$8,313.91	\$573,660.00
194 - SIMPLE PNEUMONIA & PLEURISY W CC	18	\$14,351.56	\$6,534.50	\$5,225.56	\$94,060.00
200 - PNEUMOTHORAX W CC	11	\$17,635.82	\$7,450.00	\$6,171.82	\$67,890.00
208 - RESPIRATORY SYSTEM DIAGNOSIS W VENTILATOR SUPPORT <=96 HOURS	23	\$50,029.91	\$16,519.61	\$15,529.87	\$357,187.00
220 - CARDIAC VALVE & OTH MAJ CARDIOTHORACIC PROC W/O CARD CATH W CC	12	\$151,085.33	\$36,577.83	\$35,185.42	\$422,225.00
233 - CORONARY BYPASS W CARDIAC CATH W MCC	13	\$217,225.54	\$53,884.92	\$52,464.23	\$682,035.00
243 - PERMANENT CARDIAC PACEMAKER IMPLANT W CC	21	\$57,305.90	\$18,162.76	\$16,747.62	\$351,700.00
246 - PERCUTANEOUS CARDIOVASCULAR PROCEDURES W DRUG-ELUTING STENT W MCC OR	40	\$82,620.48	\$22,537.80	\$21,251.25	\$850,050.00

247 - PERC CARDIOVASC PROC W DRUG-ELUTING STENT W/O MCC	63	\$57,649.92	\$15,777.37	\$13,007.87	\$819,496.00
252 - OTHER VASCULAR PROCEDURES W MCC	24	\$91,825.04	\$24,953.88	\$23,976.04	\$575,425.00
253 - OTHER VASCULAR PROCEDURES W CC	14	\$49,509.36	\$17,657.07	\$16,521.50	\$231,301.00
254 - OTHER VASCULAR PROCEDURES W/O CC/MCC	13	\$42,859.92	\$12,602.23	\$11,544.38	\$150,077.00
269 - AORTIC AND HEART ASSIST PROCEDURES EXCEPT PULSATION BALLOON W/O MCC	13	\$103,938.69	\$29,820.15	\$28,520.15	\$370,762.00
280 - "ACUTE MYOCARDIAL INFARCTION, DISCHARGED ALIVE W MCC"	48	\$32,036.50	\$11,666.58	\$10,622.69	\$509,889.00
281 - ACUTE MYOCARDIAL INFARCTION, DISCHARGED ALIVE W CC	24	\$22,976.21	\$6,899.88	\$5,829.92	\$139,918.00
286 - "CIRCULATORY DISORDERS EXCEPT AMI, W CARD CATH W MCC"	21	\$44,309.48	\$15,554.00	\$14,692.00	\$308,532.00
287 - CIRCULATORY DISORDERS EXCEPT AMI, W CARD CATH W/O MCC	28	\$28,997.71	\$8,222.32	\$7,201.39	\$201,639.00
291 - HEART FAILURE & SHOCK W MCC	104	\$26,748.02	\$10,515.87	\$9,318.03	\$969,075.00
292 - HEART FAILURE & SHOCK W CC	26	\$20,727.27	\$6,746.69	\$5,782.42	\$150,343.00
300 - PERIPHERAL VASCULAR DISORDERS W CC	11	\$25,175.64	\$7,089.64	\$6,303.64	\$69,340.00
308 - CARDIAC ARRHYTHMIA & CONDUCTION DISORDERS W MCC	20	\$32,019.50	\$8,692.95	\$6,969.75	\$139,395.00
309 - CARDIAC ARRHYTHMIA & CONDUCTION DISORDERS W CC	33	\$14,302.82	\$5,629.88	\$4,302.36	\$141,978.00
329 - MAJOR SMALL & LARGE BOWEL PROCEDURES W MCC	17	\$91,561.35	\$34,573.35	\$33,404.18	\$567,871.00
330 - MAJOR SMALL & LARGE BOWEL PROCEDURES W CC	25	\$59,981.52	\$17,245.36	\$15,984.24	\$399,606.00
377 - G.I. HEMORRHAGE W MCC	25	\$30,662.20	\$12,012.36	\$10,541.76	\$263,544.00
378 - G.I. HEMORRHAGE W CC	44	\$19,424.91	\$6,991.23	\$5,611.36	\$246,900.00
389 - G.I. OBSTRUCTION W CC	27	\$15,742.85	\$6,018.93	\$4,861.70	\$131,266.00
391 - ESOPHAGITIS, GASTROENT & MISC DIGEST DISORDERS W MCC	11	\$22,964.64	\$8,650.73	\$7,535.36	\$82,889.00
392 - ESOPHAGITIS, GASTROENT & MISC DIGEST DISORDERS W/O MCC"	33	\$15,888.27	\$5,424.03	\$4,275.67	\$141,097.00
393 - OTHER DIGESTIVE SYSTEM DIAGNOSES W MCC	11	\$31,260.73	\$12,940.91	\$9,464.64	\$104,111.00
394 - OTHER DIGESTIVE SYSTEM DIAGNOSES W CC	14	\$25,801.07	\$6,632.57	\$5,591.86	\$78,286.00
417 - LAPAROSCOPIC CHOLECYSTECTOMY W/O C.D.E. W MCC	11	\$65,999.45	\$16,751.27	\$15,625.36	\$171,879.00
432 - CIRRHOSIS & ALCOHOLIC HEPATITIS W MCC	12	\$40,240.17	\$12,603.17	\$11,491.17	\$137,894.00
433 - CIRRHOSIS & ALCOHOLIC HEPATITIS W CC	11	\$14,493.55	\$7,163.91	\$6,371.64	\$70,088.00
442 - DISORDERS OF LIVER EXCEPT MALIG,CIRR,ALC HEPA W CC	13	\$13,737.54	\$6,566.77	\$5,998.54	\$77,981.00
460 - SPINAL FUSION EXCEPT CERVICAL W/O MCC	28	\$88,172.00	\$29,065.57	\$25,581.86	\$716,292.00
469 - MAJOR HIP AND KNEE JOINT REPLACEMENT OR REATTACHMENT OF LOWER EXTREM	14	\$61,570.00	\$22,193.50	\$21,030.50	\$294,427.00
470 - MAJOR HIP AND KNEE JOINT REPLACEMENT OR REATTACHMENT OF LOWER EXTREM	173	\$46,204.87	\$14,919.17	\$12,623.20	\$2,183,814.00
473 - CERVICAL SPINAL FUSION W/O CC/MCC	12	\$44,224.75	\$15,950.25	\$14,600.00	\$175,200.00
480 - HIP & FEMUR PROCEDURES EXCEPT MAJOR JOINT W MCC	15	\$58,593.80	\$21,048.27	\$20,014.33	\$300,215.00
481 - HIP & FEMUR PROCEDURES EXCEPT MAJOR JOINT W CC	36	\$44,320.56	\$14,305.97	\$13,092.28	\$471,322.00
482 - HIP & FEMUR PROCEDURES EXCEPT MAJOR JOINT W/O CC/MCC	11	\$33,856.27	\$11,641.00	\$10,364.45	\$114,009.00
536 - FRACTURES OF HIP & PELVIS W/O MCC	13	\$14,777.54	\$5,392.31	\$4,290.38	\$55,775.00
552 - MEDICAL BACK PROBLEMS W/O MCC	16	\$16,017.13	\$6,274.81	\$5,030.19	\$80,483.00
563 - FX, SPRN, STRN & DISL EXCEPT FEMUR, HIP, PELVIS & THIGH W/O MCC	16	\$16,401.19	\$5,902.88	\$4,269.69	\$68,315.00
603 - CELLULITIS W/O MCC	21	\$15,870.81	\$6,008.33	\$4,850.43	\$101,859.00
637 - DIABETES W MCC	11	\$36,503.18	\$9,362.64	\$8,169.82	\$89,868.00
638 - DIABETES W CC	14	\$17,303.21	\$5,992.86	\$4,783.50	\$66,969.00
640 - MISC DISORDERS OF NUTRITION, METABOLISM, FLUIDS, ELECTROLYTES W MCC	17	\$45,186.88	\$10,992.82	\$8,140.65	\$138,391.00
641 - "MISC DISORDERS OF NUTRITION, METABOLISM, FLUIDS, ELECTROLYTES W/O MCC"	32	\$19,205.56	\$5,440.50	\$4,351.19	\$139,238.00
682 - RENAL FAILURE W MCC	35	\$32,412.43	\$10,556.34	\$9,486.23	\$332,018.00
683 - RENAL FAILURE W CC	52	\$19,374.02	\$6,583.98	\$5,338.75	\$277,615.00
689 - KIDNEY & URINARY TRACT INFECTIONS W MCC	11	\$21,557.27	\$7,587.64	\$6,400.73	\$70,408.00
690 - KIDNEY & URINARY TRACT INFECTIONS W/O MCC	31	\$15,562.32	\$5,649.10	\$4,454.94	\$138,103.00
698 - OTHER KIDNEY & URINARY TRACT DIAGNOSES W MCC	47	\$32,319.89	\$11,234.04	\$10,146.89	\$476,904.00
699 - OTHER KIDNEY & URINARY TRACT DIAGNOSES W CC	14	\$21,077.93	\$7,400.93	\$6,215.21	\$87,013.00
853 - INFECTIOUS & PARASITIC DISEASES W O.R. PROCEDURE W MCC	44	\$101,317.84	\$36,635.45	\$35,385.91	\$1,556,980.00
871 - SEPTICEMIA OR SEVERE SEPSIS W/O MV >96 HOURS W MCC	184	\$40,808.60	\$13,451.07	\$11,884.26	\$2,186,703.00
872 - SEPTICEMIA OR SEVERE SEPSIS W/O MV >96 HOURS W/O MCC	43	\$25,227.14	\$7,417.93	\$6,362.77	\$273,999.00
882 - NEUROSES EXCEPT DEPRESSIVE	12	\$12,702.50	\$5,563.75	\$4,568.25	\$54,819.00
883 - DISORDERS OF PERSONALITY & IMPULSE CONTROL	14	\$13,291.57	\$8,263.71	\$7,223.43	\$101,128.00
885 - PSYCHOSES	70	\$13,272.59	\$8,400.07	\$7,003.24	\$490,227.00
897 - ALCOHOL, DRUG ABUSE OR DEPENDENCE W/O REHABILITATION THERAPY W/O MCC	16	\$23,567.13	\$5,689.88	\$3,660.44	\$58,567.00
981 - EXTENSIVE O.R. PROCEDURE UNRELATED TO PRINCIPAL DIAGNOSIS W MCC	18	\$102,108.28	\$31,254.94	\$29,726.39	\$535,075.00
				Total	\$26,130,429.00

Total Payment per DRG for St Peters

DRG Definition	Total Discharges	Average Covered Charges	Average Total Payments	Average Medicare Payments	Total payment per DRG
190 - CHRONIC OBSTRUCTIVE PULMONARY DISEASE W MCC	55	\$17,735.65	\$7,770.04	\$6,371.95	\$350,457.00
191 - CHRONIC OBSTRUCTIVE PULMONARY DISEASE W CC	12	\$14,614.33	\$7,141.75	\$4,541.08	\$54,493.00
193 - SIMPLE PNEUMONIA & PLEURISY W MCC	107	\$23,879.44	\$9,269.76	\$7,905.82	\$845,923.00
194 - SIMPLE PNEUMONIA & PLEURISY W CC	29	\$16,681.24	\$6,184.90	\$5,135.24	\$148,922.00
291 - HEART FAILURE & SHOCK W MCC	72	\$23,303.50	\$9,787.47	\$8,935.06	\$643,324.00
292 - HEART FAILURE & SHOCK W CC	13	\$16,549.85	\$6,345.62	\$5,591.77	\$72,693.00
470 - MAJOR HIP AND KNEE JOINT REPLACEMENT OR REATTACHMENT OF LOWER EXTREM	183	\$35,228.92	\$14,709.03	\$11,521.38	\$2,108,413.00
				Total	\$4,224,225.00

DRG Definition	Total Discharges	Average Covered Charges	Average Total Payments	Average Medicare Payments	Total payment per DRG
193 - SIMPLE PNEUMONIA & PLEURISY W MCC	82	\$28,352.85	\$9,436.11	\$7,889.66	\$646,952.00
194 - SIMPLE PNEUMONIA & PLEURISY W CC	28	\$18,790.39	\$6,328.96	\$5,100.79	\$142,822.00
234 - CORONARY BYPASS W CARDIAC CATH W/O MCC	17	\$195,526.59	\$39,370.35	\$32,799.41	\$557,590.00
235 - CORONARY BYPASS W/O CARDIAC CATH W MCC	18	\$223,393.06	\$43,258.22	\$42,197.78	\$759,560.00
280 - "ACUTE MYOCARDIAL INFARCTION, DISCHARGED ALIVE W MCC"	18	\$41,712.89	\$11,362.00	\$10,350.89	\$186,316.00
281 - ACUTE MYOCARDIAL INFARCTION, DISCHARGED ALIVE W CC	16	\$30,874.63	\$6,871.69	\$5,775.06	\$92,401.00
291 - HEART FAILURE & SHOCK W MCC	165	\$29,680.48	\$9,807.66	\$8,840.27	\$1,458,644.00
292 - HEART FAILURE & SHOCK W CC	33	\$22,269.12	\$7,200.03	\$5,388.00	\$177,804.00
469 - MAJOR HIP AND KNEE JOINT REPLACEMENT OR REATTACHMENT OF LOWER EXTREM	29	\$69,757.21	\$21,792.90	\$18,624.03	\$540,097.00
470 - MAJOR HIP AND KNEE JOINT REPLACEMENT OR REATTACHMENT OF LOWER EXTREM	565	\$47,402.06	\$14,174.14	\$11,826.81	\$6,682,146.00
				Total	\$11,244,332.00

DRG Definition	Total Discharges	Average Covered Charges	Average Total Payments	Average Medicare Payments	Total payment per DRG
190 - CHRONIC OBSTRUCTIVE PULMONARY DISEASE W MCC	62	\$24,597.85	\$8,077.02	\$6,997.19	\$433,826.00
191 - CHRONIC OBSTRUCTIVE PULMONARY DISEASE W CC	23	\$21,167.00	\$6,443.91	\$5,274.52	\$121,314.00
193 - SIMPLE PNEUMONIA & PLEURISY W MCC	69	\$26,610.19	\$9,947.28	\$8,313.91	\$573,660.00
194 - SIMPLE PNEUMONIA & PLEURISY W CC	18	\$14,351.56	\$6,534.50	\$5,225.56	\$94,060.00
280 - "ACUTE MYOCARDIAL INFARCTION, DISCHARGED ALIVE W MCC"	48	\$32,036.50	\$11,666.58	\$10,622.69	\$509,889.00
281 - ACUTE MYOCARDIAL INFARCTION, DISCHARGED ALIVE W CC	24	\$22,976.21	\$6,899.88	\$5,829.92	\$139,918.00
291 - HEART FAILURE & SHOCK W MCC	104	\$26,748.02	\$10,515.87	\$9,318.03	\$969,075.00
292 - HEART FAILURE & SHOCK W CC	26	\$20,727.27	\$6,746.69	\$5,782.42	\$150,343.00
469 - MAJOR HIP AND KNEE JOINT REPLACEMENT OR REATTACHMENT OF LOWER EXTREM	14	\$61,570.00	\$22,193.50	\$21,030.50	\$294,427.00
470 - MAJOR HIP AND KNEE JOINT REPLACEMENT OR REATTACHMENT OF LOWER EXTREM	173	\$46,204.87	\$14,919.17	\$12,623.20	\$2,183,814.00
				Total	\$5,470,326.00

Total Discharges per DRG for St Peters

Measure Name	Number of Discharges	Footnote	Excess Readmission Ratio	Predicted Readmission Rate	Expected Readmission Rate	Number of Readmissions
READM-30-AMI-HRRP	N/A		0.9472	12.5108	13.2077	Too Few to Report
READM-30-CABG-HRRP	N/A		5 N/A	N/A	N/A	N/A
READM-30-COPD-HRRP	238		1.0134	17.5963	17.364	43
READM-30-HF-HRRP	251		0.8355	16.8418	20.1583	31
READM-30-HIP-KNEE-HRRP	N/A		0.9251	3.2765	3.5419	Too Few to Report
READM-30-PN-HRRP	339		0.9935	14.8791	14.9762	50
	828			65.1045	69.2481	124

Total Discharges per DRG for St Vincent

Measure Name	Number of Discharges	Footnote	Excess Readmission Ratio	Predicted Readmission Rate	Expected Readmission Rate	Number of Readmissions
READM-30-AMI-HRRP	347		0.9267	12.4465	13.4308	39
READM-30-CABG-HRRP	162		1.0392	13.6341	13.1198	23
READM-30-COPD-HRRP	263		0.8591	15.9064	18.5145	29
READM-30-HF-HRRP	578		0.9447	19.3137	20.4444	108
READM-30-HIP-KNEE-HRRP	1254		0.8061	3.0281	3.7563	34
READM-30-PN-HRRP	635		0.8532	13.1796	15.4464	73
Totals	3239			77.5084	84.7122	306

Measure Name	Number of Discharges	Footnote	Excess Readmission Ratio	Predicted Readmission Rate	Expected Readmission Rate	Number of Readmissions
READM-30-AMI-HRRP	276		0.9193	13.302	14.4698	32
READM-30-CABG-HRRP	92		1.1045	15.841	14.3419	17
READM-30-COPD-HRRP	285		0.8681	17.2284	19.8454	37
READM-30-HF-HRRP	352		0.9478	20.591	21.7253	69
READM-30-HIP-KNEE-HRRP	312		1.105	4.5371	4.1061	16
READM-30-PN-HRRP	391		0.9178	15.3294	16.703	54
Total	1708			86.8289	91.1915	225

ERR

PROVIDER NAME	TOTAL CMS PENALTY	TOTAL CMS PAYMENT	TOTAL PAYMENT FOR HRRP DRG's	ERR
ST PETERS HOSPITAL	0.0007	10548182.00	4224225.00	1.001747948
BENEFIS HOSPITAL INC	0.0064	26130429.00	5470326.00	1.030571258
ST VINCENT HOSPITAL	0.0019	45366876.00	11244332.00	1.007665823

Readmission Reduction

	Monthly	24 Months	Yearly/per pts
Installation	Free		Free
Monthly payment	\$49.99		
24- month subscription		\$1,199.76	
Monthly Equipment Fee	\$14.99		
24- month Equipement fee		\$359.76	
Total	\$64.98	\$1,559.52	\$779.76

Table 1: Explain The Result Of Each 3 Rural Hospital In Montana.

HughesNet	Variable	Viasat
\$ 49.99-\$ 129.99	Monthly Price	\$ 50-\$ 100
25Mbps	Download speed	12 Mbps
3mbps	Upload speed	3Mbps
10 GB-50GB	Data Cap	12GB-50GB
24-month	Contract requirement	24-month with a 2 year price lock
Free standard installation	Installation	Free standard installation
\$ 14.99	Monthly equipment fee	\$10/month
\$ 15/every remaining contract month	Early termination fee	\$ 15/every remaining contract month
Nationwide	Availability	Nationwide

Chapter Four: Data Analysis

From the model the number of patients the hospitals can afford to pay internet for are as follows. Benefis- 214, St Peters-9, and St Vincent-111. The hospitals will report the following HF readmissions if they do not implement RPM; Benefis-13, St Peters- 1 and St Vincent-4 [11-15].The hospitals will report the following readmissions if they put the HF patients on RPM; Benefis- 5, St Peters- 0, and St Vincent-2Therefore, the reduced number of readmissions for the three hospitals is as follows; Benefits- 8 (13-5), and St Vincent- 2 (4-2).

This means that Benefits and St Vincent will make enough savings from reduced readmissions to pay for the broad band internet for the rural HF patients who cannot take advantage of RPM due to lack of internet connection. This is because the hospital’s reduced readmission is more than the number of readmissions required to generate maximum savings for the hospitals. However, the model cannot work for St. Peters since the hospitals savings on readmissions is too low therefore the hospital cannot only afford to pay internet for a few HF patients which cannot support enough reductions in readmission to generate the cost for internet [16-18] [Table 1].

Recommendation and Conclusion

The results from the study illustrates that hospitals will register reduced HF readmissions if they pay broad band internet for rural patients who cannot take advantage of RPM due to lack of internet connections. This will make the hospitals to make significant savings from HF readmission penalties which will be enough to pay for the broad band internet. Therefore, paying internet for rural HF patients who cannot afford RPM due to lack of internet connectivity is viable for St Vincent, Benefis.

Declaration

I declare that this study is my original work, and it has not been submitted to any university for any degree or professional qualification.

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